THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

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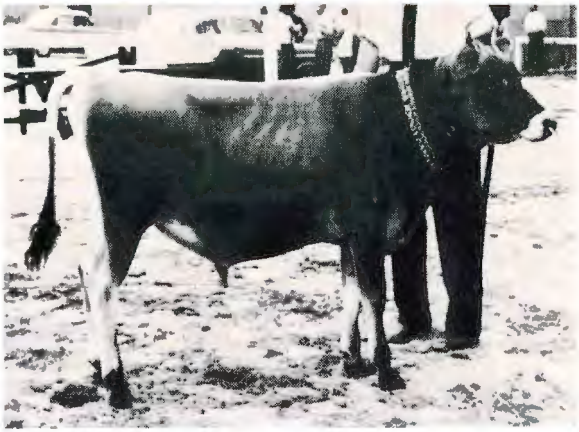

★ **LANAC ELFA'S 9th's GREEK** — Winner of the strong yearling class at last week's Adelaide Autumn Jersey Fair, and representative in type, standard and production backing of several of the other bulls to be offered.

CATALOGUES: COLES BROS. ELDERS SMITHS

THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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What is the Future for the Australian Dairying Industry?

Although the announcement by the Minister for Trade on 26th February that the Australian butter quota on the British market for the yeor commencing 1st April had been increased by more than 3,000 tons to 65,100 tons represents a welcome reduction in our accumulated stocks, the question of the disposal of current surplus and also the problem of increasing unsaleable production continue to be of vital importance, and the Australian Dairy Produce Board recently held a special meeting to examine these problems against the whole background of World dairy production and marketing trends.

At this meeting the Board studied a forecast of world dairy production and consumption during the coming years for the purpose of determining, if possible, where Australia stood in relation to poduction, home consumption and exportable surplus. No recommendations as to what actian, over and above the Board's continual search for new markets and new presentation, were made by the Board. Rather it is felt that the various sectors of the industry should each study the evidence which was presented to the Board and determine what action can most effectively be undertaken to meet the current and impending problems of each sector and of the industry os a whole.

It cannot be contradicted that the major impact of the present dairy produce marketing position is on the dairyfarming sector, and that sector will also feel the greatest effect of any reconstruction plan. It is therefore necessary and desirable that any plan should be generally accepted by the producers, even, perhaps to the extent of being initiated by them. For this to be done producers must be informed of the problems which are facing the industry. These problems cannot be cured by better farming methods and know how or by Government assistance in the form of subsidies or grants. A worthwhile and permanent solution which

does not cause severe financial loss to individual dairy farmers demands a complete revision of our thinking and possibly a restructuring of the whole industry.

The old cure-all of increased production, even at lower cost, will only aggravate the problem. In your own interests you are urged to study this Review in order that each producer can make a worthwhile contribution to the formation of policy.

THE AUSTRALIAN DAIRY INDUSTRY

A Review of some Current Problems

(as presented to the Australian Dairy Board)

INTRODUCTION

In September last year, representatives of dairy marketing authorities in the United Kingdom, Australia, and New Zealand met in London to discuss the disposal of surplus products.

The meeting expressed the conviction that some appropriate means of controlling surpluses in an orderly manner must be found before any satisfactory commodity arrangements can be concluded either on the restricted level of the London Conference, or on the much broader scale envisaged under the F.A.O. proposal for a conference to consider stabilisation of primary product prices and international commodity agreements. At the outset, it was recognised that charitable or concessional disposals of such products should not interfere with existing commercial channels of trade nor threaten developing or potential markets.

In the light of the report on the London Conference, and the critical surplus situation arising in Australia from the recent imposition of import quotas in the United Kingdom on butter, the Australian Dairy Produce Board has decided to participate in further marketing discussions on an international level and to prepare for these discussions by proceeding, as quickly as possible, with a review of the industry.

The Board acknowledges its limited authority. It is, nevertheless, prepared to sponsor these investigations from a sense of responsibility for the marketing of Australian dairy produce, the end results of which determine the circumstances of the industry and, through a broad range of complex and inter-related factors, the welfare of all people engaged in it.

Many controversial matters raised will require resort to the democratic processes already available to each section of the industry. One of the Board's objectives will be to facilitate the widest possible recognition of the inter-dependence of each section in any practical plan for the future. A piecemeal approach to the process of national policy planning limits the presentation of facts and the formulation of ideas, the unfortunate consequences of which are already apparent in recent industry experience.

This document does not attempt to cover all the problems and possibilities in the present dairy situation. As a matter of urgency it has been prepared merely as a guide to the solution of some of the more pressing problems confronting the industry. **These problems, which range throughout the whole structure of the industry, demand a flexible and realistic approach.** Only such an approach is appropriate to the present period in which the volume and rapidity of the changes that are occurring are such, that their rapid acceptance is a necessary ingredient of progress. The Board will have achieved its present purpose, if it succeeds in alerting the industry to this challenge, and in any way provides new insights or enlarges the understanding of those who make the ultimate decisions.

WORLD DEVELOPMENTS

General

A series of butter crises in recent years has caused national and international concern over the growing disequilibrium between the production of dairy produce and its available market. As a result, there has been considerable activity within the Food and Agriculture Organisation and other international bodies. Conferences have been held to examine the situation and, from them, have come suggestions of ways and means of adjusting supply and demand, both in commercial markets and by facilitating movement of dairy products into under-developed countries. Possibly, the most work on the problem has been done by the Committee on Commodity Problems of the F.A.O. A recent study, based on the joint efforts and experience of the F.A.O. Secretariat, highlights the urgent need for positive corrective action. **Although a good deal of lip service has been paid to the need for action, very little has, in fact, been done.**

In round terms, the F.A.O. study sets out the situation that could develop by 1970 if, in the meantime, nothing is done about the surplus generating forces. It is unlikely that the position in 1970, as visualised by F.A.O., will ever eventuate because disaster, with its consequences for all sections, will long before overtake us. But it is important to realise that **this is the situation towards which present policies, actions, and circumstances are inevitably steering the dairy industry.**

Disequilibrium[f] in the World Dairy Economy in Terms of Butterfat (Estimates and Projections)

	Base[c] Period '000 metric tons	1965 '000 metric tons	1970 '000 metric tons
Production in Advanced[a] Countries	6,991	7,939	8,655
Disappearance in Advanced[a] Countries	6,761	7,591	8,136
Surplus from Advanced[a] Countries	230	348	519
Nett Commerial Requirements from Developing[b] Regions	116	118[e]	157[e]
Estimated Disequilibrium	114[d]	230[f]	362[f]

(a) France, Federal Republic of Germany, Italy, Netherlands, Belgium/Luxembourg, Austria, Denmark, Finland. Ireland, Norway, Poland, Sweden, Switzerland, United Kingdom, Canada, United States, Australia, New Zealand, Argentina, Republic of South Africa, Japan.

(b) Latin America, Africa (excluding the Republic of South Africa), Far East (excluding Japan), Western Asia (excluding Turkey), Greece, Portugal, Spain, Turkey, Yugoslavia.

(c) Base Period for advanced countries taken as 1956-60 and for developing regions as 1955-59.

(d) Includes increase in stocks, U.S. exports for relief and charity, nett exports to Soviet bloc countries (excluding Poland).

(e) Supply required in addition to local production to keep per caput consumption of milk (excluding skim milk powder) in 1965 and 1970 equal to that of the base period, except in Latin America and Mediterranean countries, where per caput consumption may increase.

(f) That which would result under status quo (i.e., under existing conditions, price, national dairy policies, trade with Soviet-Sino bloc, etc.).

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SOURCES OF DISEQUILIBRIUM

The following Tables A and B highlight the countries where production is being encouraged (mainly at the expense of the traditional exporters). They also illustrate the basic cause of the present disequilibrium, namely, that the slowing down of the rates of expansion in the outputs of the traditional exporters (i.e., Netherlands, Denmark, New Zealand, and Australia) are not sufficient to match the production expansions in such countries as France, Ireland, Western Germany, and Poland, much of which is encouraged by their respective national support policies.

The figures in Tables A and B should not be treated other than as roughly indicative, and only on the bases and within the assumptions under which the projections have been made.

TABLE A

Surplus Generating Countries

Country	Contribution (%)
France	54.27
Ireland	13.70
Western Germany	7.39
Poland	7.39
Belgium/Luxembourg	5.29
Republic of South Africa	4.30
Norway	2.10
Austria	2.10
Finland	1.81
United Kingdom	0.99
Switzerland	0.24
Italy	0.24
Canada	0.18
	100.00

TABLE B

Surplus Depressing Countries

Country	Contribution (%)
New Zealand	41.47
Japan	18.01
Netherlands	14.32
Sweden	12.01
Denmark	8.60
Australia	3.82
U.S.A.	1.09
Argentina	0.68
	100.00

It should be noted in the above table that the comparison is based on the relation of production to consumption with the proviso that traditional exporters will retain their rights to their established shares of export markets, plus a pro-rata portion of any increase. The term "expanding" is limited, therefore, to production expansion in excess of these additional requirements in the case of traditional exporting countries.

Per caput consumption increases have been assumed at a comparatively high rate for France, Western Germany, and Poland.

Country	Estimated Increase in Per Caput Consumption from Base Period to 1970
Belgium/Luxembourg, Finland, Ireland, Norway Switzerland	up to 4.9 per cent
Austria, Denmark United Kingdom, New Zealand, Republic of South Africa	5 to 9.9 per cent
France, Argentina	10 to 14.9 per cent
Federal Republic of Germany, Poland	15 to 19.9 per cent
Italy Netherlands	20 to 24.9 per cent
Japan	144 per cent

Declines in per caput consumption are expected to occur in U.S.A. (12.3 per cent), Sweden (8.6 per cent), Australia (7.9 per cent) and Canada (5.5 per cent).

Thus, as per caput consumption is expected to increase in most cases, and as total consumption is expected to increase in all cases by 1970, the above surpluses appear to be mainly **the result of the over-stimulation of production under national policies.**

EFFECTS OF GROWTH OF SURPLUSES UPON THE UNITED KINGDOM BUTTERFAT MARKET

The effects that the above developments will have upon the United Kingdom butterfat market are of immediate concern to traditional exporters. It is initially proposed to examine this under the assumption that the United Kingdom will eventually become a full member of the E.E.C., and that she will be followed into the Community by Denmark, Norway, and Ireland as full members, and that Sweden, Austria, and Switzerland will become associate members.

Another assumption is that the established export markets of the enlarged E.E.C. outside of its boundaries will be retained, and that they will have increased from their present levels (around 1961) by about 24 per cent in 1970 in terms of butterfat. In other words, it is assumed that the greater E.E.C. exporters will retain their share of existing external markets under conditions of comparatively rapid population expansion and some increase in national income per head in the developing regions. A final assumption is that surplus-producing E.E.C. full members and associates will have the premiere right to satisfy the import requirements of the deficiency members.

From these assumptions it can be seen that the surplus producing members of the greater E.E.C. could have a combined gross exportable surplus of about 448,000 metric tons of butterfat in 1970. If the greater E.E.C.'s exports to established external markets (estimated at about 124,000 tons of butterfat in 1970) are deducted from the 448,000 tons, then a nett surplus of about 324,000 tons of butterfat from the surplus-producing greater E.E.C. members could arise.

If the estimated United Kingdom deficiency in 1970 of 302,000 tons of butterfat is subtracted from this, together with the Swedish deficiency of about 4,000 tons then the final result for the greater E.E.C., including the United Kingdom, **would remain a surplus** of about 18,000 tons of butterfat.

It should be well noted that this represents a surplus capable of competing with Australian sales to such countries as Malaya, and the Philippines in 1970 unless positive steps are taken in the meantime to avoid this depressing and unwanted development.

It can be logically argued that the overall picture would not be appreciably altered if the United Kingdom were to remain outside the E.E.C. Although Australia might expect to receive a share of the United Kingdom market under a continuation of the existing quota scheme for butter, the surplus pressure would remain not only to tend to reduce United Kingdom quotas and prices of imported butters in that country, **but also to have a similar effect on prices in other markets.**

MAJOR CAUSES OF DISEQUILIBRIUM

National Dairy Policies

A principal factor influencing the more rapid growth of supply than demand of dairy products has been traced to national dairy policies in advanced countries. Milk production, utilisation of milk, domestic producer and consumer prices, internationaal prices, foreign trade, and consumption in advanced countries, have all been deeply influenced by price support measures and other aspects of national dairy policies.

The main objective of national dairy policies in advanced countries is to protect and raise farmers' incomes, and in some cases, to maintain rural population. Althaugh dairy policies may vary between countries, they can be broadly classified according to whether producer prices for milk (or butterfat) are determined by reference to estimated production costs, farm income levels, a price parity formula, or a combination of these.

Although Government intervention can be traced back to the economic crises of the thirties, the majority of existing support measures originated during the 1939-45 war, or in the early post-war years, when supply shortages made relatively high producer prices necessary, not only to give an incentive to production, but also to provide funds for re-equipment. It became politically difficult for governments to withdraw or significantly reduce support prices when, in later years, further expansion in production became less essential. An additional complication was the full employment policies that were propounded in the early post-war years and the relative rights of agricultural workers vis-a-vis industrial workers under conditions of increasing discrepancy between farm and non-farm incomes around 1952.

While butter crises in 1958 and subsequent years have reduced producer prices in some countries to some extent, this has not had much effect in retarding butterfat production. Generally, milk producers have been able to protect their interests through concerted action with manufacturers and distributors to the extent of influencing governments—in some cases actively forming and implementing policies—for continued expansion.

Effects on Milk Production, Utilisation, and Investment Decisions

A peculiarity of the support policies has been to distort the milk utilisation pattern towards the economically weakest commodity which is usually butter.

The knowledge that the government is committed in one way or another to prevent producer prices from falling has significantly influenced the price expectations of farmers, and hence their investment decisions. **Even in countries where there have been slight reductions in guaranteed returns** (or in average returns when the guaranteed price does not cover the the whole of production), **output has continued to increase.** Farmers have not only tended to continue in dairy production, but they have grasped improved technologies and expanded output in an endeavour to reduce average costs, and many of the larger holdings have been successful in this regard. The surplus-generating nature of improvements in production technologies under price support policies was not fully realised at the time when these policies were introduced, and even if it is realised now, it is not universally admitted.

Changes in supply and demand have been allowed to have only a limited effect on price which has consequently failed to perform its short-term function of clearing the market, and its long-term function of guiding the allocation of resources.

Effects on Consumption

On the consumption side, increases in domestic consumption of dairy products have been discouraged by the relatively high consumer prices resulting from the high producer prices under most national policies. Only in a few countries have consumer subsidies been used to lower consumer prices, as the indirect taxation of consumers through high prices lessens the direct costs of governments in supporting producer prices. This situation has, to a great extent, led to the development of the margarine enigma.

In general, the characteristics of demand for dairy products indicates that there is still scope for increased consumption at reduced prices, particularly by lower income groups.

Effects on Trade Policy and International Trade

Dairy price support policies have, in turn, led to import restrictions and export subsidies, which have had the effect of accentuating, at the international level, the disequilibrium which they were designed to cope with at the national level.

All the major importers of dairy produce impose quantitative restrictions on some or all dairy products as a settled policy with the important exception, until recently, of the United Kingdom.

A high percentage of dairy exporting countries, on the other hand, have used various export aids, usually in the form of direct or indirect subsidies, to increase exports of some dairy products. In most cases, the necessary funds have been directly supplied by the governments concerned.

As a result of pressures for limitation of imports and encouragement of exports, there has been a concentration of exports of dairy products (pricipally butter) towards the United Kingdom which, in turn, has had to impose a system of import quotas to protect traditional exporters.

Surplus stockpiling and disposals, in spite of their careful regulation and control, have had an upsetting effect upon international price levels by reason of their very existence.

Technological Developments

In addition to the economic factors referred to above, there are several technical developments which have contributed to the rapid increase in milk production.

Included amongst these technological developments are better farm management and animal husbandry practices and improved breeds, leading to an increase in production per cow.

Increasing mechanisation of agriculture has also been an important innovation influencing milk production.

Introduction of better transport facilities have opened up new production areas and facilitated the collection of milk. There has also been a steady increase in the average butterfat content of milk delivered, resulting from the practice of paying the producer on the basis of its butterfat content. However, there is some tendency towards the payment of a premium on the non-fat milk solids content of milk, as for example, in the United Kingdom, but the effects are not yet being felt.

CONSIDERATION OF WAYS AND MEANS OF RECOVERY

The majority of the adverse results of national support policies are reflected in the misfortunes of butter on international markets. Although butter is the most important dairy product in terms of quantity, it is the weakest in the marketing sense, both because of its over-supply and the presence of a close and very much cheaper substitute.

Various recommendations and suggestions for balancing the world dairy economy have been made by international organisations, particularly since the 1958 butter crisis.

Unfortunately, little has been done at the national level to implement the various proposals made by international organisations. Proposals included measures to increase the consumption of butterfat on domestic markets, opening up protected markets, reduction in export subventions, limitation of price guarantees on production, re-assessment of the basis of payment for milk, etc.

However, long-term prospects of adverse terms of trade for primary produce exporting countries and the low nutritional standards in developing countries, has given rise to pressures through United Nations' Organisation General Assembly for a Sessional Conference in 1964 on the problems of these countries in international trade, during which international commodity agreements are expected to be discussed.

AUSTRALIAN DEVELOPMENTS

The Australian dairy industry cannot escape the consequences of the growing divergence between production and consumption of dairy products. They are already apparent on the local scene. It may not be possible, at this stage, to forecast the full nature and extent of these consequences, but there can be little doubt that there will be further intensification of the stresses already in evidence in the production, manufacturing, and marketing sectors of the industry.

These stresses arise, both within and outside the industry, and some are beyond its control. But if the industry, as a whole, is to ensure minimum dislocation and the maximum distribution of any benefits from the changes that have to be made, it is imperative that each section study the circumstances of its current situation and the forces likely to affect them.

The dairy industry does not foce this challenge alone. There is a world-wide major agricultural adjustment problem. The problem is intensified for the Australian dairy industry by the need to adjust itself to a rapidly growing industrial economy now being sponsored as o matter of national policy.

Factors Influencing Milk Production in Australia

Exponding milk production seems to be derived mainly from increasing output per cow which, in turn, could be due in large part to better feeding following the gradual concentration of dairy cattle in areas possessing a more favourable dairy environment, and a greoter potential for pasture improvement.

Another factor contributing to increased milk production is the relative concentrotion of the population. The percentage of milk utilised for direct consumption is over 20 per cent of total production, and most of this is consumed in capitol cities, with Sydney and Melbourne accounting for a substantial proportion of the total.

Fluid milk is purchased by Milk Boards, under contract. The Contracts incorporate a condition of minimum supplies during periods of low seasonal production. In order to safeguard their quotas, and to be eligible for any increases which might become necessary, most suppliers deliver surplus quantities to their factories. This is well illustrated in New South Wales where the fluid milk area is more or less self contained.

Whereas, over the eight-year period, the N.S.W. Milk Board intake (i.e., sales for fluid consumption) increased by 2.20 million gallons per annum, the surplus for manufacturing from the "Milk Zone" increased by 3.13 million gallons, making the total annual increase in the "Milk Zone" as defined, 5.33 million gallons. As milk production in the non-milk zone declined by 2.08 million gallons per onnum over the same period, the increase of 3.25 million gallons per annum in total State production is entirely accounted for by the increased production within the "Milk Zone".

Effects of Increasing Production

Under the anticipated export situation, the increasing volume of production, if continued, will have to be taken into Equalisation **at little or no value** and, therefore, will have a sharply depressing effect upon returns to all dairymen supplying butter and cheese factories. This is of particular concern in Queensland and New South Wales, where declining levels of income of an increasing number of farmers are creating serious problems for dairy organisations.

Under these circumstances, the domestic market assumes even greater significance than it does at the present time. It is of interest, therefore, to examine the F.A.O. production and consumption projections for Australia.

It is estimated that butterfat consumption in Australia in 1970 will be 230,000 metric tons, which is partly based on a per caput butter consumption of about 24.3 lbs. However, this could be too optimistic in view of the fact that the trend in butter consumption for the five years ending 1959-60—just as the promotion programme was getting under way—projected to 1970 drops to only 18.2 lbs.

Despite the further intensification of factors responsible for this decline it has been assumed that industry promotion and merchandising will slow up the trend to at least 20.0 lbs. per caput in 1970. With an expected population of 13 millions, total domestic market requirements of all dairy commodities by 1970 may be as low as 213,000 metric tons butterfat equivalent—17,000 tons less than the F.A.O. estimates.

Setting aside the traditional safety margin of 20 per cent of domestic consumption, the total requirements of dairy products in butterfat equivalent for home consumption and export by 1970 amount only to about 268,000 metric tons.

In this estimate, exports to the United Kingdom under the most favourable circumstances, would absorb about 37,000 metric tons of butterfat (in the form of, say, about 40,000 long tons of butter and 9,000 long tons of cheese), and other markets 18,000 metric tons butterfat equivalent.

On the basis of these figures, and the conservative estimate of production at 1,519 million gallons under existing circumstances, surplus production, by 1970, could amount to 153 million gallons or about 30,000 metric tons of butterfat representing 36,000 long tons of butter.

IMPLICATIONS IN CURRENT TRENDS

A dairy surplus of this magnitude is never likely to arise for the obvious reason that the economic pressures generated in the gradual progress towards such a surplus will force, in varying degree, adjustments upon each section of the industry.

It is the time now for the industry to decide whether it will pursue a "let alone" policy of adjustment in which, without aid or interference, dairy production will eventually come into balance with available markets, or whether it will adopt a more positive approach and seek to understand and facilitate any necessary adjustments with a minimum of dislocation to individual dairyfarmers, manufacturers, distributors, dairy organisations, and the industry structure as a whole. A necessary first step to this end is the identification and definition of problems in each sector.

In production, it is evident that a movement from the industry is already in progress and, in the light of current production trends, this movement must continue. The drift from the industry represents a complicated adjustment to factors some of which "push" people out of dairying and others which "pull" them into alternative production or into employment in the industry, trades, and professions. Movements from farms are mostly associated with low levels of income and are sometimes cited by industry organisations as an indication of the inadequacy of prices for dairy products.

Levels of farm income, however, are the product not only of prices, but also of costs and the volume of production, and dairymen with too few acres, too little equipment, and inadequate resources to adopt new technologies as they become available and are adopted on larger and better equipped farms, operate at an increasing disadvantage. **Their movement from the industry is a basic and necessary adjustment which can not, in the long run, be prevented by either credit, subsidies, or price manipulations.**

However, the industry must share with Commonwealth and State Governments the broad responsibility of recognising the short-term repercussions on people who are adversely affected by developments arising from factors many of which are beyond their control and through continuing research, extension, and such other forms of assistance as may be necessary, attempt to alleviate as much as possible human problems of readjustment.

One approach to the problem of maintaining dairy incomes in the face of increasing regional and new farm production is explained in "The Case for a Workable Quota Scheme"—prepared by Mr. F. H. Gruen of the Australian National University. It is, in effect, a domestic sales quota scheme and could be applied without affecting, in any way, the existing income structure of the industry. The scheme presupposes inclusion of condensery products in an equalisation arrangement and, although fluid milk is excluded, the surplus milk

from milk zones available for manufacture will be given the same domestic sales quota rights as all other milk taken into manufacture.

Adjustment is not a process merely of movements from the industry. New technical advances require programmes which will point the way to the most profitable adjustments for individual farmers who remain in the industry.

Studies must be made of new developments in technology, their rates of adoption, their costs, their credit requirements, their potential effects on farm efficiency and output, both on a regional and national basis.

There are problems, too, in the manufacturing sector of the industry. Australia has some of the most up-to-date factories in the world. But there are factories which, having served an earlier era, cling to the past in disregard of the flexibility, the more complete use of plant capacity, and scale of operation.

Marketing must also undergo the process of adjustment in the present-day detail selling system in which heavily promoted label and brand-name foods dominate the grocery trade. Marketing is a composite of advertising, promotion, distribution, mechandising, research, packaging, quality, and price, and each phase of the total operation has to be satisfactory before the marketing programme can be effective.

THE CASE FOR A WORKABLE QUOTA SCHEME

Introduction

In this paper, I propose to discuss a possible reorganisation of the marketing of Australia's manufactured dairy products; in particular of butter, cheese, and full cream processed milk products. The effects of the introduction of such a scheme would be far-reaching. The major effects would be:—

(a) It would discourage the production of surpluses of butter and cheese which are at present—and in the foreseeable future—almost impossible to sell abroad at a reasonable price. While a contraction of butter and cheese production would be encouraged, each individual producer would continue to decide freely how many cows it pays him to run, what, and how much to produce.

(b) Under the scheme, many farmers at present dairying would be able to earn larger incomes and none would have his income reduced (compared to his average income of the last three years). At the same time, the scheme would not require any rise in the prices of butter and cheese paid by the Australian consumer, or any increase in the Commonwealth Government's subsidy.

(c) The scheme would make Australian producers of full cream processed milk products more competitive on world markets and thus help to lessen the industry's dependence on exports of butter and cheese.

(d) The scheme would help marginal high-cost producers to leave the industry and would hasten the concentration of production in those areas where costs are lowest and efficiency greatest.

(e) We would be less open to charges of "dumping" or of resorting to unfair trading practices in international commodity negotiations.

Basic Outline of Scheme

The essential features of such a scheme are:—

(i) All present owners of land which has been used to produce milk or cream for sale on a butterfat basis to a factory during a specified base period—say the last three years—to be given a quota. The aggregate amount of

the quota for all dairy farmers to be equal to the total Australian consumption of butter, cheese, and full cream processed milk products during the base period. Thus, during the three years ended June 30th, 1962, an annual average of 1,081 million gallons of milk was used to produce butter, cheese and full cream processed milk products. Of this total, an annual average of between 663 and 666 million gallons of milk were consumed in Australia in the form of butter, cheese, and processed milk products—i.e., approximately 61 per cent of total output. The quotas to be allotted pro rata to each landowner. Thus a farmer whose average production during the base period was 10,000 lb. butterfat would get a quota for 6,100 lbs. butterfat (or its milk equivalent). Milk zone suppliers or holders of liquid milk contracts would be entitled to quota certificates for 61 per cent of that part of their output which they sold at butterfat prices during the base period.

(ii) The quota certificates to be deposited by the farmer with the factory which he supplies. Quotas to be freely saleable from one farmer to another.

(iii) The registration of quotas in an individual's name entitles him to a payment for his milk or cream (up to the quota limit within any one financial year) approximately equal to the net realisations (including subsidy) from the home market.

How the Scheme would affect the Individual Farmer

Suppose we consider a farmer at present producing 10,000 lbs. butterfat. For this the farmer can expect to obtain an average price of 4/4 to 4/5 a lb. at present say 4/4¾—or a total of 43,958 shillings = £2,197/18/0. This average of 4/4¾ a lb. conceals the fact that about 39 per cent is sold overseas at approximately 3/- a lb. and 61 per cent is sold locally at a much higher price. Including the subsidy (paid by the local taxpayer) in the local realisations, average returns from the home market are probably around 5/3 lb. butterfat.

Instead of paying our producer 4/4¾ for 10,000 lb., he could equally well be said to receive:—

5/3 per lb. for the first 6,100 lb	= 32,025	shillings
3/- per lb. for the next 3,900 lb.	= 11,700	shillings
Total Receipts	43,725	shillings
	or £2,186/5/0*	

*The difference between the two sums is the result of rounding off the figures, rather than any actual difference in the two methods of payment.

This is the way a farmer would be paid under a quota scheme. He would receive the higher home price (plus subsidy) for his 6,100 lb. of quota output and the average export price for the year for any production above 6,100 lb.

In other words, no dairy farmer would receive a smaller income—**if he continued to produce the same quantity of butter as in the basic period.** However, many dairy farmers would be able to raise their incomes—if they can use their land more profitably than producing the last 39 per cent of their output at 3/- a lb. Our 10,000 lb. producer may find it more profitable to produce vealers with the cows at present producing butter for sale at export prices—or running beef cattle or fat lambs instead of part (approx. two-fifths) of his dairy cows.

The choice would be his—the level and composition of the farmer's output would be decided by him in the light of his particular situation and not by administrative action. Since some farmers would cut non-quota output, exports would fall.

New entrants to dairying would receive no quota (but they could, of course, buy them). Even without buying quotas, efficient producers could enter dairying, since the price of land ex quota in dairying districts would be much lower. To avoid freezing the existing structure and location of the industry, quotas must be made freely saleable and, like milk board contracts at present, would command a considerable market price. In terms of our above example, they are an entitlement to an extra 27d. per lb. butterfat produced. Capitalised at say 10 per cent, they would have a value of 22/6 per lb. At this price, a marginal butter producer who could make nearly as much income out of beef is likely to be tempted to sell his quota. A price, satisfactory to both buyers and sellers, would be determined in the market, just as occurs with milk runs, news agencies, shares, etc. There would be a tendency for efficient farmers who could expand at low additional cost to buy more quota rights, and inefficient ones to leave the industry with the proceeds of the sale of their quota rights which must be soleable separately from their land.

The protection given to dairying has a commercial value which has been capitalised in land values. Many dairy farmers of advanced age who do not wish to leave their farms remain in the strenuous activity of dairying because this is the only way they can obtain the benefits given to the industry in the form of the home price and the subsidy. A transferoble quota scheme would enable such a farmer to sell his quoto rights, but to retain his farm, perhaps for beef, fat lambs, etc.

Lond values would fall when the quota rights were saleable separately, but the total capital value of dairy farms, including their quota rights, would not be affected.

Constitutional Aspects

The present equalisation system relies on the voluntary co-operation of factories. Reliance on voluntary co-operation is unlikely to work in the case of a quota scheme. A method of operating the scheme which does not require voluntary co-operation and, at the same time, seems constitutionally sound is as follows:—

The Commonweolth Government to impose an excise tax on all locally consumed butter, cheese, and full creom processed milk products. The excise tax to be fixed at a rate which will leave local retail prices of butter and cheese unchanged. Reverting to our previous example—suppose export realisations average 3/- a lb. and local sales (exclusive of subsidy) 4/7 a lb. Then an excise of 1/7 a lb. butterfat (or 1/4 lb. butter) would be levied.*

*Strictly speaking, the excise tax should probably equal the gap between local realisations and the **interim** payments for export—thus if this interim is 2/8 per lb., the excise tax should be fixed at 1/11 (1/7 lb. butter) per lb. The administrative reasons for this are discussed below.

The proceeds of this tax to be paid into Consolidated Revenue. An equivalent amount plus the £13½ million subsidy to be granted to the respective State Governments on the condition that they distribute the sums received to factories in proportion to the quota tonnages (or gallonages) held by each factory. The factories to distribute the monies to owners of quota certificates in part-poyment for their milk or cream supplies.

Administrotion of the Scheme

To work out a detailed method of administering the scheme requires a much more intimate knowledge of present equalisation procedures than I possess. However, since it may otherwise be argued that the scheme is administratively impractical, it is necessary to outline one possible method of administration.

This method relies on the operation of two pools. These might be called the quota pool and the export price pool respectively. The Australian Dairy Produce Board (or the Equalisation Authority) to announce conservative interim rates for both the export price and the quota pool. The export price pool covers total output and the quota pool covers the **additional payments to quota holders** (out of funds raised by the excise tax and the subsidy).

As butter is sold on the local market, the local wholesaler pays the factory the equivalent of the interim purchase prices fixed for export by the Australian Dairy Produce Board (say 2/3 per lb. of butter) and the excise tax to the Commonwealth Government (say 1/7 a lb.). If the factory sells butter via the A.D.P.B. overseas, it also receives an interim payment of 2/3 per lb.—this time from the Board or its agents.

At the end of the financial year, when the Board is able to oscertain actual export proceeds and arrive at the average export price realised, a final distribution is made for the export price pool. As this pool embraces all butter, cheese, etc., produced, it will be necessary to transfer a small sum from the proceeds of the excise tax to the export price pool—so that the final payments for this pool equal the actual average export prices realised during the period.*

*The sum which will need to be transferred from the proceeds of excise tax to the export price pool is equal to the per lb. difference between the interim purchase price fixed for export by the A.D.P.B. and the final export realisations—multiplied by the tonnage or gallonage of local sales. In our above example, it would be 3d. per lb. mult. by the number of lbs. consumed locally.

In the case of the quota pool, an interim and final distribution will again be necessary. Firstly, the exact amount of excise tax available per lb. is not known (because of varying export prices) and secondly, local consumptian will vary. If local consumption differs from the total of quota tonnages, payments per lb. of quota will need to be adjusted.

Although it is now the custom to have separate equalisation accounts for butter and cheese, it seems to me that it would be better under the quota scheme to group receipts from butter, cheese, and processed milk products together and pay all farmers a common export price (and a common quota price) for cream plus an allowance for solids not fat where farmers supply milk to a factory. The S.N.F. allowance will need to be adjustable to allow for changing circumstances—such as, for example, changes in demand for cheese and processed milk relative to butter.

Export sales would continue to be made by the same agencies as in the past—by the A.D.P.B. or its agents for the bulk of the butter and cheese exported and processed milk products by the different private or co-operative organisations who are now engaged in the export market. Australian producers of full cream processed milk products would become more competitive on export markets, since such producers would now have to pay farmers the export parity for milk supplies (i.e., 3/- per lb. in our above example, plus allowance for S.N.F.) as compared with the present position where they have to pay the equalised price minus the subsidy (i.e., 4/7 in our example, plus S.N.F. allowance). On the other hand, Australian farmers would receive the benefit of the excise tax on locally-consumed full cream processed milk products. This would be a part of the excise tax realisations and would be distributed to quota holders.

(Sgd.) F. H. GRUEN,
Australian National University

"A GENETICIST TALKS WITH AUSTRALIAN BREEDERS"

(A Condensation of Dr. Hagedoorn's Lectures, by Mrs. M. H. Robertson)

(Continued from the December issue.)

Variation and Its Causes

Variation is partly due to differences in the inherited make-up and partly due to the effects of environment, handling, managing, feeding, and climate. Two animals that have an identical set of inherited factors may yet be wholly different in appearance.

The only things which are passed on from cell to cell and from parent to offspring are the inherited, material things that are present in every cell and in the germ cells, substances called genes.

No matter how much environmental causes or the effects of better feeding or favourable climate help to make the individual larger or more beautiful or better, those qualities affect **only the individual**, and not the quality of its germ cells. The reason why breeders tend to lay great stress upon the individual qualities of their animals is a double one. They want to be sure that in the best of surroundings the animal will be capable of becoming very good and will be expressing its good heredity, but also because a great many buyers of breeding stock today still think that the final qualities of their stock will somehow and inevitably be transmitted to the offspring. **This is not so.**

The number of inherited factors (genes) in all organisms is very large and in most cases the animal will pass on the genes it inherited to its germ cells, and so to its offspring. But all the genes an animal carries are not passed on to all its germ cells.

When an individual is impure for a number of different genes, it will, in each case, give two kinds of germ cells, dominant and recessive, and the distribution of one gene over 50 per cent. of its germ cells will generally be independent of the distribution of any other factor in respect to which the individual was impure.

For this reason many animals will produce a great number of very diverse germ cells, and the result will be that the offspring from animals which look alike may be very diverse in their genetic makeup. The hereditary variation in a group of animals, even in the offspring of only two parents, may be very considerable.

Correlation

We now know that genes interact, that they work in co-operation with each other and with environmental influences.

Where some inherited influence may make itself felt in different ways, the correlation might be termed a real one. In other cases a correlation may be casual. There seems to be a real correlation between the colour of the nose and that of the hoofs in some breeds of cattle. The correlation between the weight of the cow and her milk production should be called a casual correlation.

Many correlations, however, do not depend upon any casual relationship between the qualities, but are simply accidental. One breed may be both large and spotted, whereas another is small and black. In a case like this it just so happens that each breed is pure in respect to a set of genes that will make all the animals either large and spotted or small and black. The correlation holds good only so long as we keep the breeds pure; in a mongrel lot we find that the correlation is non-existent. If we want to breed the animals larger, it does not help to select them for spottedness and, conversely, breeding from the blacker animals will not tend to make the size smaller.

The belief in the importance of breeding for correlative qualities is greatly strengthened by the system of showing and breeding for the shows. The animals in a pure breed tend to show certain qualities that in themselves may be economically unimportant, but that just happen to be seen in that particular breed. As an indication of probable commercial purity, such qualities may give us a sort of guarantee that all the ancestors of that animal really belonged to the breed.

The judges of show animals tend to try to justify those marks and to talk themselves into a belief that such points of conformation have a direct value in assessing the value of animals for productivity.

If the muzzle tends to be wide, the width of the muzzle is thought to indicate an ability to graze closely. If in most of the animals the backline is straight, a straight back is believed to denote strength.

Many breeders, and the majority of show judges, are firmly convinced they are helping in the improvement of a breed by selecting the animal rigidly for points believed to be correlated to vigour or production.

Only comparatively recently we geneticists have started to investigate the value of correlative qualities as an indication of practical merit. It is rather surprising and, on the whole, discouraging, to see that in almost all cases where we have tested the value of correlations, they seem to have been almost non-existent.

The only quality which seems to be positively correlated with production seems to be size. Large cows tend to give more milk than small, and cows more milk than goats.

The Agricultural Show

The invariable practice at agricultural shows is for a judge to place animals in what he considers is their relative order of merit. As an indication of the ability of these animals to transmit to their progeny whatever characteristics of excellence they possess, these awards of merit are of very debatable value if not quite worthless.

It becomes more and more evident that such correlations between looks and quality do not really exist.

So far as the shows call for qualities that have no real relationship with utility, purely fancy points, such as the presence of a loose black spot in the white of the foot of a Friesian calf, selection with an eye to the show can actually hinder the breeders from making as much headway in the production of good productive stock as they could make without this interest in show quality.

Good bulls that are prepotent in the qualities which make their daughters good producers are rare enough. If we prefer the very few individuals that are both beautiful and good, this makes it more difficult to find the really good ones.

There can be no objection to the breeding of fancy animals for the shows or to the judging of such animals on a competitive basis. I believe, however, that this should not apply to animals that are bred for utility. The judging of dairy bulls according to their appearance as indicative of their prepotency or the productive quality of their progeny is simply a farce.

Breeders' Fancies, Ancient and Modern

A popular belief is that it is possible to choose, by its looks, an animal which will transmit its desirable excellence to its progeny. In pure breeds or strains this is probably true to the extent of about 20 per cent. Show standards have been and are useful in that they have been instrumental in producing animals which have reached a high standard of individual excellence and merit and in educating breeders to appreciate them.

The reason why too much importance can be given to the appearance of an animal as an indication of its prepotence or production seems to be that physiological differences between one animal and the next, and differences in the chemical and hormonal composition of the organs are of greater value in determining how an animal will produce or perform than the shape of its body or the colour of its skin.

It must be remembered that each individual passes on to its progeny only one-half of its chromosomes, which are the carriers of the genes, the unit characters of inheritance.

Even if the great-grandfather was a famous bull in the show ring, we must remember that the animal had seven other great-grandparents, all of which contributed something to the make-up of our animal. The quality of the famous ancestor must have been due to a very good combination of inherited factors, not to just one or two, and the possibility of this favourable combination being reconstituted in one animal which also had seven other great-grandparents is very small indeed.

HOW MUCH MILK FOR CALVES?

The approach of autumn and the new season's calving brings to city milk suppliers the recurring question: "How much milk **should I** give the calves; how much milk **can I afford** to give them?", a question to which the calf itself is not a good guide. If left to its own choice, it would have milk until it was at least a year old.

At least we know the calf should have colostrum, and after this the choice lies between whole milk, skim milk, and buttermilk, all in varying quantities, the new milk replacements, of which Denkavit is probably the best known, and proprietary calf foods, but whatever diet is used, the subject of early weaning is still important.

Cows' milk is almost completely digestible and can be used without difficulty by the calf right from the first day. However, it takes time for its four stomachs and its intestinal digestion factories to develop both the capacity and the capability to handle properly feeds other than milk.

As the calf's ability slowly develops to use other feeds, such as cereal grains, oil meals, grass, and hay, its dependency on milk will decrease.

In the mature cow, most of the carbohydrates, sugar or starch, are fermented and digested in the rumen. But baby calves do not have a functioning rumen. They have very limited ability to digest most sugar and starch. Because of this, feeds high in starch and sucrose such as grain products and calf foods containing molasses, may cause diarrhea. As these feeds are poorly digested, they are also partly wasted by the calf. After the calf develops rumen capacity and function, it can more properly digest starches and sugars, through fermentation, as the cow does, and they do not cause diarrhea.

Until the rumen has developed well, therefore, a basic allowance of some sort of milk is needed. It provides proper nourishment and reduces the intake of noncompatible feeds, thus avoiding irritation to the calf's insides with resulting diarrhea and poor growth. So the proper weaning age depends upon the age of effective rumen fermentation.

But the age of effective rumen action in the calf may be four weeks or four months, depending upon what the calf is fed.

Milk fed as a liquid normally bypasses the rumen, so it doesn't help rumen development.

Coarse feeds, such as hay, straw, grass or even grain feeds go first to the rumen. They are retained there and are fermented by bacterial action. This is what stimulates the rumen to develop.

The more dry or coarse feed the calf eats at an early age, the quicker the rumen will be developed in the calf. Calves fed to full appetite on milk alone will not eat enough other feed to develop properly their rumens even at six or eight months of age. If they are limited on milk and encouraged to eat pasture and hay, however, the rumen will be able to function fully by at least six to eight weeks of age. Calves six weeks old which are fed pasture and hay as well as some milk will spend about five to six hours per day chewing a cud. This is about the same time spent by a mature cow eating the same type of feed. Also, the rumen fermentation and digestion in the calf is just as efficient as that in the cow.

There is another very important result of rumen development and function. This is the provision of many proteins and vitamins required for good calf growth. Milk proteins are, of course, unexcelled. And milk is a rich source of vitamins such as riboflavin, B12, thiamin, and many others the calf needs. As long as the calf gets plenty of milk these proteins and vitamin needs are well met.

But rumen fermentation produces these same vitamins. And the rumen bacteria can make high quality protein from the proteins in ordinary feeds, such as hay and pasture. Therefore, as more feed is properly fermented in the rumen, the need is reduced for many high quality nutrients pre-formed in the ration. Rumen fermentation of good hay and pasture can fulfil the protein and B-vitamin roles of milk in calf nutrition.

As regards to energy. A young calf needs milk to furnish a lot of energy to keep it warm, active, and growing. Per pound of body weight, the calf needs 2½ times as much feed energy as the cow. This is the reason that calf feeds must be more concentrated. Milk is a highly concentrated, high energy feed because, on a dry basis, it contains one-fourth fat. The baby calf does well on whole milk because it is so concentrated and is so fully digestible. As the calf gets older, its stomach capacity increases at the same time that its need for concentrated feed declines. Milk can be gradually replaced by a less concentrated feed.

When the calf can eat enough pasture and hay or grass to meet its energy requirements, there will be no further need for milk. This point could be called the optimum age for weaning.

Small calves or slow-growing calves should have a longer milk feeding period than large calves. They need more time to develop the capacity and appetite for enough pasture and hay to replace their normal milk ration.

How do you stimulate a calf's appetite for hay and pasture? LIMIT THE MILK. A calf which gets all of the milk it wants won't eat much hay and pasture. Then, when milk feeding stops, it isn't adapted to a hay and pasture ration. For best results each calf must be treated as an individual in regard to liquid milk feeding and age of weaning.

The young calf needs milk:—

1. To give it an easily digestible feed which will not irritate its digestive system.
2. To provide certain required vitamins and proteins.
3. To give the young calf adequate feed energy intake.

For these reasons a short milk feeding period is preferable. After the rumen has developed well enough, and sufficient of pasture and hay is being eaten daily, the calf can be weaned and will continue to grow satisfactorily. This weaning age should be from eight to twelve weeks for most calves.

But however short the milk feeding period is, good husbandry and economy must still play a part. On a city milk farm the cost of liquid milk is prohibitive, even for the minimum period of 3-4 weeks with gradual reduction to 10-12 weeks. On the other hand buttermilk and skim milk lack the fat-soluble vitamin A and nutrients such as carotene. By far the most effective and economical are the recently developed milk substitutes, which are compounded to match whole milk, and which are fed at the rate of no more than one gallon a day to encourage calves to eat hay and pasture, and to prepare for complete weaning on to good pasture at 8-10 weeks.

METHYLENE BLUE TEST

CHANGE IN MILK BOARD PROCEDURE

The Metropolitan Milk Board has advised us that, following legal opinion concerning the Metropolitan Milk Supply Regulation relating to standards for "city milk", a new procedure in interpreting the results of the methylene blue reductase test will become effective from May 17, 1963: The regulation defining this test reads "City milk shall not decolorise within four hours when subjected to the methylene blue reductase test carried out in the manner prescribed by these regulations", and requires that, in carrying out the test, each sample shall be examined at half-hourly intervals and the time interval at **which the sample was found to have decolorised** shall be recorded, so that if, at 3½ hours, the sample shows color, whereas at four hours no color is present, the sample shall be scored as "4".

As, however, such sample **did** decolorise within four hours, it is below standard in terms of the regulation which requires that it **shall not** decolorise within four hours.

The effect of this interpretation will, consequently, be to raise the effective standard from "4" to "4+", and all milk scoring "4" only will in future be classed as substandard.

This re-examination of the regulation has arisen from the inclusion of the methylene blue test in the new Dairy Industry Regulations, which require unlicensed milk to be graded as "choice", "first" and "second" by means of a methylene blue test, the corresponding times being "not less than four hours", "not less than three hours nor more than four hours", and "less than three hours".

APPLYING FOR ARTIFICIAL BREEDING SERVICE

NO FORMAL REQUEST NEEDED

Dairyfarmers within the present Artificial Breeding Area do not need to make any formal application before being admitted to the scheme. All that is necessary is to telephone the inseminator between 8 a.m. and 9.30 a.m. on the morning of the day on which service is required. No previous contact is necessary, nor does a request to service one or more cows commit the dairyfarmer to use artificial breeding on all his herd or to continue to use it if he is not satisfied.

The areas and 'phone numbers of the inseminators are:—

Within 15 miles radius of Mt. Barker—**Mt. Barker 120.**

Within 15 miles radius of Myponga—**Myponga 320, 321.**

Along Murray Swamp and vicinity—**Murray Br. 1144.**

Statistics

PRODUCTION (000 gallons)

Month.	1961	1962	Total since July 1 1961/62	Total since July 1 1962/63	Total since January 1 1961	Total since January 1 1962
December	3,726	4,035	22,700	24,044	37,142	39,906
	1962	1963				
January	3,376	3,537	26,076	27,581	—	—

SALES (000 gallons)

Month.	1961	1962	Total since July 1 1961/62	Total since July 1 1962/63	Quota % 1961	Quota % 1962	C.M.B. 1961	C.M.B. 1962
December	1,513	1,551	9,116	9,375	41	34	2/0⅜	1/11
	1962	1963			1962	1963	1962	1963
January	1,498	1,548	10,614	10,923	44	44	2/2⅞	2/2⅛

INTERIM PRICES

(All prices are interim only and subject to adjustment by retrospective payment.)

	Basic C.M.B. (per lb. butterfat)	Total	3%	3.5% (per gallon)	4% (per gallon)	4.5% (per gallon)	5% (per gallon)
1962.							
December	3/3	1/11	5/2	1/7¼	1/10¼	2/1½	2/4¾	2/8
1963.								
January	3/3	2/2⅛	5/5⅛	1/8¼	1/11½	2/3	2/6¼	2/9½
February	3/3	—	—	—	—	—	—	—

RETROSPECTIVE PAYMENTS, 1961-62

A retrospective payment at the rate of 5.1d. lb. butterfat for manufacturing milk has now been paid to licensed producers at the rate of 2¾d. lb. butterfat (equalised) for all production from July 1, 1961 to June 30, 1962, raising the interim basic price for that year to 47¾d. lb. and the equalised price to 71 9-16d. lb. butterfat (equivalent to 2/5½ gallon for 4% milk). Although this is not the final payment for 1961-62, it is expected that any further amounts will be extremely small and it is not expected that the final equalised figure will exceed 72d., compared with previous years, thus:—

1958-59 (highest ever)	78.63d.
1959-60	76.94d.
1960-61	77.50d.

AUSTRALIAN RECORD

Vynette Gadget's Dainty, who completed her 1962 lactation with 638 lb. fat, has established an Australian Jersey lifetime production record with 8,594 lb. fat from 13 lactations. This is only 341 below the all breeds' lifetime record. Dainty was 14 years and 7 months when she finished her lactation on September 1.

Breeders and owners are Messrs. M. R. & J. E. McKenzie of Tooperang, S.A.—Stud breeders and holders of many blue ribbons and production records.

THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

Official Publication of the South Australian Dairymen's Association Incorporated

Published Bi-monthly

Vol. 2, No. 5 Adelaide, APRIL, 1963

ANAMA GRISELDA MARZIPAN
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PRICE
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12/- per Year, Post-Paid

HEDLEY C. CLARK

We mourn the untimely death on April 10, of Hedley Clark, Administrative Member of the Australian Dairy Produce Board.

His life and his ability were devoted to the Australian dairying industry and his passing cannot but fill all who knew him with a sense of great loss.

We extend our deepest sympathies to his wife and family.

THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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The Future of Australian Dairying

A.D.F.F. Presents a Tentative Plan

In the February issue of the Journal we printed a review of the current problems facing the dairy industry in Australia as it had been presented to the Australian Dairy Board. This review showed that world dairy production was increasing at a far faster rate than world consumption through existing commercial channels, and also indicated that although ways of facilitating movement of dairy products into under-developed countries had been talked about very little progress had been made.

The review also contained a restatement of the 2-price quota scheme submitted to the Dairy Industry Committee of Enquiry by a group of economists which included Mr. F. H. Gruen of the Australian National University.

At its meeting on 21st March the Central Council had considered this review, and passed a number of resolutions as reported in the Minutes elsewhere in this Journal.

A conference of dairy industry organisations held from 29th April to 2nd May in Queensland, was attended by the General President and the General Secretary. At this conference the Executive Committee of the Australian Dairyfarmers Federation submitted an interim policy statement as a basis for concerted action by all sections of the industry, with aid from the Federal Government and other authorities.

This interim policy statement, which, with explanatory comment, is included in this Journal, is for study by all constituent organisations for the purpose of developing a definite policy and preparing a plan for action.

It is to be hoped that the final policy will contain means for a greater contribution by each section towards the restructuring of the industry, rather than relying too heavily on additional Governmental aid and concessions from the Development Bank, and it is to be hoped also that the drive and finance for promotional activities and market research will not be expected only from producers and Government sources.

In the meantime no immediate solution to the problem is seen. A good season over most of the Commonwealth is adding to the unsaleable surplus that has already filled almost every available cold store.

The Australian Dairy Produce Board has requested every manufacturer of cheddar cheese to reduce production by at least 10%, but can offer no advice

as to what to do with the excess milk. Yet at the same time Australia imports almost £1 million worth (landed value) of fancy cheeses.

The trade talks in which the Deputy Prime Minister has been participating are aiming towards a general reduction of tariffs, a move which would be greatly to the advantage of the primary producer, yet the recent granting of a 10% increase in margins and 3 weeks annual leave not only adds to our cost burden but has led manufacturers in some industries to forecast that they will need yet further tariff protection if they are to survive.

With these pressures upon us we cannot afford to wait for help to be given, we must do something ourselves, and it is to be hoped that all dairyfarmers who have any concern for the future of their industry will closely study the material supplied and give considerable thought to the problems presented.

Australian Dairy Farmers' Federation Interim Policy

The attached resolution was carried at a meeting of the Australian Dairy Farmers' Federation on April 30, 1963, and submitted for discussion at a conference of representatives of the Federation, the Australian Dairy Produce Board and the Commonwealth Dairy Produce Equalisation Committee Ltd., held at Surfers Paradise, on May 1, 1963.

While the resolution covers its present policy, the Federation makes it clear that additional recommendations may be added after further consideration has been given by its constituent organisations to the matters raised in the Australian Dairy Produce Board's "Review of some Dairy Industry Problems".

THAT:

after studying the review of dairy industry problems, prepared by the Australian Dairy Produce Board; and

noting the Board's forecast of an Australian surplus of 30,000 metric tons of butterfat by 1970, and a possible world butterfat surplus of 362,000 metric tons in the same year, if present production and consumption trends continue; and

also noting the comments of the need for adjustment in the present marketing system, to meet the changing pattern in packaging, retail merchandising and consumer's eating habits; and

after giving full consideration to the advantages and disadvantages of the domestic sales quota scheme suggested by Mr. F. H. Gruen, of the Australian National University, and the constitutional and administrative difficulties associated with the implementation of such a scheme; and

taking into account previously-adopted industry policy decisions in relation to the production and marketing of dairy products, the returns to dairy farmers, the responsibilities of industry marketing authorities, the dairy research and sales promotion programmes, and the control of substitutes; and

being fully aware of the advantages and limitations of the Commonwealth Government's current five-year Stabilisation Plan—

THIS FEDERATION ADOPTS THE FOLLOWING POLICY:—

1. That it be a recommendation to the Commonwealth Government and to all State Governments that there be no further State land development for dairying until an examination has been made of the project by the Australian Agricultural Council in consultation with the Australian Dairy Industry Council in the light of marketing requirements.

Comment:

Farmers at present engaged in dairy production must be protected from any expansion of production through the creation of new dairy farms by the independent action of any State Government.

In effect, the Federation's policy is that any Government-assisted expansion of dairy production should be planned on an Australia-wide basis, and that no decision should be made by a State Government to establish new farms until the future requirements of Australian and Overseas consumers are thoroughly examined in consultation with Commonwealth Government and industry representatives who have the responsibility of disposing of surplus dairy production so as to provide reasonable returns to producers.

2. That no action be taken to introduce a domestic sales quota scheme, at present.

Comment:

Although many industry leaders and dairy farmers appreciate the possible advantages of a domestic sales quota scheme, because of constitutional and political difficulties its introduction would be unlikely, unless it had the almost unanimous support of the industry in every State of the Commonwealth. The Federation considers that this support would not be forthcoming at the present time.

However, it is of the opinion that further consideration should be given to the quota proposals in the light of production trends in the future, and that consideration should be given also, to the advantages and disadvantages of controlling the licensing of dairy farms, as an alternative.

3. That the Commonwealth and State Governments be requested to make special provision, through Government banking institutions, for finance to be made available, on reasonable terms, to dairy farmers who desire to change to other forms of production but who are prevented from doing so because they do not have the additional capital necessary.

Comment:

There are many dairy farmers who would change from dairy production to other forms of production if they could obtain the necessary capital to make the change. Finance made available for this purpose would relieve the surplus dairy production problem.

4. That it be a recommendation to the Commonwealth Government that funds be made available to assist in the training of personnel to act as advisers to Farm Management Groups.

Comment:

The most pressing problem of dairy farmers today is that their returns are insufficient to meet their costs of production and give them a reasonable standard of living. Under the terms of the current Stabilisation Plan which provides for a fixed Subsidy, and present economic conditions and competition with substitutes making retail price increases inadvisable, the possibility of increasing returns to any significant extent is limited. A satisfactory way for farmers to improve their net return is to lower costs of production, but unfortunately, most costs are beyond the control of individual farmers or the industry. However, much could be done to reduce costs through Farm Management Groups working with an experienced farm economist, in conjunction with State Departments of Agriculture. Such groups also would expedite the application of day-to-day farming activities of the proven results of dairy form research projects.

Farm Management Groups are operating successfully in New Zealand and Western Australia, but there are not sufficient trained agricultural advisers available at present for the general introduction of farm management groups throughout the Commonwealth. This problem would be overcome, to o large extent, with the allocation of finance to train suitable personnel to act as advisers to farm management groups.

5. That the Commonwealth Government be requested to raise the Commonwealth Dairy Industry Extension Grant to provide for a substantial increase in the percentage of herd testing costs covered by the grant.

Comment:

Herd Recording has an important influence on a farmer's efforts to lower his unit costs of production. From a personal point of view, when a farmer joins a herd recording group, he becomes a better farmer, takes a greater interest in individual members of his herd, ond gives greater attention to his feeding programmes.

The results of testing are a guide to him for the selection of animals for breeding replacements, and also act as a yard-stick for measuring the effectiveness of his breeding and feeding programmes. Unfortunately, rising costs have made it difficult for many farmers to continue testing, and have discouraged others from joining.

This position could be relieved by an increased allocation to the Commonwealth Dairy Industry Extension Grant for this purpose.

6. (i) That the Commonwealth Government be requested to increase the grant made for dairy farm and dairy maunfacturing research to £2 for every £1 provided by dairy farmers.

(ii) That it be a recommendation to the Australian Dairy Produce Board that the industry's research programme be extended, with much greater emphasis given to research designed to develop new dairy foods, to lower the costs of manufacture of existing products and improve the quality, to ensure more attractive packaging and presentation of dairy products, and to develop new markets at home and overseas for all dairy products.

Comment:

With the anticipated world-wide surplus of butterfat because of increasing production and decreasing consumption of traditional dairy products, the elimination of uneconomic manufacturing and distribution practices and the development of new products have assumed new significance for the industry. Therefore, there must be an immediate step-up in the industry's programme of research into:—

(a) The development of entirely new products and compounded products containing milk solids (both fat and solids-not-fat) for both local and overseas markets; such research should take into account the nutritional requirements of Asian people, their eating habits and dietary preferences; with a view to finding products most suitable to their needs;

(b) ways and means of assisting all those engaged in the production, manufacture, transport and distribution of dairy products to lower costs, increase efficiency and improve quality;

(c) more attractive presentation and packaging of all products to meet the intense competition with other foods; and

(d) the development of new markets, and consumer preferences in existing markets.

This programme will require more finance than at present is available for dairy research and, as the present research money is, to a large extent, committed to current research projects, the Federation considers that the Commonwealth Government should assist the industry's research programme by contributing £2 for every £1 paid by dairy farmers.

7. That, with a view to lifting the over-all quality of Australian dairy products, it be a recommendation to the Australian Agricultural Council that a Federal Dairy Industry Conference be convened to give further consideration to a substantial increase in the differential payments according to quality, to producers for milk and cream purchased for manufacture.

Comment:

As quality is of such vital importance to the industry, the Federation is of the opinion that further efforts should be made, on an Australian-wide basis, to suggestions for an increase in the differential payments to dairy farmers, according to grade.

8. That this Federation re-affirms its support for an International Agreement to provide for the orderly disposal of surplus dairy products at reasonable prices and recommends to the Commonwealth Government and the Australian Dairy Produce Board that every effort be made to expedite the introduction of such an agreement.

13. That it be a recommendation to the Australian Dairy Produce Board that consideration be given:—

(i) to making available increased quantities of butterfat in the most convenient and economical form, at competitive prices, to manufacturers who ore at present using other fats;

(ii) to making available, at concession prices under the strict control of the Board, surplus butterfat for export in processed milk products;

(iii) To making surplus butter more easily available to domestic science and technical schools for use in cookery classes in conjunction with the Board's nutritional educational programme;

(iv) to more extensive advertising and promotion of Ghee.

Comment:

The Federation is of the opinion that the above suggestions, and those outlined under item 15, for the disposal of surplus butterfat to the best advantage, both within Australia and Overseas, are worthy of serious consideration. They are suggested with a view to long-term benefits to the industry, in addition to immediate benefits.

14. That the Australian Dairy Produce Boord be commended for the action it has taken to ensure a market for Australian dairy products in Asian countries, through the establishment of recombined milk plants, and that this Federation supports a continuance and extension of this policy in the interests of the Industry.

15. That is be a recommendation to the Australian Dairy Produce Board that consideration be given to:—

(i) the selling of surplus batterfat to overseas countries on terms;

(ii) the use of surplus doiry products in schemes, intioted by the Board, designed to educate people in under-developed countries in the use of doiry products and their nutritional value, and so create a demand and markets, for the future;

Comment:

A recommendation that the Commonwealth Government convene a conference of interested countries to consider the introduction of an International Commodity Agreement covering dairy products was made by The Australian Dairy Industry Council in May, 1961. In replying to the recommendation, the Minister for Primary Industry, Hon. C. F. Adermann, M.P., said he thought that it would be premature for Australia to try and initiate such a conference at that stage.

In May, 1962, the Federation recommended further action by the Council but it was decided to defer the matter until it was considered that Government action would help the negotiations taking place, at that time, between the Marketing Boards of Australia, New Zealand and the United Kingdom.

One of the reasons given by Mr. Adermann for considering action premature in 1961, was the negotiations then taking place between the United Kingdom Government and the European Economic Community.

With the breaking down of the U.K.—E.E.C. negotiations action has taken place at both Government and industry levels, with a view to negotiating an international agreement.

The Federation supports these views and considers that every effort should be made to have a satisfactory agreement introduced as soon as possible.

9. That the Commonwealth Government be commended for the action it has taken to continue the payment of bounty on exported processed milk products with provision for a maximum amount of bounty of £500,000.

Comment:

As a direct result of the bounty paid in 1962-1963, Australian processors have been able to regain markets they previously supplied, and also open up and develop new markets. This has been of substantial benefit to the industry, as it has helped to alleviate the industry's surplus butterfat problem.

The action taken by the Commonwealth Government on the recommendation of the Australian Dairy Industry Council to continue the bounty for another year and increase the amount to £500,000 is appreciated.

10. That it be a recommendation to the Australian Dairy Produce Board that action be taken to obtain the views of all Commonwealth marketing authorities, with a view to a joint approach to the Commonwealth Government for an amendment of Section 92 of the Commonwealth Constitution to cover the orderly marketing of primary products.

Comment:

From the dairy industry point of view the particular objective would be to buttress legally the Commonwealth dairy product equalisation plan.

The equalisation plan, which has operated since 1934, is recognised by dairy farmers and by Governments too, as the greatest single stabilising factor in the Australian dairy industry.

The continued operation of the plan depends upon the voluntary agreement of butter and cheese manufacturers throughout the Commonwealth. The equalisation agreement provides that a manufacturer may terminate his agreement with the Commonwealth Dairy Produce Equalisation Committee Ltd., which administers the scheme, six months after giving notice of his intention to withdraw.

Any appreciable withdrawal would inevitably result in the complete breakdown of the whole plan. This would be disastrous for Australian dairy farmers and seriously affect the National economy.

This is an entirely unsatisfactory position which can be overcome only by definite action by the Commonwealth Government.

11. That is be a recommendation to the Australian Cheese Manufacturers' Federation that the Commonwealth Government be requested:—

(i) to increase substantially the import duty on all imported cheeses, as a protection to the cheese industry; or alternatively,

(ii) to prohibit the importation of cheese.

Comment:

The Federation is of the opinion that there should be a complete prohibition on the importation of dairy products which compete with products of a similar type manufactured in Australia.

With action being taken by the industry to try and reduce over-all cheese production it appears incongruous that cheese should be imported into Australia.

However, it is appreciated that there may be international difficulties associated with a complete prohibition on imports of cheese and the Federation, therefore, recommends action to protect the industry through the tariff. If this is not effective, action should be taken to prohibit imports.

12. That the Commonwealth and State Governments, through the Australian Agricultural Council, be requested:—

(i) To police strictly the present table margarine quota legislation and ensure that no table margarine is manufactured in excess of production quotas;

(ii) to provide for all cooking margarine to be a white colour;

(iii) to provide for the automatic cancellation of the quota of any manufacturer convicted of manufacturing either table margarine in excess of his quota, where such provision is not already included in the act;

(iv) to prohibit the use of margarine in government or semi-government organisations or institutions, including schools, hospitals, the armed services, etc.

Comment:

Table margarine quotas originally were introduced in the early 1940's by agreement between the Commonwealth ond State Governments, through the Australian Agricultural Council as a protection to the dairy industry. The circumstances which made such protection necessary, then, still exist, and it is, therefore, essential for all Governments to agree to a policy which will ensure effective protection to the dairy industry from substitutes.

(iii) more extensive advertising of dairy products by the Board in overseas markets, other than the United Kingdom, to ensure a greater demand for Australian produce on those markets.

16. That the Australian Dairy Produce Board be requested to arrange for, and finance, a survey into ways and means of increasing the efficiency of the manufacture and distributing sections of the industry.

Comment:

The main objects of the survey would be to provide data which would be of assistance to manufacturers in planning the amalgamation of factories for more economical manufacture, eliminate inefficient factories, and assist the industry to provide more effective distribution and merchandising.

Central Council Proceedings

THURSDAY, MARCH 21, 1963

Honor Conferred on General President

It was resolved, on the motion moved by Mr. Spicer and seconded unanimously, "that this Council has much pleasure in recording its appreciation of Mr. Elliott's 24 years service as General President of this Association and of the fact that this service has been recognised by Her Majesty the Queen in admitting him to the Order of the British Empire".

The Chairman responded, thanking the members of the Central Council for their good wishes, and paying tribute to Mrs. Elliott for her co-operation and forebearance during that period as being the factor which has made it possible for him to devote so much time to the Association's affairs.

Artificial Breeding Board—Newsletter

The Secretary reported that following the resolution by the Central Council "that this Association ask the Artificial Breeding Board to publish regularly a newsletter about artificial breeding, its techniques, the bulls used, statistical data, and other information which will assist the dairy-farmer to make the fullest use of this medium", he had written to the Board and received from the Director the following reply:—

"The resolution passed by your Central Council was discussed at my Board's most recent meeting. I was instructed to advise you that the Board will periodically publish material of interest to users of Artificial Insemination, from all sources available. This published information will naturally be designed to encourage the most efficient use and the widest use of the medium.

—W. K. ROSE."

The Chairman stoted that at the last meeting of the Artificial Breeding Board he had asked the Board to consider publishing in the Journal any items of importance, and he hoped that in the near future Mr. Rose would be releasing information concerning the purchase of bulls and other material. The Board had purchased seven bulls, the first of which were due at the Semen Collecting Centre shortly, and it was hoped that an early start would be made on producing chilled semen, which gave a better conception rate at cheaper cost.

Promotion of Sales of Dairy Produce—Second-grade cheese

The Secretary reported that on the matter of promoting the sales of dairy produce by withdrawing second-grade cheese from competition with first-grade cheese as a table cheese and finding an alternative outlet for it in some processed form, he had written to the Principal Research Officer of the Division of Dairy Research, C.S.I.R.O. (Mr. J. Czulak), and had received a reply which stated:—

" . . . Your Association's concern with the effect of inferior quality cheese on the volume of cheese sales is, in my view, well justified and, if pursued, might lead to some improvement in the situation.

"Before suggesting any new avenues of disposal for the inferior cheese, I would like to raise one point which your Association might consider as a preliminary to further action. It is this: Cheese sold on the local market is not purchased or sold according to its grade. In fact, the various State authorities concerned with the supervision of dairy products manufacture and quality have no personnel available to grade all the cheese for the Australian market. In the absence of

such official grading and of an official price differential between cheese of excellent, good, or inferior quality, both the sellers and the distributors ore likely to be tempted to pass low quality cheese at the price which only high quality cheese ought to command. The overall result is that the consumers often buy a cheese which is below the grade they have expected. This does not encourage them to buy more.

"In my opinion, the introduction of compulsory grading of cheese for the local market, similar to that operated by the Commonwealth for the export cheese, would greatly help to improve the situation. Such o grading system could either be carried out by a State government organ or by an organisation voluntarily set-up by the cheese industry itself with official government approval. The Dairy Farmers Association Inc. might consider approaching the Australian Dairy Produce Board, the Equalisation Committee, the Cheese Manufacturers Federation and the appropriate Government bodies for some action along these or similar lines."

In discussing the possible processes which could be used Mr. Czulak stated—

". . . a cheese drying process and plant have been recently developed for the conversion of cheese packaging off cuts ond some lower grades of cheese into a powder. The first commercial plant for this process has just started operations in Melbourne.

"Attractive as this way of disposal might appear at first glance, one must bear in mind that the market for the cheese powder can only be developed gradually and that some export markets would have to be found, if the new product is to take up substantial quantities of the off-cut and poor quality natural cheese.

"I understand that two South Australian cheese companies might become interested in establishing a plant for this process in South Australia."

The Secretary added that it was obvious that the first hurdle was that of cumpulsory grading of cheese, and the setting up of a price differential, and he was at present studying the legislation relating to butter grading to see how this could be adapted to cheese, for submission to the Milk Promotion Joint Committee.

Sweet Cream Legislation

The Secretary reported that the Food and Drugs Act had been amended as from 14/3/63 to allow the use of thickeners in sweet cream and to provide a further grade of cream of 48% fat content, to be designated "rich cream". It was expected that a similar amendment to the Milk Supply Act, which had been reported to have been rejected because of inconsistency with the Food and Drugs Act, would be gazetted next week. The local trade was now examining the new regulations, with which they were not entirely satisfied as it was extremely restrictive in some ways.

Evidence was in hand showing that the April 1962 price reduction had placed a severe strain on the Victorian cream sales, as the major wholesaler had now a limit of 15 lbs. per week minimum to qualify for wholesale rates, but against this cream from another Victorian source under the brand name "Bulla" had also come on to the Adelaide market.

A cream promotion campaign had recently been introduced in Queensland by wholesalers, through television and the co-operation of the retail vendors, for which an increase in sales of 20% was claimed. However, he suggested that we wait for some time to see whether initial results were maintained before any further consideration.

Mr. Faggotter stated that it was commonly believed that in addition to minimum quantity requirement, the wholesalers of Victorian cream also required a minimum quantity of cream to be taken to qualify for supplies of the much-demanded scalded cream. He also believed that not enough was being done to educate the consumer os to the truth about the cream supply. We should also cast out of our thoughts any idea of increasing our price. The current position of the industry was such that we should seek to build up sales as high as possible and an increase in price would detract from our ultimate well-being.

Interchange of Delegates—APPU

The Secretary reported that, following our letter concerning the suggested Liaison Committee, the APPU had replied:—

"I acknowledge receipt of your letter of December 17 in regard to a resolution passed by your Central Council suggesting the formation of a Liaison Committee.

"The resolution will be placed before our Dairy Committee for consideration at the first available opportunity.

—COLIN T. SLEE, State Produce Secretary."

It was now believed that the APPU intended to place the matter before their Commodity Conference which would be taking place next week, after which we could expect a reply. Until such reply was received it was not intended to call a meeting of our representatives on the proposed Liaison Committee as it would have nothing to discuss.

Resolutions from Districts

SOUTH COAST—"that the Government be approached to set a retiring age for all Government appointed members to Boards directly affecting primary industry".

At the Executive Committee meeting of 11/10/62 it was resolved that it be a recommendation to Central Council that this resolution be forwarded to the N.F.U. of S.A. requesting its support and action to implement the resolution.

Mr. Goodrich said that the Artificial Breeding Act outlined a condition in Section 8 (2) that members of the Artificial Breeding Board should retire on attaining the age of 70 years and there was considerable support for similar conditions to apply to other commodity Boards of longer standing.

Mr. Spicer formally moved—"that this Council accept the recommendation of the Executive Committee in this matter," which was seconded by Mr. Gorman and carried.

MEADOWS—"that the Aritficial Breeding Board be asked to revise its charges so as to make the charge £1 per service instead of the present £2/10/0 for three services per cow".

At the Executive Committee meeting of 11/10/62 the Secretary had reported that this resolution had already been discussed by the Special Sub-Committee on A.B. in conference with the Director of A.B. (Mr. Rose). Mr. Rose had stated that a fee of this nature would not provide sufficient revenue for the A.B. scheme as approximately 15/6d. worth of semen was used at each service, and the economic operation of the scheme depended upon a fee of at least £2/10/0

with a minimum of returns. The Secretary also reported that the N.S.W. Milk Board charged 30/- for three services in a much denser farm population, but had a special rate of 17/6d. for each service at Camden Park, where 1,500 cows were held on a single property.

The Executive Committee had resolved that the Chairman, as a member of the A.B. Board, request the Board to consider instituting a unit fee for the fourth and subsequent services, and report back to the Central Council.

The Chairman reported that the Artificial Breeding Board felt that it was at present too early to institute major diversions from its original plans, particularly as, at the present season of the year, the Board was only just holding its own financially. He intended to bring the matter forward for the Board's consideration as soon as the Board had been able to examine its procedure and was ready to examine methods of cost reduction, such as chilled semen. The Board was not established to make a profit, and the amount of revenue received by the Board depended on the support given to it by the dairyfarmers, together with what it was able to get from the Government.

Mr. Turner said that in his experience there was a high proportion of cracked capsules. If these had to be paid for by the Board the wastage could well add up to 15/6d. for the proportion of good capsules. He also wondered whether some of our problems were coming from borderline capsules which were not obviously cracked but were still ineffective.

Mr. Harper said that on behalf of the Meadows District, which originated this subject, he was prepared to accept the Chairman's explanation in view of the brief history of the Board's operation, and would defer the matter until a more appropriate time.

Pests and Noxious Weeds

The Secretary explained that the NFU of S.A. was concerned as to the effectiveness of legislation dealing with noxious weeds and vermin. The opinion was widely held that noxious weeds legislation was a farce because of the weeds growing on Government and local government property, and the same criticism applied to vermin-control legislation. The NFU of S.A. has asked each member organisation to advise the NFU Executive Committee of any action taken by it with regard to control of noxious weeds and vermin and to express opinion on what should be done.

Since 1959 this Association had acted in respect of the liberation of pheasants, the eradication of rabbits, and cockchafers. Our opinion of action which should be taken by the NFU was required.

An example of the way in which the weeds legislation was mishandled could be seen in a recent issue of the "Mount Barker Courier" in which the Mount Barker District Council's Noxious Weeds Inspector had expressed alarm at the inroads being made by South African Daisy in the area, and, in referring to the fact that many landholders were not able to identify the weed, had said that it could be seen "growing in large quantities on the roadside leading from the Eagle on the Hill Hotel to the Old Toll Gate. In fact it makes a hedge-like growth on both sides of the road".

The Chairman pointed out that it was the duty of the landholder abutting the road to keep his side of the road clear of weeds; the responsibility of the local government authority was to see that the landholder carried out his duty.

Mr. Harper said that the essence of the matter was not the inadequacy of the Act but the shortcomings of the councils.

Mr. Sheidow described his own experience in getting noxious weed seeds in purchased seed, and in the reluctance of the councils to take action. He stated that if we could get the power to control weeds taken out of the hands of councils and into the hands of a body willing to use their power we would do more good for the farmers in two minutes than we had done in two years.

The Chairman commented that there were marked differences between Councils, some carried out their duties, others did not, particularly where the Councillors themselves were the holders of weed infested land, and even the appointment of weeds officers was pointless if the councils refused to follow up the weeds officers' recommendations.

Mr. Green said although the councils had the job of seeing that the Act was carried out, the Act stated that the responsibility of controlling weeds belonged to the landholder, on his own property and on adjoining roads, and we could not place all the blame on the Councils if the landholders did not carry out their responsibilities. It had been suggested that action be taken to allow councils to supply weedicide at cost, which would ease the financial burden on the landholder, and so make him less reluctant to act. There was no doubt as to the seriousness of the problem; much of our agricultural land was declining in value because of weed infestation.

Mr. Easton said that regardless of the price factor of weedicides, the claims made for hormone sprays were misleading and even false. His experience, both privately and with Departmental assistance, was that the quantities necessary for a kill were far greater than those recommended, and unless a farmer was sufficiently conscientious to spray at the strength necessary to get a good kill, there was the danger that the kill would be superficial and would merely give the surviving weeds a chance to grow without competition. Regarding control of roadside weeds, the farmer's problem was not only to control the weeds growing there but to keep in control the new and often dongerous weeds introduced by the road graders.

Mr. Kenny moved—"that it be a recommendation to the NFU of S.A. that a request be made to the Prices Commissioner for an investigation into the prices for weedicides and pesticides for agricultural use," which wos seconded by Mr. McKenzie and carried.

Mr. Warwick said that much of the weakness of the Vermin Act lay in its administration through the Department of Lands. A better approach would be administration by a department more intimately connected with the problem, such as the Department of Agriculture, or by a Board completely independent of any Department entrusted solely with the job of controlling weeds and vermin. Although it was clear that the Councils were neither willing nor able to discharge their duties satisfactorily, there were disadvantages in administration either by the Department of Agriculture or by an independent Board, particularly as o Board would be financed by a levy on landholders, but the present position was so unsatisfactory as to warrant immediate action.

Mr. Tonkin said that transfer of political control would bring little gain; local government was as near home as we could get, and if its administration of the Act was unsatisfactory the answer lay in getting councillors who were prepared to carry out their duties.

Mr. Goodrich said that however much we criticised the councils or the Department of Land or the Department of Agriculture, the control of weeds and vermin was still a farmer's problem and we should make no move that would force a conscientious landholder to pay for weed or vermin destruction on his neighbour's land. Consequently it would be desirable to ask the Department of

Agriculture to put special emphasis on weed and vermin control in their advisory work. As far as he knew, although advisory work was now carried out on a "whole farm" approach, weeds and vermin were not included. We would not kill a weed or a rabbit whilst we were trying to pass the buck.

The Secretary explained that many of these ideas had already been considered by the Executive Committee of NFU of S.A. and a sub-committee had been appointed to meet the Weeds Advisory Committee to discuss means whereby legislation can be used in a practical way.

Mr. Faggotter said that most of us would agree the administration of the Weeds Act was a farce because of the weeds growing on Government and Council property, but to this must be added the fact that Councils were not only not controlling weeds, but were actually spreading them through road grading, and through piling up timber removed from roadsides which provided conditions for weed growth which were impossible to combat.

Mr. Ballard said that in his experience, not only were the Councils not carrying out their duties but they were in some cases incompetent to do so, and their handling of the problem was often merely superficial. The only solution lay in giving the power to a body willing and able to use it.

Mr. Lee said that we must realise that if pressure were brought on Councils to take over the job of weed control the financial burden would fall on us all, conscientious or otherwise, through higher rates. Basically the Act was reasonable and if weedicides could be made available at reasonable cost, the conscientious farmer could carry out his part of the job.

Mr. Green moved—"that it be a recommendation to the NFU of S.A. that local government bodies be asked to make available weedicides and pesticides at cost," which was seconded by Mr. Turner and carried.

Mr. Warwick said it should be realised that part of the apparently excessive price of these preparations was due to the high cost of the research work in developing them, and it would be unrealistic to hope for a reduction in the manufacturers' prices.

Mr. Basham moved—"that the delegates from this Association to the NFU of S.A. press for full and rigid implementation of the Weeds Act by local governing authorities," which was seconded by Mr. Deans.

Mr. Turner warned that we should realise that there are areas where a rigid enforcement of the Act could put farmers off the land; Cape Tulip was one example of a weed which had, in some areas, probably got beyond the power of individual farmers to control; the only practical course was to prevent its spread.

The Chairman replied that the NFU Executive had recognised this problem and had emphasised the necessity of a practical approach concentrated on dangerous weeds as the target for uniform action by Councils.

The motion was then carried.

Mr. Faggotter moved—"that we request the NFU of S.A. to appoint a special subcommittee to study the Weeds Act and to recommend to the Government such amendments as are necessary to place the responsibility for the control of weeds on roadsides completely onto local governing authorities," which was seconded by Mr. Gormlie and carried.

Methylene Blue Testing

The Executive Committee had considered a letter from the Milk Board advising that the Board had received legal advice that the practice of treating four hour milk as conforming to the standard for city milk was in error, and that from 17/5/63 the only milk accepted as having conformed to standard would be that which had not decolorised at four hours (and was therefore recorded as 4½ or 4+). Apart from this change the Board did not intend to alter the present procedure in regard to the suspension and reinstatement of producers.

The Executive Committee had considered the position and resolved that no action be taken.

The Secretary explained that it had for long been realised that the method of interpretation of the methylene blue results was ½ hour less than the legal standard, and this change was only bringing current practice into line with the Act.

From such figures as were available to him he estimated that this change would increase the number of suppliers eligible for suspension by 2½ to 3 times, although there had, during the season now ending, been rather less, and this trend, if continued, would reduce the forecast figure.

As explained in the February issue of the Journal, the position had arisen from the inclusion of the methylene blue test in the new Dairy Industry Regulations, which had required an examination of the practices to be followed by factories in interpreting the two Acts involved in respect of licensed and unlicensed suppliers.

The statement in the letter concerning the procedure in regard to the suspension and reinstatement of licences arose from a query concerning the Board's intentions in view of the fact that the new Dairy Industry Act Regulations now provided what could be considered a fairer method of penalty and reinstatement.

It was resolved that the decision of the Executive Committee be accepted.

Industry Review by Australian Dairy Produce Board

The Secretary stated that on February 21 the Australian Dairy Produce Board had held a special meeting at which the state of the dairying industry on a world-wide basis was reviewed (see February issue of this Journal). The picture that emerged was one of continued increasing production by the dairying countries of the world at a rate greater than that which can be consumed commercially by the developing countries. For Australia the position would be one of unsaleable surpluses increasing faster than the rate of absorption by domestic and export markets, with the drive for new export markets being more than cancelled by encroachment of other dairying countries in to our traditional markets.

A recapitulation of the Gruen Scheme had been submitted to the A.D.P.B. meeting. The Board did not discuss this or any other solution to the problem.

The Executive Committee had studied the report issued by the Dairy Produce Board and had resolved "that this Committee considers that some form of industry reconstruction is necessary in order to overcome the problems of unsaleable surplus dairy produce and recommends that the Gruen Scheme be further explored as a possible means of achieving this result."

Although the Dairy Produce Board had not discussed the Gruen Scheme, its inclusion in the Report had indicated that there must be support for it in some quarters, and the Secretary had consequently written to Mr. Hedley Clark asking whether the Board hoped that industry organisations would express their views as a guide to the Board.

Mr. Clark has replied as follows:

" . . . We certainly have no fixed ideas here, at the moment, for adopting any plan. At our recent Board meeting, several speakers confused the issue by referring to restriction on production. The Gruen plan might discourage production, but it does not restrict it and leaves the decision in the hands of individual dairy farmers.

"It does appear inevitable that some form of production control will need to operate if international commodity agreements are to become a reality. I think the industry will gradually change its thinking as it learns more about the problem. It would be a mistake to proceed too quickly at this juncture.

"Meanwhile, I suggest that you give as much publicity to the problems we touched upon in the report, not only in respect to production, but also in the marketing of our products. There is a tremendous job in front of us to bring the dairy industry into line with modern merchandising practice . . .

"By the end of April I hope industry organisations will have had an opportunity to formulate some ideas for discussion by the combined bodies."

The Secretary reported also that the A.D.P.B. in a circular on 6/3/63 requested all manufacturers of cheddar cheese to undertake a voluntary reduction in output of at least 10%. The circular had stated that "it was appreciated that such a reduction would create problems of milk disposal and/or higher overhead costs but it must also be recognised that unlimited production of cheese in Australia, creating unmanageable surpluses, or alternatively a return to unrestricted shipment to the United Kingdom would in either case have extremely adverse effects on the Australian cheese industry".

The Secretary explained that quite obviously the surplus milk which would be available from such a reduction in output could not be channelled into butter manufacturing, where there was already a far greater surplus than there was of cheese.

The Victorian Dairy Farmers' Association had, just prior to the A.D.P.B. meeting passed a resolution—

"that this Assaciation is higly appreciotive of the pramotion efforts of the Australian Dairy Produce Board, both in regard to sales on the home market and the development of new overseas outlets for dairy products. We support endeavours for the maintenance of maximum quotas to the United Kingdom and continued efforts in the field of market research and exploration in Eastern Countries.

"We further request that the Board use its fullest endeavours toward the orderly disposal of surplus dairy products and that consideration be given to industry assistance for nutrition projects in under-developed countries, i.e., through F.A.O. Freedom from Hunger Campaign or milk distribution schemes under the direction and control of accredited organisations, as an immediate measure, while supporting the possibility af an International agreement on marketing and disposal of dairy products.

It is suggested that some gesture by the industry in the matter of assistance to the relief of distress is worthy of consideration and could be directed through channels which would avoid adverse effects upon normal trade."

It was important to note in connection with the VDA resolution that the dairy Board review had insisted on recognition of the fact that "charitable or concessional disposals of dairy products should not interfere with existing commercial channels of trade nor threaten developing or potentiol markets".

FAO had been engaged for some years on two projects, orderly marketing through commodity agreements, concerning which the Board's review had commented that, "although a good deal of lip service had been paid to the need for action, very little had in fact been done", and, in conjunction with WHO and IFAP, the "Freedom from Hunger Campaign.

The question as to what contribution we could make toward the solution of a world problem, either of praduction, of surplus, or of feeding the hungry, was, of course, a matter for deep study.

Mr. Warwick said that quite seriously he thought the problem had very little to do with us. The FAO had predicted a disaster if nothing was done and he believed that the only way the problem of surplus could be tackled was by there being a disaster. Australia's contribution to the world dairy export surplus was, as shown in the review, about 2%. If we are to adapt the Gruen or any other scheme we might manage at the most to reduce our surplus by 50%, which would then affect the world position by 1%, which was not a worthwhile objective. He believed that the only solution was to allow things to get to the stage where every dairying nation has to come to the conference table and work out some arrangements so that these stocks of butter, cheese and milk powder can be supplied to the peaples who undoubtedly do desperately need it and who cannot provide the finance. He wos satisfied that this could be done if conditions warranted it but it would never be done until we reached the disaster stage. From our point of view it could be shown that even if a disaster completely wiped out our export markets we would lose (at present rates) a little over 6d. per pound butterfat. If we had thrown into the sea all the cheese over and above our home requirements we would still have received 71d. for our product, and a world dairy disaster would have only a slight effect on the producers in the Adelaide supply area. This was not a policy of "I'm alright, Jack" but just a recognition of the fact that in the long run a disaster was probably the best way to achieve a rationalisation of world dairying, and that our losses from such a disaster, and our contribution to its prevention were both infinitesimal. Undoubtedly things would be far worse in the Eastern States, but if they were not advocating a major restructuring of the industry, why should we?

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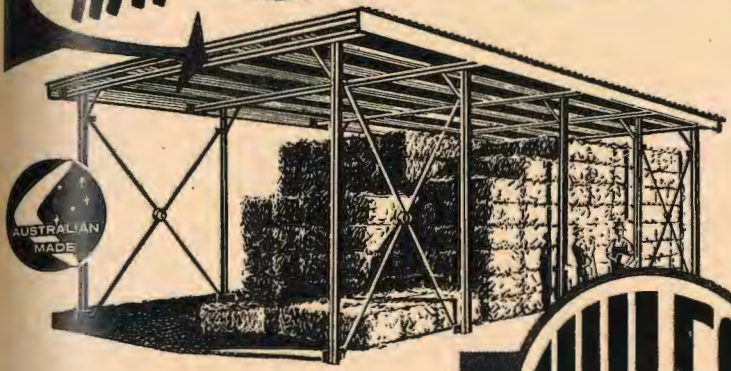

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Mr. Goodrich said that for years Australia had been trying to increase primary production; now we had succeeded with almost every drop, and although the targets achieved were perhaps no higher than we had set out to achieve, obviously something had gone wrong at the end of the line. Possibly no one had thought we could ever reach the goal, so there had been no planning as to what we should do with this production. With two-thirds of the world's population going to bed with an empty stomach, and countries such as India desperately trying to create a dairy industry subsidised to the hilt, yet we were faced with a surplus problem which the success of the Indian dairying programme would only make worse. Would it not be better for these countries to devote their energies to more immediate schemes and allow us to supply their dairying needs, even on say a 25 year credit plan. After all, if we didn't sell it we wouldn't get paid for it anyway. Perhaps if the organisations and departments that had urged us to increase production could now turn their energies to ways of supplying these countries with the means of buying our produce, and once these peoples got used to the idea of a full belly we would really get into the job of making Australia produce.

Mr. Turvey said that whilst he shared everyone's concern about the starving millions, he recognised that his most urgent concern was the well-being of his own family, and he could recall a time when the return was as low as 7d. lb. owing to over-production, a situation which had been cured only by a world war. We faced the same production situation today, but we should certainly not hope for a similar remedy, rather we should seek some means of our own of getting the industry on to a stable footing. Largely our troubles were due to the fact that the stabilization subsidy and the Commonwealth Equalisation Scheme provided strong incentives for increased production. Here in the city milk area it could be said that the incentive for increasing production was something over 70d. lb., yet in fact what we actually got for the surplus production was nearer 7d. lb. It would be ridiculous for a manufacturing industry to produce such goods as say mator cars, expecting to get, say £1,000 each for them, only to find that it had to sell them for £100; they would be bankrupt in a very short time, yet we in the dairying industry seemed to think we could go on doing it indefinitely. It was time we brought our production back into line with what we could sell economically, and the Gruen plan was a worthwhile contribution towards bringing that about. It provided an incentive for increased production at a level which reflected something like what that production would return. If anyone was big-hearted and would rather see the Asian people well fed than provide a decent standard for his own wife and family, he could go ahead and do it, but for anyone who wished to preserve the standard he had at present, the Gruen plan provided a means whereby he could do it. No doubt such a plan would be difficult to administer, but a similar plan in the U.S.A. was working quite well and had succeeded in reducing that country's terrific surpluses. As it seemed likely that some form of production quota would have to be imposed if the problem was to be solved, this meeting should pledge itself to demand that any quota scheme be based on a period already past. The industry had already seen the folly of setting a quota which allowed farmers to compete desperately to qualify for a high quota, and if the industry thought that a quota scheme was likely to be introduced, unless there was a quite definite statement that quota allocations would be based on production figures already achieved, the immediate result could be a rush by each farmer to increase production in order to qualify for a high quota, which would make the over-production position much worse than it was a present, and if, in fact, no such scheme eventuated, the whole industry would be far worse off.

Mr. Loechel said that although he agreed with Mr. Turvey that we must safeguard our personal interests, we must also look ahead and try to determine a policy which is not just for the present; a policy about which, in 50 years time, we could say "Well, what we did was the right thing!" We could not shut our eyes to the facts relating to world hunger, and although the Gruen plan might be an excellent remedy to tide us over the present difficulty, it was not the final answer. There was going to be a showdown sooner or later, and we should explore

every avenue regarding any national approach possible towards making concessions to overseas countries. It seemed a colossal sin to reduce production whilst people were starving, and we should be wide-awake enough to find some way around the problem.

Mr. Harper said that we should recognise that the pressures that affect the dairying industry are the same that affect any indusrty, primary or secondary. Although he had not agreed with it entirely, he had been impressed by the report of the Dairy Industry Committee of Enquiry, particularly by the honesty, the integrity and the humanity of the recommendations, and of course we must recognise that Gruen's submission was one that the Committee took into account when coming to their conclusions. The thing that concerned him personally was that there was being created in Australia, not only for the dairying industry but for every primary industry, a "small farm" complex. This seemed to be what was worrying the dairy industry there was no doubt that some dairyfarms were quite prosperous, others were not, and although there might be an economic 'slow-down' 'he did not think we should say that nothing should be done, that the solution would come from the free play of "laissez faire". He was very much impressed with the Gruen plan, which he believed was the most intelligent solution he had seen to overcome this problem which was likely to be with us for some time. We should give it full considerotion and at the same time look a little bit belaw the superficial ospects, and examine the economic possibilities. Certainly, ond Gruen himself admitted this, the plan had its difficulties, including constitution problems, but it was up to us to shape the destiny of our own industry.

Mr. Whitford said that the Federal ond State Governments could share much of the blame for the crisis confronting primary industry. Since the end of the war they had been advocating increased production in primary industry, and at the same time endeavouring to make the nation selfsufficient by developing secondary industry with tariff protection and a general "buy Australian" policy. Clearly Australia was a country with special advantages in the field of primary production, but when it came to selling that produce to other countries we could only do so if we gave them the opportunity to sell something to us. Their supply of manpower would allow us to buy manufactured goods for use on our farms and throughout the community at prices which would cheapen the costs of our primary production on world markets, a position that could never be brought about with Australian secondary industries meeting the rates and conditions demanded by Australian labor.

Mr. Faggotter asked whether we would be the frightened group we were if we used the phrase "under consumption" instead of "over production". Unfortunately the panic spread down to us from our leaders; not 12 months ago they were viewing with horror the position if Britain joined the Common Market; now they were even more afraid of the future because she might not get in. Today we were worried about unsaleable surpluses, yet all over the world there was the fear of the "population explosion". We must stop thinking around the problem, and go straight to the question of marketing. In these circumstances it was nothing other than sinful to think obout restricting production.

Mr. Gormlie said that from the tone of the debote he thought that the delegates did not realize the point at issue, which was that in a very short time the President and the Secretary would be representing this Association at a big conference to give the South Australian view, and this conference would have before it the facts and stotistics which we had here today. The facts were that all our warehouses were bulging with butter and cheese that had to be got rid of somehow. If we like to send it to the Asian countries we would have to pay for it out of our own pockets; we wouldn't get paid for it. The position today was serious, but what was more serious was the position as it would be in the next few years, which at present appeared to be that there would not be enough storage space anywhere to hold the surplus. In this country the root of the present problem was the disparity between home and overseos prices, a circumstance which had had its parallel in the 1920's when the cessation of the

contract with the British Government left this country with excess dairy potential, and which, if we were not careful, could lead to the same depression in the industry as we had experienced at that time, and although it had been said that "they wouldn't allow it", in fact "they" were "we", and it was our job to determine our own destiny. Therefore we should ensure that we gave to our delegates at least a guide as to the action we wanted to be taken. Undoubtedly the immediate problem was to get rid of the existing surpluses which were in cold store all over the world, and costing a lot of money just to hold there; certainly the Gruen plan would not solve this problem, but it could stabilize the position as it was today and prevent any worsening of the problem. The adoption of the Gruen plan would not merely put off the evil day, but would contain the position as it was until such time as further expansion was required. Certainly for city milk suppliers it had the advantage of maintaining the status quo; without it, as the position became chaotic, our metropolitan equalisation scheme would collapse under outside pressure. Consequently he moved, as an instruction to our delegates to the Queensland Conference—"that this Association considers that some form of industry reconstruction is necessary in order to overcome the problems of unsaleable surplus, and recommends that the Gruen scheme be further explored as a means of achieving that result".

Mr. Easton seconded the motion, saying that this was an immediately necessary measure whilst international schemes were being developed. If Great Britain was able to provide £430 million per year to keep her farmers on an acceptable level of prosperity, it was surely possible to provide at least similar amounts to under-nourished countries to enable them to buy our commodities.

The motion was then carried.

Mr. Whitford said that reference had been made to giving away our unsaleable surpluses rather than incurring cold storage charges indefinitely. In view of the millions of underfed people, our surpluses were only a drop in the ocean, so rather than give this produce away, it would surely be preferable to be sold to them at a fraction of our market price, which perhaps they could afford, and which perhaps would cause less unfavourable reaction from our competitors. The money so gained from this sale could then be spent in those countries in some way such as some form of research work, that would help to build up their economy and so increase their buying capicity.

Mr. Warwick then moved—"that this Association considers that the only long term solutions to the problems of the dairying industry lie in international commodity agreement," which was seconded by Mr. Gormlie and carried.

Mr. Turvey then moved—"that the delegates from this Association to the A.D.F.F. be instructed to urge that any scheme involving the allocation of quotas be based on production up to the end of 1963," which was seconded by Mr. Turner and carried.

Statistics

PRODUCTION (000 gallons)

Month			Total since July 1		Total since January 1	
	1962	1963	1961/62	1962/3	1962	1963
February	2,642	2,926	28,718	30,507	6,018	6,463
March	2,579	2,736	31,297	33,243	8,597	9,199
April	2,323	2,383	33,620	35,626	10,920	11,582

SALES (000 gallons)

Month	Total since July 1				Quota %		C.M.B.	
	1962	1963	1961/62	1962/63	1962	1963	1962	1963
February	1,468	1,502	12,082	12,426	56	62	2/8⅞	2/6⅛
March	1,651	1,700	13,733	14,126	64	62	3/1⅛	2/11½
April	1,531	1,602	15,264	15,728	66	67	3/1¾	3/2

INTERIM PRICES

(All prices are interim only and subject to adjustment by retrospective payment.)

1963	Basic	C.M.B.	Total	3%	3.5%	4%	4.5%	5%
	(per lb. butterfat)			(per gallon)				
February	3/3	2/6⅛	5/9⅛	1/9½	2/1	2/4½	2/8¼	2/11⅜
March	3/3	2/11½	6/2½	1/11	2/3	2/6⅜	2/10½	3/2½
April	3/3	3/2	6/5	1/11¾	2/3¾	2/7¾	2/11⅞	3/3⅞

THE PRICE OF DAIRY PRODUCTS

Probably the most frequent criticism of the dairy industry in Australia, and the most used explanation for our relatively low consumption per head, is that "the prices are too high". An examination of the facts and a comparison with prices overseas will provide a complete refutation, particularly if we examine not only the absolute price but the price as it relates to wage levels.

The American journal "Hoard's Dairyman" claims that milk is now cheaper all over the Western World in terms of the number of minutes work required by an average workman to earn enough to buy a pint of milk, and cites the "bargain nations" as being:—

United States	5.4 minutes
Switzerland	5.7 minutes
Germany	7.2 minutes
England	7.8 minutes
France	8.4 minutes
Italy	13.8 minutes

"Hoard's" has not included Australasian figures but the Adelaide figure of 4.0 minutes for one pint of bulk milk and 4.3 minutes for one pint of bottled milk surely puts us up among the leaders.

(If any reader wishes to verify these figures, the original values in Hoard's" were given in respect of one U.S. quart which is equivalent to 1.6 British pints.

The Adelaide data is as follows:—

Retail price of milk per pint: Bulk, 9½d.; bottled, 10d.

Average weekly earnings per employed male unit [December quarter, 1962]: £23/4/7.

Average standard weekly hours of work: 39.36.

Source—Monthly Review of Business Statistics, March, 1963).

A similar condition prevails also with relation to butter and cheese, although the cheese position is less outstanding. The industry is frequently criticised for charging too high a price for butter and cheese as compared with London prices, and the question is asked: "If Australia can sell butter in London at 2/6 lb., why can't it be sold at that price here?"

There are two answers to this question. Firstly, that the figure of 2/6 so conveniently chosen was a low figure that was reached momentarily some years ago when the London market was oversupplied, **and has never been repeattd since;** and, furthermore, **is in sterling.** Secondly, that the London price is an artificial price, determined by the amount of surplus produce thrown onto the London market by dairying countries, all of whom have have domestic prices considerably higher than the London price. Domestic retail prices for these countries are not available, but an adequate comparison can be made from the wholesale prices as follows:—

Wholesale Price per Cwt. (Australian currency), 31/12/62:

Market	Butter	Cheese
United Kingdom	393/9	288/9
Netherlands	450/3	260/4
Canada	478/8	308/1
Australia	501/8	296/6
Denmark	524/7	n.a.
Irish Republic	583/2	341/3
United States	588/9	347/6
Germany	628/10	n.a.
France	868/1	n.a.

(n.a.—Not available)

HE SOUTH AUSTRALIAN
AIRYMEN'S . . .
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Published Bi-monthly

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RANDERS PEARL
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PELLA MOUNTAIN MAID ★★★★★

born 24/2/59. J2 — 389 lbs. b.f., 5.6%, J3 — 410 lbs. b.f., 5.5% (estimated).

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THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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DAIRY PRODUCE CONSUMPTION RISES IN 1962
(But only just)

Figures published this month by the Commonwealth Bureau of Census and Statistics show a slight but heartening rise in per person consumption of dairy produce overall for the year 1961-62. (After all, considering the huge sum of money levied fram the dairyfarmers for promotion, we should certainly hope to see some results.)

The movements in consumption of dairy produce over the last three years, compored with pre-war, post-war and late '50's can be seen in the following tables, with the figures for margarine included far comparison.

CONSUMPTION OF DAIRY PRODUCE IN AUSTRALIA
(pounds weight per head per year)

Product	Average per year					
	1935-39	1945-49	1955-59	1959-60	1960-61	1961-62
Liquid Milk	241.0	314.2	291.5	294.6	295.6	295.6
Liquid Milk (gallons)	(23.4)	(30.5)	(28.3)	(28.6)	(28.7)	(28.7)
Cheese	4.4	5.5	5.7	6.4	6.4	6.7
Condensed Milks	4.3	7.5	10.3	10.3	9.9	10.2
Powdered Milk	2.6	3.8	5.0	6.3	6.9	6.9
Infant, etc., Foods ...	1.0	1.3	2.2	2.9	2.5	2.4
Total Milk Solids in the above	39.3	49.1	48.7	51.0	51.4	51.6
Butter	32.9	24.8	27.2	26.2	25.1	24.3
Table Margarine	0.9	0.9	3.6	3.5	3.5	3.3
Margarine	4.0	5.2	4.9	5.7	5.8	6.0

We have, naturally, every reason to be gratified with whatever gains have been made in consumption, to which, in terms of total quantity of milk solids, cheese has made by far the greatest contribution in the post war era.

But in terms of ratio, the most spectacular increase in consumption is in the field of fancy cheeses (rather than in cheddar cheese, which represents the greater proportion of the above figure) and the article "The Infuence of Imported Fancy Cheeses on the Australian Market", elsewhere in this Journal should be read in this regard.

COUNTRY SHOW SOCIETIES

As o service to our readers we intend to publish the names of the Presidents and Secretaries of ony Show Societies which may choose to supply us with this information. Our pages are also open to advertisement by Show Societies at the concessional rates applying to members of this Associotion.

SOUTHERN AGRICULTURAL SOCIETY

President: Mr. B. H. Basham, Port Elliot. Port Elliot 131.
Secretary: Mrs. W. Jolly, Port Elliot. Port Elliot 107.

The Influence of Imported Cheeses on the Australian Market

A.D.P.B. PUTS A NEW POINT OF VIEW

An apparent paradoxical situation at present faces the Australian cheese industry. Over the past year the local production of cheese has rapidly increased, and an acute surplus problem threatens. Imports of fancy cheeses into Australia are at the same time increasing. Why is this?

In the main the Australian cheese industry concentrates on the production of Cheddar cheese. Until very recently only small amounts of non-Cheddar varieties were produced in Australian factories. Even now it would be true to say that over 90 per cent of cheese produced for both home consumption and export is of the Cheddar variety.

PRODUCTION INCREASE

Over the past 5 years local production has increased sharply. In the year 1957-58 our annual output was 36 thousand tons; this year (1962-63) total production is estimated at 56 thousand tons—this represents an increase of 20 thousand tons or 56 per cent in a comparatively short period. The increase is due to flush seasons, improved manufacturing techniques and to the fact that in recent years, many manufacturers switched to cheese production because overseas markets paid more for butterfat in cheese than they did for butterfat in butter. During this time consumption of cheese within Australia has increased by perhaps 9 thousand tons—or at less than half the level of production expansion.

Australians have never ranked amongst the world's big cheese eaters. It is true that over the year our per capita consumption has increased slightly. At present we are eating 6.7 lbs. of cheese per head per year. This represents a per capita annual rise of 0.25 lb. per head over the past 4 years. If we look back further to the year 1938-39 we find that in those days Australians consumed only 4.4 lbs. per head.

Whilst there is a steady increase therefore, it is still very slight and our present 6.7 lbs. per head does not compare favourably with that of other countries such as Denmark where the annual consumption is 19 lbs. per head, and the United Kingdom's 10.1 lbs.

About a year ago Australia and New Zealand began to limit their shipments of cheese to the United Kingdom to avoid depression of the market. Although no formal agreement exists, we are however confining our shipments to cheese to the United Kingdom to 15 thousand tons per annum. This has resulted in an increased quantity of cheese becoming available for other export markets (which have still to be fully developed) and for home consumption. As we have already seen, home consumption has not increased sufficienty to take up this "slack".

Thus, production has increased rapidly; home consumption has increased—but not as rapidly as production; and our traditional overseas market has been restricted.

Currently our exportable surplus of cheese amounts to approximately 27 thousand tons compared with previous exportable surpluses which averaged approximately 18 thousand tons over the 4 year period ending 1961-62.

IMPORTS UP

*Nevertheless imports of cheese into Australia are increasing. In the year 1961-62 we purchased 1,879 tons of cheese from overseas sources. In this current year (1962-63) we will have imported approximately 2,500 tons—valued at approximately £1 million.

The leading exporters to Australia are Denmark, Italy, Netherlands, Bulgaria, New Zealand and Switzerland, and cheeses from all these countries are prominent in large food stores and delicatessens.

** In 1959-60 we purchased 1,062 tons.*

CHANGES IN TASTE

An examination of the preferences of the Australian consuming public gives some illuminating information which supports the belief that our tastes are becoming more sophisticated.

Over the past year consumer purchases of Cheddar cheese has increased by only 2 per cent. Retail sales of Australian made non-Cheddar varieties however, increased by 11 per cent, whilst the demand for fancy imported cheese has risen by an astonishing 31.5 per cent. This clearly shows the way the wind is blowing as regards trends in cheese preferences.

There is little doubt that the influence of immigrants from Europe is changing our cheese eating habits and that travelling Australians are bringing back with them new food preferences. As distances between countries contract by improved communications so da customs become modified—a fact which is reflected by the changing cheese eating pattern.

MEETING THE CHALLENGE

It is wrong to say—as some critics do—that the Australian cheese industry is failing to meet the challenge of changing cheese tastes. There have, however, been many difficulties some of which are obvious and some of which are not generally realised by the public at large.

MANY PROBLEMS

Australian manufacturers are expected to compete with their overseas counterports, many of whom have had virtually centuries of experience in producing specific types of fancy cheeses.

To a factory the cost in switching productian in terms of finance, equipment and technicol knowledge is by no means small and cannot be done as quickly as many people seem to imagine. New equipment must be designed and purchased and suitably qualified specialised cheese makers must be found.

There is too, the ever present difficulty of distribution—particularly distribution on a national scale. Retailers must still be "sold" on stocking Australian fancy cheeses as against imported fancy cheeses.

This latter difficulty arises becouse there is a great deal of "snob" value attached to imported cheeses. In many instances the locally produced article compares favourably with its imported counterpart, but snob value does present a real problem and will continue to do until the consuming public realise, in the fullness of time, that Australian manufacturers can produce as good a produce as can be purchased from overseas.

FORTY VARIETIES

In spite of these formidable difficulties all of which have had to be overcome in the space of a few short years, the Australian industry has put on the market over 40 varieties of locally made cheese. We have seen that consumer demand for thse locally made varieties is steadily increasing and there is every reason to suppose that it will continue to do so.

We must bear in mind that in Australia factory and process hygiene standards are high and are rigidly enforced and that locally made fancy cheeses must be manufactured under these strict health regulations. We cannot however supervise the manufacture of cheese which comes from overseas. Whilst the majority of imported brands are undoubtedly manufactured under satisfactory conditions we cannot ignore the possibility that some of the more obscure brands may not be.

CREATING A MARKET

The Australian industry has kept a very close eye on the rise in cheese imports over the past few years, but has taken the view that in the long run these will be of benefit to us. Imported fancy cheeses have pioneered a new type of market and have introduced to the Australian consuming public new concepts in cheese tastes. In future years much of this market will be taken over inevitably by Australian manufacturers who will thus benefit from the imports which have created the demand.

Looking at the position from this point of view therefore, we see that the paradoxical situation which faces the cheese manufacturers at present has within it the potential of increasing the per capita consumption of Australian cheeses by stimulating greater consumption of fancy varieties.

THE DANGER OF STOCK DISEASES FROM IMPORTED CHEESE

Although the case presented by the Australian Dairy Produce Board presents a new point of view on this subject, and may cause many of us to revise our opinions, the fact remains that many qualified authorities believe that the importation of fancy cheeses carries with it the grave danger of the introduction of those stock diseases from which Australia, until now, has fortunately been free.

The attitude of the Department of Health, which administers the Quarantine Act, is that the conditions of acidity and time involved are such that disease-causing organisms cannot survive in matured cheeses, but against this viewpoint there are two arguments. The first is that although the conditions present in cheese have been proved to prevent the survival of such organisms as that causing foot-and-mouth disease when these conditions are duplicated in an aqueous medium, there is no certainty that survival is completely inhibited in a protein medium such as cheese. The second is that although survival in cheese may be impossible, the cheese surface and the packaging material may be contaminated with viable organisms either present from the time of manufacture, or introduced even as late as the day of loading on to the ship.

As a counter to this contamination it is required that all imported cheese be certified as being "factory-made" and hence free of contamination from organisms that may be present on farm-produced cheese, but it must be realised that even with factory-made cheese, the truck which transports it to the wharf is probably the same truck which collected milk from farms on the morning of the same day.

Because of this ever-present danger, the results of which would be far more damaging to the dairying industry than is the importation of £1m. worth of cheese (and which, quite possibly, as the A.D.P.B. case demonstrates, is not reducing our cheddar sales by a significant amount) an approach has been made, through the Australian Dairy Farmers' Federation, to the Federal Department of Health, seeking a prohibition on the importation of cheese from any country which presents a hazard in the matter of stock disease. It is hoped that sufficient progress will be made on the submission to allow the subject to be considered by the Australian Agricultural Council at its meeting early in July, and the Association has asked the South Australian Minister for Agriculture to give his support to this action.

Covering of Pick-up Trucks and the Quality of Milk

Towards the end of 1962 a new regulation under the Metropolitan Milk Supply Act came into force regarding the use of canvas blinds on milk pick-up trucks.

This regulation requires the side and end blinds of each truck to be lowered and fastened at all times while any milk or cream is being carried on the truck. (The previous regulation required only that the blinds should be lowered when directed by a dairy adviser.)

The new regulation has already been criticised as being "unreasonable" and is likely to cause delay because of the time involved in raising and lowering blinds every few hundred yards in order to load cans.

Undoubtedly the regulation has been designed for the protection of the dairy farmer; protection which he badly needs when we consider the severity of the penalty inflicted for poor quality milk, part of the deterioration of which undoubtedly occurs during the time the milk is awaiting pick-up, in transport, and awaiting tipping, and the regulation is designed to reduce deterioration during transport by reducing the temperature rise due to the direct rays of the sun. On the other hand, these good intentions will be nullified if the time taken to operate the blinds causes the milk to be much longer in transit, apart from which the additional time involved will result in increased transport charges which will eventually come out of the farmer's pocket.

In view of the controversy that has already resulted, the study by W. D. Mitchell, of the Queensland Department of Agriculture ("Temperature Variations in Farm Milk Transported under Sub-tropical Conditions"—Qld. Jnl. Agr. Science, December, 1960) is of interest. Mitchell's study was undertaken because ". . . although considerable information is available on the effect of health of cow, cleanliness of equipment, preparation of the cow, milking techniques, and temperature of cooling and storage on milk quality, little work has been done on the influence of transport conditions on the temperature of milk. While producers have been advised of the advantages of cooling and storage at low temperature on the farm, the importance of preventing a rise in temperature after the milk has left the farm has not received the same attention."

The tests, which Mitchell made on almost 2,000 cans, were taken in seven types of vehicles which varied throughout the range from a slatted cover, designed to permit free air flow around the cans, to a completely sealed body.

The results of the tests showed beyond doubt that the rise in temperature of the milk during transport was directly proportional to the extent of covering of the vehicle, the greatest rise being in those vehicles which allowed free air flow over the cans. Furthermore, in all cases, cans on the outside of the rows showed a greater temperature rise than cans inside the rows.

It is, however, significant that the temperature rises in all cases were greatest where the initial temperature of the milk at the farm gate was low, indicating, as is to be expected, that a free flow of heated air over cold cans will raise the temperatures by a proportionately greater amount than when the milk cans are only slightly cooler than the surrounding air.

As a further indication of the importance of reducing the air flow over the cans, Mitchell showed that the temperature rise of milk in stationary vehicles waiting at the milk depot to be unloaded was relatively slight, even when vehicles stood for up to 1½ hours, thus leading to the conclusion that "where standing time is not excessive the major cause of temperature variation during transit is the movement of air through the vehicle."

What Is Wrong With Our School Milk?

The Commonwealth Free School Milk Scheme was introduced shortly after World War II on the recommendation of the Commonwealth Department of Health as a measure to improve the health of Australian primary school children, particularly in regards to calcium, the **only** recognised nutritive constituent in which the average Australian diet is deficient, a fact which may well be responsible for the low standard of dental health among Australian children. (Except for calcium the "average" Australian diet is one of the highest in the world in terms of nutritive composition, but there is still, even in Australia, a large number of children who receive far less than recommended dietary allowances.)

However, despite the fact that the milk is supplied at no cost to the child, in South Australia the milk is consumed by LESS THAN 70% of the primary school pupils to whom free milk is made available under the Scheme.

In order to discover whether this figure was general, or whether, instead, there was any pattern of consumption, the Association analysed figures obtained from the Education Department of the consumption at each school. Originally we expected that the figures might reveal some marked difference in consumption between, for example, country schools versus city schools, or between schools in "under-privileged" areas as compared with more fortunate localities, or between state schools and private schools.

In fact, absolutely no pattern at all was revealed.

One of our largest city schools has a consumption figure of 102%; another city school of the same size, and less than a mile away, consumes only 60%. In the near hills two country schools barely 2 miles apart consume 77% and 26% respectively. Of the leading private schools, one of our best known boys' prep. schools consumes 95%, two others 48% and 49%, whilst the leading girls' private schools are generally low (19%, 23%, 34%, 43%) except for one case where consumption is 74%.

The Association has, with the consent of the Education Department, written to the Porents' Associations of 18 of the schools selected because their consumption is less than 55%, asking for their co-operation in determining the reasons for the low ratios, in order that we can take the initiative in correcting whatever circumstances are causing the low consumption at these schools.

The complete lack of uniformity in consumption appears to refute the old arguments about cream-plug, and temperature at time of receival, and the contention that children don't like bottled milk anyway, but if there is anything (such as temperature) that is satisfactory at one school and not at another, there is no reason at all why this factor cannot be corrected in every case where it is now unsatisfactory.

The results will be made known as soon as the survey is completed, but in the meantime our members themselves, many of whom are on school committees, should make a close scrutiny of the conditions of the milk supply at their own schools.

It is not a fact that "farm children won't drink pasteurized milk". Consumption is over 95% at

Aldgate, Cherry Gardens, Currency Creek, Hahndorf, Iron Bank, Port Elliott, Montieth, Verdun, Birdwood, Springton, Gawler River and Willunga H.P.

(Admittedly some of these are small schools, but that is not so in all cases.) Against this we find that at many of our dairying district schools consumption is extremely low, for example:

Clarendon (60%), Echunga (36%); McLaren Vale (26%), Reynella (48%); Charleston (39%) and Meadows (55%).

If we honestly believe, as dairy farmers, that our produce makes a worthwhile contribution to the health and well-being of the nation we will do all we can to arrive at the solution of this problem. In this way we will not only be lifting the health standard of our children; we will also be establishing dietary habits for the future which will help to build a nation that is even better fitted to play a leading role among the nations of the world than is the Australia of today.

MONOPOLY AND RESTRICTIVE TRADE PRACTICES LEGISLATION

At the Central Council meeting on March 21st, the Secretary had said that as other primary producers' organizations were declaring their position regarding the proposed legislation to control monopolies and restrictive trade practices, he believed that it would be appropriate for this Association to do so also. From his own study of the position as it existed he believed that Sir Garfield Barwick's proposals were good, coherent, and necessary. He deplored, although he had expected, the opposition from the business world, but he deplored even more, because he did not expect it, the opposition from the South Australian Government. The Premier had foreshadowed that this State might oppose this legislation because non acceptance wohld place this State in an advantageous position in attracting industries. To attempt to attract industry by the laxity of our industrial legislation was surely a scandalous thing which even supporters of the Government must abhor. He therefore believed that this Association should state its support of the proposed legislation and make its policy known to the A.D.F.F. and the N.F.U. of S.A. Such indications of support would not be necessary, but would be heartening, and at the same time the Association should consider whether it should advise the members of the Federal and State Parliaments of our support of the proposals.

Mr. Warwick said that he doubted whether most members had sufficient knowledge of the proposals to decide on a statement of policy, and it would certainly be ironical if we voted to support legislation which could lead to the destruction of our own Equalisation Scheme.

Mr. Harper said that the proposals did not proscribe all monopolies and all trade agreements as harmful, and this particularly applied to statutory marketing arrangements; he was certain in his own mind that we could give the proposals 100 per cent support.

The Secretary explained that agreements arising out of statute law, such as the Metropolitan Milk Supply Act, were specifically exempted from the application of the proposed legislation. Furthermore, as Mr. Harper had pointed out, all agreements were required to be registered, but registration as such had no effect on the carrying out of the agreement until the Registrar made investigation into the agreement, either through efflux of time, or as result of a complaint from an injured party, perhaps a member of the public. If, during this investigation it could not be shown that the agreement was in the interests of the public (and the number of "gateways" by which public interest could be proved was quite large), then, and only then, would the agreement be declared illegal, either in whole or in part. Apart from the statutory backing of our Equalisation Plan, he was convinced, both as Secretary and as a citizen that there was nothing in our Equalisation Plan which was contrary to public interest.

It was agreed that, in view of the delegates' lack of detailed knowledge concerning the proposed legislation, a decision concerning the policy of the Association on this matter be deferred.

Mr. Norquay, Federal Secretary of the N.F.U., has now prepared what he calls a "layman's guide" to the proposed legislation, which we print below:

The Government's proposals are aimed at recording in a confidential register the details of all agreements among business firms to trade in a restrictive manner of some form or other. The Government recognises that some of these restrictive practices can be justified, and the machinery allows these types of arrangement to continue. Where, however, it can be shown satisfactorily that a restrictive arrangement operates against the interest of the public, steps will be taken to make such a practice illegal.

THE "GATEWAYS"

(i) Necessary for public safety.
(ii) Confers substantial public benefits.
(iii) Necessary to thwart external pressures restricting competition.
(iv) Necessary in dealing with a powerful buyer or seller.
(v) Necessary to maintain employment.
(vi) Necessary for the export trade.
(vii) Supports another practice which is not contrary to the public interest.
(viii) Likely to contribute to the supply and distribution by most efficient and economical means of goods and services with advantages to consumers.
(ix) Increases efficiency and encourages new enterprises
(x) Encourages fullest use and best distribution.
(xi) Confers a clear and specific public benefit.
(xii) Protects goodwill of business being transferred.
(xiii) Relates to co-operation between firms as with research, statistics, etc.
(xiv) Where re-sale price must be maintained for specific reasons.

The proposal, therefore, calls as a first step for the **registration of a document** fully describing **any arrangement or practice which tends to control or influence the market for a product or service. There are three exemptions to this compulsory registration, viz.—**

(1) Restrictive practices already regulated by law, such as statutory primary produce Marketing Boards.

(2) Practices resulting from the use of patents, specialised skills, etc.

(3) Practices not directly related to the control or distortion of a market, i.e., observing o recognised standard.

THE REGISTER AND THE COMMISSION

In this way there will come into being a collection of documents, each of which describes a practice of a restrictive trading nature, and this collection of documents is referred to as "the Register." It will not be open to public inspection, but only to those parties who can satisfy a special Commission to be established, that they have a special entitlement to examine it. This special Commission will operate with the Officer-in-Charge of the Register, the Registrar, and together they will decide whether proceedings should be taken to decide whether a certain arrangement described in the Register operates against the public good. They will also receive complaints from the public about certain trade practices which appear to be within the operation of the legislation. There will be a Deputy Registrar in each State, who will investigate such complaints. They will be particularly anxious to detect restrictive trade practices which have not been registered. It will be a legal offence to engage in any restrictive trade practice unless there is a registered document which fully describes the practice filed with the Registrar. The Commission will contain laymen, and so far as is known at this stage, will not contain members of the legal profession.

THE TRIBUNAL

Where it appears to the Registrar that a certain trading practice is against the public welfare, he may—after investigation—advise the Commission to institute proceedings, and if the Commission considers this to be appropriate, then the arrangement is challenged before the Tribunal. The Tribunal contains both members of the legal profession and laymen, and is made up of several divisions, any of which may sit at the same time as other divisions. The Registrar, or the Attorney-General, or a member of the public, as the case may be, would have to bear the onus of proving that the document in the Register which describes

the restrictive trade practice, describes in fact a practice which substantially reduces competition, **either partly** in some area or areas of commercial activity, **or generally.** Where the Tribunal is satisfied that this is in fact the true state of affairs, then the document may be de-registered. and it would then become illegal for the firms concerned to continue operating under that practice which the document described. However, the firms concerned can avoid this penalty if they con show that the practice is justified by one or more of fourteen particular circumstances, which are referred to as the "gateways".

PROVEN PUBLIC BENEFIT ALLOWS CONTINUANCE

The "gateways" include such justifying circumstances as:

(i) a possibility that if a certain restrictive trading practice were abandoned serious and persistent unemployment in a certain areo would result; or

(ii) that o restrictive trade practice is likely to increose efficiency ond encourage new enterprises; or

(iii) that it confers some other clear ond specific public benefit.

However, the Tribunol must be satisfied that on balance the public interest is not harmed, and **although a certain practice might qualify for one or more "gateways",** the Tribunal could still conclude, if it saw fit after having regard to all consideration, that there is preponderating detriment, ond **it could still proceed to de-register** such a practice and make it illegal.

Any firm, or firms, engaged in a restrictive trading practice which they do not register are still liable for severe penalties, even if what they are carrying on appears to qualify for one of the "gateways". In other words, **the benefits** of getting this speciol justification **ore only available to those firms which register their practices.**

Over and above the great variety of practices which this system would deal with, there are four which the Government proposes to place outside the benefit of the "gateways", ond to make them **completely inexcusoble, illegal, ond unable to be registered—**

(i) Collusive tendering
(ii) Collusive bidding
(iii) Monopolisation
(iv) Persistent price-cutting, ot a loss, to drive o competitor out of business.

INTRODUCING THE LEGISLATION

The Attorney-General has stoted thot the Bill which introduces the Governments' proposals to Parliament will be ollowed to remain undeolt with after the First Reading until the beginning of the following session of Parliament, so that public discussion can take place and necessory alterations made. It is understood that he had hoped to introduce the Bill in the Session which ended last month. However, apparently delays in the drafting of the Legislation have made the time even later, and it now seems unlikely that the Bill could become Law before early 1964. When the Bill is received by Parliament, and has been considered at the First Reading, it will be possible for a closer study of certain particular aspects to be made; for example, it would be useful for the Government to provide more detoil of its intentions on how arrangements involving price-fixing and restrictions of outlets will be deolt with. As soon as further progress is made with the Bill, the N.F.U. will endeavour ta pravide a copy for closer study by its member and component organizations.

It is clear, however, that the Government's proposals go a long way towards meeting many of the objections to unfair trading in certoin sections of secondary and tertiary industry. The proposals specifically leave Primary Produce Marketing Boords completely untauched, realising—quite correctly—that having been set up and operated by Law, they are by no means in the same class os those categories of marketing which are set up by private firms and individuals in secret and with reference ta no Parliament or Law.

It will be realised that certain restrictive trade practices are a type of home-made protection for certain firms and industries. For many years the N.F.U. group of organizations has taken an active part in opposing increases in tariff protection to certain industries. However, we have never had any opportunity to deal with the various systems of private protection which firms and industries have built up for themselves without recourse to such public instrumentalities as the Tariff Board.

IS THE LEGISLATION NEEDED?

It might be thought in some quorters that the system outlined by the Government is far too large and cumberous to deal with what might be only a few unsatisfactory trade arrangements. In case this point of view is held in some quarters, it is worth pointing out that all the evidence that is available points to the contrary. A great number of countries overseas have found it necessary to take action against the same sort of trade restriction. The operation of the Anti-Trust Legislation in the U.S.A., is almost notorious—but the British Legislation is also wellknown. That the present proposals are being introduced by the Liberal-Country Party Government in Australia suggests that a sound and satisfactory cause exists. It is worth mentioning that in one of Australia's less industrialised States—Western Australia—a report by a Royal Commission in 1958 into restrictive trade pratices listed one hundred and eleven Associations in that State connected with trade and commerce, among which a number were found to engage in putting pressure on other firms to become members of their Association, in order to achieve price uniformity. There are other practices referred to in the Commission's report which are of a similar nature.

In conclusion, it can be soid that the Government's proposals do not, as some people think, strike a blow at the root of the free-enterprise system and render illegal many of the accepted conventional trade practices of our day. On the contrary, the Government's proposals aim to preserve as far as possible the very basis upon which the free-enterprise economy functions—that of a reasonable amount of competition. Trading practices of a restrictive nature **will not be made illegal** under the Government's Legislation, unless a special Tribunal of qualified persons considers that on the balance the **public welfare suffers** from such an arrangement. Seen in this way it may be thought extraordinary that so much opposition has been placed against this system, by certain Associations of manufacturers and commercial interests. However, there are good grounds for believing that the opposition is by no means as widespread as it appears to be, and that a few key personnel in certain organizations have thus far been able to trade on the lack of information among their various members.

From my own examination of the proposals and from discussions with my colleagues in the other organizations in the N.F.U. group, I consider the proposals in their present form well worth the support of all farmer organizations. When the relevant Bill is brought down, further study will be possible, but in the meantime it would appear to me that the Government's intentions should be given every support by the one section of the economy which **sells** its production in the maximum of competition, but is too often obliged to **buy** its goods and services frim industries which ore protected, not only by Tariff duties, but by all sorts of home-made trading devices with which this legislation proposes to deal.

—A. S. NORQUAY.

TALKING ABOUT DAIRIES ——

HAVE YOU HEARD WHAT CHRISTINE KEELER SAID TO MANDY ABOUT MR. PROFUMO?

Please turn to foot of page 29.

OPENING PRICE FOR 1963-64

Although it will be some weeks before the new season's Interim Basic Price can be determined, we have been advised that the Federal Government will underwrite the new season's values at the same level as for the past five years, that is, 40d. lb. commercial butter.

In view of the current supply and marketing conditions, this action by the Federal Government is very gratifying, as it will enable the Commonwealth Equalisation Committee to determine and finance initial interim payments at higher rates than would be practicable on a purely conservative estimate of potential market returns for the coming year, and consequently licensed suppliers in the Adelaide city milk area can expect an initial basic price at approximately the same level as that at present, namely 39d. lb. butterfat at the farm gate.

FINAL RETROSPECTIVE PAYMENT 1961-62

Although the final returns for 1961-62 are not yet completed the Commonwealth Equalisation Committee has stated that it is now virtually certain that the final value for cheese will be 240/- cwt., representing an increase of 8/4d. cwt. cheese on the current interim value for 1961-62.

In the Adelaide milk supply area this will represent an increase of approximately 2.125d. lb. b.f., for manufacturing milk, allowing a retrospective payment of **1⅛d. lb. b.f. equalised on all production for 1961-62.**

This will make the final basic price for that year approximately 49¾d. lb. and the final equalised price approximately 72-11/16d. lb.

The exact rate and date of payment of the retrospective will be announced on July 18.

The Role of the Factory in the Present Crisis

Outspoken Comments by Chief Dairy Adviser

No punches were pulled by the S.A. Chief Dairy Adviser, Mr. A. G. Itzerott, M.Agr.Sc., when he spoke to the S.E. Managers and Secretaries Association conference at Mt. Gambier on the subject, "An Appraisal of Dairying in the South-East.

Mr. Itzerott said between 1950-1960, returns to the dairy farmer, except for several minor relapses, rose steadily to record levels during the period 1959-61.

Currently the picture was not as reassuring as in the past and this had been reflected in a decline in the overall return for butterfat to the dairy farmer. Despite this, there is evidence of more interest in dairying in the South-East.

It is typical of the dairy industry that declining prices stimulate higher production, presumably to maintain gross economic returns.

The problem of disposing of current and anticipated production was exercising the minds of marketing and other authorities. In the light of the current situation the burning questions were:

(1) Can a major increase in milk production be justified?, and

(2) If so, what was the milk to be used for?

The present structure of the manufacture section of the industry, with its many small capacity, overloaded and inflexible plants, was perhaps the biggest handicap currently facing the industry in its ability to meet the potential problem of the future as well as coping with any increased production.

Many factories required significant capital expenditure for enlargement and new equipment to cater for increased production, as well as improving quality. By comparison with other areas, factory size and development were outmoded when it came to considerations of making most effective use of recent technological developents in automation as well as greater flexibility in manufacture.

Environmentally the area was one of the best suited to dairy production in the state. Because of this, it was reasonable to expect that dairy production would always be a prominent part of agricultural production.

A survey of farm productivity showed that farmers producing less than 6,000 lbs. butterfat and relying solely on dairy as a source of income invariably had limitations such as too few acres, too little equipment, and inadequate resources to adopt new techniques. These farmers would be at a disadvantage in the event of marketing difficulties which could be reflected in a decline in prices. Any downward movement in prices could result in increased production on farms with potential for increased production. This could increase the instability of small dairy farming units.

In recent months, there had been considerable discussion on bulk milk collection in the area. Despite the views expressed, it is inevitable that the technique would develop. At the recent Bulk Milk Conference in Melbourne the consensus of opinion was that a 40 cow unit with productivity of 10,000 lbs. butterfat per annum was the desirable minimum for a change from cans to bulk pick-up. **Unless there was considerable rationalisation to avoid duplication of transport over the same routes the advantages of bulk milk pick-up would be lost and reflected in higher costs which ultimately would have to be borne by the farmer.**

Milk production in the area fluctuated from a trough of 8,000 gallons a day in late summer-autumn to a peak of 70,000 gallons a day in spring. There were 12 factories to cope with this production. This compared unfavourably with the position in most other major dairying areas.

The thing sticking out a mile was the need for consolidation—in particular, consolidation of factory units.

The rationalisation of transport and investment of money in enlarging and re-equipping centrally located plants or building several new multiple-purpose factories would be a sounder proposition in the long term than one which prolonged the survival of small inadequately equipped units. This latter policy must inevitably detract from returns to the producer.

As many of the factories are co-operatives, much of the responsibility for policy relating to future consolidation will depend on farmer directors. As policy will affect farmers as a whole, it was one that should be given serious consideration by dairy farmer organisations in the area.

The recent request by the Dairy Board for cheese factories to restrict production by 10 per cent. also stressed the need for flexibility, which can only be achieved in larger plants.

Concerning current industry problems, Mr. Itzerott said: "There are problems, too, in the manufacturing sector of the industry. Australia has some of the most up-to-date factories in the world. But there are factories which, having served an earlier era, cling to the past in disregard of the flexibility, the more complete use of plant capacity, and scale of operation made possible by improvements in transportation and demanded by the changing market situation both at home and overseas."

Since January, factories had been grading by the methylene blue test. A review of results showed over 86 per cent of all milk to be First Choice grade, i.e., 3 hours or better.

On the basis of export quality to the end of February, only three factories had results that were parallel to quality of milk intake. With all other factories, the quality of export cheese was well below the quality of milk intake.

There does not appear to be a close correlation between milk and cheese quality.

This is a very serious matter. A drive for "quality" improvement at farm level is of little avail if manufacture techniques serve only to produce cheese which is unrelated and inferior in quality to the milk supplied by farmers.

While current economic results may appear satisfactory, better quality would bring better results. The poor quality cheese made last year has caused irreparable damage on some markets. Unless rapid improvement can be effected, it would be advantageous to direct milk to other products.

Management should have a good look at itself. On many occasions departmental officers find that what a manager tells them is done in the factory is often very different to what is being done. This is a very serious state of affairs. Most managers know the correct procedures to be followed and probably give correct orders.

However, for various reasons, there appears to be a lack of follow-up and supervision to ensure that orders are implemented correctly. It is too late to retrieve the position when reports of poor quality are received from the grade floor.

"Until this deficiency in management is removed, I cannot foresee any major and consistent improvement in quality," said Mr. Itzerott.

"WHAT IS PUBLIC LIABILITY?"

Although "an Englishman's home is his castle" (and the same can be considered true of an Australian's farm), it is doubtful whether any of us would be optimistic enough to hope to get away with such medieval treatment of visitors as pouring cauldrons of boiling pitch over them from the battlements. However, to judge from the number of queries following the Federation Insurance advertisement in December issue of the Journal, many members are unaware of their position regarding their liability in respect to accidental injury to the public generally in the way of visitors (authorised and otherwise) and adjacent landholders. We therefore asked Mr. Schlank, S.A. Manager of Federation, to supply this brief explanation.

"Like every other occupational trade, the dairyfarmer, in carrying on his business, comes in touch with and has dealings with the public. Should a member of the public meet with any mishap through the negligence of a farmer or his employee, then he can expect to sue successfully and recover the monetary value of his loss or injury. It must be appreciated that, whilst this is certainly so when the negligence is clear, there is also the grave risk that the court may find negligence proved in cases which are far less obvious to a layman. Thus, with the general trend of such cases over the last few years being for the courts to award damages on an ever-increasing scale, it is certainly not impossible for a farmer to find himself in the completely unforeseen position of having to sell his property in order to meet an order for damages.

Statistics and the farmer's personal experience prove that accidents will happen in an unexpected manner, and even when the farmer is extremely careful in running his farm, he is faced by the possibility of irresponsible assistants and by eventualities which are beyond human capabilities to foresee, added to which there is the very real danger of being faced with claims of a speculative nature which could be termed "try-ons" where the claimant actually possesses no true case in law. If the farmer is obliged to deny liability and seek legal aid in such cases the costs and expenses involved are often quite considerable even where the claim for damages has failed.

The frequency of accidents caused by farm implements and machinery to farmers and their employees, who are familiar with the equipment, makes it readily appreciable that the likelihood of injury to members of the public who, in general, are unaware of the risks involved, would be far greater, and a parallel exists in the case of dairy bulls, but less obvious sources of injury to the public are the ever-increasing use of sprays, with risk of damage to neighbours' crops or livestock, the dangers of straying stock in adjoining properties or on roadways, of defective milk stands, cattle ramps, or vehicle by-passes, and of faulty leads to electrical equipment.

Add to these the possibility of a small burning-off fire getting out of control, with heavy damage and even loss of life, and the chances of incurring a claim are seen to be considerable, and should a claim of any size against a farmer arise from any of these or similar causes, the chances are that even if he could meet the claim his financial position would be seriously weakened, and the forced sale of his farm would be a real possibility.

The only effective protection is through a Public Liability policy, costing only a few pounds per year, and which, as issued by the Federal Insurance Limited, provides the following:—

Legal liability protection against claims by members of the public in respect of personal injury or damage to their property arising from farm premises and outbuildings, unregistered vehicles and tractors whilst being used on the farm, and ALL other farm equipment and machinery, land and fencing, farm animals and straying livestock, milkstands, cattle ramps or motor by-pases, protection against LEGAL COSTS incurred with the consent of the Company in defence of such claims.

COMPARATIVE COSTS OF WATER-HEATING

Solid Fuel Heater for Dairy Use Shows Considerable Saving.

Although the convenience of an electric water-heater is an undoubted advantage, the hygiene-conscious former who makes full use of the booster element for morning **and** evening clean-up finds that water-heating makes quite a large contribution to his electricity bill.

A new universal water heater now being marketed in South Australia has proved, under tests conducted at the request of this Association, to give considerable economies, even where fuel (wood, coke, or briquettes) has to be purchased. When, as is the case on most farms, there is a ready supply of free firewood (which, if not cleaned up periodically, is of considerable nuisance to farm operations), old tyres, and sump oil, the savings can be considerable.

The tests* showed that the initial 30 gallons of water in the heater is raised to boiling point in one hour by 8 lbs. of firewood, so that twice daily use, with firewood at £5 per ton (and allowing a margin of 25% extra fuel to be on the safe side) runs out at 26/9 per month.

With "J" tariff at an average of 1.08d. per Kwh. and "R" tariff (for the booster) at an average of 3.1d. per Kwh. the cost for 60 gallons per day is £6/11/6 per month.

Thus it can be seen that the minimum saving is at least £5 per month, even when all fuel has to be purchased.

Comparing capital costs, we find that a 60 gallon electric dairy heater, retailing at £54, will cost approximately £74 installed. The solid fuel heater, retailing at £75/15/0, will cost approximately £95/15/0 installed, leaving a difference of £21/15/0 which will be more than balanced by savings in the first five months.

* *The actual figures derived during the tests can be supplied on request.*

IMMUNISATION AGAINST MASTITIS

New Research by Sydney University

The Dairy Husbandry Research Foundation has begun an important research project aimed at overcoming the serious mastitis problem in Australian dairy cows.

The project is being set up at the Foundation's research laboratories at the University of Sydney Farms at Camden. In the beginning it will comprise a fundamental examination of the factors controlling the rate of transfer of antibodies in to and out of the cavity of the mammary gland.

Up to date, no local or overseas research workers have found an effective method of vaccination as a practical control measure in the treatment of mastitis.

One technique to be used in this experiment is the lymphatic canulation method developed by Dr. Lascelles and Dr. Morris at the Australian National Univesrity. This method allows the measurement of the rate of antibody synthesis in the lymphatic system.

Other immunological techniques will have to be developed. Although active research in the field of mastitis has been going on for some 50 years, it will be necessary to take time to develop these new techniques, as this is a fresh approach to this subject.

INCENTIVE PAYMENTS FOR DAIRY COWS!

We have just received from the U.S.A. a catalogue describing the "Milk-O-Meter", a device which fits onto any overhead line milking machine and automatically weighs and samples the milk from each cow.

But the BIG feature is the fact that this device can be used in conjunction with the "Aut-O-Feed" system, which feeds o concentrate ration to each cow being milked, in DIRECT PROPORTION TO HER PRODUCTION. Furthermore, if you wish to provide also for the cow's maintenance ration in addition to feeding according to production, the machine can be set to prefeed a basic ration before the automatic ration according to production starts to operate.

The catalogue adds that if the dairyfarmer wishes to feed a variable maintenance ration to allow for variations in body weight "the system's pre-feed control box allows precise over-ride on automatic control". I almost get the impression that the makers are a little ashamed that they haven't incorporated a cow-weighing device that AUTOMATICALLY prefeeds a variable maintenance ration according to body weight.

BUT SCIENCE DOES NOT STOP AT THIS! As soon as the level of feed in the storage bin drops, a Bin Level Control Switch comes into operation, automatically setting in motion the feed grinders and mixing systems, to replenish the storoge bin by freshly ground and mixed ration direct from the raw material. It will handle anything; grain, chooped feed, ensilage, wafers (baled hay is not mentioned).

The Water-Matic, which is an optional extra, will add water to dry feed to bring it up to the desired moisture centent.

(NOTE.—In much smaller type the catalogue admits that, in addition to the completely automated set up described, a hand-cranked model is also available.)

Incidentally, and on a much diminished note, the company con also supply a Butterfat Test Kit which uses o new principle, approved by the American Dairy Science Association, eliminating the use of sulphuric acid and centrifuges. The Introductory Set (good for 40 tests, one at a time) is priced at $4 (say £2/10/- in Australia), ond the Dairymen Test Kit is $65. A kit could be imported for any member wishing to use it.

"THE 30-SECOND WASH"

Quality and Production Rises With Improved Milking Practices

Tests on identical twin cows at Ruakura Animal Research Station in New Zealand have indicated that increase in production of up to 32%, and a reduction in milking times can be expected from the practice of a 30-second wash and hand stimulus of the lower teats and udder before milking as against a system where the machine is relied upon to produce the letdown stimulus.

WHAT IS THE 30-SECOND WASH?

Basically, the 30-second wash incorporates three principles—thorough cleansing of the udder, effective stimulation for let-down, the correct use of modern sanitisers.

Also, an essential part of the "30-second wash" is the water-jetting system.

Some comments on each of the three principles, ond on the water-jetting system, are necessary.

The "cloth-and-bucket" methad cannot give udder cleansing as effective as water-jetting. At its best the out-moded cloth-and-bucket is inefficient—at its worst it is a spreader, rather than an eliminator of disease ond bacterial contamination.

A great deal has been written about the beneficial effects of good udder stimulation. Let it suffice to say that with good stimulation milking is more thorough, hand-stripping is practically eliminated, milking time is shortened, production figures rise, and butter-fat level can be expected to improve. The cows will be more contented—and so will the farmer.

In the 30-second wash sanitisers are applied by spray bottle, directly to the udder. By this means the sanitiser does not lose effectiveness, it is applied at most effective strength, it gives a better "kill" to bacteria.

The water-jetting system in itself is probably the most effective sanitiser. Apart from that, it is easier than the old cloth-and-bucket, it is cheaper in the long run (you save on sanitisers). Further, it gives a cleaner wash and thorough stimulation becomes part of the washing process.

BENEFITS

Many of the benefits of this technique are immediate, other benefits are not apparent for some time.

Immediate Benefits to the Dairy Farmer

Increased milk and butter fat production—this is achieved without increasing herd numbers or extra feed.
Less time is spent in the milking shed—more time for other jobs.
Hand stripping is eliminated.
Cleaner hygienic milk or cream—loss of income through down-grading is minimised.

Long Range Benefits

Longer lactations—less herd wastage.
Less mastitis—less herd wastage.

EQUIPMENT

The equipment for the water jetting system is simple and can be fitted by any dairy farmer. The material needed is—sufficient polythene or galvanised piping to pipe water from the source of supply to the bails, plastic hose for down droppers, sanitary paper roll, plastic sanitiser dispenser, strip cup, spray nozzles, pipe fittings.

Usual cost for each unit is about £2, so that £6 covers the cost of a three-cow plant.

The spray nozzles favoured are of the spray gun or garden nozzle type. For convenience and to save water, nozzles should be of the trigger cut-off type.

The sanitiser spray bottle is simply a plastic bottle. A disposable acid container (obtainable from any garage) is ideal.

The sanitary paper roll is simply absorbent paper to wipe off excess water and sanitiser. It can be bought with or without a dispenser.

RECOMMENDED ROUTINE FOR THE 30-SECOND WASH

1. Spend 30 seconds washing down the udder with running water and the bare hands.
2. Squirt the teat with an approved sanitiser and again rub in with the hand.
3. Use about 8 to 9 inches of paper towelling to dry off surplus moisture.
4. Take a test strip from each quarter.
5. About 40-50 seconds will have elapsed and let-down will have occurred or be imminent. Apply teat cups immediately.
6. Use an end of milking detector and remove cups just before milk flow ceases. (The usual sight glass is not effective for this purpose, but the Ruakura detector is now available and is recommended.)
7. Rub in final squirt of sanitiser before releasing the cow.

"Better Than Memory"

Dairy farmers in the U.S.A. use a "Sticker" to identify cows treated with penicillin.

Speaking at the Central Council last year, Mr. W. S. Smith, Chief Inspector of Stock, said that, accidental contamination of milk with penicillin could arise in two ways.

- Inadvertently milking a treated cow before expiry of the recommended three days' lapse.
- Being unaware that the cow milked had in fact, been treated.

Mr. Smith then recommended that Australian dairy farmers would do well to adopt the U.S. method of an identifying sticker for all treated cows which would show the period for which the milk should be withheld.

It was found, on investigation, that although these labels could be made in Australia, the adhesive tape manufacturers were not particularly interested in marketing such an item.

The Association then took the problem to the Ampol Company, where it was referred to their scientific staff, who, working in the Company's laboratories, produced the prototype below.

The Ampol Company have now produced a trial quantity of these Stickers, and, subject to satisfactory tests under actual conditions, will look at supplying the Dairy Industry needs on an Australia wide basis.

This Sticker, quickly adhesive to stock, can be easily completed in chinagraph pencil, to show the number of full days milk is to be discarded, and the actual time on a particular day, that consignment of milk to the factory can be recommended.

Members prepared to assist in tests under actual conditions, should 'phone or write, and on hearing from you, we will post out a quantity of Stickers, and await your report.

"HAYLAGE"

From July onwards every dairyfarmer will be paying the utmost attention to fodder conservation to maintain his production during the coming summer and autumn and to balance the grazing of irrigated paddocks and the early growth of next year's opening season.

The choice generally lies between ensilage and hay, each of which has its own nutritive characteristics, and each of which has advantages and disadvantages not shared by the other in harvesting, storage, and feeding-out. One disadvantage

which is, however, common to both systems, is the inability to deal satisfactorily with quantities of fodder on less than a "whole farm" basis, such as, for example, the excess growth on an irrigated pasture growing at a faster rate than the herd can graze.

A recent technique which does, in fact, enable this type of problem to be tackled, and which also is an outstanding advance over traditional methods even for the "whole farm" programme, is the vacuum-fodder process developed by Grasslands, which not only allows conservation with absolutely no waste, but permits the stack **to be added to at any time.**

What type of fodder will be obtained from this process?

The answer to this question lies in the amount of moisture contained in the grass as it is stored. If the crop is cut and stored with a moisture content exceeding 50% the resultant feed will be a high quality silage very palatable and high in protein. But where the operator takes care in cutting and prewilting or the crop has matured sufficiently so that the crop stored has a moisture content of 35% to 40% the result will be a magnificent feed called "haylage".

Haylage, so named because it is a cross between hay and silage, will be equally high in protein as a first class green chop silage yet have the more desirable lower moisture levels of hay, but because haylage contains more moisture than hay it is softer and more succulent for the animal to chew. This ensures an efficient intake of dry matter without damage to the animals mouth. Because the feed is harvested at higher moisture levels than hay less leaf is lost and the real value of crop grown is stored and therefore the total nutrients fed back is far greater.

Grasslands Vacuum fodder system makes the storage of haylage possible. Once the haylage is stored within the cover and the air removed with a vacuum pump, the forage stored in an oxygen free condition. Hence little or no fermentation can take place and any tendency to heat during the initial stacking process is stopped. Any crop can be converted to haylage but the better the quality of the crop going in the better the crop will be when fed back. It is generally accepted that first class leguminous crops such as lucerne are extremely difficult to make into silage, but if these crops are wilted they will make top quality haylage.

A vacuum fodder cover filled once and compressed by the atmospheric pressure can be removed from the stack and replaced again after the stack has been topped up with haylage from a second growth. This is particularly important from the irrigation man's point of view. He may only require, for grazing or greenlot feeding, half of the crop produced for his immediate needs—the remainder can go into one or more vacuum fodder covers as and when it becomes available as surplus. Each 100 lbs. of Haylage contains 33 lbs. of total digestible nutrient compared with 100 lbs. of silage containing 11 lbs. of total digestible

nutrient. Therefore 200 tons of haylage will contain the same nutrient as approximately 600 tons of silage.

This will mean thot by the end of March the efficient producer will have one or more vacuum fodder stacks available for self feeding with the stock under close control and with no need for the cattle to go onto "bloat risky" pastures.

Many comments have been made about the cost of the Vacuum covers but the 50 ton cover at £68 does not cost as much as a good cow, but the latter unfortunately can go down and be dead within a matter of hours. One large stack will store enough haylage to feed 60 cows for one month. Assume that this herd produces 5,000 gallons in a month at 2/9 a gallon. The gross return amounts to £680 from one 50 ton stack, and the economy of using a 100 ton cover at £91 is even greater.

The vacuum fodder dome, handled with reasonable care, can be used several times.

"Haylage" is also the name given to the feed which is stored in the A. O. SMITH HARVESTORES. Whilst the Harvestores may be beyond the financial reach of some farmers, the practical advantages of haylage can be gained with the Grasslands Vacuum fodder process.

The process of making haylage is simple and can be carried out almost regardless of the weather conditions. The fact that it can be made from any crop at any point of maturity, bears repeating, because so much money is wasted annually trying to get the crop harvested and into storage without waste. Economics in storage of haylage with vacuum fodder covers follows automatically because the plastic covers are waterproof thus preventing leaching of nutrients and the valuable carotene is retained because the sun cannot bleach the covered forage. Because the vacuum fodder stacks are circular they lend themsevles to efficient self feeding, through a 9 in. x 9 in. mesh. The circumference of a 50 ton stack is approximately 80 feet which is more than ample for 60 cows. A smaller 20 ton stack with a circumference of nearly 60 feet is also available priced at £29/10/-.

Statistics

PRODUCTION (000 gallons)

Month			Total since July 1		Total since January 1	
	1962	1963	1961/62	1962/63	1962	1963
May	2,370	2,578	35,990	38,204	13,290	14,160

SALES (000 gallons)

Month	Total since July 1				Quota %		C.M.B.	
	1962	1963	1961/62	1962/63	1962	1963	1962	1963
May	1,585	1,628	16,849	17,356	67	63	3/1½	2/11¾

INTERIM PRICES

(All prices are interim only and subject to adjustment by retrospective payment.)

	Basic C.M.B. Total (per lb. butterfat)			3%	3.5%	4%	4.5%	5%
				(per gallon)				
1963								
May	3/3	3/1½	6/2¾	1/11¼	2/3	2/6¾	2/10¾	3/2½
June	3/3	—	—	—	—	—	—	—

Attention is drawn to the misprint in the April issue: The Quota for February 1963 should be 51%, not 62% as printed.

THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

Official Publication of the SOUTH AUSTRALIAN DAIRYMEN'S ASSOCIATION INCORPORATED

Published Bi-monthly

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THE VALUE OF PASTURE SPRAYING
C.S.I.R.O. Has Second Thoughts

In less than 10 years the spraying of pastures against red mite and lucerne flea has now become generally accepted as one of the routine jobs like supering or haymaking, and in fact two or even more sprayings per year are being used on some farms. In such circumstances our first reaction must be one of surprise that such an organisation as the C.S.I.R.O. is now questioning the value of spraying in the control of pasture pests.

Those of us who have read Rachel Carson's "Silent Spring," with its quite horrifying account of the effects on human and animal life of the irresponsible use in America of chemical controls must surely have questioned the wisdom of our own, more restrained, use of the same methods, but excused ourselves on the grounds of economic necessity.

A reappraisal which strikes even at these grounds is surely worthy of careful examination by an industry in which both time and money are in short supply.

THE COST OF PASTURE PESTS

The June issue of "Rural Research in C.S.I.R.O." reports that research in Western Australia has shown that increased returns from insecticidal treatment of pastures do not always cover the cost. Productivity might be increased more economically by other means, particularly where the pastures are low yielding and the red-legged earth mite is the main pest.

It does not always pay to control pasture pests by spraying with chemicals. Just as the spraying of an entire building to rid it of one housefly would not be justified, so pest situations are often encountered where the value of the production lost through unrestricted development of a mite or insect pest would not be covered by the cost of insecticidal treatment of the pasture.

However, it is very difficult to estimate such losses with precision. In some instances the damage may be insidious, while in others it can be overestimated because physical damage to the plants is very obvious. Unfortunately there is little information about the production losses resulting from various levels of infestation by the more common pests of Australian pastures.

IN WESTERN AUSTRALIA

Most of the information available has been gathered in Western Australia, where a number of serious pasture pests are recurrent on many of the 7 million acres of improved pastures now established in that State. Aggregate annual expenditure on control measures runs into a considerable sum and adds substantially to costs on affected properties. The advent of apparently inexpensive control measures has led come graziers to treat blocks of their land each year, irrespective of the nature of the pasture or the extent and intensity of the pest infestation.

Some ten years ago, Mr. M. M. H. Wallace and Mr. J. A. Mahon, of the C.S.I.R.O. Division of Entomology, began a series of long-term experiments to measure losses in production resulting from various levels of infestation by the most common mite and insect pests of Western Australian pastures—the red-legged earth mite, the lucerne flea, and the webworm.

From headquarters at the Western Australian Regional Laboratory in Perth, they established experiments at four different sites in the vicinity of Katanning. Some of the quarter-acre experimental enclosures were kept free of pests by regular dressing of DDT superphosphate. Other plots on these clover-dominant pastures were top-dressed with plain super and no attempt was made to control the moderate levels of pest infestation that developed from year to year. One series of experiments was ungrazed, while others were grazed either intermittently or continuously.

Productivity of the plots was measured over a four-year period in terms of herbage yields and of sheep-carrying capacity. Changes in botanical composition were recorded and regular checks made of the pest numbers on all plots.

Larger areas were used later in trials on properties at Northam and Kojonup. Paddocks of 30 acres and 10 acres respectively were divided and one half of each sprayed with a malothion–DDT mixture. Both herbage yields and sheep weights were recorded.

HERBAGE LOSSES VARY

The differences between the weights of herbage on the treated and untreated plots provided a meosure of the posture lost through the depredation of the mites or insects. The losses caused by the pests ranged from nil to 24 cwt. There were substantiol variation in damage from site to site in the same year, and from year to year at the same site. These fluctuations depended upon:

- the particular pest responsible for the damage
- the intensity of infestotion
- the vigour of the pasture

In 27 of the 34 comparisons, the red-legged earth mite was the dominant pest. It caused losses ranging from nil to about 10 cwt. of dry matter per acre, with an average toll of about 4 cwt. per acre.

Lucerne fleas were dominant in only one area, causing a loss of about 8 cwt. of dry matter per acre.

Webworms caused the greatest damage, with an average loss of about 20 cwt. of dry matter per ocre.

The important question is just what these herbage losses represent in terms of livestock production. The average annual yield of dry matter from all the untreated and ungrazed experimental plots was 34 cwt. per acre. When grazed, such pastures normally carry abaut 2 sheep per acre. On this basis the losses due to pasture pests represented a loss in sheep grazing ranging from nil to 1½ sheep per acre.

The additional feed avoilable os a result of controlling the pests may also increase the liveweights and wool production of the sheep. In one trial sheep off-sheors on a sprayed pasture were 2.8 lb. heavier and carried an extra ½ lb. of wool per head, but in another the increase in wool production was only about 1/10th lb. per head. An increase in rate of stocking would be a more effective way of utilizing the extra feed and this procedure forms the basis of the discussion on casts and returns presented by Mr. Wollace and Mr. Mahon.

TO TREAT OR NOT TO TREAT

In years of heavy webworm attack there seems little doubt that treatment of infested pastures would be profitable. The position regarding the red-legged earth mite is less clear-cut. With an average gain in corrying capacity after treatment of only 1/3rd sheep per acre, treatment will more often than not cost more than the value of ony increased production. For instance, with net wool

prices averageing 48d. per lb., from 1958 to 1962 aerial treatment for mite control in Western Australia would probably have been profitable only on properties with low sheep costs or top-quality wools.

The state of the pasture is an important element in the situation. Vigorously growing pastures may not be affected by severe infestations, while a pasture in poor condition as a result of cold or drought, for intance, might suffer severe damage from far fewer mites or insects. Mr. Wallace's experience has shown that **if damage is not obvious while standing or walking through the pasture, treatment is unlikely to be warranted.** Checks for the red-legged earth mite should be made soon after the pasture germinates. However, both the lucerne flea and webworm also do damage in mid- and late winter and it is often necessary to keep a watching brief throughout the growing season.

The C.S.I.R.O. entomologists believe that, in Western Australia at least, insecticidal treatment of established pastures is justified only on highly productive areas. It is essential that, if he does decide to treat his pastures, the farmer should do everything possible to ensure maximum return for the expenditure. **He should treat only those areas that are suffering or are likely to suffer severe damage. Blanket spraying of large areas is not only wasteful, but may also have unfortunate side effects** by upsetting the natural compensatory mechanism which would ultimately reduce pest numbers to normal levels.

The only way the cost of treatment can be recouped is by increased animal production. It is useless saving ½ ton of dry matter if it is then allowed to go to waste. One certain way to 'harvest' the additional feed is to increase the stocking rate.

However, it is by no means always certain that insecticidal treatment is the best way to increase stocking rates. In fact, in many instances the pastures are already understocked and treatment only increases the surplus which will be going to waste in any case. Finally, insecticidal treatment may not always be the best and most economical way of increasing the output per acre. **In some circumstances the same expenditure on say fertilizer or additional fencing might give greater returns.**

The considerations outlined in this article apply only to established subterranean clover and medic pastures in Western Australia. **Treatment of new pastures or leguminous crops and cereals is quite another matter** and presents an entirely different set of problems.

At the time the experiments described in this article were in progress DDT and malathion were the insecticides recommended for control of the major pasture pests. They were effective in reducing pest populations on treated plots to low levels and so enabled valid estimates to be made of losses due to pest attack.

For various reasons, however, State Departments of Agriculture are now testing other insecticides in the hope of finding alternatives. Their use should not invalidate the general conclusions.

STOP PRESS

In view of the increasing problem of infertility in dairy cattle, it is of interest to note, in the light of the above article, that constant contact with D.D.T. has now been found to cause oligospermia (reduced production of spermatozoa) in the pilots of crop-spraying aircraft. Subsequent laboratory investigation on experimental animals indicated that there is a tendency for D.D.T. to accumulate in the genital organs at a far higher concentration than in any other part of the body. Furthermore, it was shown, in the cose of bulls, that the mobility of the sperm was decreased when insecticides were present in the testes.

Statistics

PRODUCTION (000 gallons)

Month			Total since July 1		Total since January 1	
	1962	1963	1961/62	1962/63	1962	1963
June	2,572	2,835	38,562	41,039	15,862	16,995
July	3,123	3,263	——	——	18,985	20,258

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1962	1963	1961/62	1962/63	1962	1963	1962	1963
June	1,544	1,572	18,393	18,928	60	56	2/10¼	2/7¼
July	1,588	1,635	——	——	51	50	2/5⅜	2/4⅜

INTERIM PRICES

(All prices are interim only and subject to adjustment by retrospective payment.)

	Basic C.M.B. Total (per lb. butterfat)			3%	3.5%	4%	4.5% (per gallon)	5%
1963								
June	3/3	2/7¼	5/10½	1/9¾	2/1¼	2/5	2/8½	3/-
July	3/3¼	2/4⅜	5/7⅞	1/9	2/0½	2/4	2/7½	2/11
August	3/3¼	—	—	—	—	—	—	—

Prices and Retrospectives

NEW SEASON'S INTERIM BASIC PRICE

The interim overall return for cheese for 1963/64 has now been determined by the Commonwealth Dairy Produce Equalisation Committee Limited as follows:

Interim Equalisation Value (per cwt. cheese)	202/8d.
Interim Bounty Rate (per cwt. cheese)	21/8d.
Interim Overall Return (per cwt. cheese)	224/4d.

The interim basic price to licensed producers in the metropolitan supply area will therefore be 3/3¼d. per lb. b.f at the farm gate, after providing for the deduction of the Australian Dairy Produce Board levy for research and promotion of 3/32d. per lb. cheese (approximately 0.24d. per lb. b.f.), the ¼d. increase over the previous rate being the result of a fractional adjustment.

FINAL RETROSPECTIVE 1961-62

In the June issue of the Journal it was stated that the exact rate and date of payment of this retrospective would be announced on July 18. As, however, the final returns are not yet completed, it is not expected that the exact rate will be known until late in September, also the forecast is approximately 1⅛d. per lb. b.f. equalised is unchanged.

FIRST STEP-UP — 1962-63

The Commonwealth Equalisation Committee has announced a Step-up in interim values for cheese for 1962-63 of 14/- cwt. cheese, bringing the interim value of 215/4d. cwt. cheese, which will allow a step-up in the basic price for that year to licensed producers of approximately 3.8d. per lb. b.f., and a retrospective payment of approximately 2d. lb. b.f. equalised.

CENTRAL COUNCIL PROCEEDINGS

PROPOSED REDUCTION IN CHEESE OUTPUT

The Secretary explained that the Executive Committee had conferred with the S.A. Cheese Manufacturers' Association concerning the desirability and manner of acceding to the A.D.P.B's. request for a reduction of 10% in cheese output.

The necessity for this reduction in output arose from the circumstances stated in the Review of Industry Problems published by the Australian Dairy Produce Board, which indicated that the world was faced with a large unsaleable surplus problem. This Review had been examined at its March meeting by the Central Council which had then expressed some measure of support for a two-price quota scheme and insistence on the fact that long-term solutions could only be achieved by international commodity agreements. In the meantime we had a problem of increasing magnitude in unsaleable surplus of butter and cheese, brought about by expanded production per cow throughout Australia and the effect of the imposition by U.K. of import quotas which, although satisfactory in view of previous export figures, were not enough to absorb all of today's production, although it should be realised that the higher price levels which were brought about by the imposition of quotas gave a greater overall return than if the whole of the production was sold on the open market. Our task at the moment was, however, to find a short term solution to the immediate problem, which was the lack of cold storage space over and above that now in use to store the record cheese stocks on hand.

As the Council had been advised in March, the Chairman of the A.D.P.B. had asked all cheese manufacturers to reduce production to 90% of last year's figures. The fact that the A.D.P.B. would only request such action on a voluntary basis was due to its lack of power over production, but it appeared that Victoria and probably Queensland would accede to the request if other States also complied. In this State it had been suggested that cheese output in the Adelaide area be reduced by 10% and the 5,500 gallons of milk per day thus rendered surplus be directed to butter manufacture. Although butter was also oversupplied, the amount of oversupply was not as great, proportional to total output, as was the case with cheese, and additional butter manufacture in S.A. would reduce the amount imported from Victoria. Furthermore butter had alternative uses, e.g., butter oil and ghee, for which there was no counter part in the case of cheese, and the quantity, about 15,000 boxes p.a. was not great compared with total output of butter in Australia.

The lower return for butter and the cost of factory separation and transport as milk would mean a lower basic price to the producer, but if diversion of milk into butter were not undertaken, the only alternative appeared to be to continue to make cheese until the position exploded.

The meeting between the Executive Committee and the S.A. Cheese Manufacturers' Association on June 25 had not produced any concrete plan, and the members of the Executive were not unanimous that we should accept the proposal for diversion to butter, particularly as we might find that S.A. was the only State that had acceded to the A.D.P.B's. request.

The Secretary added that he, personally, believed that we had nothing to fear from taking such unilateral action. In the meantime the Association was examining two lang term projects, namely, uniform legislation in all States for the compulsory grading of cheese, and the total prohibition of imports of cheese because of the danger of importing stock diseases.

Mr. Warwick asked whether the cheese in cold store belonged to the A.D.P.B. or to the factory, and if it belongs to the Board, how much had been paid for it?

The Chairman replied that the cheese passed under the control of the Board as soon as it was graded for export after delivery to the cold store and that an advance payment approximating the interim value was paid at that stage. If the

To All Farmers' Union Shareholders!

Voting for vacancies on the Board of Directors of Farmers' Union closes on September 23.

Although voting is optional, to assure the continued progress of the Company, it is important that you exercise your right to vote . . . and carefully consider who will represent you.

Mr. W. F. Nankivell, M.P.

MAKE SURE YOU VOTE, and . . .

Choose a Youthful Practical Farmer who knows Your Problems

Mr. W. F. (Bill) Nankivell was born at Mount Gambier 40 years ago into a family which has had 70 years' association with Farmers' Union.

He currently farms a 2,300 acres property at Geranium, in the Upper South-East, where he lives and maintains. During the war he served in the R.A.A.F.

He gained the Diploma of Agriculture at Roseworthy College and graduated in Agricultural Science at Adelaide University.

In the House of Assembly, Mr. Nankivell represents the rural electorate of Albert. He is a farmers' representative on the Wheat Industry Advisory Committee.

FOR PROGRESSIVE DIRECTION

VOTE

NANKIVELL, W. F. [X]

ROBINSON, W. W. - - - - [X]

Look at Last Year's Figures

And ask yourself: **"CAN I CONSISTENTLY MEET THE 4+ METHYLENE BLUE TEST?"**

The April issue of this Journal reported that the Metropolitan Milk Board had received legal advice that the practice of treating 4 hour milk as conforming to the standard for city milk was in error, and that FROM 17/5/63 THE ONLY MILK ACCEPTED AS HAVING CONFORMED TO STANDARD WOULD BE THAT RECORDED AS

4½ or 4+

The Secretary of the South Australian Dairymen's Association estimated that this change would increase the number of suppliers eligible for suspension by 2½ to 3 times.

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factory could not obtain cold store space the Board would not assume control nor make advance payment.

The Chairman said that there had, here and interstate, been a lot of discussion, but he had been very disappointed at the negative results from these discussions, particularly on the part of the manufacturers themselves, and the conference between the S.A.C.M.A. and the Executive Committee had been quite fruitless. In view of the absence of positive policy at the manufacturers' level he recommended that we did not make any rash moves. There was, after all, a possibility that we might just scramble through with, at worst, the loss of a few shillings.

Mr. Barclay said that he could support the Chairman's remarks, as cold-store space was available in S.A. for our needs until next March.

The Chairman added that although the merchant had no unanimity yet concerning factory separation, Mr. Turvey had suggested that farmers who wished to could separate their own milk, and the aspects of this in relation to milk equalisation be examined.

Mr. Barclay said that this could reduce any overall reduction in the basic price, by eliminating the high costs of transporting liquid milk for separation. As a suggestion it had value, and should be examined, but the dairyfarmers should not fly into a panic. Although it appeared inevitable that the farmer would lose money, the factories had more at stake than the dairyfarmers and they were not going to sit still and do nothing.

Mr. Turvey said we should not let this matter drift on, because after all the dairyfarmer stood to lose far more than the factory, which did not have to stand the costs of cold storage or to take the loss resulting from the deterioration of stored cheese. Factories would receive their margins whatever happened, and in the end it would be the dairyfarmers who suffered. In our meetings with the Cheese Makers' Association he had gathered the impression that each merchant was afraid that the other one might gain a little more than he did, and was not prepared to volunteer any ideas. It was all very fine for us to say that a reduction would come about in due course, and that we should not act until the other States also acted, but we could well find that we were in a far worse position by the time circumstances forced a reduction. He believed that if we in South Australia were the only ones who acted we would not lose any more than if we did nothing at all and the unsold surplus increased, and if we did act the other States might follows. Although, perhaps, we should not act hurriedly, we should immediately set about taking positive action to bring about a reduction in output, and to take what steps we could to prevent the market being flooded with large quantities of cheese that had deteriorated through long storage. The costs of factory separation should be investigated as soon as possible and the question of farm separation should also be studies, to see whether it would be possible to pay the dairyfarmer the same price as for milk.

Mr. Warwick asked what powers or duties the A.D.P.B. had in respect of cheese delivered to cold store? Was it able to refuse to take cheese or to pay the advance in South Australia yet continue to accept and pay for cheese in another State? If it was dependent only on cold store capacity, was it beyond our ability to build a co-operative cold store?

The Chairman replied that the question of additional cold store capacity had been raised, but it was considered that S.A. had cold storage space at least proportional to Victoria. It appeared that the A.D.P.B. accepted control of, and made advance payments on, all cheese delivered into cold store and graded for export.

Mr. Warwick said that in that case it was pointless for this State to take unilateral action, which would handicap us whilst not benefiting the rest of Australia to ony appreciable extent. As the most important part of our income was the sale of city milk, everything we could do to keep the quota up was of far greater significance than the question of surplus cheese, and if we could have a propaganda campoign to demonstrate to dairymen how uneconomical it was to feed vast quantities of concentrates to their borderline cows, we would go a

long way to reducing our excess production, keeping up our quota, and gaining higher nett figures.

Mr. Gormlie said that whatever control the A.D.P.B. could exercise through withholding advance payments would be nullified by dissentient States un-loading their cheese onto the home market in breach of Commonwealth Equalisation.

Mr. Spicer said that the Gruen plan appeared to be one solution to the problem, yet the report from the A.D.F.F. meeting was one of general opposition.

The Chairman replied that individual members of the A.D.F.F. Executive had expressed some support for the plan, but the general trend, apart from our own Association, was one of opposition, until such time as the situation became desperate. The A.D.F.F. had resolved that no action be taken to implement a domestic quota plan at present, and had commented that because of constitutional and political difficulties its introduction was unlikely unless it had the almost unanimous support of the industry in every State in the Commonwealth, and it did not consider that this support would be forthcoming at the present time, although it believed that further consideration should be given in the light of future production trends, to the Gruen plan and also to the alternative proposition of dairyfarm licensing.

The Secretary commented that he was astounded that the A.D.F.F. should have given any consideration to licensing as an alternative to the Gruen plan which did not restrict the farmers' freedom of choice, and he had assessed that most of the opposition to the Gruen plan was due to ignorance rather than conscientious objection, and the fact that the industry appeared to be prepared to go ahead with no self discipline at all, and when in a jam to go to the Federal Government pleading for help.

The position as regards our own production could, however, not wait for such a scheme as the Gruen plan. As far as the immediate problem in S.A. was concerned, the ball was now in our court, and it was up to us to take the initiative.

Mr. Easton then moved: "That the Executive make no submission, but watch developments and take such action as they considered necessary"; which was seconded by Mr. Ballard and carried.

AUSTRALIAN DAIRY FARMERS FEDERATION POLICY DECLARATION

The Secretary stated that the policy declaration made by the A.D.F.F. in Queensland in April had been published in full in the Journal and had been considered in detail by the Executive, which had resolved: "that it be a recommendation to the Central Council that all clauses of the policy declaration be adopted by this Association as set out with the exception of or modification of clauses 1, 2 and 11".

Mr. Warwick said that he considered we should not support Clause 3, regarding the provision of finance on reasonable terms to dairyfarmers who desired to change to some other form of production. He believed there were no avenues of production available to the majority of dairymen, whether finance was available or not, owing to the restricted area of most farms, and the fact that, with the possible exception of sheep and beef, there was no other commodity that was not already in as bad a position as dairying.

Mr. Easton supported Mr. Warwick, saying if dairymen could find a more economic commodity than dairying, they could readily obtain finance.

The Chairman said that although the Secretary had opposed this clause at the A.D.F.F. executive meeting, it had been passed by the majority of the executive. As the policy declaration applied to the whole of Austalia we should not take any action which could, perhaps, jeopardise another State's position.

Mr. Warwick said that if it did not apply to us, we should not support it, as otherwise we might run the risk of having it cast back in our teeth by some subsequent Committee of Enquiry.

Mr. Warwick then moved: "That although clause 3 is not relevant to South Australia, this Association support it in deference to the wishes of other States"; which was seconded by Mr. Easton and carried.

The Secretary said that in reference to Clause 1 ("that it be a recommendation to the Commonwealth Government and to all State Governments that there be no further state land development for dairying until an examination has been made of the project by the Australian Agricultural Council in consultation with the Australian Dairy Industry Council in the light of marketing requirements") the Executive had resolved that this clause be supported, and that this Association request the Minister of Agriculture to support this clause at the next meeting of the Australian Agricultural Council. The President and he had accordingly conferred with the Minister asking him to support this principle.

It was noted that in reference to Clause 2 ("That no action be taken to introduce a domestic sales quota scheme, at present"), the Executive had resolved that it be a recommendation to the Central Council that this clause be supported but that this Association is opposed to the restrictive licensing of dairy farms as an alternative to a domestic sales quota, and that a further examination be undertaken by the appropriate organisations of the implications and the possible administrative processes involved in a domestic quota scheme.

Mr. Temby said that a restriction through licensing of the whole of Australia's dairy output could not be supported from a political or a humanistic viewpoint in a world where two-thirds of the population was underfed. The Gruen plan was restrictive only in so far as it restricted increased output to those farms which could do so economically at world price levels, which, from a national point of view, was quite reasonable.

It was noted that in reference to Clause 11 ("That it be a recommendation to the Australian Cheese Manufacturers' Federation that the Commonwealth Government be requested:—

i. to increase substantially the import duty on all imported cheeses, as a protection of the cheese industry; or alternatively,

ii. to prohibit the importation of cheese"),

the Executive had resolved that this Association seek the extension of the Quarantine Act to prohibit the importation of cheese on the grounds that such prohibition will lessen the danger of introducing stock diseases which are not at present endemic to Australia.

The Secretary explained that at the A.D.F.F. meeting there was considerable support for complete prohibition because of the effect on the industry's sales, but the South Australian delegates had opposed this on the grounds that it was an unreasonable action for any industry to take, and if similar action was attempted by the manufacturer of some commodity used on the farm, and who wanted to prohibit competitive imports, it would be opposed by the dairying industry. The S.A. delegates had, however, pressed strongly for prohibition on the grounds of the danger of the introduction of stock diseases, the financial effect of which could be a hundred times greater than the mere loss of sales. The Executive had taken steps to put this in motion and it was hoped that satisfactory action would be forthcoming from the meeting of Chief Quarantine Officers (Animal) now being held in Canberra. Any recommendations by the C.Q.O.(A.)'s would be passed on to the Australian Agricultural Council at its July meeting, and the President said he had asked the Minister of Agriculture to give his support to this move at the Agricultural Council.

ARTIFICIAL BREEDING BOARD NEWSLETTER

The Secretary said that although it had been reported at our March meeting that we had received a letter from the Director of the A.B. Board stating that the Board would periodically publish material of interest to users of artificial breeding from all sources available, to encourage the widest, most efficient use of the medium, and we had advised Mr. Rose that we would be happy to offer space in our Journal for such information, no material had yet been received, nor had we received any intimation as to what action the Board intended to take in this matter.

The Chairman explained that there was little to report at the moment. The Board was now in the process of getting under way with the supply of chilled

semen, and the numbers of farmers using A.B. was increasing, except in the Myponga district.

Mr. Warwick said that although the Director's attitude was that the facts about A.B. were well enough understood, it was obvious from questions asked at a recent meeting that this was far from being so. There was still a great deal of ignorance about A.B., there was still a great deal of apathy about the matter, and it was not being pushed at all. Instead of the decline of 400 cows reported by Mr. Rose there should be people clomouring to get into the scheme, which was the biggest single advance in dairying that we had had in recent years, and the whole thing was being let go though lack of public relations and drive. This state of affairs could only result in the scheme becoming more uneconomic as the fees were raised even higher because of the poor support, and the necessity for inseminotors to drive many miles to those few farmers who would remain in the scheme. Although he knew the staff were busy, the type of newsletter we needed would take only a few hours work.

As an exomple, an item in the "Chronicle" cited South Australia as having the worst non-return rate in Australia. We had challenged Mr. Rose on this and his reply had been that this was not, in fact, so, as our figures were calculated in a different way, yet no refutation of the "Chronicle's" statement had been made, and any dairyfarmer considering entry in A.B. could certainly change his mind on reading this. The only contact the dairyfarmer had with the Board was through the inseminators, and it appeared that even they had little contact with or information from the Board.

Mr. Gormlie said although he had been one of the biggest advocates of A.B. along the River he had to confess that experience had not supported the claims he had made for it in good faith, and a good deal of this unsatisfactory experience could be blamed on the complete lack of information coming forward to the farmers.

Mr. Goodrich said that clearly the technical staff were not fitted to carry out public relations. As an unexperienced farmer at the time A.B. was introduced, he was now able to say that he was seeing results in his own herd, but an experienced man with a good herd would require very sound reasons to adopt a new technique.

Mr. Harper then moved: "That a further meeting of the A.B. goup be called to study this problem"; which was seconded by Mr. P. Schubert and carried.

LIAISON COMMITTEE WITH A.P.P.U.

The Secretary reported that a letter had now been received from the A.P.P.U. accepting the invitation to form a Liaison Committee in conjunction with this Association, and naming as their representatives on the Committee, Messrs. Frith, Adams, Gore and Slee. The letter had stated that the aim of the Committee should be to discuss matters of common interest to both associations, with the alternate aim of forming one dairyfarming organisation in this State.

In reply to a question from Mr. Gormlie the Chairman stated that the intention of this Association's purpose for which the Liaison Committee was formed was to discuss matters relating to the industry.

Mr. Warwick said that although this was the primary purpose of the Committee, nevertheless the question of unity was one of the most important matters facing the industry, and no harm could come from discussing it. The Committee could not commit either the Central Council or the Association concerning any unity move, but at least it could find out where the areas of agreement and disagreement lay. One problem that he did foresee was that of finding a chairman for it. It was possible that neither their nominee nor ours would be acceptable, and in any case the nomination of chairman would mean the loss of a vote to one side or the other and consequently he moved: "that Mr. J. Heffernan, Federal President of the A.P.P.U., be asked to act as chairman for the first meeting of the Liaison Committee"; seconded by Mr. Harper and carried.

PESTS AND NOXIOUS WEEDS

The Secretary reported that the S.A. National Farmers' Union Sub-Committee on weeds and vermin had presented a submission to the Minister of Agriculture requesting that the control of weeds and vermin be brought together into unified legislation, as in Victoria, under one Government department, and be administered by a Board to be known as the Weeds and Vermin Control Board. It had been proposed that this Board take over the powers now held, but not often used, by local governing bodies, and that the cost of operation of the Board be from general revenue. The Sub-Committee had also submitted proposed amendments to the legislation, which included some prohibitions concerning the movement of machinery and the sale of seeds and fodder suspected of contamination by noxious weed seeds. The Executive Committee of this Association had studied the Sub-Committee's submission and had considered the 3rd prohibition relating to the sale of fodder to be unreasonably restrictive.

We had therefore requested the Executive Committee of S.A.N.F.U. to submit this clause to the consideration of the Governing Council of S.A.N.F.U.

Mr. Temby said that as the proposals had been modelled on the Victorian pattern, it could be that a satisfactory means of control and certification had been evolved, and we should obtain a copy of the Victorian Act.

Mr. Warwick said that these prohibitions already existed under the present Act, and we could hardly object if the same prohibitions were used in new legislation.

Mr. Gormlie said that rigid enforcement of the prohibitions would bring sales of fodder and feed grain to a full stop. No farmer would be prepared to sell if he risked prosecution through the presence of unsuspected noxious weed seeds.

Promising Results From New Fodder Crop

Dairy farmers in widespread parts of the State have now had their first experience with Sudax, a new hybrid fodder crop which has given spectacular results in the U.S.A. and in other States of the Commonwealth.

Glowing reports received from users suggest that Sudax is destined for an important role in South Australia.

Sudax is a sorghum—cross x Sudan grass hybrid made by crossing a special type of male-sterile sorghum with a prolific American strain of sudan grass.

Animal breeders will be familiar with the concept of hybrid vigor in which the first cross of two very different inbred strains is vastly superior to either the parents.

Results in South Australia this year seem to bear out the original claims made for Sudax, which were:—

- **Grows 10-12 feet tall at maturity.**
- **Outyields Sudan grass by 30-100 per cent.**
- **With repeated cutting has yielded 50-80 tons of green feed per acre.**
- **Has broader leaves with bigger and softer stems than Sudan grass and is more palatable and sweeter.**
- **Has tremendous re-growth ability of up to three inches per day.**
- **Is easier to plant and can be distributed very evenly as the seed resembles that of grain sorghum.**
- **Can be grazed repeatedly or cut regularly for silage.**
- **Is deep rooted, does well under dry conditions and in many parts of Australia and America has proved superior to sorghum almum.**

There is one drawback with any hybrid plant or animal, however. Seed saved from a Sudax crop will "segregate", (to use the mechanical term) in the next generation and will not breed true to type thereafter.

Sudax seed must therefore be re-purchased each year.

Letters received by M. F. Hodge & Sons concerning Sudax speak for themselves. Extracts from some are published below:—

LUCINDALE

Mr. Ron Pexton sowed 30 acres of black sandy swamp to Sudax on November 24, 1962.

Damp spots germinated immediately but the main germination took place after a rain in mid-December.

Mr. Pexton considers total germination was equivalent to 25 acres.

By January 30—nine weeks from seeding—the crop was 6 ft. high. Twenty-seven cattle were introduced.

"It is growing away from them—they do not appear to have used more than one-third of the crop—so I am today introducing another 32 head of mature cattle," Mr. Pexton said.

The letter was dated February 25.

WILLUNGA

E. M. Rundle and Sons sowed 3 acres of Sudax at 7 lb. of seed per acre on good fertile valley soil in mid-November. The crop was not irrigated.

To use Mr. Rundle's term, the feed was "terrific", reaching about 7 ft. high. It had stooled well and was very thick and had been cut for hay and fed to dairy cows.

By mid-February, when Mr. Rundle made his report it had grown 2-3 feet since the last cut 3 weeks earlier.

MACCLESFIELD

Mr. Fuss broadcast 2 acres of Sudax at 25 lb. of seed per acre in early November under dry land conditions.

Cold November weather affected the crops in the hills, and only 60 per cent. germinated. But this grew well and after trying to cut the crop, Mr. Fuss decided to strip graze the Sudax when it was 5-6 ft. high. The Sudax showed far more vigor and better regrowth than a crop of Jap. millet growing beside it. By mid-February it was 2-3 ft. high and ready for another grazing.

NAIRNE

Mr. D. F. Shephard planted Sudax for the first time last November at 9 lb. per acre, with sulphate of ammonia, muriate of potash and superphosphate. Mr. Shephard attributes the somewhat patchy germination to cold weather just after planting and to the sowing rate which he considers should be raised to 15 lb. per acre, dry grown.

Despite this, the crop grew well and stooled out.

In mid-February, Mr. Shephard reported that 150 sheep and 10 dry cattle had been on Sudax for 6 weeks and that 3 acres were cut and fed to dairy cows. Regrowth from both areas was encouraging.

Maize was also grown on the same property and Mr. Shephard found that cows preferred the Sudax and milked better on it than on the maize.

STRATHALBYN

Mr. S. Weston has had a most successful first attempt with Sudax sown on October 10, over 7¾ acres, dry grown.

He was able to feed it off on December 27. when the crop was 4-6 ft. high. Three hundred and eighty sheep—the equivalent of 50 sheep per acre—were on the Sudax until January 9, when it was down to 18 in. high.

On January 23, the crop was 3-4 ft. high again and 120 lambs (15 per acre) were put in. These remained until January 30, when the 380 sheep were put back again for another 11 days.

On March 4, Mr. Weston reported that the crop was again 2-3 ft. high and another grazing would be possible, with a lighter stocking rate over a longer period.

Mr. Weston's observation was that under dry land conditions, a heavy sowing did not produce a heavy crop, but a 5-7 lb. per acre seeding gave sufficient gaps between each plant to carry up to 30 stems per plant, giving more overall feed per plant, better feed and quicker regrowth. This, of course, was a reflection of the available moisture content in the soil.

MOUNT GAMBIER

The area sown had a bad history, having been under lease and having received little super. It was disc-harrowed three times to kill weeds, without a really satisfactory result.

On October 10 last year, Sudax was sown at 12 lb. per acre, with 1 bag of superphosphate. The weather was cold and wet as the germination was patchy. It seems that some malting occurred.

In mid-December, the crop did not appear to be making much headway, so it was decided to irrigate, on December 26, applying a bag of superphosphate with 7 lb. copper sulphate, 7 lb. zinc sulphate, ¼ oz. cobalt sulphate and 2 oz. molybdenum oxide and 1 bag of sulphate of ammonia, per acre.

The first irrigation was at the rate of 1½ inches. When this watering was completed, a further 1½ inches was applied, with a final watering of 2 inches in the third week in January. This was followed by 220 points of rain.

The crop was cut and made into "vacuum haylage" on February 4, when the tallest plants were 7 ft. 6 in. high. From sowing to February 4, 898 points of rain fell, plus 5 inches of irrigation.

When the two stacks were finally de-aired there were 60 tons of haylage.

As he did not need a major regrowth, no further super was applied, but as soon as the crop was removed, 2 inches of irrigation was given. This will be the last watering. It appears that the regrowth will be more than adequate for requirements.

"I have previously owned two dairy farms and in my opinion, Sudax must be the most prolific source of summer greenfeed available to dairymen today.

"Many thanks for your suggestion that I try this crop."

This was the conclusion of Mr. Jarvis.

There are other reports from the Adelaide hills and Mid-North that cattle prefer and do far better on Sudax than on Sudan grass.

GENETIC ASPECTS OF THE ARTIFICIAL BREEDING OF DAIRY CATTLE

J. S. F. BARKER, B.Agr.Sc., Ph.D., Senior Lecturer in Animal Genetics, Department of Animal Husbandry, University of Sydney.

Probably every dairyfarmer must at some time hove asked himself "Whot has artificial breeding got to offer in terms of the economicol running of my dairy unit?", and probably decided that the most importont factor involved was the expectation that artificial breeding would give him the opportunity to use superior sires, thus giving the basis for improvement in his herd.

In answering this, the two key words, namely **superior** and **improvement,** must be approoched from the genetic viewpoint. Any cow has an inherent potential for milk ond butterfat production, determined by the inheritance it hos received from its sire and dam. This inherent potential is referred to as the genetic merit or breeding value of the individual. However, the amount of milk that the cow actually produces is also influenced by the environment to which it is subjected that is, feeding, management, etc.

Similorly, a bull has a certain breeding value for milk production, which determines in part the producing ability of his daughters. Thus the breeding value of a bull can be estimated from the production records of o large random sample of his daughters. A superior bull is, therefore, one whose breeding value for milk production (and other economic characters) is above average. In other words, one whose daughters will show a higher average production than their contemporaries sired by a random sample of other bulls. The idea of improvement simply follows; we are thinking of genetic improvement or cumulative increase in the average breeding volue of the herd or breeding unit in each generation.

This sets the pattern; we hope that A.I. will offer us bulls of above average breeding value in each generation, thus allowing continuing genetic improvement. Therefore we must ask: "How will we find the superior bulls?" and "How can we maximise the rate of genetic improvement?"

It has already been intimated how the superior bulls will be found; namely, by progeny testing. But we must also ask where will the young bulls for testing be obtained? There are two possibilities: they can either be purchased from stud herds or bred within the A.I. unit. The relative merits of these possibilities are shown by the results of Rendel and Robertson working in Edinburgh in 1950. They investigated the possible rates of genetic improvement for milk yield in o herd of 100 cows, and in an A.I. unit of 2,000 cows. Using data from Great Great Britain, they estimated these rates at 1.0% and 1.7% of the average yield per year. Therefore, if the young bulls for testing are bought in from stud herds, the rate of genetic improvement is tied to that possible in average herds, which is considerably less than that possible within the A.I. unit. Essentially, a bull-breeding and progeny-testing scheme within the A.I. unit involves selecting for progeny-test those young bulls that are the progeny of the best bulls in the A.I. Centre out of the best cows in the unit. A number of young bulls from such matings are obtained and, at as early an age as possible, are used to inseminate a number of cows sufficient to ensure an expectation of at least 25 to 30 daughters to complete a first lactation. These young bulls are then laid off until their daughters all complete a first lactation, when the progeny tests can be assessed. The best of them are then selected to enter the proven bull stud, and the remainder are culled. The best of these proven bulls are used to breed the next generation of young bulls for testing, and so on.

However, it must be realised that some cows in the unit are being mated to the young untested bulls, and mating too many cows this way would reduce the rate of genetic improvement. Therefore, to maximise rate of improvement, we have to find the optimum usage for young and for proven bulls in the cow population. This will depend on the number of young bulls being tested each year, the number of cows each must be mated with to provide and adequate progeny test, and the proportion of bulls tested which are selected for service. Workers in Great Britain, the United States, and New Zealand have recently analysed the effects of these factors on possible rates of improvement. Results

differ because each analysis rests on assumptions and statistics that differ from country to country. Similarly, such analyses will have to be carried out in Australia to determine the optimum breeding plan for our conditions. To do this, however, we will need a lot more information than is presently available to us. For example, we need information on the degree of inheritance of milk and fat production, we need detailed statistics on the dairy cow population—on average production, the variation in production between cows and between herds, average ages at calving, and wastage or loss at different ages.

There is tremendous scope for research in dairy cattle genetics in this country, but this research will be essentially based on production records. This, therefore, comes down to the need for increased herd recording to provide the basic data. It is interesting to note here that the studies on possible rates of genetic improvement by progeny testing in A.I. have emphasised that increasing the percentage of cows recorded increases the rate of improvement. Studies by Searle in New Zealand show, for example, that the rate of improvement for various possible breeding plans is from 6.0% to 26.0% greater if the percentage of daughters tested is 100%, as compared with 25% of daughters tested.

In the progeny testing scheme, the breeding value of the bulls is assessed on the basis of their daughters' first lactation production. The fear has been expressed, particularly in Great Britain, that this might result in the selection of bulls whose daughters are early maturing and have high first lactation production, but who soon "wear out" and do not have a long productive life. Recently, at the Milk Marketing Board of England and Wales, I carried out an analysis to test this idea, and have shown that in general it does not hold. Bulls with above agerage breeding value have a higher percentage of their daughters completing three lactations than do bulls with below average breeding value. A related study by Dr. Alan Robertson on Scottish data bears out this relationship for the percentage of daughters completing a fifth lactation.

Other recent research has been directed at speeding up the process of progeny testing. Earlier assessment of bulls will be advantageous in allowing the selected bulls to enter the bull stud at a younger age, and, by decreasing the interval between generations, will increase the rate of genetic improvement. The amount of milk produced by a cow in the first five months of lactation is closely correlated with her production in the full 10 months. Therefore, this partial lactation record can be used in bull assessment. Other steps in the progeny testing process also can be completed at an earlier age of the bull.

It is clear then that A.I. centres can contribute tremendously to genetic improvement in the cow population which they serve. If I may be permitted to proselytise, the institution of such a bull-breeding and progeny testing scheme must be an essential part of your programme. However, if you are to gain the maximum possible improvement, the data must be available to allow determination of the optimum plan. Every effort must be made to increase the percentage of cows recorded.

Genetic research has the potential to contribute greatly to the Australian dairy industry. For it to do so, however, there must be an increased recognition within the industry of the need for this research, and of the necessity for giving it support. This recognition can only come from awareness of what research has to offer.

		Normal times— no effort to test bull rapidly (months)	Testing— as rapid as practicable (months)
1.	Birth to age of usable semen	16	12
2.	Inseminations to sample the bull	12	2
3.	Gestation period of inseminated females	9+	9+
4.	Birth to breeding age of female progeny	18	15
5.	Progeny's first gestation	9+	9+
6.	Progeny's first lactation	10	5 (partial)
7.	Collection and analysis of records	9	2
	Total months	83	54
	Total years	7	4½

SEASONAL DISCOUNT PLUS BOUNTY WILL REDUCE SUPER. PRICES

Late in July the fertilizer companies announced the introduction of a seasonal discount scheme whereby deliveries of superphosphate and superphosphate mixtures from August 1 to December 31 will be subject to a discount of 10/- per ton.

This scheme is in the nature of a trial for 1963/64 and replaces the deferred payment plan previously operating, under which payments for deliveries during August and October became due on December 1.

This move, which has been advocoted by members of this Associotion for many years, will be welcomed, particularly in view of the trend towards Spring topdressing for increased seed setting in clovers (ref. this Journal, April 1962, p. 32) and the desirability of heavily supering irrigated pastures before watering begins.

Almost simultaneously with this concession has come the announcement of the new Federal bounty of £3 per ton, full details of which are not yet available.

CLEANING OF DAIRY YARDS

Clearly the fastest and most satisfactory way of cleaning dairy yards is by hosing down with a sufficient volume of water to flush away the material without the need for brooms or shovels.

With the limited water supply available on many dairyfarms, particularly in the summer time, it is not always possible to use sufficient volume of water to achieve this, and a very satisfactory compromise can be obtained by using a high pressure water jet to break up the material, followed by a high-volume low-pressure flushing.

To do this effectively requires a centrifugal pump of considerable capacity and a motor of relatively high horsepower, and consequently a high price if the dairy is to be equipped with a self-contained unit comprising a pump and a motor of, say, 2 h.p. or more. Inevitably the question is asked that, as the milking machine is already equipped with at least a 2 h.p. motor, why cannot that motor be used to drive the pump also?

The answer lies in the fact that, with a normal installation, this requires the water pump to run continuously during milking and the vacuum pump to run during hosing-down, causing unnecessary wear on both the pumps, using more electric current than is necessary, and reducing the horsepower available for both milking and hosing-down, unless the belts to the surplus equipment are run-off during each operation, a process which is not desirable where vee-belts are used.

The problem is being overcome for one of our members by a special rock-over motor mounting made to our design by a firm of transmission engineers, for fitting to the existing slide rails. The turning of o simple hand wheel allows the drive to be transferred **either** to the vacuum pump **or** to the centrifugal pump as required.

By the use of a suitable nozzle he is then able to use an initial spray-down at 50 lbs. per square inch pressure, followed by a large-volume flush-off at 2,500 g.p.h.

It is expected that the complete cost of the installation, comprising rock-over mounting, centrifugal pump, pulleys and belts will be approximately £30.

Developments In Fodder Conservation

Although dairyfarmers are probably more fodder-conservation conscious than any other group of primary producers, we still tend to restrict our thinking in terms of hay and ensilage. The article in the June issue describing "Haylage" demonstrated a newly developed method of conservation which probably has the best features of both the conventional methods without their corresponding disadvantages, together with considerable additional advantages of its own. The scope of fodder conservation improvement does not, however, end there. Hay particularly, in harvesting and feeding out, requires considerable handling, and consequently agricultural engineers in the United States are giving a great deal of attention to the complete mechanisation of this crop.

Many farmers thought that the end of the road had been reached with the near-perfection of the mobile, automatic-tying, pick-up baler, but the problem of the weather hazard still remained. So came the hay crushers. These are machines in which a pair of rolls or crimping cylinders crack the stems of the cut pasture and allow the moisture to escape more rapidly. As the stems are slower to dry, this cracking process speeds up field curing.

But now the cry is for hay quality, and research has found that early cutting, which means cutting at a time of highest weather risk is essential for the highest feeding value of hay, and maximum digestibility and palatability.

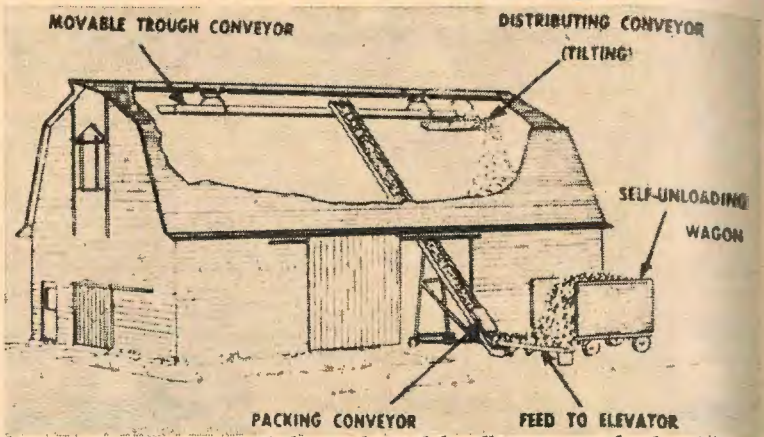
It has also been shown that losses of nutrients due to leaf-shatter and to chemical and bacteriological factors are much reduced if the moisture content at harvesting is about 35 per cent—**much above that required for safe storage.**

Jointly, these two factors have led to the development of artificial drying installations. But baled hay has many disadvantages from the artificial drying point of view. The bales have to be made fairly loose to allow air flow, and after shrinkage do not hold together well. They have to be stacked carefully on edge in such a way as to give and even flow of air through the bale and so avoid the escape of air around the bales. This is clearly a hand operation. Research is proceeding on the making of small bales which can be random-piled in a bin-type drier, but no workable system has resulted as yet.

From the drying aspect, chopped hay offers advantages. It is conveyed **once** at harvest time from the trailer to the shed, and can be ventilated and fed out from there. The drying process would be expected to be more efficient, and there should be less labour requirement.

The usual method is to use a field hay chopper in which a pick-up cylinder lifts the windrowed material and passes it to a chopping box. From there it is delivered by means of a blower and spout into a trailing truck. It is then transported to the shed where a blower does the loading.

Alternatively, the whole hay is taken from the windrow to the shed, chopped by a stationary hay chopper and then blown in to the storage area.



A diagrammatic illustration of the mechanical handling system developed for chopped hay by the Agricultural Engineering School of the Cornell University, U.S.A.

There is another facet of this problem, ot least in the eyes of the American farmer, who is now turning more ond more to silage as fodder, and finds himself facing the cost of two very different types of machinery, namely the pick-up baler and the forage harvester. One is led to look at the possibility of using the pick-up baler for silage or the forage harvester for hay. Of these two possibilities, the forage-chopping type of harvester applied to hay looks the most promising on a farm which is producing hay for its own use. For reasonable power consumption and acceptable rate of output the hoy needs to be chopped fairly long, about four to eight inches.

Nevertheless there is no reason the restrict the process to these two methods. The flail harvester has come to stay, and has some impressive advantages over the pick-up baler as the **basic machine of a fodder conservation system.** It is cheaper, machine for machine, and requires considerably less ancillary equipment; also it is mechanically simpler. The flail harvester **can make chopped hay;** true, there are problems in doing so, but all of them are solvable with sufficient developmental work and field experience. At present the flail harvester is regarded as a silage-maker only. (What a pity it is thot in every 100 tons of green silage, there are 70 to 80 tons of water to be carted around.) But it has extraordinary versatility which is far from fully exploited. Particularly should this matter be examined under Australian conditions. We hear so much about fodder conservation methods and so little about fodder quality. In the U.S.A. and Great Britain, a fodder crop is tending to be regarded in terms of the monetary value of the total digestible nutrients and not just as a weight of preserved material.

We do not have the weather hazards in hay-making to the same extent as do the farmers of those countries. But by the same token, we have excellent conditions for hay drying by natural air, that is, low relative humidity for prolonged spells.

The pick-up boler is produced overseas and is a very expensive machine. Its attractiveness as a one-man machine may over-ride its many faults, the chief of which is the excessive handling that goes into the collection, storage and feeding out of o bale. As time goes on, the limitations of a bulkly package of hay in relation to a fully-mechanised system of storing and feeding out will be increasingly obvious, and chopped hay, which can be bulk-handled, will be looked at seriously.

—PROF. A. H. WILLIS, University of N.S.W.

THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

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1962/63

HE AUSTRALIAN SITUATION

The uncertainty which faced the Australian Dairying industry at this time, year ago, as Britain negotiated the terms of her entry into the European Economic mmunity, has been resolved. For the present, at least, Britain remains outside e Common Market and retains her ties with the Commonwealth countries.

This respite, however, brings little comfort to the industry, which now finds self confronted with large and growing stocks of unsaleable produce resulting om an Australia-wide increase in productivity per cow to hitherto unapproached vels occurring simultaneously with the imposition by the United Kingdom of uotas on the importation of butter and the admission of Australia into an greement regulating the imports of cheese into that country, which has had a milar effect.

There is no doubt that the import quota of butter currently allotted to stralia is, relative to the average quantities supplied to the United Kingdom previous years, quite reasonable, and to a lesser extent, the same may be said the position as regards the cheese agreement. Furthermore, the restrictions aced on the United Kingdom market have tended to stabilise returns for both utter and cheese at relatively high levels and have consquently resulted in oss receipts which are satisfactory when compared with recent years. Never-eless, the position cannot be regarded with complacency, as stocks of surplus utter and cheese, for which, in the short run, there are no commercial outlets, e approaching the limit of cold store capacity, and production trends fore-adow a surplus problem of at least equal magnitude in the coming season.

In the long run there is hope of a considerable expansion of the Asian market which the Australian Dairy Produce Board and a number of manufacturers e seeking to develop what is, geographically, our natural outlet, and to over-me the problems of reciprocal trade which arise from Australia's traditional olicy of industrial protection, but even in this area the stability of the market, ce developed, may be subject to pressure from other dairying countries. The ustralian Dairy Produce Board, in a study of world dairying developments, has recast a steadily growing surplus of dairy produce which will, if allowed to ntinue unchecked, result in complete dislocation of world dairy trade, and illing on each section of the industry in Australia to study the circumstances of s current situation and the forces likely to affect it, has presented the industry ith the choice between "a 'let alone' policy of adjustment in which, without d or interference, dairy production will eventually come into balance with ailable markets, or the adoption of a more positive approach which seeks to derstand and facilitate the necessary adjustments with a minimum of dislocation the individuals and organisations concerned".

To this end this Association has adopted a policy favoring some form of industry reconstruction in order to overcome the problems of unsaleable surplus, and has recommended an examination of the implications and possible adminsfrative processes involved in such action.

METROPOLITAN MILK SUPPLY

Within the Adelaide milk supply area the production position is a reflection of that applying to Australia as a whole. Licensed suppliers in the year under review produced a record output of 41,039,000 gallons, an increase of 6.4% above that of the previous year and 44.5% above that of 5 years ago. Sales of liquid milk, at 18,928,000 gallons, again a record but of lesser magnitude, being 2.9% above that of 1961-62 and only 15.3% above that of 1957-58, resulted in an annual quota of 46.1%, the lowest for 13 years.

The trend of autumn production, which has been evident since 1958, continued, with an average daily intake in the leanest month of 79,444 gallons, which exceeded by 29,000 gallons the daily requirements of whole milk in the metropolitan area, a figure which clearly indicates the capacity of the present licensed area to supply Adelaide for many years without further extension and also poses the question as to whether the Metropolitan Milk Board should continue to issue licences without restriction, in the interests not only of the economic position of licensed producers and of the adequacy of the Board's supervisory staff, but of dairy farmers in general, whose returns must be diminished by the additional production engendered by newcomers into the industry.

As the balance of 20 million gallons over whole milk requirements has been made into cheese, the problem of unsaleable surplus dairy produce is one which concerns us greatly; consequently the Executive Committee of this Association has conferred at length with the South Australian Cheese Manufacturers' Association to seek some jointly acceptable solution which will not have the effect of disrupting other sectors of the industry, and it is believed that the factory supplied by our members are actively exploring alternative forms of production, apart from the manufacture of fancy cheeses, a field in which several of our factories are successfully engaged.

DOMESTIC CONSUMPTION OF DAIRY PRODUCE

The levels of domestic consumption are inseparable from any consideration of surplus dairy produce, and it can hardly be denied that if the Australian consumption per head could be raised to that of some of the Western nations the current level of total production would be completely absorbed. It is therefore encouraging to note a perceptible trend towards this end in an increase of 6% in Australian consumption per head of dairy produce other than butter from the period 1955-59 to 1961-62. To this increase that in cheese consumption, from 5.7 lbs. to 6.7 lbs., makes by far the greatest contribution, but even at this latter figure we are still considerably below such comparable countries as the United Kingdom and the U.S.A.

It can hardly be denied that this relatively low consumption rate, which is little more than ¼ ounce per day, is due to the public's inability to buy cheese of uniform quality. Much of the cheddar cheese made in Australia is of an extremely high standard, but there is much that falls below this level. Such measures as may be taken, and, in the opinion of this Association, must be taken, simultaneously to increase the general standard of quality and to enable the consumer to purchase cheese of a uniform grade, will undoubtedly increase the level of consumption of cheddar cheese which represents by far the greater portion of our output.

At the same time cognisance must be taken of the increasing interest in fancy cheese. In the year just passed consumption of Australian-made non-cheddar cheeses increased by 11%, whilst the sales of imported fancy cheese

rose by 31.5%, and it must be obvious that an immediate and vigorous exploitation of this field, in which the activities of our own manufacturers have already been mentioned, will achieve far more of value to all sections of the industry than merely negative policies of protection or prohibition.

LEGISLATION

A precursor of quality dairy produce is quality milk and it is to this end that the Regulations under the Dairy Industry Act have been amended during the current year to provide, among other things, for the grading, by the methylene blue reductase test, of milk for manufacture, thus, in this respect, bringing the testing procedure under the Dairy Industry Act into agreement with that under the Metropolitan Milk Supply Act. This alignment of procedure has, however, resulted in a re-interpretation by the Metropolitan Milk Board of the regulations for city milk, with the result that the acceptance standard has now been raised from 4 hours to 4 plus or 4½. Certainly the new interpretation reflects exactly the intention of the legislation; but the increased number of producers liable for suspension will surely require the Metropolitan Milk Board to examine critically the factors contributing to sub-standard milk which lie outside the control of the producer.

PRODUCTION COSTS AND PRICES

Partly as a result of the general lessening of inflationary pressures over the last few years, and partly as a result of the economic stringency with the dairyfarmer is forced to exercise, production costs, as assessed by the survey conducted by the Metropolitan Milk Board at 42.21 pence per gallon are, for the third year in succession, below the original figure of 42.79 pence determined in 1959-60. Whether this condition will continue must be subject to considerable doubt. The granting to the labour force of Australia of a 10% increase in margins and an additional week's annual leave may already be reflected in the latest Price Index where a rise of .4 for the June quarter represents the largest upward movement since March 1961, and there is no doubt that cost pressures on the primary producing sector, if not at the moment felt, are gathering strength.

It is therefore gratifying to be able to report the Federal Government's underwriting of the interim values for the fifth year in succession at 40 pence per pound commercial butter, thus allowing an interim price for licensed producers in the Adelaide metropolitan supply area of 39¼ pence per pound butterfat at the farm gate, and to be able to forecast a final return for 1961-62 of approximately 240/- cwt. for cheese, and a similar final figure for 1962-63.

It is reassuring, also, to record, although not in respect of the year under review, the Federal Government's action in granting a 20% investment allowance on the purchase of certain farm assets and a subsidy on superphosphate of £3 per ton, to which may be added the independent decision of the fertilizer manufacturers in South Australia to grant a seasonal discount of 10/- per ton.

PRIMARY PRODUCERS' ORGANISATIONS

It is, of course, impossible to assess with any accuracy the role played by primary producers' organisations in achieving such concessions and in contributing to the welfare of the industries they represent. Nevertheless it is not unreasonable to say that the plight of primary producers would be much worse without concerted action, and, conversely, that their welfare would be considerably improved if their organisations had the universal and undivided support of all producers.

The fact that membership has risen only by 14 from the previous year, although having passed a total of 1,800 in December, is therefore disappointing. On the other hand the action taken by the Central Council in inviting the Dairy Commodity Committee of the South Australian Division of the Australian Primary Producers' Union to form a Liaison Committee to discuss matters affecting the industry marks a step towards obtaining one voice for the dairyfarmer.

In a wider field the Association has continued as an active member of the South Australian National Farmers' Union, which has, I believe, made substantial contributions during the past year to the welfare of primary producers in this State, and as an active member of the Australian Dairy Farmers' Federation and of the Milk Producers' Association of Australia and New Zealand, to the Australasian Conference of which this State was the host in September 1962.

In our own right, therefore, as a commodity organisation, and as a constituent member of State and Federal organisations, we believe we have made some achievements during the year, whilst at the same time we have provided less spectacular, but to the persons concerned no less important, service to individual members who have sought our assistance.

To the members individually, to the Central Council and the Executive Committee, and to the Staff, who have made those achievements possible, and to all other persons and organisations on whose assistance we have called, I express my thanks.

I. R. ELLIOTT, O.B.E., General President.

INCREASED FEES FOR ARTIFICIAL INSEMINATION SERVICES IN N.S.W.

The Chairman of the N.S.W. Milk Board has announced that fees for artificial insemination services for dairy cattle within the milk zone have been increased from 30/- to 35/-. As previously, two free returns will be given, providing they are taken within three calendar months of the first insemination.

Mr. Ferguson said that the Milk Board, which in 1956 assumed the financial responsibility of extending and developing artificial stock breeding in New South Wales, found it impossible to continue services on the present scale without this increase in fees. "The alternative," said Mr. Ferguson, "would be to reduce these services and the Board is reluctant to do this."

Mr. Ferguson pointed out that the increase from 30/- to 35/- would not by any means be sufficient to make up the deficit in A.I. services which will be unavoidable during the current financial year, and emphasised that with further development of A.I. services it may well be possible to reduce fees.

DAIRY FACTORY MANAGER SERIOUSLY INJURED

MILKVILLE, Monday, Oct. 14.

Mr. ————, well known manager of the local milk factory is reported to be recovering from serious injuries received yesterday. Police enquiries into the case have revealed that the injuries resulted from a concerted attack by a group of dairy farmers, who, in a series of assaults, twisted his arm, bashed his ear, and got on his back.

It is believed that the cause of the assaults was Mr. ————'s continued refusal to stock Gaima Dairy Cleaner, Gaima Citric Acid Cleaner and Gaima Q.A.G. Steriliser, as it was his opinion that all cleaners and sterilisers were the same, and what was on the shelf was good enough to send out to the farmer.

In an exclusive interview Mr. ———— told our reporter that, as a result of yesterday's incident he now believes that only the best is good enough for dairy farmers, and that there are no cleaners and sterilisers better than those made for South Australian conditions by Gaima Industries Ltd., 188 Main North Road, Prospect, S.A. (telephone 65 1235).

Statistics

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1962	1963	1961/62	1962/63	1962	1963
August	3,623	3,786	6,746	7,049	22,608	24,044
September	4,144	4,391	10,890	11,440	26,752	28,435

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1962	1963	1961/62	1962/63	1962	1963	1962	1963
August	1,579	1,630	3,167	3,274	44	43	2/1¼	2/1⅛
September	1,488	1,538	4,655	4,812	36	35	1/9⅞	1/8¾

INTERIM PRICES

(All prices are interim only and subject to adjustment by retrospective payment)

	Basic	C.M.B.	Total	3%	3.5%	4%	4.5%	5%
	(per lb. butterfat)			(per gallon)				
1963								
August	3/3¼	2/1⅛	5/4⅜	1/8	1/11¼	2/2½	2/5¾	2/9¼
September	3/3¼	1/8¾	5/–	1/6½	1/9¾	2/0¾	2/3¾	2/7

RETROSPECTIVE PAYMENTS

The Metropolitan Milk Equalisation Committee has announced the first retrospective payment for the year 1962/63, at the rate of 2⅛d. lb. butterfat equalised, which will be paid to all licensed milk suppliers early in October.

The final payment for the year 1961/62, at the rate of 1-5/16th pence lb. butterfat equalised will be paid to all licensed milk suppliers early in November. This payment will result in a final basic price for 1961/62 of 50.28d. lb. butterfat, and a final equalised price of 72.875d. Comparisons with previous years are shown below.

Year	Final Basic Price (pence per lb. butterfat at farmgate)	Final Equalised Price	Quota %
1961-62	50.28	72.875	47.7
1960-61	55.71	77.500	53.2
1959-60	54.60	76.938	57.4
1958-59	63.50	78.625	55.0
1957-58	55.86	76.313	57.8

CHEESE QUALITY AND DOMESTIC CONSUMPTION

(Address given by Mr. A. G. Itzerott, Chief Dairy Adviser, Department of Agriculture, to the Central Council)

In examining the question of the consumption of cheese in Australia, we note that over the last 20 years, consumption had increased by 52%. Consumption in other countries, during the same period had increased by 40% in New Zealand, 165% in Argentine, 100% in Canada, 40% in Denmark, 15% in Great Britain and 60% in the U.S.A. (to which by far the greatest contribution was from the increase in cottage cheese), 18% in West Germany, and, in Japan, 400% from 1960 to 1963; although in this case the quantity is, admittedly, not great.

In general it can be said that disregarding those countries where the standard of living is below that of Australia, the increased cheese consumption in this country compares more than favourably with most other countries, although the present total consumption of 6.7 lbs. per head is not as high as we would like. Perhaps, if this rate of increase continues, we may overhaul some of the leaders in the field, but naturally this will depend on being able to supply to the consumer the quality demanded; and it is in the measurement of quality that it is difficult to find any degree of agreement,

At the present time there is no standard of quality that I can regard as seeking to interpret the consumer's preferences and so encourage them to eat more cheese, nor is ther any organised attempt to appraise cheese quality or to market cheese according to grade. In any of the food shops one can see cheese being merchandised under various brand names and under descriptions such as "tasty," "mild," "matured," but it was impossible to determine just what these descriptions meant. What, for instance, is the difference between "tasty" and "matured," and where in the range do some of the brand names fit. To the consumer many of these names mean nothing, although some of the agents, when buying for the shops, do specify a type, basing their standard on some previous purchase which has passed completely from the memory of the supplier who made the original consignment. So we can say that for local consumption, unlike that for export, there is no "standard" of quality and consequently no uniformity. Quite often cheese which has been rejected for export finds its way on to the local market and is eagerly purchased and sought after by consumers.

The work of the Department of Agriculture is based on the belief that milk of good bacteriological quality will, in turn, make cheese of a high quality and acceptable to the majority of the consuming public. To achieve these conditions at farm level the Department maintains an inspection service over dairy premises; this is followed by the grading of milk at the factories, and the milk is paid for according to quality as recorded by the methylene blue test, but we find that in a lot of cases the quality of the cheese made does not always conform with the quality of the milk received. The milk quality in the Adelaide hills, where the Milk Board has been operating for a number of years, is very good, quite a high percentage being choice, but when you look at records of cheese quality, even at export level, they do not correspond with the quality of the milk that is sent in. Now it would be easy to throw the blame for this on the factory, but in fact I believe there are a lot of problems relating to cheese quality to which we just haven't the answers.

The factories are required to maintain strict standards of hygiene, to use proven techniques for manufacture, and to provide satisfactory conditions for storage, and if all these requirements are met the bulk of the cheese made should find a ready market and a high degree of acceptability.

In the case of cheese for export, the higher the quality, the better the return, as the factories received differential payments according to grade, and a factory making a cheese with high compositional quality will, from its high, overall realisations, be able to pay its suppliers a correspondingly higher return.

But in the home merchandising field there is no such control. The bulk of the cheese sold, well over 90%, is cheddar, in various forms, rinded, or rindless, and in various shapes, sold under various brands and descriptions, and the marketing of this cheese is solely in the hands of the retailer. Until recently this fact caused us no concern, but the position now was one that we could not overlook. It would be reasonable to suggest that the increase in consumption over the last 20 years was due solely to increasing standards at farm and factory level, and these factors were still of prime importance, but if this increase is to continue or even be accelerated we must know a lot more about what the consuming public really wants, and at present, there is, in this field, a complete lack of knowledge.

Where do we start in measuring consumer taste? Certainly flavour plays a large part but, except for the connoisseur, it is not the sole factor; for the housewife at least nutritional value is no less important, and we must recognise that probably a lot of cheese is eaten, for example in school lunches, solely because of its nutritional value, whereas, if demand is to be maintained among the young people coming to adulthood, they must be won over to like cheese for its own sake.

From the culinary viewpoint texture is also important—its ability to slice well (and all too often the purchaser considers that the thinner it will slice, the better) is, again, to the housewife and to people preparing food commercially, often more important than flavour; perhaps the most important of all. The reverse of this picture is the "club" cheese favoured in select circles in England, a crumbly, tasty cheese which complements the flavour of alcoholic beverages.

Pack size also plays a part in the economic aspect of selling; too large a pack may discourage buying on the score of price, or because of deterioration in storage whilst it is being used.

Assuming we have considered all these factors and produced what we believe is the right product, properly packaged, what advertising should we do?

Clearly we must acquaint the consumer with the fact that the cheese he wants, in the packet he wants, is available. For instance, Australia makes blue vein cheese, of a quality which is, in many cases, superior to the Italian and Danish product, yet many people do not know that it even exists, and the same probably goes for other varieties too. If we are to succeed in selling what we make, it is of first importance to let the customer know that it can be bought, and where it can be bought.

But let us assume that we do get the message over to the customer that the cheese he requires is being made; we must also make sure that it is available for him to buy, and that it is **always** available when he wants it. In this respect we should take a leaf out of the books of big manufacturing organisations who have their sales information so well organised that they have fresh stocks despatched to the fast-selling outlets before the retailers have even placed their orders for replacement quantities. There can be little doubt that the dairy industry doesn't know just where its cheese is selling fastest, and it is probable that in some suburbs or stores at this minute there are storekeepers frantically ringing up to get more cheese of a type that has sold well, and not being able to get any assurance that fresh stocks will be forthcoming.

This is the industry's big job; to find out what is selling well, and where, and then to make sure that these types are continuously available to those areas. We must recognise that the type and package that sells well in Port Adelaide is probably not what North Adelaide requires, and we must go out and find out just what is required.

But knowing is not enough. The right cheese must be made, and we must get away from the practice of pushing milk into one end of a factory and taking cheese out of the other end. Factories must consider whether they should put

perhaps 10% of their intake into Edam instead of cheddar, and these decisions can only be made on the score of knowing what people are wanting, not by expecting them to buy just, and only, what we are producing.

This knowledge, once gained, will lead to technological changes, perhaps in the type of milk required, perhaps in the tightening, or loosening of bacteriological standards, or in the sorting of the milk intake to suit the cheese being made on a particular day.

In the field of market research which is, as I have said, the first step, the Australian Dairy Produce Board is already at work, but it is the factory's job to put into effect what research has found out, by producing what the public wants, by ensuring that it is always available, when and where it is wanted.

This question of the required types not being available at local retail centres is important, and some consideration and push should be given to establishing places where people could go and know always that what they wanted was in stock, which could lead to a snowballing effect, as the public got behind the idea, and we could find these centres being opened up in the suburbs.

Supermarkets, which are now beginning to stock larger ranges of cheese, are well aware of the fast selling lines, and there is considerable scope for liaison between them and the manufacturers, and until the information from these and other sources has been thoroughly sifted there is no point in factories changing their methods without knowledge of what is required. I feel that present standards and techniques are quite adequate for us to make cheese that is capable of increasing home consumption, but for the extra lift, surveys may show that we need some modification in farm or factory programme. It is possible that in the not too distant future factories could be licensed to make special types of cheese which the market was demanding; most of you will know that rindless cheese, which is growing in acceptance overseas, can only be made by factories licensed to do so.

Q.—If a particular brand of cheese is to sell, it must be produced at a consistent quality. Is this possible?

A.—Yes, but consistency in quality over a large variety of cheese is possible only in a big, well organised factory. In smaller factories the variation in milk quality and other extraneous factors may make this much more difficult and a lot of waste may result if consistency is tao be maintained. It is probably far more efficient if the big factories concentrate on cheddar, perhaps by aiming at automation, and the smaller factories make fancy cheese.

Q:—You appear to believe that the answer lies less in manufacturing techniques than in sales studies. Do you believe these studies should be made by the manufacturer, or by a specialist consultant?

A.—I believe that the factory's job is to produce the best it can until it is told otherwise, and this is a job for a specialist organisation operating on a national basis, because many of the fancy cheeses will need a national market if they are to be sold in large enough quantities for their manufacture in this country to be economic.

Q.—Would we gain by prohibiting imported cheese, not only from an economic viewpoint but also because of the danger of stock diseases?

A.—There is certainly some risk of introducing stock diseases, but the quarantine position is carefully administered and in this respect S.A. is the strictest of all—in the economic case, we must realise that we also export dairy produce to many countries from which we import cheese, particularly France and Belgium, and in the case of Italy, for instance, the balance of trade is so heavily in our favour that such action might be unacceptable.

Q.—How can we get the factory to respond to the market indications?

A.—Conditions are now such, with unsaleable surpluses, that factories must listen to what the market wants, and being forced into marketing other varieties. But we must remember that the development of markets is not only a matter of trade missions to other countries; we should use the same techniques at home.

Q.—What is cottage cheese, and how can it be popularized in Australia?

A.—Cottage cheese is made from low-fat milk, but apart from that, it varies considerably in texture and taste. It is made to eat with salads, etc. as a substitute for meat. It must be kept under refrigeration and needs a quick turnover. To succeed in Australia we need an all-out advertising and promotional campaign. Some of the large dairy companies in the Eastern States are making it, and it is now being produced in S.A.

Q.—Would code marking assist towards achieving consistency of type and quality?

A.—Yes; it is now a requirement for factories to mark all cheeses as to day, vat, etc., and this will greatly assist tracing the cause of variations.

Q.—A frequent criticism is the inability to buy mature cheese. Is there sufficient storage room in S.A. to cope with demands for mature cheese?

A.—No, there is a lack of storage space, but, despite the apparent demand for mature cheese, the greater portion of the demand, particularly in U.S.A., is for a bland, mild cheese.

Q.—The surplus problem appears to arise because we do not grade for the home market in the same way that we do for the export market. Why is this not done?

A.—I am not convinced that the system of grading for export is valid as means of matching consumer tastes. It frequently happens that cheese rejected for export, and put on the home market, has a ready sale. There are also instances where subsequent gradings in U.K. are substantially different from the original grading in Australia.

I consider rather that we should determine the preferences here in Australia, then establish a procedure for grading to match these preferences and techniques and conditions to enable the manufacture of cheese in accordance with the grading.

Q.—Do some of our quality problems arise from a cheesemaker being also a factory manager and hence overmuch concerned with maintaining good relations with the farmer?

A.—Yes, most factories are too small to obtain the better quality that would result from employing specialist, certificated cheesemakers.

BIGGER PRICE DIFFERENTIALS FOR SECOND-GRADE CHEESE

The Australian Dairy Produce Board has made a positive move in tackling the disposal of long-stored low-grade cheese and developing a widespread quality consciousness throughout the industry by recommending to the Minister for Primary Industry a change in the dairy produce export legislation to prohibit the export of cheese below 88 points grading. At the same time it has announced that it will discontinue the purchase of cheese grading below 88 points, and will increase the penalty for 88/89 points cheese from 1d. lb. to 6d. lb. below the rate for choice (93 points) grade.

Whilst this action cannot affect the present surplus position, its effect on future production should result in substantial gain in reducing quantities of unsaleable cheese, and raising the quality level and acceptability of cheese on the domestic market.

The Danger of Stock Diseases from Imported Cheese

Following the Dairy Industry Conference in Queensland in April, this Association took the initiative in raising with the Federal quarantine authorities the question of the danger of introducing, through imported cheeses, stock diseases which are not at present endemic to Australia.

The opinion of the South Australian Chief Quarantine Officer (Animal) that the belief that disease-causing organisms could not survive the cheese maturing process was incorrect, was submitted to the Australian Dairy Farmers' Federation, and it was decided to seek further information from the C.S.I.R.O. The following reply has now been received from the Chief of the Division of Dairy Research, C.S.I.R.O. (Mr. G. Loftus Hills).

"I have consulted our Animal Health people on the matters you raised in your letter and they feel that the only authority on these matters in Australia is the Veterinary Hygiene Officer of the Commonwealth Department of Health in Canberra.

There are, however, certain points in relation to cheese which we can put before you and which you may care to use in any presentation of your case:

The cheese manufacturing process will not in itself destroy pathogenic organisms—for instance staphylococci multiply during manufacture and survive during maturing of cheese (McLeod, Roughly & Richards, Aust. J. Dairy Tech. 17/1/54: 1962.)

Some types of cheese are not very acid and the pH may be as high as 5.5 to 6.0. Parts of the cheese subject to surface or mould ripening agents may be neutral or alkaline. There would seem to be no reason to expect destruction of virus under these conditions during cheesemaking. Bacteriophage action during cheesemaking sometimes results in lysis of lactic streptococci and the pH of the cheese will then be well above the normal figure.

It is unlikely that the Veterinary Hygiene Officer is aware of these facts. He should, in the light of them, **find it hard to admit cheese from cattle virus disease affected areas into Australia."**

NEWS FROM THE A.B. CENTRE

Artificial Breeding (A.B.), as the artificial insemination programme in South Australia is known, represents the most exciting development in the dairying industry for many years.

More and more farmers are adopting the services available from the A.B. Board. Perhaps, they undertake A.B. because they are progressive thinkers or discuss the pros and cons with qualified technical people; they may have taken notice of items of news or gained a sound impression from satisfied users of artificial insemination.

When dairymen get together, they are apt to talk of infertility and conception rates, diseases which set back a herd, the cost of good quality bulls and the difficulty of selection, aims toward lifting butterfat and milk yields or the value of a sideline venture in breeding beef-type calves from cull cows.

Connected with such matters is the work of the A.B. Board which offers a service which can lead to quicker betterment of the farmer's prosperity.

When a farmer joins the scheme, he enters a new field as regards the use of a first class, healthy, pedigree bull—and at low cost. He also stands to prevent certain contagious breeding diseases from affecting his returns. He gains more accurate records for calving dates.

The scheme is not something handed to the farmer on a plate. He is required to carry out certain procedure—none of it unfairly arduous or difficult—aimed at making A.B. successful.

The present and future success of this A.B. plan rests to some extent on the goodwill and co-operation from both sides, between the A.B. Board and the farmer.

Quite recently, the first chilled semen collected at the Artificial Breeding Board's centre at Northfield was distributed to country centres. Previously, semen in deep-frozen form from Eastern States was the only semen available.

In the news during Adelaide Show Week was the Board's selection and purchase at auction of two Jersey and two Friesian bulls at the annual subsidy sales. Provided these bulls pass the exacting tests to eliminate any chance of disease being spread, their chilled semen will become available to add to the supplies from the Board's other tested bulls.

At present, users of A.B. cannot nominate the sire but must accept the "bull of the day."

The charge is £2 10/- per cow; this allows for a first visit and two free repeat inseminations should they be required.

The country sub-centres are at Mount Barker (telephone 120), Murray Bridge (1144), Myponga (320, 321) and Mount Gambier (2 3963). Enquiries may be made between 8 a.m. and 9.30 a.m., but should essentially be brief because this is the time when farmers place daily orders for inseminations.

Enquiries also may be made at the A.B. Board, Northfield (ring 62 1811), where queries will be answered for farmers further afield than a 15-mile radius of a sub-centre.

From the A.B.B. service being operated for 363 days in the year, users may elect to take semen from any of the breeds, Ayrshire, Australian Illawarra Shorthorn, Friesian, Guernsey, Jersey or Hereford.

Sufficient information is now in YOUR hands for the necessary action to guide you toward using the well organised A.B. programme now operating from five points in the State. Complete details are available to all farmers who ask at the Board or any sub-centre.

Think what you can do with the feed, space and time occupied with a bull once he has gone from the property.

A.B. (or A.I. as many know it) is not a miraculous performance but a practical method of breeding based on proven and sound principles.

A NOTE ON ARTIFICIAL BREEDING

If artificial breeding is to be both a technical and a financial success it is essential that it be used to the maximum in each area and on each farm. Only by concentrating the efforts of inseminators onto servicing, and eliminating the excessive distances travelled between farms, and only by each farmer using the service on his whole herd can the costs of the scheme be kept at a level low enough to be acceptable to the farmers and yet give the Board a revenue large enough for it to provide a high standard of service and to undertake the research into infertility and other problems which is so urgently needed.

Recognising that the efficiency and acceptability of the scheme depend greatly on liaison with the farmers who are using it, the Association formed an Artificial Breeding Study Group for the purpose of finding out what the farmer requires from the service, and how a fuller and more effective use can be achieved.

Farmers, of course, will frequently discuss with inseminators some of the problems they encounter, and may also suggest means of improving some aspect or another, but the Association believes that there is much to be gained if ideas and suggestions of a broad nature, designed to improve the scheme could be passed on by farmers to the nearest member of the Study Group, who are:—

Messrs. J. Gormlie, Pompoota (Pom. 24); J. Allingham, Echunga (Ech. 247); K. Clarke, Charleston (Charl. 243); C. Easton, Clarendon (Clar. 47); H. Hannam, Mt. Torrens (M.T. 213); H. Laechel, Eden Valley (E.V. 211); R. Nettle, Wistow (Mt. Barker 119); V. Warwick, Inman Valley (I.V. 228)

THE CHEESE PROBLEM

IS THERE AN OBVIOUS ANSWER?

The current cheese problem can be simply stated—our cold stores are bursting with cheddar cheese that we cannot sell, whilst fancy cheeses are being imported in explosively increasing quantities, 1,062 tons three years ago, probably three times that amount this year!

The answer is considered by many people, including the Federal Minister for Primary Industries, to be almost as simple as the problem, namely to make these fancy type cheese in Australia, although this solution is sometimes qualified by additional proposals such as increasing the tariff or even the complete prohibition of imports.

Before going on to a further examination of this solution, let's agree on one fact at least. The majority of the fancy cheeses imported are not substitutes for cheddar, so that increased tariff or prohibition will have almost no effect on the consumption of cheddar. Let's raise the tariff if we will (or can) but we must at the same time take steps to replace from home sources the cheese we are trying to keep ont, if there is to be any gain to the Australian dairy industry.

However, making fancy cheeses takes more than just saying that it should be done. Know-how, equipment, type and quality of milk, storage, transport, presentation, promotion and marketing organisation are all vital, and demand a much higher standard of application than is the case for Australian cheddar marketed anonymously through the Australian Dairy Produce Board.

And remember, too, that even if, by some miracle, we could, overnight, convert the whole of the fancy cheese sales to Australian production, this would nowhere near absorb all the milk that is now going into surplus cheddar cheese. But at least it is a goal worth going for and this article by David Wyman, reprinted by permission of "Australian Country", tells the story of one

CHEESE GAMBLE THAT PAID OFF

New ways to market butterfat is a major problem of the dairy industry. Cheddar cheese and butter are overworked bottlenecks. A Victorian factory has tried a new angle—and now it is paying off.

The story in June COUNTRY on "Dairy Produce on the Home Market" certainly struck a chord. If about half what the writer suggested was given a trial it would be sure to lift the demand for milk and butterfat on the local market.

This is clearly borne out by the experience of a factory in Gippsland which decided to compete in the fancy cheese trade—and has found it a lucrative venture.

When migrant numbers built up in Australia in the post-war years, cheesemakers faced a problem—a flood of imported cheese. The flood continues today. While Australia exports vast quantities of cheddar-type cheese, she imports volumes of European cheese of various shapes, tastes and packs. The migrant market demanded attention. While many manufacturers wanted absolute protection from imports, some of them acted.

One of them has specialised in making the unique Italian cheeses for the last four years with profitable results, and has found a wide native Australian market for one of its products.

Kongwak Co-operative Butter Factory Co. Ltd. is 66 years old, has some 400 country shareholders and about 200 milk suppliers in the rich South Gippsland hills of Victoria. "Our main lines are butter, whole milk and casein," manager Mr. J. H. Weatherhead told COUNTRY. "We finished making cheddar cheese

1955 because it just didn't pay. We looked around for an alternative cheese rket for a couple of years. An Italian farmer was making Italian cheeses ally with some success so we surveyed the Italian market in Melbourne and ided to give it a go."

The farmer, Mr. Peter Tomasello, was hired and Kongwak butter factory gan making Italian cheese in the traditional manner. Tomasello's contract has w expired and an Australian, Sid Coe, is in charge of cheese-making.

The factory's first efforts were in the hard, grating type cheeses. Pecorino and corino with peppercorns. These and others are now marketed through three olesale outlets in Melbourne, and go to all States except Tasmania. The mpany now grates a lot of this cheese itself, putting it out in attractive 4 oz. cks for sale in supermarkets and groceries. "We've found the biggest buyers grated cheese are Australians, who like it with spaghetti, on sandwiches, in ups and souffles," Mr. Weatherhead explained.

The company's output now exceeds 100 tons a year, a fairly large amount en one considers that much of the cheese is in 4 oz. packs retailing at 2/- d in 1 lb. loaves retailing at 4/-. To gain attention from wholesalers the ngwak factory found early that it must have a range of popular Italian cheeses. e or two were not enough.

Main varieties made now are:

PECORINO — The hard cheese which is ready for grating in 12 months. is is made in the traditional Italian manner in cane baskets to give the outside in an attractive basket-weave appearance.

PROVOLONE — A marrow-shaped cheese, made in moulds and maturing in ree months. It's for normal table use.

MOZZARELLA — A fresh cheese (two to three weeks), hand moulded into lb. packs in the shape of a very large pear. These are vacuum packed in stic film.

RICOTTA — Made from whey. This is a fresh, soft, cottage-type cheese.

FETTA — A Greek cheese, soft and white, made entirely for the Sydney rket. Over 100 four-gallon tins of it are shipped there every week.

Very little special equipment has had to be purchased to make the cheeses. e factory uses its existing vats, but has modified starter cabinets for use as okers. Unlike cheddar, Italian cheeses ae made without starters. After ulding, however, all are cooked and then matured.

How has the Kongwak cheese competed with the imported product?

"When the New Australian comes to Australia, he will always go for the ported product," Mr. Weatherhead said. "Slowly, but surely, he will realise at our product is just as good, and often better—indeed, we are constantly ing told this by Italians. The higher price of the imported cheese also gradually ans him on to the Australian product. Quite often, he'll buy 1 lb. of imported eese and 2 lb. of Australian.

"Prices of imported cheese have come down, too, which means we have got watch quality and packaging all the time. In some cases we have been paid e compliment of an imported cheese changing its texture to follow our pattern.

"We've found the palate of the Italian migrant changes frequently. We ve had to interrupt our program for cheese maturity and sell some cheeses rlier than normal at the request of the Italians. This causes a lot of trouble ith our stocks, but we are in a handy position to give buyers what they want ster than the importers." After a lucrative experimental period of four years, ngwak factory is ready for further expansion.

"Imports of cheese are on the increase, but we feel that by close liaison with ur wholesalers we can get a bigger share of the market," Mr. Weatherhead said.

Packaged Protection for Modern Living

Special Farmers' Combined Policy

The ease of the automatic washer, the handy food freezer, air cooling in the summer, controlled heat in the winter—MODERN LIVING IS ALL AROUND YOU, and, like most people, you enjoy every minute of it.

The big investment you have in the Twentieth Century living comfort—control of your overhead—calls for modern insurance protection—well rounded packaged insurance protection as convenient, practical and efficient as the most streamlined appliance in your kitchen.

The Federation Insurance Limited, realising the needs of "the man on the land" has pleasure in announcing the special Combined "Farmers" Policy.

The "Farmers" Policy has been designed to protect the primary producer against the normal risks to which they are subject. The farmer gets the benefit and convenience of a single, simplified contract . . . one document . . . one premium to keep track of . . . one renewal date, and, of course, much lower cost to financial members of your organisation.

The covers available under the one policy include:—

Home Protection under the one policy include:—
Fire—on building and contents of dwelling.
Fire—on building and contents of farm outbuildings.
Fire—on fencing, livestock and hay.
Public Liability—on farm operations including Personal Liability of insured and family.
Personal Accident or Personal Accident and all Sickness.
Glass and All Risks—on jewellery and furs.

All these covers are now available under the one policy so doing away with the worry of stacks of paper, varying due dates, cheques to be drawn—only one notice, on payment per year ensures proper protection under The Federation Combined "Farmers" Policy.

Details of this very important Insurance development can be obtained from The Federation Insurance Limited, 63 Waymouth Street, Adelaide, telephone 51 3747.

N.S.W. SWINGS OVER TO "BUTTERFAT"

One of the chief sources of confusion when comparing dairy farm returns between States has been the practice in other States and in Commonwealth organisations, of using "commercial butter" os the unit of calculation, whereas in South Australia we use "butterfat".

"Commercial butter" is, basically, the average amount of butter that, theoretically, can be produced from a given quantity of butterfat, and the conversion rate is 1.216 times the butterfat quantity.

In New South Wales the unit of calculation has now been changed to "butterfat", and factory returns will now be expressed in the same unit os South Australia, so that a direct comparison is now possible.

Our fellow organisation in N.S.W., the Primary Producers' Union, has now prepared a "Ready Reckoner" to assist farmers and dairy factories during the changeover period to the new unit.

Incidentally it should be noted, when comparing factory returns in other States (and the South-East) that returns are calculated at "factory door", so that cartage costs must be deducted, whereas in the Adelaide area returns ore at "farm gate".

What is the Value of Advertising?

The Australian dairy industry spends, through various channels, a very large sum of money on advertising, perhaps close on £½ million pounds annually, and the organisations responsible for spending the money claim (and who can blame them?) that it produces results. Yet it is difficult to find any figures that can be used to support these claims.

The New South Wales Milk Board spends £100,000 on its "Let's Crack a Bottle" campaign and claims an increase in sales of "0.5% over and above the increase which might normally have been expected through population increase," a figure almost exactly equal to the lift in milk sales above the population increase in South Australia, where no advertising is carried out.

Similarly the promotion by the Australian Dairy Produce Board appears to have had some effect in raising the consumption per head of dairy produce (see this Journal, June 1963) from 51.0 lbs. total milk solids in 1959-60 to 51.6 lbs. in 1961-62, but on the other hand this annual increase of .3 lbs. is considerably less than the annual increase from 1955 to 1959, before the Dairy Produce Board campaign began (and note also that the Commonwealth Statistician includes in his calculation all unsold stocks so that the current high figure of 6.7 lbs. for cheese includes large surpluses which will, in fact, probably not be consumed in Australia).

Two questions must arise: first, is the gain worth risking the very large amounts involved (it can be shown that in N.S.W. the gain to producers from the campaign is less than £40,000 and probably does not return their portion of the £100,000 cost of the campaign); second, are the correct methods being used? How many extra pounds of butter or cheese are really sold by the huge new illuminated sign recently erected in Melbourne, which links a message about dairy foods being "Nature's Finest." Not many, we would think.

Does this criticism mean that advertising is useless, and that the millions of pounds being spent by industry and commerce in Australia are all wasted? Or does it mean that advertising can be valuable if used correctly, but that we are not making use of the most effective techniques.

Dr. R. M. Parish, of the University of Sydney, set out to answer the second question in a paper presented recently to the Australian Institute of Agricultural Economics, and summarised below, in which he answers also the question asked by so many of us — should the funds and the initiative for promotion be provided by the dairyfarmers as under the present scheme administered by the Australian Dairy Produce Board, instead of being a function of the manufacturers and the re-sellers?

The Possibilities For Promoting Farm Products

Those product characteristics which are favorable to advertising include the following:—

- The existence of an opportunity to differentiate the product, that is to say, to present it in a number of different ways as to type, package, size, etc.
- The presence of important "hidden" qualities in the product which require "explanation" by the advertiser.
- The association of powerful emotional buying motives with the product (e.g., cosmetics).

Characteristics of the market which are thought to provide good opportunities for promotion include the following:—

- The existence of a favourable demand trend.
- The presence of many potential consumers (e.g., in the case of tobacco, the number of young people who may take up smoking).
- A fast turnover of buyers (e.g., purchasers of baby goods).
- Frequent product changes.
- Frequent price changes.

Armed with this list, one could look for farm products which seem to possess the requisite characteristics for successful promotion—and this is precisely what I propose to do. But first I want to make the rather obvious point that from the foregoing list of characteristics favorable to advertising one could infer that probably the major determinant of the success of promotion is **whether or not it supplies the consumer with useful information.** I do not for a moment wish to deny that much advertising tries to exploit, rather than dispel igornance; that some advertising misinforms or misleads; nor that all advertising tries to persuade as well as inform (but, as Hicks has pointed out, effectively informative advertising is unlikely to be "bleakly" informative). Advertising has its abuses which are well known; its uses tend to be taken for granted.

In applying these ideas about what makes a product promotable to Australian farm products, I suggest, first, that selling effort will be best rewarded when made on behalf of **products which consumers want more of,** or **with which they are unfamiliar.** On these criteria, the most likely candidates for successful promotion are commodities with a high income elasticity of demand by which we mean those which are bought in increasing quantities as income increases, and those which lend themselves to processing into new forms. Fortunately, in the case of

foodstuffs, we can, I think, say with a fair degree of confidence what these commodities are. Human preferences among foods seem to be sufficiently uniform and stable for cross-sectional comparisons among countries to give a reliable indication of income elasticities. Moreaver, changes in food consumption habits occur relatively slowly so that simple projection of past trends into the future can be made with some confidence.

Though changes in eating habits occur slowly, their cumulative effect over a long period, can be very substantial. Just how substantial they can be is shown by the following tabulation of the major changes that occured in the United States national diet between 1930 and 1960:—

TABLE I

Change in Average Annual Consumption per head, 1930 to 1960.

Variety of Food	lb. weight	%
Wheat flour	—51	—30
Pototoes	—32	—24
Fruit other than citrus	—20	—15
Cabbage, spinach, etc.	—10	—50
Butter	—10	—57
Margarine	+7	+262
Cheese	+8	+130
Poultry	+18	+105
Tomatoes	+19	+33
Beef and Veal	+36	+65
Citrus fruit	+55	+172
Fresh fruit	—33	—25
Dried fruit	—7	—36
Canned and frozen fruit (including juices)	+75	+463

(+ = increase — = decrease)

Australians also, like Americans, have been consuming less wheat flour, butter, and non-citrus fruit, and have been eating more cheese, margarine, citrus fruit and tomatoes, and the actual consumption per head of these and other foods in the two countries for 1937-39 and 1961 are set out in Table II. Consumption of canned fruit (including juices) has increased at the expense of fresh and dried fruits. Unlike Americans, we have substantially reduced our intake of beef and veal, and all meats, and increased our consumption of fluid milk, but both of these changes have in fact had the effect of bringing our diet's composition more in line with that of the American diet. However, despite these changes—and this is perhaps the most significant fact brought out by the table—**our present diet generally more closely resembles the American diet of 1930 than the Americon diet of 1960,** particularly with respect to wheat flour, sugar, poultry, butter, cheese, citrus fruit, other fruit, dried fuit, and tomatoes, and we must note carefully that the consumption of all of these foods with the exception of sugar, changed markedly in the United States between 1930 and 1960.

Since many of the trends evident in United States food consumption—and certainly the more striking ones—are clearly related to changes in income level and associated changes in patterns of living, to technological progress and to changes in retail selling methods, there is every reason to believe that our diet will come to resemble more closely the present American diet. Naturally I do suggest that the American diet of 1960 constitutes a blueprint of the Australian diet of, say, 1980: the big discrepancies between the two countries in consumption of eggs and meat, and tea and coffee, are sufficient testimony to the power of relative prices in influencing eating habits, and to the existence of differences in national tastes. However, I doubt if I will be accused of rashness if I single out the following products as being **eminently promotable by virtue of their high income elasticities of demand, our relatively low consumption of them,** and, in some cases, **their unfamiliority to many potential consumers:**

1. Fruit juices and tomato juice (particularly frozen concentrated orange juice.

Look at Last Year's Figures

And ask yourself: **"CAN I CONSISTENTLY MEET THE 4+ METHYLENE BLUE TEST?"**

The April issue of this Journal reported that the Metropolitan Milk Board had received legal advice that the practice of treating 4 hour milk as conforming to the standard for city milk was in error, and that FROM 17/5/63 THE ONLY MILK ACCEPTED AS HAVING CONFORMED TO STANDARD WOULD BE THAT RECORDED AS

4½ or 4+

The Secretary of the South Australian Dairymen's Association estimated that this change would increase the number of suppliers eligible for suspension by 2½ to 3 times.

2. Chicken and turkeys.
3. Cheese—**particularly cottage cheese.**

Frozen orange juice and frozen (and ready-cooked) chicken are relatively new products in this Country. Both are markedly superior goods, in the income elasticity sense. Frozen orange juice does not appear to be being heavily promoted, perhaps because, until recently, only one firm was manufacturing it. Chicken is being heavily advertised, to some extent by packers, but primarily by the retail food chains who consistently feature it as a price special in their weekly advertisements.

TABLE II

Average Annual Consumption per head of Major Foods, Australia, 1937-39 and 1961; United States, 1930 and 1960.

Food	Australia		United States	
	1937-39	1961	1930	1960
	lb. per head per year			
Wheat Flour	187	170	169	118
Potatoes	104	115	134	102
Rice	4.0	3.7	5.2	5.8
Sugar	107	108	108	99
Beef and Veal (carcass weight)	143	91	55	91
Lamb and Mutton (carcass weight)	75	100	6.6	4.8
All Pigmeat (carcass weight)	26	21	66.1	65.3
Poultry (carcass weight)	9.7	11.7	16.9	34.6
All Meat (including offal)	263	235	145	196
Canned Meat (canned weight)	2.1	4.2	—	10.8
Bacon, etc. (cured weight)	10.2	6.7	18.5	18.3
Fish (edible weight)	11.2	11.7	10.1	10.5
Butter	**32.9**	**25.1**	**17.3**	**7.5**
Margarine	**4.9**	**9.1**	**2.6**	**9.4**
Fluid Milk (and cream)	**247**	**298**	**337**	**324**
Condensed and Evaporated Milk	**4.3**	**9.9**	**13.4**	**13.8**
Dry Whole Milk	**2.6**	**2.5**	**.1**	**.3**
Non-fat Dry Milk	**—**	**4.4**	**1.3**	**6.3**
Cheese	**4.4**	**6.4**	**5.9**	**13.6**
Eggs	26.6	26.3	40.9	43.7
Citrus fruit (farm weight equiv.):				
Fresh	n.a.	n.a.	30.8	33.7
Canned (incl. juice)	n.a.	n.a.	.8	17.9
Frozen	n.a.	n.a.	—	34.7
Total	31.9	35.5	31.7	86.3
Other fruit (farm weight equiv.):				
Fresh	94.0	84.5	101	64.7
Canned (incl. juice)	10.7	23.2	15.4	35
Frozen	—	n.a.	—	3.6
Dried	32.4	25.6	18.1	11.5
Total	137.1	133.3	134.5	114.8
All fruit	169	168.8	168.3	201.1
Vegetables, fresh and processed (fresh weight basis):				
Tomatoes	15.7	30.5	57.6	77
All vegetables	n.a.	137.3	266.5	260.7
Fresh Vegetables:				
Cabbage and other greens	n.a.	14.6	20.6	10.6
Cauliflower	n.a.	16.1	2.3	1.7
Corn	n.a.	1.4	4	7
Lettuce	n.a.	4	12.6	15
Tea	6.9	5.9	.7	.6
Coffee	.6	1.7	12.3	15.8
Cocoa (beans)	2.1	3.4	3	4.1

(n.a.—not available)

Much the greater part of the discrepancy between U.S. and Australian cheese consumption is accounted for by cottage cheese. U.S. per capita consumption of this product increased fourfold (from 1.2 to 4.8 lb.) between 1930 and 1960. It and several other minor dairy products, such as yoghourt and sour cream, are virtually unknown here, (*the Australian consumption of cottage cheese is quarter ounce per head.—Ed.*), and one of the most striking differences, to casual observation, between United States and Australian supermarkets is in the range of dairy products on display. I don't think it fanciful to blame this stote of affairs on **a lack of effective competition,** stemming largely from government regulation, **in the marketing of fresh milk and fresh milk products.**

There would appear to be little need for farmer-sponsored promotion of these products, except insofar as they are processed or manufactured by farmer co-operatives. This comment also applies to the promotion of canned and frozen foods, cake-mixes, etc.—in short, to the whole range of "convenience" goods which will absorb an increasing proportion of our food expenditure.

A study carried out by Northwestern University's School of Business is highly critical of the advertising policies and procedures of agricultural producer groups in the United States. The promotional objectives of such groups—typically stated as being "to increase the use of the products and expand the market for them", or "to achieve orderly marketing"—are characterised as being **"at best so general as to be literally worthless** . . . there was no evidence of any marketing concept . . . in which the objectives of the group are set in terms of consumer satisfactions. This indicates that the groups are essentially product and not market-oriented. It would have been reasonable to assume that at least a few of the groups would be specific in terms of their mission to the extent of types of users and areas to to be served. Unfortunately none even went this far".

This criticism would appear to be also applicable to much of the advertising sponsored by agricultural producer groups in Australia. Marketing boards are currently conducting advertising campaigns for butter, cheese, milk and eggs. Promotion of these products does not seem likely to be very effective. All are items of almost universal daily consumption and hence well known to consumers. The decline in butter consumption seems destined to continue since it derives, in no small part, from the fact that the cut lunch is undoubtedly an inferior good. Our consumption of fluid milk (per capita) is not markedly below the American level. Most consumers have an adequate, even an exaggerated awareness of the nutritional virtues of dairy foods, and a most effective means of milk promotion—the school milk programme—is already being undertaken at the taxpayers' expense. The vacuousness of such slogans as Buy Australian Butter and Cheese, Let's Crack a Bottle and Eata Extra Egga Day is not, I believe, so much a reflection on the competence of advertising agencies responsible for them as an indication of the fact that there is little that consumers can be told about these products which might cause them to eat more of them. **They simply seem to be unlikely subjects for successful promotion.**

SOME CONCLUSIONS

1. Advertising seems destined to play a more important role in the marketing of food products than it has in the past.

(i) The high income elasticity of demand for "convenience" foods seems to ensure that product innovation will proceed at an accelerated rate, with a consequent increased need to provide housewives with information concerning new products, and with increased opportunity for product differentiation through advertising.

(ii) Substitution of superior for inferior (*"inferior" foods are those of which less are purchased as family income rises, e.g., bread, whilst "superior" foods are the converse, e.g., poultry.—Ed.*) foods in our diet will provide opportunities for profitable promotion.

(iii) Competitive advertising of cut-price "specials" for food retailers has increased greatly in recent years and this trend seems likely to continue.

2. **INCREASED PROMOTIONAL OPPORTUNITIES** arising from the above circumstances **BELONG MAINLY TO FOOD PROCESSORS AND RETAILERS, RATHER THAN TO PRIMARY PRODUCERS.** A few relatively minor farm products—such as citrus fruits—would appear to be good bets for farmer-sponsored promotional campaigns. In addition some producer groups might find it profitable to advertise their product when it is in plentiful supply (or when a shortage of a competing commodity exists).

NEW SOUTH WALES GETS INCREASED MILK PRICES —

Latest milk prices in the N.S.W. Milk Zone increase retail price by ½d. to 1/- per pint, raising the return to producers to 4/4.1d. per gallon at the factory door. The average cost of cartage from farm to factory, which is borne by the producer is 2.24d., so that the return at farm gate is 4/1.7d. per gallon, compared with the South Australian figure for licensed producers of 3/6.25d. per gallon at farm gate.

— AND LOSES FAITH IN QUOTAS

Mr. Ferguson, Chairman of the N.S.W. Milk Board said recently that he, personally, was dissatisfied with the way individual milk quotas were working. He said quotas achieved a valuable purpose by levelling out production, but they had reached a stage where, if they continued in their present form, difficulties would ensue which the industry would not be prepared to encounter. Their operation now was a contradiction of their fundamental purpose,

E SOUTH AUSTRALIAN
AIRYMEN'S . . .

Journal

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Published Bi-monthly

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—Photo by courtesy "The Chronicle".

VYNETTE CHEVY'S CHER

1 t Type and Production — Adelaide Royal Show, 1963
1 . Highest Producer — All Breeds — Adelaide Royal Show, 1962-1963

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PRICE
2/-

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12/- per Year, Post-Paid

VYNETTE CHEVY'S CHER

in 1963, by producing 922 pounds of butterfat from 13,860 pounds of milk at 6.7%, established a State record for a mature Jersey cow, following her 1962 performance in which, as the highest producing Jersey cow in South Australia for that year, she produced 842 pounds of butterfat from 12,330 pounds of milk at 6.8%, thus making a total of 3,188 pounds butterfat in 5 lactations.

V. CHEVY'S CHER, 3rd highest producing Jersey in Australia during 1963 is out of WINDREST CHEVY CHEER, by V. CHEER'S COMBINATION, sire of other top Vynette producers, including V. CHEERFUL MARIE, 4th highest producing Jersey in 1963.

THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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IVAN ROSS ELLIOTT, O.B.E.

It is with deep regret that we record the death on December 16th, 1963, of Mr. I. R. Elliott, O.B.E., General President of the South Australian Dairymen's Association Incorporated and Chairman of Directors of the Metropolitan Milk Equalisation Committee Limited.

Mr. Elliott, who was a member of the Association from its inception, was elected General President in 1939, a position which he occupied continuously until his death. As President of the Association he took an active part in the introduction of the orderly marketing of milk in the Adelaide metropolitan area, and on the formation of the Metroplitan Milk Marketing Committee in 1941, he was appointed Chairman, again a post which he occupied until his death.

In January, 1963, Mr. Elliott was admitted to the Order of the British Empire by Her Majesty the Queen for his services to the dairying industry, and was invested with the Order by the Queen herself during her visit in that year.

Central Council Proceedings

GRADING OF CHEESE

The Secretary stated that he had reported to the Executive Committee that although the desirability of compulsory grading of cheese as a means for increasing home consumption had a good deal of support at farm, technological and research level it would only be possible to achieve or to have carried out if it had the support of marketing authorities. Consequently he had written to the General Manager of the ADPB, stating the reasons why we thought such grading to be desirable and asking for his comments. He had also disaussed the matter with Mr. C. L. MacDonald, the S.A. Member of the Australian Dairy Produce Board, and Mr. MacDonald had stated that the ADPB was at present conducting a general survey of grading practices throughout Australia in relation to butter, cheese, cream and milk, in order that they can bring a much greater measure of uniformity into the matter of grading than at present exists, and whilst grading at the moment is primarily for exportable produce, Mr. MacDonald felt that this might well be the stepping stone to the kind of thing that we were looking for.

It was also intended to obtain a report on the operation of Commonwealth cheese equalisation as it affected the amount of premium margin which could be retained by the manufacturer of high quality cheese for the domestic market. Although we had, during the currency of price control, accepted the assurance that the failure to market matured cheese was due to the inadequacy of the premium allowed by the Prices Commissioner, it appeared even now, several years after the removal of price control, that matured cheese was still not being marketed to the extent that we felt was desirable, and the question must now be answered as to whether the operation of the Commonwealth Equalisation Scheme demanded such a high contribution from the seller of matured cheese on the home market that the profit margin was insufficiently large to warront the expenditure of the necessary time, labour and capital, in contrast to the ease of producing anonymous, immature cheese for export.

CHEESE TASTING SURVEY

Following the Central Council's resolution concerning a cheese tasting survey to be held at the 1964 Royal Show the Secretary had written to the Director of Marketing and Economic Research of A.D.P.B. (Mr. Singh) seeking his opinion.

Mr. Singh had replied that cheese tasting surveys present some difficulties in that the toste for cheese was acquired, and tended to change through life, and to vary between social and economic groups, so that the desired objective was not so much **which** cheese was liked most in a one-shot test but rather, which had the most potential to be acquired more and more with increasing frequency of consumption. Nevertheless he believed that a survey such as that proposed could yield useful indicators provided the objectives were modest and clearly understood.

Mr. Singh had also stated that the Board was at present conducting a full scale survey of the cheese market, the final report of which was expected in February 1964.

SURPLUS CHEESE STOCKS

The following report had been received from the Australian Dairy Produce Board.

> "Reporting on the present stocks of cheese situation, the Secretary of the Cheese Allocation Advisory Committee, Mr. M. F. Trenery reported that dramatic changes had taken place in the situation over the past 2 or 3 months. Earlier forecasts had predicted that by the end of

November our cool stores would be packed to overflowing, but now total export stocks at the end of November are expected to be at a normal level.

"Mr. Trenery said that this was chiefly due to greatly increased sales to markets other than the United Kingdom, the main ones being U.S.A., Italy and Portugal.

"The easing of the situation had also been caused by lower than anticipated seasonal output in some States and by a degree of co-operation from some sections of the manufacturing industry to a request which called for some reduction in production. Thus, what looked some months ago like being a most serious position had been averted."

The Secretary said it appeared therefore, in view of this report and the earlier report that butter stocks had also reverted to normal, that the crisis was short lived and that as well as clearing surplus stocks, London prices for butter and cheese, at 334/- and 226/- cwt. were now 30/- and 16/- respectively above the prices for the same period last year.

In view of these developments the Executive Committee had decided that no further action be taken concerning the diversion of milk from cheese manufacture.

The Secretary added that higher London prices and the clearing of stocks would also result in a higher final basic price for 1962-63 than had been originally estimated, and a retrospective payment for the year of 11/- cwt. approximating 1¾d. lb. butterfat equalised would be paid out within the next few months.

OUTLOOK FOR 1964—CHEESE

The Secretary stated that he had received from the Australian Dairy Produce Board a report that the representatives of Australia, N.Z. and U.K. had just met to determine the cheese quota for the year; the U.K. quota had been lifted 5,000 tons to 110,000, a far more moderate lift than had been feared, due to the unfavourable European Season; Australia had remained on 15,000 tons, the same as the year before; and N.Z. was continuing on 75,000 tons with the right to increase the quota later. This news was heartening, but in Australia's case a quota of 15,000 tons and estimated domestic consumption of 27,000 tons, to give a total of 42,000 out of an estimated production of 56,000 tons left 14,000 tons to be accounted for, which might only be partly absorbed by Japan and other countries, so that the **elimination of the current surplus did not remove the possibility of further surplus problems,** and the industry should still tread warily.

MEMBER—METROPOLITAN MILK BOARD

Mr. Harper said that the requirements of the Act concerning the qualifications of Milk Board members excluded any nominee from the ranks of the Association, and we should, perhaps, consider seeking an amendment to the Act to provide direct representation by a producer, as had been done recently in the Egg Marketing Act. We should sound out the feeling of the Government on this matter, and if we, ourselves, felt that this was desirable, we should act accordingly.

Mr. Gormlie said that although that had been our original intention during the drafting of the Act, it became obvious that producer representation would lead to direct representation of merchants, vendors, housewives, and others to such an extent that the position was unthinkable.

Mr. Harper replied that if we asked for direct representation we would have to expect the same for other interests, and for this reason an impartial Board

was attractive, but if the recent moves in the case of the Egg Board and other Boards indicated a swing away from impartial Boards we should give the matter serious thought.

Mr. Gormlie said that the problem was a delicate one and he suggested that delegates give the matter considerable thought over the next few months.

ARTIFICIAL BREEDING

It was noted that the Artificial Breeding Board had now agreed to provide material for the Association to be published in the Journal and had appointed, on a part time basis, a press officer. The first of the newsletters appeared in the October issue following which the Secretary had advised the press officer concerning the type of material which the A.B. Study Group considered would be of most value to the dairyfarmer, and it was believed that future material would be along these lines.

The Chairman reported that a meeting had recently been held at Belvedere, following a personal canvass in that area by two inseminators, and applications had been received for A.B. service for 1,200 cows. The Board proposed to commence service at Narrung early in April.

In answer to a question from Mr. Faggotter concerning the part time noture of the work of inseminators, the Chairman replied that the Board was seriously examining the position. The placing of all inseminators on o full time basis could probably result in increased service charges.

Mr. Warwick said that it appeared that the part time provision for inseminators did not apply to all centres, although it was stated that the part time inseminators serviced as many cows in a portion of the year as other inseminators did on a year-round basis, and because of the pressure of the busy season they were not able to build up the herds on their own farms to a level which would support them in the slack period.

The Chairman replied that the Board was well aware of the problem, and was examining proposals such as, for example, canvassing on the lines of the recent successful trial at Milang.

The Chairman added that the Board had recently discussed the importation of frozen semen from N.Z. which was now permitted by Commonwealth regulation. It was believed that animal health authorities in the State departments of Agriculture did not agree with the Commonwealth ruling on this matter, and the importation of semen was accepted reluctantly. The Commonwealth had, however now applied so many restrictions as to make importation practically impossible, such as storage for two years and testing of the bull two years after taking the semen. The main objection by the States had been the danger of importing blue-tongue disease.

TARIFF ON IMPORTED CHEESE

The Secretary reported that in reply to the Association's request a letter had been received from the S.A. Cheese Manufacturers' Association stating that they had agreed to our request for support for increased tariff on imported cheeses and had received questionnaires from the Australian Cheese Manufacturers' Federation, but had found many of the questions to be impossible to answer. The letter received by ADFF from Mr. Loftus Hills of C.S.I.R.O. and printed in this Journal had been forwarded to the Federal Minister for Trade and Customs, who had replied that his Department had studied the letter and conferred with quarantine authorities, and "the consensus of opinion was that there is no risk of introducing foot and mouth disease with imported cheese",

The Executive had agreed that the Secretary should confer with Mr. Irving of the Department of Agriculture on this matter and should report Mr. Irving's opinions to the Secretary of ADFF.

Mr. Parik said that we had made it plain enough to the Federal authorities that we were not only concerned with foot and mouth; there were other diseases that could be introduced in cheese from general farming areas that could be dangerous to animals other than dairy cattle, such as blue tongue, which was feared by sheepmen. He therefore suggested that the ADFF seek through NFU the support of other Federal primary producers' organisations in the efforts to prevent the introduction of stock disease in imported cheese.

It was agreed that the Secretary confer with Mr. Irving on this matter, and that if Mr. Irving considers that there is any basis for this, that the ADFF be asked to act accordingly.

Mr. Harper said we should conjure up as much support as we could get, and, this should include our representative in Federal Parliament.

WEEDICIDES AND INSECTICIDES

The Executive Committee had been informed that a letter had been received by NFUSA from the S.A. Prices Commissioner advising that prices charged for weedicides and pesticides, apart from arsenate of lead, were not subject to price control, but that it had been found thot margins being obtained by distributors and resellers were not excessive.

A letter had also been received by NFUSA from the Secretary of the Local Government Association requiring further information for discussion by his Executive in the matter of the request that Local Government Bodies give consideration to making available weedicides and pesticides at cost to landholders.

The Secretary had informed the Executive that the latest Report of the Auditor General had stated that legal opinion obtained had indicated that the sale by Councils of goods other than those surplus to requirements, to staff, ratepayers, and others, was contrary to the Local Government Act, and he felt that producers should be urged to obtain their requirements through factories and Co-op. sources.

The Executive had also been advised that NFUSA had received a letter from the Minister of Agriculture commenting on the submission concerning amendments to the Weeds Act and Vermin Act, and stating that the Weeds Advisory Committee had discussed moves to enable Councils to make further progress under the Weeds Act. The substance of the Minister's letter had now been incorporated in an amendment to the Weeds Act, the objects of which were to encourage Councils (and to provide them with financial assistance) to carry out more regular and intensive programmes of weed control within their areas, and to increase representation to the Weeds Advisory Committee to include six primary producers in place of five at present.

Mr. Turner said that in view of the recent amendments to the Weeds Act it seemed that now was the time to press for roadside weed control being made the responsibility of district councils. The present system was quite unfair where a landholder with 70 acres may have a half mile of road whilst another with 3,000 acres may only have 50 yards of road or even none at all. It would be fairer to distribute the burden equally through rating and let the councils look after the roadsides; this might tend to make councils more careful with their roadmaking and grading practices, which tended to spread weeds for miles. In many cases councils knew that the soils they were moving contained weeds, but were not concerned, as it was up to the landholder to undo the damage they caused.

The Chairman said this should be taken up with the NFUSA. The present position was completely unfair; a landholder fronted to a road which carried travelling stock was faced with the problem of perpetual outbreaks of weeds.

Mr. Faggotter said that we had numerous arguments along these lines, all of which had resulted only in acceptance of the present position, and it was time we threw it overboard. The councils now, because of the type of machinery they were using, and because they knew they would not be landed with the responsibility of control, were the worst offenders in spreading noxious weeds. Although the conscientious landholder could ask why should he bear extra burdens even though his control of roadside weeds was 100%, he should realise that because of the present position he now had many more weeds to cope with, and most landholders would gladly pay extra rates if they thought the problem had a chance of being controlled.

In reply to Mr. Gormlie, the Secretary said that a recommendation along these lines had been made to NFUSA, and had been incorporated in the NFUSA submission to the Minister, but it had eventually not been incorporated into the amended Weeds Act.

Mr. Ballard then moved: "That further representation be made to NFUSA that the control of roadside weeds be made the responsibility of Councils"; which was seconded by Mr. Allingham.

The Secretary said that the amendments to the Act gave the Councils greater powers, and reimbursment of some expenditure from the Government, but the essence of the amendment was that it gave the Council greater authority over the landholder, and reinforced the principle of the present Act.

Mr. Spicer asked whether we should not push this matter ourselves, rather than through NFUSA. He felt that much of the drive went out of a cose in an official submission which lacked the details of first hand examples. It might be preferable to have this matter put into the form of a report and presented by the Secretary to the Minister directly.

The Chairman replied that this affected all primary producers, many of whom were very weed-conscious, and if we could not get the support of NFUSA he doubted whether the Minister would listen to us.

The motion was then carried.

ADFF MILK SECTIONAL COMMITTEE

It was noted that the Chairman had attended the October meeting of ADFF at which the VDA had put forward this proposal, and the Chairman had reported to the Executive that it had been apparent that there was little general support for the scheme, even from the Victorian delegates, and he believed that there were dangers in trying to bring the consideration of wholemilk matters into the ADFF. He considered that the functions of the proposed Sectional Committee were already carried out by the Milk Producers' Association of Australia and New Zealand, of which this Association is a member, and he had suggested to the ADFF that consideration be given to joining and strengthening the MPA, both as regards its representation and its prestige, as a preferred alternative to the proposal.

The Executive Committee had resolved that the delegates from this Association to the ADFF propose that milk producer members of the constituent organisations of ADFF affiliated with the MPA with the intention of making it on effective organisation.

FARM APPRENTICESHIP SCHEME

The NFUSA has adpoted the Association's report of the teaching of Agricul-

tural Science and a deputation from NFUSA (including the Secretary) would shortly be conferring with the Ministers of Agriculture and Education.

Mr. Parik said that shortage of skilled labour was one of the things that handicapped the dairying industry, and it was practically impossible to employ efficient labour because there were no facilities for training them. Dairying itself was not an attractive occupation, nor was it rewarding for young men because of the ties, but in other countries he had seen that boys who had served apprenticeship in dairying had advantages later on in getting jobs and in getting adequate wages. Here we had nothing to offer a boy to counter the high wages and short working week that he would get in some other job, and even if higher wages were offered, the objection was that after years of experience, he would still count only as an unskilled labourer. There was nothing available from educational authorities to supply this lack, and we would find, as the years went on, that only the older men were left in the industry. Consideration should therefore be given to providing some form of incentive to young men, and he considered that a request should be made to the State Government that young men with two years service on a dairy farm get priority in the new Farm Purchase Scheme.

FARM PURCHASE SCHEME

Following a request from Mr. Geoff. Giles, M.L.C., seeking the support of this Association for the proposed legislation concerning the guarantee by the Government of loans to farm purchases, the Executive had instructed the Secretary to confer with Mr. Giles.

The Secretary reported that he had discussed this legislation with Mr. Giles and with other members of Parliament. The substance of the legislation as it now appeared was that the State Government would guarantee to the lender the whole of the amount of a loan up to 85% of the value of the property, the value of the property being ratified by the Land Board, and the Department of Agriculture certifying that the farm was productive enough to provide the applicant with a reasonable living as well as servicing the loan. Members on both sides of the Houses had expressed the opinion that the scope of assistance would be limited, and it appeared that applicants would need about £5,000 to qualify for a loan.

Mr. Gormlie said that although members of Parliament had been somewhat sceptical of the scope of this Bill, there could be advantages to a farmer who wished to sell to a younger relative and could, by this means, obtain a guarantee from the Government for the whole of the loan.

IMPOUNDING ACT

Mr. Spicer said that it had been suggested to him that this Association seek to have the Impounding Act amended.

The Secretary stated that recently the Act had been amended as result of representation made by him to the Minister and to the Attorney General, and the general penalties had been considerably increased. Nevertheless they were still only nominal penalties, and the recourse of the landowner suffering damages was to the Courts.

ENGINEERS PRODUCE LONG-LASTING WIRE

United States industrial engineers have produced an aluminium-coated wire that tests indicate will resist rust and other corrosion and provide fences that will last for 50 years. The wire, which costs only ten per cent. more than ordinary galvanised wire, is being readied for the agricultural market after more than eight years of testing under highly corrosive conditions, during which it lost only 18 per cent. of its aluminium coating.

Statistics

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1962	1963	1961/62	1962/63	1962	1963
October	4,631	5,087	15,521	16,527	31,383	33,522
November	4,487	4,756	20,008	21,283	35,870	38,278

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1962	1963	1961/62	1962/63	1962	1963	1962	1963
October	1,587	1,649	6,242	6,461	34.3	32.4	1/8⅛	1/7¾
November	1,582	1,625	7,824	8,086	35.3	34.2	1/9⅛	1/8⅜

Moving Average Quota for 12 months ended 31/10/63 45.57%, 30/11/63 45.38%

INTERIM PRICES TO LICENSED SUPPLIERS

(All prices are interim only and subject to adjustment by retrospective payment)

	Basic C.M.B. Total (per lb. butterfat)			3%	3.5%	4%	4.5%	5%
				(per gallon)				
1963								
October	3/3¼	1/7⅜	4/10⅝	1/6¼	1/9¼	2/0¼	2/3¼	2/6¼
November	3/3¼	1/8⅜	4/11⅝	1/6½	1/9½	2/0¾	2/3¾	2/6¾

LONDON PROVISION EXCHANGE QUOTATIONS — OCTOBER

	1962	1963
Butter— Choicest Australian	314/–	334/–
Cheese—First Grade Australian	215/–	226/–
Rindless Australian	227/–	234/–

INTERIM RETROSPECTIVE PAYMENT 1962-63

The Metropolitan Milk Equalisation Committee has announced the second retrospective payment for the year 1962-63 at the rate of 1-11/16d. lb. butterfat equalised, which will be paid to all licensed milk suppliers early in February. The interim basic price for 1962-63 is thereby increased to 46.10d.

No increase is expected in the interim basic price for the current year 1963-64.

BEMERSYDE BULL FOR A.B. IN N.S.W.

At the annual Bemersyde sale of Jersey cattle, the bull Bemersyde Advance Jester was sold for 1,000 gns. for artificial insemination in New South Wales. This bull is a full brother to Bemersyde Eileen 31st Greek the Lanac Senior Sire, which is in the process of putting up a really first-class sire survey, his daughters consistently being well ahead of the daughters of other bulls in the herd.

The dam of both bulls had many outstanding yields, the top being a mature record of 857 lbs. of fat. She was also Supreme Champion over all breeds at the Sydney Royal Show.

Two full sisters of the above-mentioned bulls are V.H.C. cows with over 700 lbs. of fat, and five full sisters have won prizes in the Show ring.

With this background of good type, plus excellent life time production at a high level, Bemersyde Advance Jester looks likely to be a success in New South Wales.

A.B. BOARD NEWSLETTER

Farmers in the Milang area have decided to use the services of the Artificial Breeding Board.

Although this move, following a canvass of the district, comes at a time when the close of the dairy breeding season is not very far off, farmers responded to such an extent that the provisional figures for cows to be inseminated was placed at 1,300 head.

Confirmation was almost certain on the site of the sub-centre being in Strathalbyn and the starting date being January 3, 1964. Congratulations to those responsible for progressive and decisive action.

In addition to A.B. sires already publicised, the Board has made a further selection, a Jersey Bull, bred and born on January 15, 1963, at Roslyn Vale stud, Myponga. He will undergo the usual stringent tests at the Centre.

The Board bought Roslyn Vale 5th Milestone (by Le-Roy Golden Lad from Roslyn Vale Misty Morn 2nd) from K. N. Whitford & Sons. The dam of the bull has the ratings of Highly Commended and Elite Merit register and was sired by Nyroca Peggy's Design who has three Elite Merit register daughters. Grand-dam of the new A.B. bull in Misty Morn, top cow of the Myponga Herd Testing Association in 1947-48 with 588 lb. butterfat at nine years. She put up 463 lb. at almost 15 years adn was still milking when destroyed at the age of 20 years, 10 months.

Roslyn Vale cows under test have, this current season, showed out with the first 25 completing tests having an average butterfat of 500 lb. and this includes figures from several J2 cows.

"Expansion in the size of the milk production unit and its increasingly specialist character both make heavy demand on the cow and on the person who manages and handles her."

This in an extract from the current annual report of the Milk Marketing Board in England and Wales, a body which reported 1,699,172 cows inseminated for the year through its services. The country-wide service including non-board centres made that figure into a grand total of 2,106,236 cows artificially inseminated for the year.

An important line in the report reads: "It is to assist him (the man who handles the cow) in every possible way that our services are directed."

The members of the Board in S.A. agree that their outlook is similar.

Dairymen are accustomed to dealing with numerals so that figures arising from conduct of artificial breeding in various regions are bound to arouse some interest even from those who respond to a visit during a canvass with the remark, "I do not believe in artificial breeding," or, "It costs too much," or "I can use neighbours' bulls."

All have heard of A.B. or A.I. and some say they think of using the scheme and have even calculated costs and benefits—benefits in not running bulls and in conquering some disease problems.

The report from London shows that the service continues to expand and in the last five years the rate of expansion has averaged 5 per cent. per annum with year to year variations.

There is consideraable scope for expansion of A.I. services as countries like Denmark (95 per cent. A.I.) and the Netherlands (70 per cent. A.I.) indicate.

The Artificial Breeding Board of Tasmania shows in its annual report for the year ended March 31 that the total number of herds served by A.I. was 1,201 and cows involved 22,301—an increase of 2,766 compared with the previous season.

The total was made up of:—Commercial, 941 herds, 10,672 cows and 15,706 inseminations; the Department of Agriculture infertility clinic, 256 herds, 11,422 cows, 18,371 inseminations, and four private herds.

The Tasmanian Board seeks furtherance of the practice of artificial breeding through the establishment of a Board-controlled semen production centre.

On a fairly grand scale is such a "semen factory" at Bacchus Marsh where the Victorian Artificial Breeders' Co-operative Society Limited has 90 bulls on the books, assets of £222,966 and 40 inseminating organisations in Victoria taking semen. In the near future membership is likely to reach 5,000 farmers.

The V.A.B.C. Society Ltd. finds that 90 per cent. of semen produced is taken by organisations in Victoria with the remainder going to Tasmania, South Australia and Queensland. The Society looks further afield in other States and in overseas.

The Society follows the New Zealand bull selection system. The wide field of operations includes outside contract mating. Resulting matings of top cows with A.B. bulls provide a supply of bulls for the progeny testing project.

In contract to the S.A. plan, all semen is deep frozen. The users of artificial breeding in S.A. now have access to both deep frozen and chilled semen.

One more news item comes at the end of 1963—not long after the A.B. Board completed its first year of operation—since the Minister of Agriculture, Mr. Brookman, has approved the recommendation of the Director of Agriculture, Mr. Strickland, that more space be allocated for artificial breeding activities.

The letter to the Director of the Board, Mr. W. K. Rose, states, "That an additional 30 acres to the south of the existing 30 acres enclosed with the perimeter fence of the A.B. Centre be made available to the A.B. Board."

This means that the Artificial Breeding Board now has 60 acres under its control at Northfield.

FLIES IN MILK

We have been asked by the Metropolitan Milk Board to publish the following statement:

Flies have been observed by the Board's Supervisors in many cans of milk received at country factories and treatment plants in the metropolitan area.

Following reports concerning the presence of flies in milk, the Board has instructed graders at factories and the Milk Board's Supervisors to destroy any milk containing flies or alternatively to add methyl violet to such milk and have it returned to the producer.

Flies are carriers of serious diseases and therefore their presence in milk or on the surfaces of the equipment with which milk comes into contact is most undesirable. The presence of flies in milk is a contravention of the Regulations made under the Metropolitan Milk Supply Act.

The fly lays its eggs in organic materials and therefore the first step in fly control is the elimination of conditions which are conducive to fly breeding. When flies are in the adult stage they should be kept away from the milk room by the proper screening of the doors and windows or other openings. Lids should be placed on the cans of milk as soon as they have been filled.

Flies can be destroyed by various insecticides and these are commonly used as sprays. These sprays are of two types namely the knock-down type and the residual strays which remain active for a long time and are relatively slow acting.

Further advice on these matters can be obtained from the Board's Supervisors.

In general prevention of breeding is the true answer in fly control; regardless of the number of adult flies that are killed, there are always enough survivors to breed another generation.

—W. J. TAYLOR, Chief Supervisor.

Dairyfarmers will be interested to learn that a one gallon Pressurised Insecticide Sprayer, specially developed for the dairy and farm industry is now available. This unit, which is pressurised by a built in air pump, is light and portable, and is particularly suited for fly control in and around the dairy.

NEW MEMBERS FOR METROPOLITAN MILK BOARD

After 18 years' service as a member of the Metropolitan Milk Board, Mr. J. W. K. Beddome, F.A.S.A., retired on 31st December, 1963.

At the time of publication of this issue the name of the new member replacing Mr. Beddome has not yet been announced.

We understand that the Deputy Chairman, Mr. K. M. Bowen, who has also been a member of the Board for 18 years, will retire on 30th June, 1964, thus necessitating the appointment to the Board of yet another new member.

Although the members of the Metropolitan Milk Board are not appointed as representatives of any particular interests, Mr. Bowen's original appointment was undoubtedly influenced by his close association with and personal experience of the producing aspect of milk supply, and it is to be hoped that his successor will have at least a similar knowledge of the dairy farming sector and a sympathetic approach to the problems involved. Such qualifications are, however, difficult to find in a man who has a worthwhile span of useful years still ahead of him and who can fulfil the other conditions of the appointment, namely that he have no connection with the production, processing or selling of milk, and we would be pleased to hear from any member of the Association who knows of any person fulfilling these requirements, and who may consider offering himself as a candidate for the position.

Helping Dairy Cows "BEAT THE HEAT"

Results of tests in U.S.A. suggest that by limiting roughage and increasing grain, cows won't lose so much weight and there will be fewer breeding problems.

The climate in Arizona, where these tests were carried out, is very similar to that in South Australia, and the principles outlined may assist in preventing the drastic summer production decrease.

We might ask how a cow's feed can affect her response to hot weather. To start with, we can think of the rumen as being like a stove the cow has to carry around with her. Ordinarily, the temperature inside the rumen is a few degrees higher than the temperature in the rest of the cow's body.

There are times when allowing the "fire" in this stove to go out might be disastrous. This is why we sometimes hear of hay, or even straw, being airlifted in to snow-bound cattle. We know that if we can keep them eating even the poorest roughage, their rumen stove will keep its fire burning and keep them warm.

But while this keeps cattle from freezing in winter's cold, it can help keep cattle **overwarm** in summer's heat.

What is this "fire" in the rumen? The rumen has a capacity of some 30 to 60 gallons, depending on the size and conformation of the cow. Usually it is almost filled with a soupy mass of feedstuffs in various stages of grinding and soaking. Every drop of this mass is teeming with microbes which are busily breaking down the food materials and building their own body tissues, giving off waste products and **heat** in the process.

The number of these microbes in one cow's rumen is astronomical, in the trillion or quodrillion range. But the association between the cow and these microbes is a beneficial one, not only for the cow, but for man.

The microbes live on what the cow eats and drinks and the saliva she produces, and on the products of their own activity. To a great extent, the cow in turn lives on the end-products of the microbial activity, and on the digested bodies of the microbes themselves, when they have passed down the digestive tract.

FOOD PROVIDES THE "FIRE" . . .

If the rumen is a stove, then the activity of these billions of microbes is the "fire" and the food the cow eats is the fuel for the fire. Gases are among the waste products of this fire, and we could over-work the simile by saying bloat is caused by a clogged chimney.

All feeds cause heat production, but we know that a cow gets more benefit from some feeds than from others, on a pound-for-pound basis. Thus, for many of her needs, a pound of concentrates does the cow more good than a pound of roughages, but without corresponding increases in heat production.

We could rearrange this idea then, and say that to get a given job done (production of a pound of milk, for instance) by the use of roughages would involve more heat production than the same job by the use of concentrates. Or, the higher the percentage of roughage in the diet, the greater the heat production by the rumen.

A fundamental truth of dairy cattle feeding is that a high-producing cow cannot take in as much nutrient as she puts out while in her first few months of lactation. She loses weight. By traditional feeding methods, a 1,400-pound cow might be fed alfalfa hay free-choice and would tend to eat about 35 pounds of good quality hay.

Even if this were the **highest quality hay available,** a cow producing 80 pounds of 3.5 per cent. milk would need 18 pounds of concentrate to meet her energy and protein needs. This is a total of 53 pounds of feed per day. This may be olmost all she could eat.

Under many circumstances, this would present no problems. However, if hot weather and heat from roughage handling by the rumen combine to reduce appetite for any of the feed, and she doesn't eat it, then there is no way the cow's intake will fulfil her requirements.

APPETITE STAYS SHARP . . .

If, on the other hand, the cow's intake of roughage were controlled at 1.5 pounds per 100 pounds of body weight, or about 21 pounds, and the difference made up with concentrate, tests hove shown that the cow's appetite for concentrate stays sharp. And, the requirements can be met more nearly, even in the hot summer. Here, the hay allowance is limited to 21 pounds, and about 27 poupds of concentrate (a total of 48 pounds) are required to meet nutrient requirements.

One Arizona dairyman has noted that he still can't avoid early lactation weight loss, even on the high concentrate feeding, but that milk production during the period is higher.

The cow is an extremely busy functioning unit, especially when she is producing milk. Just one example of this activity is the work her heart must do. About 400 pounds of blood pass through the udder for every pound of milk produced. A cow producing 100 pounds per day would have 40,000 pounds of blood flowing through her udder daily. If we ossume that 10 per cent. of her total circulation flowed through her udder, her heart would be pumping 400,000 pounds, or 200 tons of blood per day. Such a cow might look "contented", when in reality she is **tired.**

Besides this, she must produce the ingredients of the milk and process her feed. These and other activities produce heat, and some of the heat production is fixed rather rigidly.

In hot weather, the major route available to the cow for heat loss is by evaporation of water, and since she is not built to sweat much, most evaporation takes place by respiration.

Hot cows pant. This is an automatic attempt by the cow's body to give off heat and keep the body temperature normal. But even this activity produces heat, and sometimes the body temperature rises above normal. As a matter of act, in the tests mentioned, conventionally fed cows had higher than normal temperatures continually during the hot weather, whereas the temperature of the limited-roughage, high-concentrate group, although above normal during the day, did return to normal in the cool early morning.

HUMIDITY INCREASES DISCOMFORT . . .

Heat discomfort is caused by the high temperature itself in combination with the relative humidity. As the humidity increases at a given temperature, the cow's discomfort increases becouse the evaporation she depends on for heat loss becomes less effective.

There is good evidence that summer heat combines with heavy lactation to produce breeding problems. We usually try to breed our cattle at 60 to 90 days after calving. This is also when they tend to be in maximum production. When this happens in the hot season, there is a high incidence of early embryonic death. Something obout the elevated body temperature at the time of ovulation, fertilisation, or related function, interferes with conception. One to several missed heat periods and irregular cycles are characteristic of this reduced fertility.

A commercial herd subjected to a field test of the high-concentrate feeding showed a reduced incidence of this problem. Also, the initiation of heat cycles following calving was earlier, the cycles became regular sooner.

In the same herd, besides improved production and breeding performance of the high-concentrate cows during hot summer months, these cows also were more persistent in production. This apparently was due to the effect of better appetite and greater nutrient intake made possible by restricting roughage.

In order for high-concentrate, restricted-roughage feeding to work for you, several factors have to be watched closely.

FAT TEST MAY DROP . . .

If roughage intake is **too** low, butterfat test may drop. This has been avoided in field tests by being sure the cows continue to eat at least 1½ pounds of lucerne hay per 100 pounds of body weight.

There appears to be a certain requirement for fibrousness in the ration which is **not** met by very fine, leafy or immature lucerne hay. If this type hay has to be fed, the "fibre requirement" can be met by using coarser lucerne, or perhaps silage, for part of the 1½ pounds per hundredweight equivalent.

This type of feeding should be thought of as a **controlled-roughage** plan. If too much roughage is allowed, it affects appetite by causing too much fill and excess heat effects. If too little roughage is eaten, butterfat test will drop.

If this programme is used, it puts more pressure than ever on **careful** feeding. Feeding costs amount to about half the cost of milk production. Over-feeding is never desirable, except for fattening. But, many cows will produce more if they are fed better; this programme lets us come closer to feeding good cows up to their ability to produce.

Using these more powerful rations makes it easier than ever to **overfeed** cows which have low-producing tendencies. It is necessary, therefore, to know your cows and exactly how they are milking so they can be fed accordingly.

The concentrate in this programme is given more work to do than in conventional rations. More of it is used. So, more care must be taken that it is right for the job. It must not have unnecessary, highpriced ingredients. It must be as accurately and inexpensively adjusted to the cow's needs as possible.

With proper care applied to feeding, this method is **less expensive** per pound of milk produced than free-choice-roughage programmes, at least, at current prices in many areas. It is true that a more expensive feed is substituted for less expensive hay, but less is fed. If the feed price is figured on a nutrient basis basis (for instance, according to its net energy or protein content), then prices are usually comparable, and often favour the concentrates.

This change in emphasis of feeding does not indicate that we are ready to dispense with the rumen. We still depend on it to make high-quality, appetising protein and B vitamins out of the low-protein-quality plant sources. But the change does permit us to effectively use today's more abundantly available higher energy feeds so milk production costs can be cut.

As experience with the high-concentrate, controlled-roughage programme increases, we will earn more about its effect on the cow's ability to build a dietary "silk purse out of a sow's ear" milk out of dairy feeds. For the present, we know that per-pound cost of milk production can be decreased and summer heat problems and the related productive problems can be reduced, through careful use of the programme.

—PERRY W. RILEY, Dairy Science Dept., University of Arizona.

(Hoard's Dairyman, 10/7/63)

A READY RECKONER FOR DAIRY FARM INCOME

When it comes to buying a dairy farm the would-be purchaser generally has plenty of figures to go on—so many acres, so many cows, so many pounds of fat per cow, so many gallons for the year, and so on. The one figure he doesn't have is the most important (and he doesn't have it because, very often, the farmer himself has only a vague idea), namely "net income."

"Net income" for a one-man farm can be considered as gross income less all cash costs and allowances for depreciation, and is, consequently, the return that the owner gets for his own labour and the interest on his capital.

From the latest costs as shown by the Milk Board survey, and at final prices forecast for 1963-64 a very close approximation of average net income can be calculated on either a herd size basis or a total production basis using the same factors of 52 and 500 in each case.

Herd Size Basis:

NET INCOME = (TOTAL MILKERS × 52)—500.

For example, for a herd of 34 cows, the net income would be—

34 × 52 =	£1,768
Subtract	500
Net Income	£1,268

Total Production Basis:

NET INCOME = (TOTAL BUTTERFAT ÷ 52)—500.

so that, in the previous example, at average yield of 270 lb. butterfat, total yield will be 9,180 lb. and net income would be:—

9,180 ÷ 52 =	£1,764
Subtract	500
Net Income	£1,264

CHOKED PULSATION GIVES BETTER MACHINE MILKING AND MASTITIS CONTROL

Investigation by Dr. Whittlestone (who has now, unfortunately for the Australian dairy industry, returned to the Ruakura Research Station in New Zealand) into the action of pulsators on milking machines has shown that incidence of mastitis can be reduced and the milking operation speeded up by the use of choked squeeze pulsation.

The purpose of a pulsator is to give alternating periods of atmospheric pressure and vacuum in the outer chamber of the teat cups.

The ratio between these two is known as the pulsation ratio or the squeeze to release ratio.

When milking machines were first produced they worked on a basis of 50-50 pulsation ratio.

This meant that action in the pulsation cycle was 50 per cent. squeeze and 50 per cent. release strokes.

Originally, it was believed that milking took place on the squeeze, similar to the hand milker, however, in experiments it was found that the milk was actually drawn or sucked out of the teat when the inflation was released.

This was quite a step forward as it introduced new ideas into ways and means of making the milking operation faster and more efficient.

A conclusion drawn was that time of milking the cow could be speeded up by changing the pulsation ratio so as to have a shorter squeeze and a corresponding longer period for the milk to be sucked out of the teat.

This was found to be so and current recommendations are for pulsators to be adjusted to give a short squeeze.

On experiment it was discovered that each dairy cow could only take a certain period of suction phase without becoming uncomfortable ending up by kicking off the cups.

A minimum squeeze duration of 25 per cent. or a ratio of 25 : 75 was determined as being the minimum which can be tolerated by all cows.

The recommended squeeze-release ratio of 25 : 75 gives adequate duration of full squeeze and results in a satisfactory milking ratio of the order of 33 : 67.

The milking ratio gives a measure of the duration of the milking stroke or in other words, the periold during which milk flow actually takes place.

Recent investigation into the action of squeeze-release ratio on the cow found that even more improvement could be effected by choke squeeze pulsation.

Choking the air inlet alters the pulsation ratio, and can be used as a simple method of adjustment. A choke of small diameter reduces the rate of air passage into the cups and therefore shortens the squeeze phase.

There is evidence that the gentler application of the inflation when the squeeze stroke is choked results in a shorter duration of full squeeze being tolerated by the cows without ill effects.

In other words the squeeze can be reduced down to 20 per cent. or less.

In theory this does not really speed up the milking as the milking ratio is very similar to the non-choked machines of the 25 : 75 pulsator ratio.

In actual milking conditions, it is found that choked pulsator valves do speed up the milking operations. This is even more noticeable if the pulsator ratio has not been adjusted to the fast milking ratio of 25 : 75.

Biggest advantage of choked pulsation appears to be in the low incidence of mastitis which accompanies the gentler massaging of the inflation.

In a number of cases where choke pulsator valves have been installed, complete clean-up of infected herds has been reported.

Some machines have choked squeeze built in and these include automatic pneumatic, and magnetic or pneumatic master and relay systems.

The simplest way to add choking to the conventional slide machine is a one-way valve inserted between the pulsator and the cups. Plastic valves to do this are now available.

As purchased, these plastic chokes have a 7/64 inch hole in the choke valve which operates only on the air stroke to slow down the application of

50 YEARS AGO

DAIRYFARMERS WANTED A PRICE RISE, FODDER PRICES WERE TOO HIGH, REGULATIONS ON MILK QUALITY WERE TOO TOUGH, AND THE EXPERTS WERE RECOMMENDING BETTER FEEDING, BREEDING AND TESTING TO REDUCE COSTS

Things Haven't Changed Much, Have They! But --

ONE THING IS DIFFERENT

The Dairy Farmer can now maintain standards of hygiene never before obtainable with the range of detergents and sanitizers manufactured and supplied by:

the squeeze (collapse of the inflation on to the teat). They are designed for fitting to pulsators set to vige the basic 50-50 ratio.

This size hole has a very considerable slowing down effect on the squeeze of the inflation.

If it is added to a pulsator which is already set to a fast milking ratio such as 25 : 75, the duration of the full squeeze may be reduced to disappear altogether. The inflation in this case does not collapse completely onto the teat at all, but moves off again before it has done the job of massaging the teat. This can have a harmful effect and cause mastitis.

Present indications are that the duration of full squeeze in choked pulsation should not be much less than 20 per cent. and certainly no less than 15 per cent.

If the pulsators have already been set for fast milking make sure the basic pulsator setting is still between 25 per cent. and 30 per cent. squeeze. Drill out the choke holes to 9/64 inch to avoid overchoking.

The only way to be sure that the adjustments are correct is to check with a vacuum recorder. Checking services are easily available from dairy officers, survey officers, from some dairy factories and milking machine companies, and from private operators.

Since the choke valves are made to handle the air flow from only one set of cups, one valve must be provided for each set, even in doubled up bails.

There are two other factors which modify the final effect of the choke. These are the pulsation rate, and the presence of leaks in the cups, claws, inflations or droppers.

As the pulsation rate is increased the effect of choking in shortening the duration of the full squeeze becomes more obvious so that at high rates the squeeze never fully tightens on the teat or if it does it does not stay there long enough to be effective.

The standard which has long been adopted in the N.S.W. Department of Agriculture of 40-45 per minute is assumed in the above recommendations.

The effect of a leak in the pulsation system is to shorten the milking stroke.

It is thus extremely important that measurements on the adjustments to choked-squeeze pulsators be carried out using cups that do not leak.

50 Years Ago

There is a French proverb which says: "The more things change, the more they are the same," and this applies as much to dairying as to anything else. Fifty years ago and more the Adelaide and Suburban Dairymen's Association, the forerunner of this Association, was greatly concerned about prices and conditions in the industry, so concerned in fact that it called a "Special Meeting of All Dairymen (whether Members of the Association or not) to be held at Ware's Exchange Hotel, Hindley Street, at 8 p.m. on Saturday, December 18th, 1914, to discuss the advisability of raising the price of milk." The proposal to be discussed was a price increase to 6d. per quart and one newspaper commented that "the public will no doubt view this with surprise, they being under the impression that the recent good rains should make feed plentiful, but such, it is said, will not be of special benefit to dairymen generally for some time. The present high price ruling for fodder is the principal cause of the suggested rise." At that time, as the result of drought, fodder was exceedingly short and was under the control of the Government, the fixed price for chaff being £9 10/- per ton. It is not clear from the records as to whether a price increase was obtained but some months later the "Government Dairy Expert" (Mr. P. H. Suter) gave a lecture as to how returns could be increased by better feeding, breeding and testing. The copy of "The Register" in which Mr. Suter's lecture is reported, also contains some advertisements for some real estate bargains. The potential purchaser could make his choice from "13 acres near city, ¼ acre assorted fruit trees, balance barley and oats, double-fronted stone house and out-buildings, £1,050" to "600 acres freehold, solid stone house, cellar, good stables, £3 per acre."

Standard for Bulk Milk Tanks

Although bulk milk pick-up is ot present little used in South Australia, there is no doubt that its use will increase in the future, and for this reason it is undoubtedly to our advantage to learn from the experience gained in bulk pick-up in the Eastern States. The design and manufacture of the farm tanks has been carried out independently by a large number af firms, often with little more than a superficial knowledge of what is required, and the result is that many units now in the field have proved to be unsatisfactory.

To overcome the problems involved, and to safeguard the dairyfarmers the experience gained in the field has now been incarporated into an Australian Standard Specification published by the Standards Association of Australia.

The refrigerated tank-units are of the type used for the storage of milk in bulk on dairy farms and its every day pick-up by bulk milk tankers.

The standard was prepared in response to a combined request from several of the State Departments of Agriculture, in order to provide an Australia-wide uniform basis for the design, construction, performance and testing of the tank-units and their fittings and cooling equipment.

Several organisations in Australia concerned with the production and distribution of milk, the Associated Chambers of Manufactures and Department of Agriculture and universities were represented on the committee which drafted the standard.

Overseas developments in refrigerated units were investigated during the drafting of the standard, with particular consideration being given to standards issued in the United Kingdom and United States.

Because the summer conditions in Australian dairying areas are generally more arduous than in the dairying districts af the U.S.A. and the U.K., the Australian committee has laid down performance requirements more stringent than those applying to tank-units for use in those two countries.

The standard demands satisfactory performance of the tank-units in ambient temperatures up to 95 degrees F.: furthermore, in order to ensure continuous operation through short peoks of extra high temperature, the standard requires the units to be capable of operation in an ambient temperature of 104 degrees F. for at least two hours without interruption by the functioning of the unit's protective equipment.

The standard recognises, however, that in some areas it may be necessary for tank-units to be of superior performance to the requirements laid down. Test procedures to prove the performance of the tank-units are described in the standard.

Copies of this standard, which is designated Australian Standard N46, Refrigerated Farm Milk Tank-Units, 1963, can be obtained from the Standards Association of Australia, Bagot St., North Adelaide. The price is 10/-.

AMENDMENTS TO THE IMPOUNDING ACT

Although, like most legislation, the Impounding Act is amended from time to time (ten times in the last forty years), the schedule claim has remained unaltered since 1858, when the rates applicable of rates for damage by trespass which the holder of a property can varied from one farthing for trespass in unenclosed land by any ram, ewe or lamb, to five shillings for trespass in enclosed growing crop or garden, "or in any public cemetery", by any horse, ass, mule, bull, cow, camel or deer.

Following the obtaining of legal opinion for one of our members, the Association drew the attention of the Government to this archaic schedule, and we are pleased to announce that an Amending Act has now been passed which increases the damage rates approximately fourfold.

Even at this it may be thought that the rates are low, being a maximum of £1, but it should be understood that these are rates for damage by trespass, and do not apply to such special damages as the landholder may be able to prove.

The ability to prove damages is, of course, difficult, and the landholders' success in any case he may bring against the owner of trespassing stock will depend, not only on his ability to prove damages, but also on his own actions regarding his duties and liabilities in relation to fences and so on.

A.B. BOARD SEEKS MEMBERSHIP OF JERSEY SOCIETY

The President of the South Australian Branch of the Australian Jersey Herd Society, Hon. G. O'H. Giles, M.L.C., has announced that the South Australian Artificial Breeding Board has requested membership of the Society.

Mr. Giles pointed out that such an application was permitted by the rules of the Society and on receipt of the application his Society would be very pleased to welcome the Board as a member. He said that there were obvious advantages to both the Board and the Society due to the fact that the Jersey cow was such a good economic proposition over the wide field of climates and conditions in South Australia, and that the Jersey breed was numerically superior in South Australia.

As proof of the goodwill between the two bodies, Mr. Giles quoted from a letter signed by the Chairman of the Board in August, 1963, which stated:—

"The Board regards its mission as in no way antagonistic towards the Breed Societies, and we believe that the Board's activities will not prejudice the operations or prosperity of the genuine breeder. At no time has the Board contemplated the use of semen from other than **fully accredited pedigree bulls.**"

TEATS BEAT BUCKETS FOR CALF-REARING

American calf feed companies are currently widely publicising the "P.G.E. factor" and advocating use of nipple or teat feeding for the first three or four weeks at least.

P.G.E., or pre-gastric-esteraze, is a digestive enzyme secreted by all young calves. It greatly assists the digestive process in the first few weeks of a calf's life.

However, P.G.E. is produced by the calf only in the act and process of "suckling".

Many people already believe that calves do better on a teat than a bucket, but this is the first time any scientific explanation has been advanced.