THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

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—Photograph by courtesy "The Stock Journal."

PLEASANT BANKS MERYL
Champion Guernsey Cow—Royal Adelaide Show, 1965
and Winner of the Kinross Memorial Goblet
med nd Bred by B. H. BASHAM—PLEASANT BANKS—PORT ELLIOT

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THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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MILK IS NEEDED FOR STARVING INDIA . . .
. . . SO WE GIVE A TON

Famine conditions in India continue unabated.

Already burdened with the problems of development, illiteracy, ignorance, and prejudice, this country has, during the past year, been in the grip of drought which has halted what little progress had been made towards solutions to some of these problems.

"Milk for India" appeal was launched in South Australia on 2nd March by the Lord Mayor of Adelaide with the purpose of assisting in an Australia-wide campaign to supply milk-powder to India in an attempt to palliate some of the suffering.

Milk-powder was chosen because, in the opinion of U.N.O. nutritionists, it supplies the protein which is the greatest need of the mass of the Indian population, and as an industry we must appreciate the fact that, despite all the campaigns against milk and dairy produce, when the chips are down it is MILK that is needed.

For all the headlines that state, year after year, that scientists have found the way to make a complete food from this, that or the other, at the cost of a farthing per head, it falls to the dairy farmer, not the scientist to supply to a starving nation the nutrients that are needed, in the cheapest and most convenient form.

It was therefore partly as a thank-offering and partly as a mark of gratitude for recognition of milk as the best food to meet this problem, that the Central Council of this Association decided to give one ton of milk powder to the Appeal.

PLEASANT BANKS MERYL

Champion Guernsey Cow, and Winner of the Kinross Memorial Goblet at the 1965 Royal Adelaide Show, at which she was also awarded 1st Prize in the class Over 6 y-o. Dry Cow, PLEASANT BANKS MERYL is by P. B. VICTOR (whose dam, P. B. Valerie averaged 452 lbs. b.f. over 8 lactations) out of P. B. MELISSA (407 lbs. b.f. over 7 lactations). MERYL, who also won 1st Prize for 4 y-o. Cow in Milk at the Royal Adelaide 1963 has produced as J2 320 lbs. b.f., J3 489, S4 432.

The Appeal will continue open for some time, and further contributions, in money or in milk powder, would be appreciated.
Donations should be sent to—

"Milk for India Appeal",
Community Aid Abroad,
5A Gay's Arcade, Adelaide.

But "giving" is not enough. If the cure is to be permanent "understanding" is also necessary, and to help our readers do just this we reprint a report by Mr. Escott Reid, formerly Canadian High Commissioner for India, and now an official of the World Bank.

* * * *

TO UNDERSTAND A BASIC PROBLEM . . .

The Indian peasant is poor. A recognition of his dire poverty is central in any discussion of the problems of economic development in India. But the Indian peasant has many other attributes which are also relevant to these problems of economic development. There is the way he feels about the caste group he belongs to and about other higher or lower caste groups in his village. Because of the way he feels it is difficult for the various caste groups to work together to promote the interests of the whole village. The village tends to be divided into factions. There is the villager's attitude to the cow and the monkey. Most Hindu villagers consider it a sin to kill either the cow or the monkey in India and is plagued by useless cows and destructive monkeys. There is in most Indian villages what most people from rich lands would consider to be undue deference to the traditional ways of the past, whether they are ways of cultivating rice, or sowing wheat, or preparing food, or not using latrines.

I remember the first tour my wife and daughter and I made of Indian villages at the beginning of 1953. We spent ten days visiting village after village. We slept in government bungalows on the outskirts of the villages. One of the first villages we visited was, we were told, even poorer than the average. On our tour of that village we were shown a rich mango grave and a fertile tomato patch, and we saw that the crop had been mangled the night before by monkeys. In village after village we saw half-starved milk-bearing cows competing for scanty pasture with useless old three-quarter-starved cows. We heard stories of feudalistic privilege and oppression.

The natural reaction of the outsider is to conclude that what India should do—if India is to double its agricultural production in fifteen years or so, as it must—is to break down its caste system, destroy the useless cows and destructive monkeys, and eradicate from its villages the hierarchical and feudal traditions.

This is a natural reaction. But I think that the second stage in the attainment of wisdom about the problems of economic development in under-developed peasant countries is an acceptance of the fact that changes of this sort cannot be made in a mere decade or two, and that to secure badly needed immediate increases in agricultural production it is necessary to work through existing social institutions. Thus if the greybeards dominate a village it is necessary to concentrate on the task of converting the greybeards to using improved seeds, fertilizers, new methods of cultivation, and so on. If the villagers will not kill monkeys perhaps they will look the other way if outsiders trap them and kill them far away from the village.

A third stage in the attainment of wisdom is, I suggest, the realization of why it is necessary that the leaders of the poor countries have even harder heads than the leaders of the rich countries and why it is more difficult for the leaders of poor countries to make hard-headed decisions.

Suppose agricultural production in a typical poor country were to go up by 5 per cent a year. Are the farmers to be allowed to increase their consumption by 5 per cent a year? They easily could, not by spending their increased income on luxuries but by spending it only on bare necessities for the growing population in the villages. The former and his wife and children could spend a little bit of extra income per head on a little more food, a few more clothes. But if the farmer consumes all the increase in his production, how is the poor country to finance its industrialization program and feed the fast-growing population of its towns and cities? If there is a 5 per cent increase in agricultural production, will it not be necessary for the government to siphon in one way or another, say one-quarter to one-third of the returns from that increase, in order to finance industrial expansion?

Take another and a different kind of hard choice. A poor country is building a dam to irrigate land which has hitherto had to depend on scanty and irregular rainfall and water drawn from shallow wells. The farmers in the area are poor. They need water badly. It would be possible to distribute the water over 500,000 acres. Every farmer in the area would get some water for his fields. Every farmer would get bigger crops. It would also be possible to do a scientific soil survey and select out of the total area of 500,000 acres the best 250,000 acres and provide water only for those acres. The farmers who farm the other 250,000 acres would get no irrigation water. The experts say that by concentrating the water on the best 250,000 acres, instead of spreading it thinly over 500,000, one would get a much bigger increase in the total agricultural production of the area. Indeed the best guess of the experts is that if everybody got a little water the total agricultural production in the whole area would probably increase by about 50 per cent, whereas if the water were used only on the better land agricultural production in the whole area would probably be trebled. But the farmers who own the poorer land, who are for the most part the poorer farmers, would see their richer neighbours get plenty of water while they would get none.

Faced with this sort of problem the soft head ruled by the soft heart would always make a soft choice, and a poverty-stricken country would never lift itself out of its poverty. The soft heart ruled by the hard head would make something close to the hard choice, would make this choice in sorrow and grief of heart. This is the sad burden borne by the leaders of governments of the poor countries.

It is a burden which can be borne by compassionate men only if they do their best to reconcile the necessity of increased production with the demands of social justice.

Thus in the last example of hard choices the farmers who get the scarce water should not be permitted to retain for their own use the whole of the resulting increase in the value of their farm production. They should be permitted by the government to keep only that proportion which is necessary to provide them with sufficient incentives to use the water efficiently. The rest of the increase in the value of their farm production should be siphoned off by the government by water rates or taxes of one kind or another. Some of the money thus siphoned off can be wisely used by the government to finance a massive rural works program which could employ the farmers in the area who do not benefit directly from the new irrigation project. The works projects should be the kind which lead directly to increased agricultural production. They should include contour bunding, desilting canals and small reservoirs, damming rivulets and streams, digging surface wells, tree planting, and other projects for soil conservation and land reclamation.

The inescapable task of an institution like the World Bank is to help the governments of under-developed countries shoulder the burden of hard choices. The World Bank helps them with loans. It helps them with advice. It helps them by giving them loans for hard projects and by refusing loans for soft projects.

It helps them by refusing to give them loans if they are not taking adequate steps to mobilize their own internal domestic resources for development.

But it can only help the governments of those member countries that ask for its help. If a member country asks it to do so, the World Bank will analyse as best it can the costs and benefits of alternative courses of action in respect of a particular project or a particular sector of the economy of the member country. Some of the possible courses of action will be softer than others. The result of the Bank's analysis will be that before a government makes a soft choice it knows the economic cost of making that choice. And by economic cost I do not mean the cost in dollars or rupees or dinars. I mean the cost in terms of slowing down the pace of the economic advance of the country.

For in the examples I have given of decisions between hard choices and soft choices, the selection of the soft choice means just that. It means that the economic advance of the country will be slower than it otherwise would have been. There will be less food produced, and thus more hunger. There will be fewer resources available for building more factories, and thus more unemployment.

Rich countries are fully familiar with this kind of problem. It is the very stuff of politics. The governments of rich countries are constantly having to make decisions on how far they should slow down the material advance of the country as a whole in order to reduce disparities among regions or among social or economic groups, or in order to achieve political or cultural objectives. The governments of rich countries are constantly aware that the selection of one alternative rather than another may mean the loss of several constituencies in the next election. It may even mean the loss of the election.

If a rich country consistently chooses policies which involve sacrificing economic considerations, its rate of economic advance will slow down but it will still have a very high standard of living. In almost all the poor countries the situation is tragically different. In poor countries with rising populations, if governments over a period of time consistently sacrifice economic considerations, the rate of ecomonic advance will fall below the rate of population growth and the people, already poor, will become poorer; the people who now have some hope of a better life for their children will be left without ground for hope.

Thus it is essential for the governments and peoples of the poor countries generaly to make something close to the hard choices, where it is not essential for the rich countries. But at the same time it is much more difficult for a poor country to reject the temptation of soft choices than it is for a rich country. For the rejection of soft choices so often means holding down increases in consumption by the poor. It so often means putting off doing much to reduce inequalities and inequities among regions and among groups within regions. It so often means sacrificing today's goods for tomorrow's hopes. These are things which it is difficult enough for governments and peoples to do in rich countries. It is much more difficult in poor countries.

Electronic Aid For Cattle Feeding

An electronic device, no larger than a hearing aid, which can be clipped to a cow's ear, may eventually enable farmers to feed their cattle automatically and at the same time ensure each animal receives its fair quota.

Cattle food is normally piped from a larger container to mechonical teats from which the cows feed. It is possible under this system, however, for a large animal to push a weaker one out of the way.

The device would be adjusted to a predetermined amount of food and when each cow had had its share, impulses from the device would activate and close off an electronic valve attached to the automatic teat.

Even if a cow which had already had its fill went to another teat, the valve there would not open for it—so aver-eating would be avaided.

Safeguard your milk production with a McDonald 'Imperial' Milker

McDonald Milkers have built-in quality and provide all these important features:—

- ★ Solid Stainless Steel Milkway — rules out all possibilities of 'copper contamination'.
- ★ No 'Dairy Metal' or copper alloys used.
- ★ Exclusive 'UNIWELD' construction Releaser and Vacuum Tank ensures perfect hygiene.
- ★ Smooth polished contours — completely eliminates 'bug traps'.
- ★ McDonald Mastermatic Relay or Magnetic Pulsation systems — guarantee faithful, accurate reproduction of milking cycle to all bails.

Write in or ask your local representative for McDonald's free informative booklet "12 Principles of Machine Milking".

McDONALD *Imperial* **MILKERS**

A. H. McDONALD (SALES) PTY. LTD.,
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Country Rep.: J. Simmons
169 Shepherds Hill Rd., Eden Hills, S.A. 8815/S

Statistics

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1964	1965	1964/65	1965/66	1964	1965
December	5,015	4,757	28,511	29,001	47,351	48,991
	1965	1966			1965	1966
January	4,250	4,035	32,761	33,036	4,250	4,035

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1964	1965	1964/65	1965/66	1964	1965	1964	1965
December	1,618	1,751	9,943	10,417	32.3	36.8	1/7⅜	1/11½
	1965	1966			1965	1966	1965	1966
January	1,597	1,721	11,540	12,138	37.6	42.7	19.06	24.40

Moving Average Quota for 12 months ended 31/12/65, 42.32%; 31/1/66, 42.76%.

INTERIM PRICES TO LICENSED SUPPLIERS

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

	Basic	C.M.B.	Total	3%	3.5%	4%	4.5%	5%
1965	(per lb. butterfat)			(per gallon)				
December	3/6½	1/11½	5/6	1/8½	2/–	2/3¼	2/6½	2/10
(cents)	35.42	19.58	55.00	17.03	19.87	22.70	25.54	28.38
1966—								
January (cents)	35.42	22.40	57.82	17.90	20.88	23.87	26.85	29.84

LONDON PROVISION EXCHANGE QUOTATIONS

(Sterling Currency)

	December		January	
	1964	1965	1965	1966
Butter—Choicest Australian	350/–	314/–	350/–	304/–
Cheese—First Grade Australian	260/–	235/–	260/–	235/–
Rindless Australian	270/–	260/–	270/–	260/–

INCREASE IN INTERIM BASIC PRICE . . .

Despite earlier fears the Commonwealth Dairy Produce Equalization Committee Limited has been enabled, by the trend of production and sales, to increase the interim return for cheese by $1.50 per cwt. cheese in the present season.

In the Adelaide Milk Supply Area this has had the effect of increasing the interim basic price to 38.40 cents from 1st February, 1966.

. . . . AND A RETROSPECTIVE

The increase announced above in the interim basic price will be retrospectively applied to all production from 1st July, 1965, to 31st January, 1966, by a retrospective payment at the rate of 2.16 cents per lb. butterfat equalized.

This will be paid eorly in April, and will be in addition to the 0.94 cent retrospective for 1964-65 announced in the previous issue, which will be paid in early March.

MARRICKVILLE BEATEN ON T.K-O.

May Seek Return Bout With New Ref.

The High Court has rejected the Marrickville plea that its margarine production for interstate trade was protected by Section 92, and has upheld its 1955 judgment on this issue.

A Full Court Bench of five judges unanimously convicted the company for contravening the N.S.W. Dairy Industry Act by manufacturing table margarine in excess of the quantity allowed by its licence.

The company reiterated the plea it made in 1955 (when it also lost the case), that the manufacture of margarine for interstate trade was beyond the jurisdiction of the N.S.W. legislation, but the Court ruled that manufacture intended for interstate trade does not constitute interstate trade in itself, even when the manufacture of the goods has been ordered by a customer in another State (as had apparently been the position in the case in point).

The judgment, which was handed down on 3rd March, remitted the case to the Central Court of Petty Sessions in Sydney for penalty, and costs were ordered to be paid by the company.

It is believed that Marrickville Holdings Ltd., the parent company, will seek leave to appeal to the Privy Council.

. . . in South Australia

The case against Miracle Foods has been based on different grounds, in this instance the failure of the manufacturers to submit for inspection the raw materials, as required by the Margarine Act. As we go to press news has been received that the charges have been found proved, but no conviction has been recorded, pending the possibility of an appeal to the High Court.

OESTRUS IN DAIRY CATTLE AND ITS RECOGNITION

In artificial breeding the timely recognition of the onset of the heat-period in the cow is of prime importance if optimum calving schedules are to be achieved, but there are many occasions when through some irregularity or other factor, the farmer fails to observe the condition or does so at a time when the possibility of successful conception has diminished.

To overcome this most important problem the Association asked Mr. Rose, the Director of the Artificial Breeding Centre, for his assistance, which is given in the following article—

OESTRUS IN DAIRY CATTLE AND ITS RECOGNITION

The oestrus cycle in cattle begins at the end of puberty. It is a continuous cycle in the normal cow, apart from pregnancy and its aftermath, with an average length of 21 days, the highlight being oestrus otherwise known as "heat." The onset of oestrus heralds the end of one oestrus cycle and the end of oestrus initiates the next cycle.

In the animal kingdom few things are subject to strict dimensions, so the length of the cycle is subject to appreciable variation and normal cycles occur within the range of 17 to 24 days. Despite this variation in length, individuals tend to repeat similar patterns, so if an individual shows oestrus at 17 days, 23 days and 19 days, such cycles cannot be considered normal, whereas cycles of 19, 21 and 20 days, 17, 18 and 17 days and so on are so considered.

After the end of pregnancy, throughout which the oestrus cycle is suppressed, oestrus appears again after 30-90 days, most cows having the first occurrence of heat by 40 days. The interval between calving and first heat is extended when an excessive burden is placed on the cow, e.g. if milking is stepped up from twice daily to three times daily or more. Oestrus can be completely suppressed when cows are kept in high temperatures, low temperatures or suffer illness, particularly those involving pain.

Although heat is not apparent, this does not imply that the cycle has stopped. When the cycle progresses without the outward signs of oestrus, the condition is called "silent heat", "still heat" and "silent ovulation."

When the cycle is completely suppressed this situation is called anoestrus and it is due to failure of the ovaries to function. This failure is due to many reasons, but the most common reasons are directly related to stress on the animal. When oestrus is being exhibited in regular fashion the duration varies from 4 to 30 hours, the average being 17 hours. Variation in duration is due to climatic conditions, the temperament of the individual and the conditions of husbandry under which the animal is maintained. Release of the egg in the cow (ovulation) takes place from 2 to 26 hours after the end of oestrus, the average time being 12 hours. The time of ovulation is directly related to duration of heat.

RECOGNITION OF OESTRUS

The tendency of the cow to exhibit homosexuality has been a major factor in assisting the propagation of Artificial Insemination in commercial proportions throughout the dairying industry of the world. Her unusual behaviour makes heat detectable to the casual observer.

Initially, in the heat period, the cow exhibits increased activity and mounts other cows. Later, having exhibited this idiosyncrasy she is mounted by other cows. As the peak of the heat crisis subsides the tendency to stand to be mounted decreases, the cow avoids being mounted and eventually ceases to be of interest to other cows.

Some factors influence the apparent clarity of this manifestation of oestrus. Timid cows that are low in the "peck order" do not take part in the normally expected exhibition and heifers frequently shrink from indicating their desires when confronted with strange animals. In the absence of a bull, it has become standard practice in some places to use a nymphomoniac cow or a steer to assist in demonstrating which cows are actually in oestrus (or heat). The use of a steer for this purpose is a practical and profitable method employed by many overseas farmers experiencing difficulty in determining which animals are ready for mating.

Apart from noting the natural mating attempts displayed by the cow, there is little that can be done by an owner to determine whether a cow is in oestrus and ready for mating. Where cows are milked individually, a sudden drop in milk yield is commonly accepted as evidence of heat. Changes in colour of vaginal mucosa are sometimes used as indications, but these are inconsistent in relation to individuals and therefore unreliable. Other positive scientific methods are impractical, owing to time factors involved in test reading.

CALVING TO INSEMINATION INTERVAL

In order to achieve a calf from a cow every 12 months, this interval must be about 80 days. Circumstances concerning the cow make this impossible in every case, e.g. illness and failure to exhibit oestrus. Statistically, it has been worked out that the best time for conception is between 60 and 90 days after calving. Mating earlier than this by the natural method involves risk of infecting the bull, but with A.I. there is no risk of this nature. Earlier mating through the use of A.I. is done in order to bring back the calving date of cows calving out of season.

TRENDS IN THE DAIRY INDUSTRY

Dr. W. G. Whittlestone, Senior Principal Scientific Officer at the Ruakura Agricultural Research Centre, Hamilton, New Zealand, visited Sydney recently for a lecture tour of the dairying districts of New South Wales and Victoria.

Formerly Reader in Dairy Husbandry at the University of Sydney Dairy Research Foundation, Dr. Whittlestone's work on dairy hygiene and machine milking is well known to dairy farmers in this country, and his lecture tour was made at the request of the Australian Dairy Produce Board.

At a reception in his honour, Dr. Whittlestone was asked to comment on trends in the dairying industry, and he listed, among others, larger herds, quicker milking times, changes in shed design, stimulation of the cow by milking machine and full adoption of cleaning by circulation.

There was no doubt, Dr. Whittlestone said, that economic pressures would bring about larger dairy herds. Herds of up to 200 cows were already commonplace in New Zealand, and this must be the trend here also if the industry was to survive economically, because of the high labour costs.

This increase in herd size carried its own problems, some of which were loss of output per man, difficulty in maintaining hygiene and added risk of overmilking by leaving the cups on too long.

Field surveys had shown that overmilking was very common, and it had been amply demonstrated that this assisted in udder damage. Current studies indicated that the actual duration of milking was a factor in the irritation of the udder; therefore, the shorter the milking time, the less would be the irritation to the cow. Anything that could shorten the milking time would be beneficial.

The workers at Ruakura were hoping to improve on the end-of-milking indicator. The present indicator in use was still the best one available, but it was hoped thot work now in progress would produce an improvement so that the indicator could be seen from any angle of the shed.

Herringbone Sheds

With the increose in herd size, sheds were becoming bigger, some with as many as 24 bails. This was not good, because there were 48 cows in the shed at once, and this was too great a number to be managed efficiently, and the worker was certain, in such circumstances, to leave the cups on too long. The alternative, Dr. Whittlestone said, was small herringbones in a series of short three-bail units with six sets of cups. This would provide for three cows being milked and three cows waiting in each row. In this way more cows could be milked efficiently.

At present, this work is at the theoretical stage, but a sample shed is to be built at Ruakura, and the workers believe the result of their studies will be a reduction in actual milking times to as low as two or three minutes per cow.

Part of the routine to achieve this efficiency would be the stimulation of the cow's udder by the machine. There were not many milking machines that could not be converted so that, by adjustment, the stimulation could take place while the cups were on. By this method, ten seconds, instead of the now customary thirty seconds, would be required, as the machine would be doing the stimulation while the worker was away attending to the next cow.

The main change for this adjustment would be in the pulsator, and when stimulation was completed the machine would be switched to normal milking. This was the idea of Mr. Phillips, of the Ruakura Research Centre.

The technique for reducing milking times would be to set the machine to faster-than-normal milking and, as soon as the end point was reached, the vacuum would drop and the machines would stay on the cow until the farmer could return to take them off. This would avoid overmilking and, therefore, udder damage.

These theories are the basis for work currently being carried out at Ruakura.

J. R. HEWLAND

The death occurred on 26th February, 1966, at the age of 91, of Mr. John Reed Hewland, who was appointed General Secretary of this Association at its founding in 1935.

Mr. Hewland had been associated with the dairying industry in all its aspects for many years before this and was, at the time of the formation of the Association, Secretary of both the Metropolitan Dairymen's Association and of the Affiliated Dairymen's Association, which was the forerunner of, and became absorbed into the South Australian Dairymen's Association. He played a leading part in developing the Scheme of orderly marketing through equalization which has, with modifications and refinements, continued in the subsequent 30 years. Between 1939 and 1960 Mr. Hewland, who was o public accountant, was Secretary of Myponga Co-operative Society.

AWARD WINNING DAIRY PLANT CLAIMED TO SAVE TIME AND LABOUR

One of the basic costs of milk production, man hours per gallon, can be reduced by a new dairy plant, which recently won a silver medal at the Royal Dairy Show in Britain. It is claimed one man can milk and feed up to 70 cows in 1½ hours, or two men can milk and feed up to 130 cows in three hours, with minimum effort, with the new system.

The plant is designed to be easy to instol, operate and clean. It can be supplied to suit herds of any size.

The prefabricated units ore erected beside a pit, which runs along the centre of the building, from which the operator carries out and controls the entire milking and feeding programme.

The operator first moves a lever, which remotely opens gates to admit cows to clearways which run on either side of the pit, and the animals line up in herringbone formation at on angle to the pit, but facing away from it.

Each clearway can be built to accommodote 4, 5, 6, 8, 10, or 12 cows at a time—more if the farm can spare more than two men to run the plant.

The milking equipment is fitted above the pit. The animals in one clearway are milked first and the equipment is then disconnected and used on the cows in the other clearway. The complete process of extracting the milk from each cow, sampling it, and passing it first to recording jars and then through a system of glass and stainless steel pipes to a central storage tank, is controlled by a single tap in the pit.

A hose which supplies worm water for udder washing is provided for each pair of cows.

Most of the pipework for the milking system is built into the plan's rump rails.

Whilst being milked, feed is delivered to each cow by hoppers, which are filled by operating levers fitted in the pit close to the milking control taps.

Levers for opening and shutting exit gates are fitted at both ends of the pit so the operator can control both the exit and entrance of the animals from either end.

After each session the milking system is cleaned by pumping a mixture of water and sulphamic acid through the pipes and valves.

F.I.L. Makes New Appointment For Hills Area

Mr. Des Berry

The Manager of the Federation Insurance Limited, Mr. G. R. Schlank, has announced the appointment of Mr. Des Berry as the Company's Inspector in the Southern Adelaide Hills.

Mr. Berry, who is at present taking the final year of the course for Associateship Degree of the Insurance Institute of Australia, has had considerable experience in all phases of the Insurance Industry since 1953. He has worked for the Federation Insurance Limited for the past two years, and was promoted to his present position on 17th January.

BIG RISE IN JAPANESE CHEESE SALES

Current Year's Figures Will Show An All Time Record

In discussing the present position of Australian cheese on the Japanese market it was noted by Board Members that apart from a period, just over a year ago, when the cheese sales curve flattened out, the history of this market's development hos been one of continuing success in the face of ever increasing competition.

From small sales of less than 300 tons a year in 1960 the figure grew to 2,709 tons in 1963-64.

Currently, however, sales have increased tremendously and estimates based on present orders indicate that the figure for 1965-66 should be in excess of 4,000 tons.

In reviewing the position, the General Manager and Marketing Director of the Board (Mr. E. B. Gilbert) paid tribute to the work done by Mr. M. Okazaki, who heads the Board's Secretariat in Kobe.

"This success story has been mode possible by his efforts and by the co-operation of the industry in ensuring shipments of top quality Australian cheese to this vital and ever growing market."

RELIEVE **CALF SCOURS** IN HOURS WITH NEW '**NEFTIN**' TABLETS

Scours can strike — and spread quickly — at any time, on any farm, even a wel kept farm. Bacterial scours are the greatest health threat to your stock investmen Overnight, a scours outbreak can turn profits into losses. Prompt, effective. 'Neftin treatment is essential if your losses are to be kept to a minimum.

Time is the big factor — both for the infected animals and to prevent spread of th disease to others. 'Neftin' tablets work fast. Relief is apparent in a matter of hour and calves recover in a day or so.

With 'Neftin', there are no future problems of bacterial resistance as there ar with sulphas and antibiotics. And 'Neftin' is only half the cost of broad-spectrum antibiotics when used for a full 3 day course of treatment.

But 'Neftin' is so effective that just two doses, twelve hours apart, are ofte sufficient.

Your veterinary supplier will advise you that 'NEFTIN' tablets are the moder effective, economical treatment for calf scours.

Smith Kline & French Laboratories (Australia) Ltd.,
Warringah Road, French's Forest, N.S.W.

SK&F

SKF 6702

SKF23e.86.8

More About Exotic Diseases

We have received much favourable comment from readers concerning the articles on exotic diseases which we printed from the student periodical "Chiasma," but this has been followed by requests for more authoritative treatment and broader coverage of the field insofar as it concerns all exotic diseases which may constitute a threat to Australian livestock.

The following explanatory list is printed in response to these requests—

VIRUSES THAT THREATEN LIVESTOCK

Mostly by good management, but partly by good luck, Australia is free from many of the viruses that affect livestock overseas. Some of these diseases could be devastating if established in this country; others would require the expenditure of much time and money to keep them under control.

Until 1909, each colony or State of Australia was responsible for its own quarantine measures. In those early days, the long sea voyage was our most effective protection against the entry of disease. Then for some years quarantine was administered by the Customs Department, but in 1921 the Health Department was created and has since been responsible for human, plant and animal quarantine. The first Commonwealth Director of Veterinary Hygiene was appointed in 1926. The Animal Quarantine Service combines both Commonwealth and State officers. The chief Veterinary Officer in each State and the Northern Territory is ex officio the chief Animal Quarantine Officer. His staff work in very close liaison with the Customs Department.

DEMANDS CONSTANT VIGILANCE

Modern air transport, the flow of immigrants, and an increase in overseas trade bring new problems to the Animal Quarantine Service. Smuggled food of animal origin, ships' garbage, and even dirty shoes can all carry viruses like that of foot-and-mouth disease. Our protection demands constant vigilance and a large force of specially trained men.

But without paralysing international trade and relations, it is impossible to make the quarantine barrier impregnable. Customs and postal officials, staff at airports, and travellers themselves form part of this barrier; so it can never be stronger than humon weakness.

Livestock owners and their veterinary advisers will therefore be increasingly on the alert to report promptly any unusual livestock diseases. They continually show that they appreciate the national advantage we have in possessing a livestock population free from most of the major exotic diseases, and that they expect the nation to spend thaught and money to safeguard this priceless heritage.

The very fact that a diseose is exotic means that very limited local facilities exist for training veterinarians in its control. Joint Commonwealth-State arrangements were therefore made to send senior officers overseas to attend courses in exotic diseases and observe control programmes in operation; the first four officers have already gone and others will follow. In addition, the Department of Health and the Australian Veterinary Association are taking steps to convey the latest information to veterinarians.

VIRUSES ALREADY HERE

In 1958, C.S.I.R.O. established a Virology Unit, led by Dr. E. L. French, in the Parkville Laboratory of the Division of Animal Health. The first objective of the Unit was to reveal and study any viruses that already might be present

in Australia. An important second objective was to create a skilled specialist group forming a national nerve centre to counter exotic viruses.

Until a few years ago, it seemed that virus diseases had little effect on the health of grazing animals in Australia. Now, largely owing to the work of the C.S.I.R.O. Virology Unit, we know this to be incorrect. Some of the viruses that have already been isolated, identified, and studied at Parkville have now been shown to cause serious illness, deaths and long-lasting residual effects.

Among these are:—

- **Sporadic bovine encephalomyelitis,** a serious brain disease of young cattle, already identified in Victoria, S.A. and N.S.W.
- **Infectious bovine rhinotracheitis (I.B.R.)** and
- **Infectious pustular vaginitis,** two separate clinical entities affecting the respiratory and genital tracts respectively, but caused by the some virus;
- **Bovine popular stomatitis,** prevalent in young cattle in Tasmania and Victoria, and also known to be present in other areas;
- **Bovine mucozal disease** and
- **Bovine virus diarrhoea,** believed to be caused by the one virus and affecting cattle throughout Australia
- **Winter dysentery of cattle,** spread throughout Australia in 1958, affecting mainly milking cows; and
- **Bovine malignant catarrh,** an acute highly fatal infection first observed in N.S.W. 15 years ago and found also in Victoria in 1961.

EXOTIC VIRUS DISEASES

Apart from their work on the viruses already in this country, officers in the Virology Unit will help to stimulate the thought and action required to augment our defences against Virus diseases not present in Australia. No work on exotic diseases is undertaken at Parkville. Even for use under closely supervised laboratory conditions, the importation of such virus would be too dangerous.

Should an outbreak of a major exotic disease be suspected in Australia, the Director of Veterinary Hygiene has made emergnecy arrangements for material to be collected and sent to special overseos laboratories, where a rapid examination and diagnosis would be made. At one of these laboratories, at Pirbright in England, Mr. W. A. Snowdon of the Division of Animal Health is spending 1-2 years studying foot-and-mouth disease generally and in particular the possible susceptibility of Australian marsupials to the virus and the extent to which they might transmit it to domestic animals.

CURIOUS CARGO

So that this work could be undertaken, 64 marsupials were sent by air from Canberra to England in October, 1964. The cargo comprised six red kangaroos, 10 potaroos, 10 bandicoots, 10 opossums, 9 wombats, 7 spiny ant-eaters, 8 water rats and 4 marsupial mice.

Foot-and-mouth disease, which affects all cloven-hoofed animals, is one of

the most serious exotic diseases of livestock. Farmers in Europe, Africa, South America and most of Asia have had to live with it for centuries. In these places it is not primarily a killer, thought it would probably be more lethal to previously unexposed Australian sheep and cattle.

It is the most feared disease in Australia, because the virus need not enter with the living animal. It may enter, for example, with food scraps from ships and aeroplanes; or with many animal or plant products essential to our trade or welfare.

In Argentina, foot-and-mouth disease causes a loss of about £76 million annually. These costs include provision for inspection and special slaughtering facilities for cattle whose carcasses are to be exported. British veterinarians are sent to these abattoirs as a further safeguard against the introduction of infected beef into their country. Even these costly precautions often fail.

Most of the outbreaks in Britain have been attributed to beef from Argentina, a minority possibly being due to birds migrating from Europe. The resultant intermittent outbreaks are eradicated by slaughtering diseased and in-contact animals, and by quarantining the areas concerned. Average annual compensation costs amount to hundreds of thousands of pounds.

These great costs are considerably less than those of any practicable plan for vaccination, which might cost Britain £8-15 million a year. On the continent of Europe the estimated cost of severe and widespread outbreaks in 1951-52 was about £200 million. F.A.O. is now encouraging a plan for control by vaccination and for possible ultimate eradication.

DANGEROUS IMMIGRANT

When foot-and-mouth disease broke out in Mexico soon after World War II, the United States spent $133 million in eradicating the disease to remove the threat to its own livestock.

Canada's first outbreak, in 1952, was probably introduced via infected material brought in by a migrant who came by air from Europe and found work on a dairy farm almost immediately. Fortunately the country was in the grip of midwinter, and snow and ice brought traffic to stock markets and between farms to a virtual standstill. Only 15 small properties were involved, but it cost a million dollars to eradicate and resulted in trading losses of some $200 million.

The Canadian example emphasises that vigilance on the part of veterinarians is useless unless informed public opinion backs up the officers who control the entry of food products and those who supervise the disposal of food on aeroplanes and ships.

NARROW ESCAPES WITH SCRAPIE

Despite the usual vigilant precautions, sheep with scrapie entered Victoria in 1950. What might have been a disaster for the wool industry was averted by the prompt and energetic action of veterinarians (see "Rural Research" 24). Their control measures were greatly helped by the wise action of the owner, who had kept the sheep on an isolated part of his property for many months. No further outbreaks have occurred.

It was clear that a disease, like scrapie, with a long incubation period might not be detected during normal quarantine measures. A ban was therefore placed on the importation of sheep from infected countries. Then, in 1958, when the risks of introducing bluetongue became apparent, the scope of this ban was widened to include all ruminants.

Many infectious diseases, when first introduced into a susceptible population, can be eradicated—if diagnosis is not unduly delayed and if appropriate measures are promptly applied. Besides scrapie in sheep, rinderpest in cattle, swine fever and Newcastle disease of fowls have occurred in Australia and have been eradicated by slaughtering.

Bluetongue of sheep, however, which constitutes the greatest threat to our sheep and wool industries, could not be dealt with in the same way. Once established in this country it could not be eliminated. Thus, when bluetongue was identified in California in 1953, American veterinarians did not attempt the impossible. They realised that the causal virus could already be harboured by many of their cattle, which act as alternative hosts without showing any signs of infection; and further, that there was very little prospect of being able to eradicate the insect vectors.

BLUETONGUE TEST UNRELIABLE

The present ban on imports of cattle into Australia was imposed because there are no practical means of making certain that they are free from infection. Certain blood tests have been developed, but, unfortunately, they cannot be relied upon to identify every carrier. South African veterinarians, who have carried out much of the research on bluetongue, have generally been unable to find any obvious disease in cattle known to be carrying the virus.

Another feature of bluetongue is that it is spread by biting insects of the genus Culicoides, commonly known as midges or sandflies, that are widely distributed in Australia. It would be an unthinkable catastrophe if they had a chance to spread bluetongue among our sheep in the same way as insects spread myxomatosis among rabbits.

In its original location, South Africa, and in Spain and the United States, bluetongue is seasonal: it only occurs when the midges are breeding and flying. But in Australia midges are active somewhere or other throughout the year.

In some countries attempts are made to control bluetongue by annual vaccination of every sheep. Unfortunately, the vaccine may seriously damage the foetus if given during the early stages of pregnancy; and vaccinated sheep should be kept out of the sun for a period to reduce the risk of photosensitization. Even if it were possible, the annual protection of about 160 million Australian sheep with a costly living vaccine requiring special low-temperature storage would place an intolerable burden on the industry.

Figures from Spain provide a striking example of what can happen when flocks of highly susceptible Merinos are exposed to bluetongue infection. The disease first occurred in the middle of the insect season. In one of the first plovinces affected, 116,000 of the 2 million sheep exposed became sick in the few weeks before cold weather reduced insects to a minimum; 80% of the sick sheep died. Elsewhere, up to 100% died.

COLORED GLASS BOTTLES ON INCREASE IN EUROPE

The use of colored glass bottles for milk, as a protection against flavour problem caused by sunlight, is extending in Europe. In Finland, WITH THE WORLD'S RECORD CONSUMPTION OF 61 GALLONS PER HEAD, colored bottles are compulsory, and in Norway, Austria, Sweden and Switzerland, the next four highest consumers, colored bottles are becoming general.

Why doesn't the Australian dairy industry wake up?

VOCATIONAL EDUCATION FOR FARMERS

This Association has already expressed its concern at the lack of worthwhile facilities for training the farmers of tomorrow, and a Special Sub-Committee in 1962 produced a report concerning the shortcomings of the "Agricultural Science as taught in high schools, and the way it believed that training in scientific **and economic** farming should be carried out.

This report was passed to the S.A. Branch of the National Farmers' Union for action, but despite interviews with the late Minister for Education and the Director of Education, nothing has yet been achieved.

The need has not diminished with the years; rather each year, each scientific advance, each technological improvement, makes it even more necessary that the young farmer is properly educated to play the role of farm manager rather than form laborer, and to know the "why" of farming as well as merely the "how." Because of our opinions on this subject we are pleased to report that the September 1965 issue of "Farm Policy," compiled by the John Thomson Agricultural Economics Centre of the University of W.A. is devoted entirely to Agricultural Education.

The issue opens with relevant extracts from the "Martin Report" on Tertiary Education in Australia, and contains a series of articles by acknowledged experts.

For those who wish to examine the subject in depth a copy of this journal will be invaluable, and can be obtained for 5/- from the University of Western Australia, Nedlands, W.A.

For the others we report here extracts from the Martin Report and from the contributed articles relating specifically to training for the farmer-to-be.

Martin Report — Agricultural Education

In 1961, the Prime Minister appointed a committee under Emeritus Professor Sir Lesley Martin to make recommendations to the Australian Universities Commission on the future developments of tertiary education. The following article consists of extracts on agriculture from the Report of the Martin Committee. It does not include any of the recommendations concerning veterinary science or forestry. These extracts are reproduced by permission of the Minister-in-Charge, Commonwealth Activities in Education and Research, Senator the Hon. J. G. Gorton.*

The general **problem of educating people for work on the land is similar to that which exists in other callings.** The past quarter-century has seen a great **revolution** in farming. The tractor has replaced the horse, and most farm operations are now mechanised. In addition, the amount of **technical and scientific knowledge** underlying most farm processes has **increased greatly, few countries showing bigger advances** in this direction than Australia. In our knowledge of soil deficiencies, of the basic facts behind many of the maladies of our livestock, of the scientific methods available for the control of diseases, pests and weeds, we are well to the fore. But this **new knowledge is as yet applied only on a somewhat limited proportion of farms;** and behind this state of affairs lie economic and sociological problems which require constant investigation.

If our farming industries are to improve and maintain their standard of efficiency, the education of all farm workers must keep pace with the advance

of knowledge; and it is important that the structure of the educational system through which they poss should be of a type, which is sufficiently flexible to permit those with a capacty for higher education to obtain it. Moreover, the recent advances in technical and scientific knowledge applicable to farming probably represent only a stage in a progressive series. The future is likely to show results which will be just as impressive as those of the last quarter-century. It is important that discoveries should be conveyed to the farming industries as soon as practicable after they are made, and this will require a cadre of extension officers with an educational background which has fitted them to appreciate such discoveries. The administrators of the agricultural organisation and its various parts also need training in the problems of farming in order to be efficent in the handling, manufacture and sale of its products.

Farmers who are operating properties with a large capacity for production would certainly benefit by tertiary education if they have the opportunity and the talent to absorb and utilise it. Such an education would help them not only to manage their farms but also to understand and appreciate the problems which confront their industries both in Australia and overseas. With this knowledge they could form a rural intelligentsia which would be invaluable in deciding rural policy and from which leaders of the agricultural industries would eventually emerge. Without such leadership the rest of the rural community is likely to be exploited by charlatans or overimpressed by thrusting salesmen in this age of organised propaganda which becomes increasingly powerful as the years pass.

However, although only a small proportion of the half million farmers and others working on farms will need, or seek, tertiary education, many of them will benefit from and welcome short refresher courses of a specialised type at various stages in their farming careers. The organisation of such courses has begun only in recent years. If it is to prove effective, adequately trained instructors with a tertiary education will be required.

The remainder of the groups mentioned above, including technical consultants and research workers, all need some tertiary education. Otherwise they are apt to be little better than the blind leading the blind—and ditches are common in the field of farming!

* Tertiary Education in Australia : Report of the Committee on the Future of Tertiary Education in Australia to the Australian Universities Commission. Vol. II, Aug. 1964.

Agricultural Education in Australia and Other Countries

(By C. Trotman)

Advances in science and technology have generally been paralleled by changes in the curricula and courses of secondary and technical schools. It has yet to be shown that advances in farming technology, and in management technique, have been paralleled by similar improvements in Australian agricultural education.

There have been few reports concerning Australian agricultural education, and these have not included discussion of the training of persons entering farming. The most recent bulletin on agricultural education from the Commonwealth Office of Education states: "Agriculture and related subjects, as might be expected, have an important place in Australian education curricula." However, the bulletin does **not** discuss the adequacy of the standard and sufficiency of such training, nor is a distinction made between the training opportunities for persons intending to enter farming, and persons intending to enter other agricultural vocations.

Secondary Level Agricultural Education

In Australia most secondary Agriculture is taught as a single subject at Junior or Leaving level. However, the vocational value of such subjects is doubtful, since few schools possess practical training facilities, there is a scarcity of trained teachers, and the courses occupy one-sixth or less, of the student's time. Of the five countries compared, only Australia and the United States, include Agriculture in the school curriculum. In the United States, however, **vocational** courses include practical training and occupy almost one-third of student time.

In Europe, courses at a low-middle secondary level are provided for **farm workers** by means of evening classes, short courses or day-release classes associated with apprenticeship schemes. In Australia specialist agriculture education for future **farmers** is given in residential secondary schools, but this at a low-middle secondary level. Ages of students doing these courses range only from 14-16 years. Such students have insufficient practical experience to appreciate management subjects, insufficient opportunity to complete a sound general education, and they return home too young to influence their parents' managerial decisions. American students at this level attend the first two years of a four-year course.

Agriculture is taught as a Leaving subject in all Australian States but is not always taken to matriculation level and is often treated as an alternative science unit rather than as vocational training. This is because facilities for practical, managerial, and economic training are usually inadequate.

In Europe, most residential agricultural schools cater for students at a high secondary level. Denmark has 29 such schools, Sweden 55, and the United Kingdom 40. In the 10,000 high schools of the United States, most of the agricultural courses proceed from first to the fourth and final year. Upper secondary specialist training in Australia appears to be provided by the final two years of only five five-year high schools.

Entrants to the purely vocational European agricultural schools have already completed their general education, and in fact, have been away from school for one or more years. Nevertheless, European countries seem to have little difficulty in recruiting agricultural students, in spite of the fact that their entrance requirements appear more exacting than those of Australia. The recruitment of large numbers of older students to residential schools allows teaching to proceed at a higher level and within an agricultural environment. In addition, a demand for out-of-school experience ensures that students can better appreciate subjects such as economics and accounting, farm management and marketing. These subjects are seldom meaningful to younger student groups.

One advantage to be gained by increasing the standard of secondary agricultural education in Australia, is the elimination of the basis for the idea that such education is appropriate only for less able students. This idea is likely to persist, with some justification, as long as most vocational training courses begin early in the student's secondary schooling. Until Australias specialist agricultural courses are placed on a level equivalent to that of the secondary professional courses, it will be difficult to persuade better students to choose them. The advantage of having older students in residential agricultural schools is evident in Denmark and Sweden. It is claimed in these countries that the opportunities for discussion and seminar work enable students to develop an interest in learning which persists throughout their farming career. In the United States similar opportunities result from membership of the Future Farmer Clubs.

Non-University, Tertiary Level Agricultural Education

High level vocational training is carried out in residential institutions in all countries included in this comparison. The content of the courses seems comparable, though there are variations in length of courses, in the proportion of practical work, in the emphasis on economic and management subjects, and in entrance requirements. Apart from the two-year course at Muresk in Western Australia, Australian agricultural college courses extend over a three-year period. This compares with two-year courses in the United States, England and Wales, and with one-year courses in Scotland, Northern Ireland, Denmark and Sweden. The shorter courses in these countries allow a greater student output from each school, and apparently result from the smaller amount of time spent on practical training. This is possible because practical experience is a pre-requisite of college entrance in these countries. Academically, the entrance standard of Australian colleges is higher than that of Denmark or Sweden, but lower than that of the colleges in the United Kingdom or the United States.

Therefore, although there are a comparatively large number of agricultural colleges in Australia, these are not making as great a contribution to the training of persons entering farming as could be expected. Rather, as suggested by the figures quoted previously in this article, they tend to be used for the training of technologists servicing agriculture. **This means that most specialist agricultural training in Australia is available only at a low secondary level, and consequently cannot train for the increasing technical, managerial and economic needs of modern farming.**

Other Agricultural Training

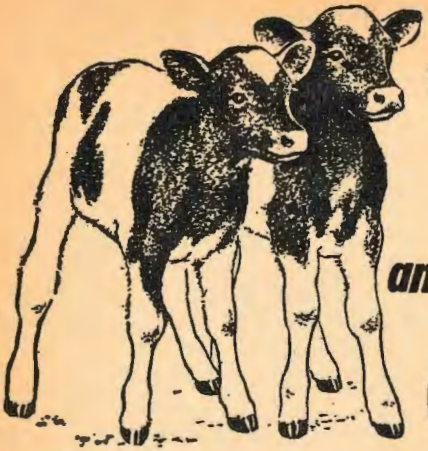
Other Agricultural Training

All countries in this comparison have developed various other types of agricultural training. All have a Junior Farmer Organisation or its equivalent, which gives members further educational opportunities of a social, general, or vocational nature. All provide a variety of technical and correspondence courses in agriculture, though in other countries these courses are not considered as part of formal agricultural training, unless associated with apprenticeship schemes. In Australia however, correspondence courses often represent the only form of training available to farmers who have left school, apart from very short courses occasionally provided by State Departments of Agriculture.

In Denmark, additional training is provided in folk high schools by small-holder associations and agricultural societies. About 8,000 people annually attend classes for courses that extend over four years. Previous attendance at such classes is frequently a requirement for admission to the agricultural schools.

Swedish 4-H is an important educational force that has trade, rural and educational instructors who are nationally organised. In addition, the Swedish Farmers' Federation annually organises correspondence classes for about 40,000 people, and arranges evening classes for off-season farm workers. The Federation also offers five-month co-operative management courses at its own farm school. Classes conducted annually by local agricultural societies reach a further 175,000 people, using vocational and general educational material initiated at the Federal level.

In the United Kingdom part-time technical courses associated with the apprenticeship schemes, are conducted in local farm institutes and agricultural colleges. In the United States, young and adult farmer programmes are organised in addition to the training supplied by Future Farmer, New Farmer, and 4-H organisations. Young farmer programmes continue the agricultural



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training of those who have recently left school. Adult programmes enable farmers to keep abreast of developments and innovations in agriculture.

To satisfy the demand for trained farm workers, apprenticeship schemes are common in European countries in this comparison. Such schemes are also being introduced by many other countries, including Austria, France, Germany, the Netherlands and Switzerland. Such schemes are organised by government or private institutions. They supervise both the farmer and his apprentice, and guarantee a bonus woge for the apprentice on completion of his time. These countries thus appear to place greater emphasis than Australia on vocational training for their farm workers.

Although agricultural subjects at Intermediate and Leaving levels are available to both boys and girls in most Australian high schools, there are few residential facilities catering for the agricultural training of girls. In Denmark and Sweden girls may attend the part-time winter courses and folk high school courses, though not the residential courses. Throughout the United Kingdom most residential institutes and colleges cater equally for boys and girls. Similorly, courses in American high schools and junior colleges are open to both sexes.

Conclusions

In spite of the need for increasing managerial skills, there are fewer opportunities to obtain sound vocational farmer training in Australia than in the other countries. This situation may be the result of a smaller demand for such training, but this lack of demand should not be interpreted as an adequacy of future farmer training by those responsible for the supply of such training.

In Australia there appears to be several reasons for a lack of demand for the training of persons entering farming. One is the isolation and small labour unit structure of farms. It is not on attractive prospect for a farmer whose son constitutes a third, or even a half of the work force, to board that son away from home for further education. Many sons are therefore withdrawn from both agricultural and general education at or near the school leaving age, and before their technical and general education is complete. However, a comparison of farm labour statistics indicates that it is Sweden, not Australia, which employs the smallest labour force per farm. Nevertheless, Sweden appears to have little difficulty in providing a high grade training programme for a large proportion of those persons entering agriculture.

A second factor influencing demand is that mony agricultural courses are regarded as non-academic alternatives and are therefore taken by less able pupils. Able students are directed to more challenging courses. The supply of students is further handicapped by the practice of wealthier farmers of sending their sons to residential schools which do not give emphasis to agricultural education. It is possible too, that the lack of trained agricultural teachers is reducing the number, and training standards, of agricultural facilities in Australia. Whatever the reasons, the supply and standard of most agricultural training is below that of the other countries referred to in this article. There are signs of a growing demand for agricultural elucation in Australia. However, until training standards are improved, **farmers** are unlikely to lose their inherent suspicion of agricultural courses. Administrators of agricultural education thus face the problems of raising standards, but at the same time of increasing enrolments in their courses. Not until such problems are faced, and overcome, is Australia's agricultural training likely to exert its potential influence on Australian farming.

A Simple Step Towards Better Agricultural Education?

(By A. W. Humphries)

As one already convinced that agricultural education in Australia could be a lot better, I present here a brief case for one simple important step towards its improvement.

The present system in some respects lags well behind the needs of agriculture. Some of this is doubtless due to democratic inertia, but in additiin, a failure to clearly define needs keeps some of our teaching institutions out of date. To clarify often meons to simplify, and in the present case, the educational requirements for agriculture can be simplified into three main categories.

For research, for higher levels of teaching, and for extension work, advanced tertiary education is essential. The requirements are exacting, because knowledge of several branches of fundamental and applied science must be combined with some grasp of practical agriculture. It is this level of knowledge and activity which is conveniently and most accurately called Agricultural Science.

Agricultural Technology is less easy to define, because more diffuse. It includes specialised mechanical and other services to farmers, technical assistance to scientists, and perhaps some other occupations on the fringes of agriculture, like valuing and surveying. For our present purpose, it should be noted that the requirement in this broad field is for specialised skills, which although often linked with science, do not require any deep understanding of scientific principles.

The latter point applies even more to the third category—those engaged in practical farming. Nevertheless, it must be conceded that the farmer also has an important area of contact with science, which is likely to grow larger in the future. In this case, the scientific and technical specialists need to be able to communicate with the farmer. To make the best use of their services (and to discriminate between good and bad advice) the farmer must have some knowledge of the specialist services which are available, and some understanding of the specialists' jargon. As well as this, he must be competent in stock and crop husbandry, mechanics, and so on.

In the light of these three broad kinds of educational needs, it can be shown that the present Junior and Leaving "Agricultural Science" courses in Western Australia satisfy none of them. The syllabuses for the two levels are very similar. They include study of the physical and chemical properties of matter, especially air and water, mechanics, heat; magnetism; elementary astronomy; geology; climatology; soil science (several aspects); plant and animal anatomy; plant and animal physiology, reproduction; pathalogy; nutrition. The list is incomplete, but it is long enough to show that the only major difference in scope between this and the university degree course is the inclusion of economics and farm management in the latter. The difficulties of achieving reasonable standards of teaching over such a wide range of subjects hardly requires comment. The undergraduate student has four years of full-time study available to him, and normally undertakes it with a backing of Leaving physics, chemistry, mathematics and perhaps biology. Yet there are serious problems involved in reaching adequate standards for the degree, and an increasing proportion of graduates go on to further study in the specialty of their choice. The conclusion is inescapable that the teaching of "Agricultural Science" in secondary schools can only be superficial at the best.

A glance at the other professions provides evidence of a different kind. There are no school subjects called Dentistry, Engineering, Law, Medicine, or Veterinary Science. Why Agricultural Science?

Junior and Leaving Agricultural Science obviously does not produce agricultural scientists. Nor does it provide suitable introductory education for those proceeding to an Agricultural Science degree. This is recognised by the Faculty of Agriculture of the University of Western Australia which does not require Leaving Agricultural Science for matriculation, and does not even advise intending undergraduates to take that subject.

It is equally clear that this subject does not produce technologists, not because the standards achieved ore too low, but because the syllabus has little relevance to their specialised training requirements. I am not aware of any evidence that farmers are the worse for having done Junior or Leaving Agricultural Science, but this seems quite possible, mainly because superficial teaching of intricate subjects is likely to leave the student with some dangerous misconceptions. It is difficult to avoid the conclusion that Agricultural Science as a secondary school subject should be abolished.

However, there is a risk of throwing the baby out with the bath-water. Some (sound) knowledge of scientific agricultural principles ought to be better than none, especially for students in rural oreas. How could such knowledge be offered to them if Junior and Leaving Agricultural Science were discontinued? There are a number of possibilities, discussion of which is beyond the scope of this article. My own preference is to teach biology to those students who would have done agricultural science, and to any others who may be available. Biology, especially if taught with an eye on agriculture, could provide a sound stock of scientific principles, useful both to those entering farming, and to those going on to tertiary education.

The teaching of biology does not provide vocational training for any of the three categories that we have been considering. Such training is best provided by institutions which cater for the specialised fields concerned. In the case of the technologist and the farmer, some vocational training might be undertaken in secondary schools, but there does not seem to be any strong reasons for doing so. Whatever training is offered to those entering farming should, in addition to instilling physical and managerial skills, provide some insight into the nature and methods of agricultural science, and of the kinds of services provided by agricultural scientists and technologists.

At the beginning, I claimed that a simple and important step could be taken toward better agricultural education. The abolition of "agricultural science" as a school subject would be a comparatively simple step, but why important? There are two reasons which immediately suggest themselves. Firstly, by removing "Agricultural Science" from the schools, the serious lack of suitable vocational courses in practical agriculture would become more apparent, and (one hopes) would encourage action directed towards providing them. In a world of rising technical standards, there is a real danger in failing to provide the best and most appropriate vocational training for important industries. Secondly, the removal of agricultural science from the curriculum should help to extirpate the idea that agricultural science is something you learn at school. A better popular appreciation of the nature and scope of agricultural science could be of benefit to the profession and ultimately to the public that it serves.

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Journal
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—Photograph by courtesy "The Stock Journal."

VYNETTE DANEWEED 7TH

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THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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Sales Promotion Conference

DAIRY INDUSTRY MEN ANALYSE MARKETING PROBLEMS

. . . Frank Discussions At Two Day Conference

Packaging, point of sale merchandising, price, and psychological reasons why the housewife does or does not buy dairy foods were a few of a wide range of topics discussed by industry men at a two day dairy industry Sales Promotion Conference held in Melbourne in February. This conference was organised by the Australian Dairy Produce Board with the object of bringing together as many people as possible interested in the selling of dairy products in Australia. Amongst the 80-odd delegates attending were representatives of butter and cheese manufacturers, distributors, producer organisations, marketing Boards and technical development men.

The conference was divided up into four sessions covering "The Retail World," "Merchandising and Marketing," "The Consumer," and "The Dairy Industry." At each session experts in their field gave addresses which were followed by lively, hard-hitting and stimulating discussions.

At the request of the sponsors of the conference discussion was frank, and speaker after speaker reiterated the theme that **the industry must become more alert to the changing pattern in retailing, packaging and merchandising, and consumer purchasing habits.**

The final session of the conference took the form of a presentation of the outline of the Dairy Boards national advertising plans and a discussion on how promotion by the Board, manufacturers and distributors could be better and more effectively co-ordinated.

VYNETTE DANEWEED 7TH

granddaughter of the record-breaking Jersey VYNETTE GADGET'S DAINTY was placed 3rd in the class 5 Years Dry and 3rd for Type and Production at the 1965 Adelaide Royal Show. She has been awarded numerous country show championships and is a consistent winner of best-udder classes. Her production figures so far are J2 322 lbs. b.f., J3 417, J4 688, M 726, 577.

TWO RESOLUTIONS

The conference concluded with two resolutions: one requesting all concerned with national advertising to emphasise the health benefits of butter, and the second recommending the formation of a Liaison Committee to study the problems involved in achieving a completely integrated dairy foods advertising and marketing programme at national and retail levels and to stimulate the necessary action to achieve this aim.

This Committee will consist of representatives from the Australian Dairy Produce Board and their advertising consultants, the Australian Dairyfarmers' Federation, the Australian Dairy Products Marketers' Association, The Australian Butter Manufacturers' Federation and Australian Cheese Manufacturers' Federation.

CAN'T USE YESTERDAY'S METHODS TOMORROW

. . . Foodland Executive Suggests Greater Aggressiveness

Discussing packaging, Mr. Jolley, the Operations Director of Foodland Holdings Ltd., said that much more imagination and creativity was called for and mentioned that a previous association with which he had been associated had experimented with a foil wrap which had outsold ordinary wraps by three to one, and had even caused many customers to take the unusual step of writing letters of commendation to his organisation.

Mr. Jolley called for greater diversification of products and more vigorous promotion of lines such as yoghurt and sour cream which he said were gaining popularity almost on their own momentum.

Profitability was a very real problem for the butter industry. The margin on this product was far below that of margarine even though butter took a third of the refrigerated space available in most retail stores.

There was general agreement that there should be more attention given to retailer education especially in lines such as cheese.

Mr. Jolley's conclusion was that many sections of the industry are doing their marketing the hard way and that **sales would improve if the industry's marketing organisation within Australia could be simplified.**

"CHARGE MORE FOR BUTTER AND MARKET IT BETTER"

. . . A Retail Journalist's Views

Mr. Eric Stephens, Editor of the National retail journal, "Foodworld," suggested that in this age of brand selling the emphasis in the dairy industry was still on the product. This, he maintained, is basically unsound. "One does not sell fly spray," he remarked, "but rather Mortein. Not instant coffee, but Nescafe. The industry and particularly those concerned with marketing butter could well profit from this lesson."

He suggested that the industry was losing out on sales because of the lack of a national brand and because of the proliferation of scattered local marketing organisations. "Probably as a result of this 'historical fragmentation' butter is the only product which, to my knowledge, has remained unchanged over the past 25 years," Mr. Stephens said.

"The food industry has seen drastic changes in packaging, production and new lines, but as far as butter is concerned, **this retail food merchandising revolution has completely passed it by.**"

Mr. Stephens suggested smaller packs of butter for people who live alone, brighter packing to compete with that of other products on the supermarket, and zip cartons and outer containers which can be conveniently handled by female labour in food stores.

Touching briefly on the subject of cheese, the speaker said that much the same problems applied. The question of quality was also important. **"The trouble is that you cannot be sure of getting what you ask for when you purchase cheese,"** he said. "The question of **brand identification is most important** here, as one very large cheese marketing organisation has realised."

He also asked the conference why Australia had not yet developed its own particular type of cheese in addition to Cheddar, instead of only copies of imported varieties.

"LESS EXCITING THAN IT NEED BE"

. . . Retailer With Wide Marketing Background Talks of Problems

Butter in circular half pound slabs, attractive wraps for the table, variety in type, were some of the suggestions put forward by Mr. Douglas Bain, formerly Deputy Chairman of U.S.P. Benson, and now proprietor of the Post Office Store at Wallace, Victoria, when speaking on "The Problems of the Retailer."

"Display material," he said, "should be easy to use, come in convenient sizes and arouse interest in butter."

He said that it should show the product in use and act as a "vital salesman" which could appeal to a customer on a particular occasion.

Mr. Bain said that as a smaller retailer he still noticed an unsophisticated attitude towards cheese, with most people apparently preferring the processed Cheddar varieties.

He said that even if he wished to tempt his customers with a variety of fancy cheeses he would be at some lass as to know where to purchase these varieties.

HEALTH QUESTION PROMINENT IN GENERAL DISCUSSION

In a general discussion on the retailers' points of view the questions of "health advertising" and the influence of poly-unsaturated fats were freely discussed. Practical evidence of the confusion in the scientific world on this subject was apparent in the fact that one member of the panel had been advised off butter whilst another member said that although he suffered from a similar complaint his doctor had told him to continue eating butter!

Mr. Bain suggested that **the industry should not fight on a "heart disease battle ground."**

"Advertisers who play on fears of heart disease are obviously using this fear and scientific theories which cause fear as gimmicks to promote their own product. The dairy industry should be more concerned with selling **its own positive**

benefits."

Mr. Stephens said the word "fat" has never had pleasant cannatatians in the public mind (the nick-name "Fatty" is never a friendly one), and he suggested the industry might take a leaf out of the hair tonic industry's book. They, he said, had come right away from urging people to put "grease" on the hair. He suggested that "fat" be given another name.

SALES PROMOTION IS A MANY SIDED THING

. . . Marketing Expert Paints A Broad Canvas

Diversification of product, pricing, packaging, advertising, distribution, display, special promotion, publicity and public relations, were all touched upon in an account of "The Planning and Execution of a Sales Promotion Campaign" by Mr. Roger Ford, Director of Jackson Wain & Co. Ptd. Ltd.

He pointed out that most people imagined that butter was a single product whereas there were in fact three types—Salted Butter, Unsalted Butter and Ghee. "The publicising of these three products can do much to stimulate a renewed burst of interest in this long established product," he said; "and the possibility of marketing variaus types of savoury butters should also be investigated."

He touched on the importance of education of sales personnel, remarking that, when buying cheese, he had often found that sales assistants were unable to help him select the type of cheese h was after, or to suggest alternative similar brands if the ones he asked for were not available at the time.

On the subject of small packs of butter, Mr. Ford expressed some reservations. He said that it is common marketing knowledge that a product is consumed more quickly by the customer if it is purchased in a larger quantity. "Whilst small packs may serve a need and stimulate sales in some areas," he said, "it must not be forgotten that they depress sales in other and perhaps more important areas. This is a matter which wuold require serious investigation."

Mr. Ford concluded his address, and the discussion, by telling of a strange sight he had seen recently in the Hunter Valley.

"At about 10.30 on Saturday morning I saw lots of men sitting in a milk bar drinking milk shakes," he said, "which I think everyone will agree, is not exactly a typical male Australian Saturday morning activity. They were doing it because of the vigorous and well conceived sales promotion programme of Oak Brond for it was an "Oak" milk bor. It showed me what can be done through effective sales promotion."

A QUALITY IMAGE

. . . Some Straight Views On Consumer Attitudes To Butter

On the second day of the Sales Promotion Conference, fascinated delegates listened to tape recordings of actual discussions among housewives on the subject of butter—its price, its quality, its pros and its cons.

The tape was presented by Mr. Ronald Vickers, Managing Director of M.F.I. Surveys, who explained the implications behind the comments, and come up with findings presented by his organisation to the Australian Dairy Produce Board.

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"Most people regard themselves as having an inherent right to **natural products**—such as butter and cheese—**at a reasonable price** and perhaps this consideration accounts to some extent for the extraordinary sensitivity shown by the housewife to the slightest upward trend in the butter price," Mr. Vickers remarked.

"It is fair to say that the consumer rarely thinks of butter **unless there is a price increase;** it is normally accepted as part of the natural order of things. Butter is in fact **an accepted luxury."**

Pointing out that 25 per cent of housewives maintained that butter is far too dear, Mr. Vickers said that when circumstances necessitated a change in price it was vitally necessary to explain these circumstances as fully as possible.

Some of the general comments played were:

"Butter is the sort of thing you would not like to deny your children."

"With lots or butter and cheese you have a well stocked larder."

"Butter gives a smoother flavour in baking."

"You can always pick it out when it is used in cooking."

"Butter makes your cake keep longer."

Only a small percentage of housewives maintained that margarine tastes good and preferences expressed for margarine always were hinged on economic reasons.

Examples of this were such remarks as:

"I secretly substituted margarine for butter because my husband put far too much on his crumpets and it was getting too expensive."

(The housewife still insisted that she herself would not eat her husband's crumpets because they had margarine on them!)

"I find I can make my budget go further by buying margarine."

"We keep butter in the refrigerator for visitors, but eat margarine ourselves when visitors are not present."

"People obviously prefer butter," said Mr. Vickers; " . . . its taste, its social connotations, and most housewives still believe that butter is good for you."

He made the point, however, that the confusion surrounding the cholesterol theories, the alleged connection between onimal fats and heart disease and the claims of poly-unsaturated spreads were creating doubts in some minds, and that the industry would do well to be aware of this. Only by awareness could the true problem be appreciated.

Summing up, Mr. Vickers said that, in the main, the present **consumer attitude to butter was favourable,** but that the **trend was not so favourable.** He suggested that any sales promotion by the industry should try to offset this adverse trend in consumer opinion.

MANY FACTORS INFLUENCE CHEESE CONSUMPTION

. . . Researcher Comes Up With Practical Suggestions

In an informative discourse on "What the Consumer Thinks of Cheese," Mrs. Philippa McCallin, Field Officer of the Economist Intelligence Unit Australia Pty. Ltd., pointed out that the average Australian consumed 2.2 ozs. of cheese a week, with large eaters consuming 6 ozs.; that 10 per cent of the population consumed 30 per cent of locally eaten cheese, and that a great potential market existed among the two million people who presently are eating **little or no cheese.**

The average eater's attitude fas that cheese is a basic food, high in nutritional value, and easy to buy, although few know that the product is **just as nutritious, although more economical than meat.**

Dealing with heavy cheese consumers, Mrs. McCallin remarked that the unsophisticated purchaser preferred cheddar or processed cheese with some inclination to cream and cottage varieties, and often used cheese as o substitute for meat.

She suggested that such consumers had no knowledge of fancy cheeses and that interest could be stimulated if retail stores featured different varieties conveniently packed for trial or for table use. **Heavy points could be gained by retail stores which would revert to the old practice of allowing customers to test an unfamiliar cheese.**

"With the pressure of modern living, the unsophisticated but heavy cheese eaters have no time to go looking for themselves, or to discover other varieties available, **if the industry does not help them."**

The sophisticated Australian, usually well travelled, had often acquired his taste for fancy cheeses overseas, and on returning sought out Australian fancy varities. **Retailers in high income areas have many opportunities of selling Australian fancy cheeses.** However, if these are not available, imported varieties are purchased. In places where neither local nor imported varieties are available the cheese eating habit tends to decline.

Mrs. McCallin commented on inconsistency of flavour, and vagueness surrounding brand names. She suggested that it would help if cheese were marked so that its age and variety could be quickly identified by the retailer and the consumer.

On the subject of packaging, she suggested that distinctive wrapping could be used to identify brand and tpyes, that packs should be regular in shape and pleasing to the eye.

Many consumers felt that with 70 types of cheddar available it was difficult to sort out "what was what". This wos particularly confusing **when there was even inconsistency within brands.** Many asked why there was no distinct Australian cheese — remarking that individuol counties in the United Kingdom could produce their own particular varieties.

CHEESE CENTRES

In a long list of stimulating and provocative suggestions for the quickening of sales, Mrs. McCallin suggested cheese centres or cheese bars in capital cities where a complete range of available cheeses could be shown and tasted, and

where retailers could obtain information on where to purchase different types, and how to handle and display them. Such centres of information would do much to create interest and enable consumers and retailers to do something about the interest. There would also be merit, Mrs. McCallin suggested, in mobile cheese units.

The speaker concluded by commending the idea of radio talks, advertising which stressed outdoor living, and recipes showing new and exciting ways of enjoying cheese. "These would undoubtedly create more sales for your 'stimulating and delectable' dairy product," she said.

In discussion Mrs. McCallin said that the "snob value" of imported cheeses was over-estimated and that the sophisticated cheese eaters displayed strong loyalty to Australian varieties — **if they could find them.** She remarked that some cheese such as Gouda and Edam are not distinctive enough in flavour and that, for instance, ot was **almost impossible** to find **matured** Gouda and Edam, although these types were very popular overseas.

"THE DAIRY INDUSTRY" DISCUSSION ON CO-ORDINATED PROMOTION

. . . Board Outlines Its Plans To Delegates

The final session of the conference dealt with the subject of co-ordinated promotion.

Delegates were told that the continuous year round promotion—the Butter-White Wings Bake-Off would be maintained; the Lenten period could be used to promote interest in cheese; during June the accent could be on both butter and cheese; Spring cheese promotions and a pre-Christmas butter campaign were also mentioned.

In addition to this advertising which would stress the themes of value for money; faith in dairy foods; the reassurance on health questions; the unique and enjoyable taste benefits and the status of butter; direct mail would be sent to doctors, dieticians, health educators and schools.

Another series of direct mailings would be aimed at various types of catering establishments throughout Australia as part of a five year plan to promote butter and cheese at all outlets.

Following this extensive discussion the meeting resolved that the many subjects discussed, and the lessons learnt at the conference should not be forgotten, but that steps should be immediately taken to see how the many worthwhile recommendations submitted could be put into effect.

For this purpose the conference called for **a special committee** to be formed consisting of representatives from producer and marketing organisations. This Committee is expected to be formed almost immediately, and it will study ways and means to stimulate interest in, and sales of, all dairy products.

It was also resolved by the body of the conference that all butter advertising in the next 12 months should accentuate the health benefits of the product. This decision was influenced by the heavy accent during discussion periods on the effect of the poly-unsaturated fat products on the butter market.

The Chairman of the Australian Dairy Produce Board, Mr. E. G. Roberts, said that the conference had pointed up the need for unified action by the industry in tackling the vital questions of selling in the competitive markets of the sixties.

STATISTICS

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1965	1966	1964/65	1965/66	1965	1966
February	3,284	3,206	36,045	36,242	7,534	7,241
March	3,131	3,195	39,176	39,437	10,665	10,436

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1965	1966	1964/65	1965/66	1965	1966	1965	1966
Feb. ...	1,638	1,674	13,178	13,812	49.9	52.2	24.17	26.50
Mch. ...	1,871	1,909	15,049	15,721	59.7	59.8	28.12	30.54

Moving Average Quota for 12 months ended 28/2/66, 42.90%; 31/3/66, 42.93%.

INTERIM PRICES TO LICENSED SUPPLIERS

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

	Basic	C.M.B.	Total	3%	3.5%	4%	4.5%	5%
1966	(per lb. butterfat)				(per gallon)			
Feb.	38.40	26.50	64.90	20.1	23.4	26.8	30.1	33.5
Mch.	38.40	30.54	68.94	21.3	24.9	28.5	32.0	35.6

LONDON PROVISION EXCHANGE QUOTATIONS

(Sterling Currency)

	February		March	
	1965	1966	1965	1966
Butter— Choicest Australian	350/–	300/–	350/–	300/–
Cheese—First Grade Australian	255/–	235/–	236/–	225/–
Rindless Australian	265/–	260/–	260/–	260/–

RECOVERY TO RECORD LEVEL DESPITE BAD SEASON

The reduced level of output which became apparent in November, 1965, with the persistence of dry weather was continued through the remainder of the Summer, the monthly production in December, 1965 and in January and February, 1966 being up to 5% below that of the previous year, **although still higher than in any year before that.**

However, the downturn has now been arrested and output in March, 1966 rose to the highest ever total for March of 3,195,000 gallons, which gives every indication that output in April, normally the leanest month in the year, will also reach a record level, thus continuing the phenomenal rise in April production which has occurred every year since 1959.

FLUCTUATING YEAR REVEALED IN MILK BOARD REPORT

The Annual Report of the Metropolitan Milk Board for the year ending 30th June, 1965, has just been published, having been delayed by the large volume of work building up at the Government Printers Office.

The Report reveals very marked fluctuations in a number of aspects during the year.

STATISTICS

The number of licensed producers continued to decline and by the end of the financial year had fallen to the lowest-ever total for that time of the year of 2,351, of whom 66 did not renew their licences for 1965-66.

Despite the reduction in licensed farms the number of cattle increased by 2,666 to 108,439, including 28,286 heifers, indicating a general rise in the average herd size.

A most surprizing item is that on 4 per cent, or about 100 licensed farms, the cows were hand milked.

QUALITY

The general level of quality remained much the same as in previous years, the results being influenced considerably by atmospheric conditions, particularly in February–March when the number of below-standard methylene blue tests reached 20.58%; compared with a maximum of 18.61% in January–February of the year before and 11.80% in the same period of 1963. Because of this 200 producers' licences were suspended, a considerably higher figure than in previous years.

The Board considers that further marked improvement in milk quality is not possible when milk is collected once a day in hot weather, unless refrigeration is used for cooling milk, and in view of this the Board is watching the development of bulk collection of milk with considerable interest as this method of handling milk offers tremendous possibilities for improving bacteriological quality, particularly during the warmer months of the year.

REFRIGERATION

As has been anticipated, the extension of refrigeration on licensed farms had led to a cautious attitude on the part of dairy farmers, and the number of milk refrigerators installed on farms declined considerably, only 77 being added to bring the total on all farms to 510, or approximately 21 per cent of all licensed farms.

DAIRY BUILDINGS

The continuation of the Board's campaign for better milking premises has resulted in almost 2,000 new buildings being erected since the Board was first set up in 1947. Because of this the number of unsatisfactory premises has declined spectacularly, and as a result the number of buildings to be replaced or renovated is now much smaller, and the rate of re-building has consequently slowed down.

In the year under review, 77 new dairy buildings were erected (104 in 1963-64) and 7 renovated (11).

MILKING MACHINE TESTING

The 96 per cent of licensed producers who have milking machines continued to call on the Board's milking machine testing service, which has now become a regular feature of the supervisors' duties, and is encouraged by veterinarians when mastitis problems occur within herds.

During the year complete tests were made on 122 machines and 48 were part tested.

PRICES AND CONSUMPTION

Prices for milk increased late in 1964 by ½d. a pint, or 4d. per gallon, allocated as follows—

Producer	2½d. per gallon
Wholesaler	½d. per gallon
Retailer	1d. per gallon

There was a general increase in the amount of milk sold, the average daily sales reaching 52,031 gallons per day, an increase of 2.2 per cent on the previous year, and an increase of 12 per cent over the last five years, but consumption per head of population fell from 0.621 pints per day (28.4 gallons per year) in 1960 to 0.602 pints per day (27.5 gallons per year).

COOL ROOM FOR SALE

Walk-in cool room, 6' x 5'6" x 5'6" inside measure, fully insulated, cooled by 2 h.p. Electrice unit, with coupled-in 2 storage aerator for shock pre-cooling. Owner will help remove and instal. Selling at 1/3rd cost. £150. Telephone this office 51 3034.

WE APOLOGIZE!!!!

The English race has long been credited with a penchant for observing obscure records which are then faithfully reported in the correspondence columns of the newspapers, and it is this trait that wos recently satirized by a letter which read—

"Dear Sir,

On cleaning out my attic recently I came across a thin black disc with a hole in the centre. Is this a record?"

Nowhere is this practice carried to greater extremes than in the field of sport, particularly cricket and the plethora of unlikely combinations that pass as records once inspired "Punch" to write of the young fellow named Rover,

Who bowled thirteen balls in one over;
This has never been done
By an archdeacon's son
On a Tuesday, in August, at Dover.

In Australia, too, cricket probably leads in the listing of records, but surely dairy records must follow close behind, with records for milk, records for fat, records for this lactation, records for that, and we must plead that it was this proliferation of records that caused us, in the September-October issue, to do grave injustice to a grand cow.

In reporting the death of Ellengowan Maybelle, herself a **milk** record holder, we stated that the butterfat record was still held by Yarraview Golden Daffodil, who, by the time of her death in 1959, had produced the remarkable total of 8,934 pounds.

In copying this from an N.S.W. paper we quite overlooked the fact that VYNETTE GADGET'S DAINTY surpassed this figure yeors ago to become the holder of the Australian all-breeds record, and, having passed this figure by the substantial margin of over 600 pounds to give a total of 9,599 pounds, is not prepared to rest on her laurels, but is again in milk, **at 18 years of age.**

So we offer to Merv. McKenzie and to Dainty our sincere apologies and our earnest hopes that the 10,000 pound mark will be reached and even surpassed, a feat that will be all the more remarkable when it is appreciated that Dainty is paddock-fed, never housed, and milked only twice daily.

DAINTY, who appeared on the cover of this Journal in December, 1962, has recorded, for each lactation, the following production (lbs. butterfat)—

J2	270	574	668
S2	527	**870**	679
J3	516	**884**	638
S4	695	803	624
M	708	762	381

Total: 149,304 lbs. milk, 9,599 lbs. butterfat.

(Figures in black — State record for all breeds.)

. . . and, as would be expected, has chalked up an impressive list of awards at the Adelaide Royal and country shows, including—

Cow in milk: 2nd
Type and Production—
1st: 1956, 1957, 1958
2nd: 1953, 1954, 1955

Wells Trophy:
Highest butterfat (all breeds)
1st: 1956, 1957, 1958
2nd: 1953, 1954, 1955

Dry Cow: 4th
Meggitt's Trophy:
1st: 1956, 1957, 1958
2nd: 1953, 1954, 1955

Finlayson Memorial Trophy,
All Breeds Dairy Cow:
1953, 1954, 1955
1956, 1957, 1958

We have not been able to find where Dainty stands in relation to world butterfat records. Most of the overseas records appear to be for milk yields, and as far as we can ascertain the lifetime record for milk is held by the British Friesian Manningford Faith Jan Graceful, with 326,451 lbs. milk, which is, of course, well above the level of milk production attained by the higher testing South Australian Jersey.

However, news comes from the U.S.A. that Colorado State University's Friesian College Ormsby Burke is again in milk after producing 308,302 lbs. milk and 10,457 lbs. butterfat. At 15 years of age, Burke is now giving a daily yield of 90 lbs. milk, and could top 11,000 lbs. butterfat by completing this lactation.

. . . AND TALKING ABOUT RECORDS

. . . the big news in Eden Valley is not a new butterfat record, but the 30-pound Murray cod, caught on rod and line by our General President last month.

We don't know the cod's pedigree, nor whether it was eligible for the stud book, but there was no doubt that it was a champion, and, unlike so many fish stories, the truth of this one is evidenced by the photograph. What is not true, however, is that the recent postal strike was caused by the General President's mailing samples of his cod to the Central Council delegates.

"NO FURTHER DROP IN LAKE LEVELS"

The Chairman of the Lower River Murray Liaison Committee (Mr. J. Ligertwood) has advised us that, although the average levels at the Goolwa Barrages are at present approximately 9 inches below normal pool level, with the fall-off of high evaporation, the water entering the Lakes will not drop further and there should be a gradual rise in level over the next few months.

BALLOT FOR DAIRY BOARD MEMBERSHIP

For the first time for many years a ballot will be necessary in South Australia to elect this State's representative of co-operative butter and cheese factories on the Australian Dairy Produce Board. Mr. Colin MacDonald, manager of the Dairy Produce Department of South Australian Farmers' Co-operative Union Limited, who has represented South Australia on the Board since 1956, is being opposed by the General Manager of the United Co-operative Dairymen Limited.

The only other ballot to be held in connection with the election of the new Board will be in Queensland, when Mr. Alan Littleton, of Crows Nest, a dairyfarmer, and a director of the Downs Co-operative, and Mr. William Wind, also a dairyfarmer and Chairman of Directors of the Port Curtis Co-operative, are contesting the one position as representative of co-operative butter and cheese factories in Queensland.

In all other States the representatives of co-operative factories have been elected unopposed, as have also the two members representing all proprietary and privately-owned butter and cheese factories in Australia.

The poll closes on 14th June and all eligible dairyfarmers (supplying co-operative factories) will receive ballot papers before that date.

A high ratio of completed ballot papers will be a measure of the dairyfarmers' interest in the marketing of his commodity.

CHEESE IMPORTS STILL RISING

Figures released by the Commonwealth Bureau of Census and Statistics again show a sharp increase in imports of cheese. During the period July, 1965 to January, 1966 total imports of cheese into Australia amounted to 2,318 tons—representing a value of $1,896,318.

In the period July, 1964 to January, 1965 imports amounted to 1,810.4 tons valued at $1,516,392.

The increase in cheese imports, therefore, amounts to approximately 23% over the same period of the previous year.

Australia is currently importing cheeses in varying quantities from 23 different countries. The biggest supplier is Denmark, followed by the Netherlands, Bulgaria, New Zealand, Italy, Norway and Switzerland.

MILK SELLS AT 40 CENTS A PINT IN ALASKA

Because of the high cost of transporting liquid milk from dairying centres in Canada and U.S.A., efforts are being made to establish dairy farming in Alaska.

As a result there are now over 60 dairy farms in existence, but despite this the price of milk is well above 40 cents a pint.

All but three of the herds are Friesians. Perhaps Geoff. Giles should take a trip up there and convince them to change to Jerseys, if only just to keep the cold out.

DAIRYFARMERS

HERE ARE ONLY SOME OF THE REASONS WHY YOU SHOULD VOTE

1 MacDONALD C. L.

AT THE FORTHCOMING ELECTION FOR MEMBERSHIP TO THE AUSTRALIAN DAIRY PRODUCE BOARD—

- He has a proven record of nine years as a keen, far-sighted and able Board Member and as a forceful negotiator.

- His knowledge of cheese in all its aspects has been and can be of great value to this State in particular. South Australia has become the second largest cheese manufacturing State in the Commonwealth.
- His status on the Board is evidenced by his appointment to both the Executive and Research Committees.

Apart from official Dairy Board activities Mr. MacDonald's contributions to the industry have included:—

(a) Chairman of the Cheese Manufacturers' Federation of Australia since its inception in 1955.
(b) Member of the Board of Directors of the Commonwealth Dairy Produce Equalisation Committee for 13 years.
(c) A member of the Executive Committee and also the Finance Committee of the Equalisation Committee.
(d) Chairman of the S.A. Cheese Manufacturers' Association. since 1953.
(e) Member of the S.A. Butter Manufacturers' Association.
(f) Member of the Dairy Produce Board in South Australia since 1953.
(g) Member of the Pasture Improvement Committee in South Australia.

As Manager of the Dairy Produce Department of Farmers' Union, Mr. MacDonald has revealed foresight and adaptability of a high order. His contributions have included:—

- The development of the Rindless Cheddar Cheese manufacture in South Australia that has resulted in financial benefit to all milk producers;
- The introduction of Vacuum Blended Butter for consumption on the home market in South Australia. This has been of direct benefit to all cream producers in South Australia.

When you receive your ballot papers, **vote promptly** . . . and vote

1 MacDONALD C. L.

It will be a vote for know-how, achievement, experience and progress.

BRITAIN AND THE EUROPEAN COMMON MARKET

Will There Be Another Approach?

Federal M.H.R. and Dairymen's Association member, Mr. Geoff. O'Halloran Giles recently sought assurance in the Federal Parliament concerning Government vigilance in the matter of the possibility of Britain's re-entry into the European Common Market.

Mr. Giles asked the Minister for Trade: "Did the Minister for Trade and Industry notice in last Friday's Press an article suggesting that member nations of the European Common Market felt that Britain was now in o more amenable frame of mind regarding her entry into the Common Market? Does this mean that the British Government will not consider the financial wellbeing of Commonwealth countries in their future trade with Britain, or will her attitude be much the same as it was before when negotiating for entry? Is the Australian Government in constant touch with our advisers on this matter in the United Kingdom, and has the Government succeeded in re-directing an appreciable percentage of our exports of dairy produce, dried fruit, canned fruit and other export commodities, which are dependent primarily on Britain as a purchasing source?"

Mr. McEwen replied: "If I may, I will take the latter part of the question first. The Government, and the various marketing authorities set up by statute, have been devoting their energies to seeking new markets wherever they can be found for the items that the honorable member has mentioned — canned fruits, dried fruits, dairy products, meat, fresh fruit and so on. We have had a considerable degree of success in the diversification of markets, so that it may be said today that, not so much as a deliberate act of policy but as an achievement in marketing, our opportunities for selling these products world-wide are now much greater than they were ten years ago or before the war.

"I have read a number of articles recently touching on what may happen, whichever porty is elected to government in Britain, about the United Kingdom's seeking to enter the Common Market. I have also read reports of a change in the attitude of General de Gaulle to Britain's entry and a change in the attitude of other countries. All I can say is that, at the moment, what is being said about Britain's entry to the Common Market is being said on the election hustings rather than as a considered statement of policy by a government in office. It is pretty clear now that Mr. Heath, who is the Leader of the Opposition, is at least as eager today to have Britain join the Common Market as ever he was. Having done a lot of business with Mr. Heath on this, I know that he is very keen to have Britain join the Common Market. The position of Mr. Wilson's Government seems to be that it sees virtue in Britain joining the Common Market, but Mr. Wilson has made some undetailed observations about the necessity to protect the trode of the trading partners of Britain. This, of course, would include the Commonwealth countries. I think the attitude in Britain on this subject and the attitude of the Continental Europeans will become clearer in the next few months. However, this obviously is a matter of vital importance to Australia and I assure the honourable member and the country generally that we are losing no opportunity to keep abreast of thinking and of intentions wherever these can be elicited in the areas in which decisions can be taken."

Small Sheet of Topsoil Sustains World's Life

All the world's human life depends on the fertility of a thin sheet of the earth's topsoil, covering one-tenth of the earth's total surface and forming a storehouse of plant nutrients only about seven inches deep. It takes about 1,000 years to build up one inch of topsoil. Wind or water can take that much away in a few months unless the surface is protected.

THE BATTLE OF THE FATS . . .

"NOBODY KNOWS THE ANSWER!"

. . . Doctor Warns Against Diet Changes

"Nobody knows the answer," says Dr. R. R. Reader, Medical Director of the National Heart Foundation, made this statement in the A.B.C.'s "Town and Country" TV programme last month. He said:

"Let me be clear that we are speaking about the condition atherosclerosis, commonly known as hardening of the arteries.

"This condition is at the back of coronary occlusion, coronary artery disease generally and many forms of stroke. It is therefore the most important form of heart disease and certainly the commonest.

"Let me also be clear that it is certain that there are many causes, not just one.

"Heredity, obesity, cigarette smoking, lack of exercise, may all be causes. Diet also may be a cause.

"The idea that diet is responsible in some way for heart disease arose from the comparatively recent observation that this form of disease is common in affluent societies, and so, too, is a high content of fat and particularly animal fat in the diet.

"Arising out of that simple observation, an enormous amount of research has been carried out throughout the world to investigate the theory that dietary fat is in some way related to this disease.

"From that research, conflicting in many ways as it is, there are four things which I think one may say with confidence.

"First, a high level of fat, certain fatty substances, including cholesterol in the blood, is associated with a high risk of heart disease.

"Second, one cannot say that these fatty substances in the blood necessarily cause heart disease. The relationship may be coincidental.

"Third, reduction of the level of these fatty substances in the blood can be achieved by certain means—the use of drugs and the use of certain dietary modifications.

"But let me be quite clear: let me emphasise that the dietary modifications must be complete and thorough, otherwise they would be a waste of time.

"It would not do simply to substitute some types of margarine for butter; the whole diet would have to be checked and modified.

"The fourth thing that I would like to say is that nobody knows. It has not been possible to show whether reducing dietary fats will, in fact, reduce the risk of heart disease."

U.S. DOCTORS SHIFT GROUND ON FATS

. . . Polyunsaturated Claims Not Supported

After the American Heart Association recommended in 1964 that the general public ought to adjust its diet to reduce intake of saturated fats (prin-

cipally animal fats) and increase polyunsaturated fats (principally vegetable oils), in hopes of possibly preventing heart attacks, the American Medical Association's Council on Foods and Nutrition decided to review its position on the subject. In a recent "Journal of the American Medical Association," the CFN reaffirmed its stand that such dietary manipulations should not be attempted **except under a doctor's supervision.** The fat changes are intended to reduce blood cholesterol levels, and, as the CFN was careful to point out, "definitive proof that lowering serum cholesterol, or preventing a rise in serum cholesterol, will lower the morbidity and mortality associated with coronary heart disease is still lacking." The CFN did, however, broaden its list of "high-risk" patients for whom doctors may want to consider dietary adjustments to include "young men vulnerable to coronary disease."

I.D.F. LOOKS AT MARGARINE PROMOTION

The Dairying industry is frequently criticised for its continued campaign against margarine, the theme of the criticism being that margarine is a wholesome food in its own right, that its nutritive value and palatability are not inferior to butter, that the addition of vitamins brings it up to the level of butter as a health food, and that in some respects, such as spreadability, it's actually superior to butter.

In fact, runs the criticism, in trying to regulate margarine manufacture, the dairying industry is using a weapon that it would resist violently if the tables were turned and vested interests tried to legislate against the use of a cheaper but otherwise equal substitute for some product used by dairyfarmers.

But this form of criticism overlooks one vital fact which is that **margarine does not rely on its own merits but seeks to gain acceptability by posing as being identical with butter.**

To start with, there's the colouring — margarine in its natural state is white or near-white. There is no food value in the colouring material, so the inescapable conclusion is that margarine is yellow in order to deceive.

Fortunately in this country we have fairly effective legislation against other forms of deception, such as brand names and pictorial representations on labels, but anyone who has read overseas magazines will realize how much value margarine manufacturers place on being able to suggest that their product is derived from the countryside, such suggestion being carried out by weaving into the brand names the names of flowers or such emotive words as "meadow" and the like, and by using as brand illustrations pictures, such as a farm gate in a hedge, which implant false impressions in the user's mind.

To counter these actions the International Dairy Federation has recommended that National Dairy Committees should take appropriate action to ensure that through the relevant authorities in their respective countries suitable legislation —in so far as it is necessary—is enacted with the following purposes:

(a) To prohibit the use of illustrations, pictures and designations derived from the dairy industry, in advertisements in favour of substitutes for butter and butterfat,

(b) To prohibit any marks, drawings, illustrations, pictures, as well as fanciful designations, trade marks, etc. (whether in script or not) which could be misleading as to the composition of substitutes for butter and butterfats.

CAPTAIN STURT'S DAIRY TO BE RECONSTRUCTED

As part of its plan to restore "Grange," the South Australian home of explorer Captain Charles Sturt, to its original condition, the Charles Sturt Museum Memorial Trust proposes to reconstruct the underground dairy where the milk from Sturt's "fourteen quiet cows" was set to rise, and where the butter and, perhaps, cheese, for the household use, was made.

Much labour must be put into the task of restoration, and the Trust hopes to be able to recruit the enthusiasm of a group of young people who are keen to take part in this project of "living history," but the Trust needs also the equipment which once furnished the dairy.

CAN YOU HELP?

Perhaps, somewhere, you have some article of dairy equipment—a copper milk pan, a wooden churn, hand butter-pats, an early separator, an original milking stool, **anything, in fact,** which has o connection with dairy husbandry or homestead dairy produce manufacture in the early days.

EVEN IF IT IS OUT-OF-REPAIR it is still required, because it is probable that the equipment, too, will need to be renovated, and the missing, broken, or worn parts of otherwise working equipment may be able to be replaced by a part from what is, in your opinion, junk!

Old photographs, too, of cows, dairy buildings, or equipment, literature, charts, or other material will be welcome.

The Trust hopes, in the near future, to appoint a co-ordinator for the dairy project, but in the meantime all offers, and enquiries, will be received by this office; telephone 51 3034.

POSITION WANTED

A 17-year-old boy, with rural background, educated to Leaving standard, and with vacation experience on station properties, is seeking a position, from the end of this term, when he will leave college, on a good dairy farm, preferably a stud property.where he can obtain solid experience and **preferably be in a position to continue study.**

Good reports of his attitude and ability have been received from the properties on which he has worked, and we would be pleased to receive offers from any member wishing to provide a position for this applicant.

Telephone this office: 51 3034.

MILK PRICE GUARANTEE, QUANTITY RISE IN U.K.

The United Kingdom Government has raised the guaranteed price for milk to producers by ½d. stg. a gallon and the standard quantity to which the guarantee applies by 62.4 million gallons.

The announcement said that, "after allowing for the automatic decrease of 12.4 million gallons, due to the fact that liquid sales were below expectations, this gives a net increase of 50 million gallons which is equivalent to an additional ½d. a gallon on the guaranteed price."

The combined total will have the effect of giving the producer the equivalent of an extra 1d. a gallon.

The Government has concluded that the main need at this year's annual review is to give some further stimulus to the production of beef and it was appreciated that if the dairy herd is exponded, the increased milk production would hove to be sold for manufacturing purposes and this would result in a dilution of the pool price.

An assurance was given that this would be taken into account at future reviews.

The guaranteed price to producers now will be 3/6.35d. stg. a gallon, and the price of domestic milk to the housewife was advanced on January 1 by ½d. to 10d. stg. a pint for a period of four months.

DAIRY CHANGES FORECAST

Big changes ore ahead for the dairy industry in the next 50 years.

Looking half a century ohead in the United States, the U.S. Department of Agriculture has made the following forecasts for U.S. dairy formers:

1. There will be the largest, most prosperous and best-educated potential market in history;
2. Milk will be provided at an all-time low price in relation to wages earned;
3. Farmers will provide only whole milk which meets a single high quality standard;
4. Farmers will get highest prices in history;
5. The prices will be based on all the components of whole milk;
6. There will be on increase in per capita consumption of milk in all forms;
7. There will be greater competition from new food products and food forms;
8. Advanced technology will be used to develop new dairy products and new forms of today's dairy products;
9. All the byproducts now wasted or under-used will be used;
10. A distribution system will be used that features fluid milk products made from preserved forms of milk, and made by food companies selling nation-wide or on a region-wide basis, through stores, coin-operated machines, and fully-automated retail outlets.

BRITISH MANUFACTURERS TACKLE DITCHING PROBLEMS

In the past the widespread system of ditches, which is the traditional English way of draining farmland, has been maintained and extended by a specialist rural worker, the hedger-and-ditcher. Modern farming demands mechanization even of this job, and British machinery manufacturers are developing equipment which can be operated from farm tractors.

Although ditches are almost unknown in our farming country, they have almost identical counterparts in irrigation channels, and the two machines described below may be suitable for use on irrigated farms.

Further details are obtainable from the British Trade Commissioner.

Easy-to-Work Trencher-Ditcher

Ditches are cleaned with the tractor parallel to the ditch to avoid backing up and down—trenches can also be dug dead astern—and there is a choice of four ditching buckets, from the 48-in. light cleaning version to the 20-in. heavy duty digging model. For trenching there is a 5½-in. taper bucket and 11-in. and 13-in. versions. All trenching buckets have automatic ejector plates.

The working arm of the trencher-ditcher is powered by three double-acting hydraulic rams to give penetration of hard soils, and it will slew through 180 degrees without resetting. This allows spoil to be dropped evenly over a wide band up to 20 ft. from the ditch.

Working reach of the arm is up to 13 ft. 10 ins., allowing ditches up to 9 ft. deep and 10 ft. wide—or up to 18 ft. wide if working from both sides—to be cleaned out. Ditch cleaning output is said to be a maximum of 60 yds. per hour.

The whole equipment is mounted on two independently adjusted skid feet to eliminate maintenance of vulnerable leg rams and to allow the machine to be skidded forward to save time and so increase output. This arrangement also allows the trencher-ditcher to be tilted relative to the tractor when working on sloping ground.

Digger for Ditch Maintenance

A digger attachment for a tractor has been specially designed to carry out ditch maintenance by "skinning" soil off the banks at the rate of 70 yards per day.

The digger will operate with many tractors of 30 horsepower and over providing it is fitted with live power-take-off. It can be attached or removed from the tractor in less than 10 minutes and on removal will stand firmly under its own balance.

Built mainly of heavy steel box sections, the digger is operated by a self-contained hydraulic unit consisting of gearbox, pump and re-circulating tank. This unit makes the digger entirely independent of the tractor hydraulic system —all that is required is a drive from the tractor's power-take-off to the pump.

Operation is by four simple controls, each colour-coded to the appropriate hydraulic unit.

A 180 degrees slewing action enables the machine to deposit the soil well away from the side of the ditch. Ditches of up to 18 ft. wide can be tackled and a wide counter-weighted base gives stability and prevents tipping. In addition to ditch maintenance, the digger's excavator arm can be used to scoop out new dykes or ditches, level off banks, and tackle a wide variety of agricultural, drainage and civil engineering jobs.

Watch your poddies . . .

and your profits . . .

GROW!

Kaf-O-Milk is the complete calf milk that begins to build good milkers . . . and sturdy mothers . . . right from the start. Kaf-O-Milk is a balanced blend of 14 ingredients including a body building meal which is made readily digestible by the inclusion of three essential enzymes.

Giving the rumen an early start

Kaf-O-Milk should be fed from the fourth day. When a calf is naturally ready, there is sufficient "body" in the diet to start the rumen working, promoting rapid development and a strong constitution.

One factory . . . Strict quality control

Kaf-O-Milk is made only by the D.H.A. Rural electronically controlled feed mill. Every batch is true to formula, every ingredient thoroughly dispersed to ensure complete uniformity in the diet.

Maximum feed conversion . . . greatest economy

You'll get healthier development and better herd stock with Kaf-O-Milk at a fraction of the cost of feeding whole milk. Kaf-O-Milk has proved to be a profitable investment for dairy farmers everywhere. Order a trial batch now and watch your poddies . . . and your profits . . . grow!

DHA

KAF-O-MILK

Packed in 50 and 100 lb. Polyethylene-lined bags.

MILK REPLACER
FOR CALVES AND PIGS

A product of
DRUG HOUSES OF AUSTRALIA LTD.
RURAL DIVISION

Distributed in South Australia by BENNETT & FISHER LIMITED

DECIMAL PRICES FOR MILK AND CREAM

As reported in a previous issue, the producer with 1.69 cent increase, received the biggest share of the 2 cent rise in milk prices which resulted from the change-over to decimal currency.

Almost 70 different prices for milk and cream were affected by the change, and the Milk Board took this opportunity to rationolize the price structure by removing many of the differentials which had crept in over the years.

The new prices therefore represent not only a new currency but also a new policy on the part of the Milk Board. In previous price revisions the increases have been added uniformly to all prices, and margins have risen proportionately, but in this instance the whole structure of margins has been reviewed.

For this reason, as well as for general interest, we print below a comparison of the old and the new prices.

Metropolitan Milk Supply — Adelaide

SUMMARY OF MILK PRICES

	From 6/9/64			From 14/2/66					
	Price	Margin	*Net Margin	Price	Margin	*Net Margin	Price	Margin	*Net Margin
	(pence per gallon)			(pence per gallon)			(cents per gallon)		
Price paid to Licensed **Producer** (at farm gate)	44.75	44.75	44.50	46.80	46.80	46.55	39.00	39.00	38.79
Price paid **to Factories:**									
By Vendors— **Zone 1.**									
Loose	58.53	13.78	13.27	61.80	15.00	14.59	51.50	12.50	12.16
½ bottle	72.53	27.78	27.27	76.20	29.40	28.99	63.50	24.50	24.16
Bottle	64.53	19.78	19.27	66.60	19.80	19.39	55.50	16.50	16.16
½ carton	88.53	43.78	43.27	93.00	46.20	45.79	77.50	38.50	38.16
Carton	76.53	31.78	31.27	77.40	30.60	30.19	64.50	25.50	25.16
By Vendors— **Zone 2.**									
Loose	59.53	14.78	14.27						
½ bottle	75.53	30.78	30.27						
Bottle	65.53	20.78	20.27		No longer applies				
½ carton	87.53	42.78	42.27						
Carton	77.53	32.78	32.27						
By shops, etc.— **Zone 1:**									
Loose	64.00	19.25	18.84	67.50	20.70	20.29	56.25	17.25	16.91
½ bottle	78.00	33.25	32.84	81.90	35.10	34.69	68.25	29.25	28.91
Bottle	70.00	25.25	24.84	72.30	25.50	25.09	60.25	21.25	20.91
½ carton	95.00	50.25	49.84	99.30	52.50	52.09	82.75	43.75	43.41
Carton	83.00	38.25	37.84	83.10	36.30	35.89	69.25	30.25	29.91

By shops, etc.— **Zone 2:**									
Loose	66.00	21.25	20.84						
½ bottle	82.00	37.25	36.84						
Bottle	72.00	27.25	26.84						
½ carton	95.00	50.25	49.84						
Carton	85.00	40.25	39.84						
				No longer applies					
By Milk Bars— **Zone 1:**									
Loose	65.00	20.25	19.84	68.70	21.90	21.49	57.25	18.25	17.91
By Milk Bars— **Zone 2:**									
Loose	67.00	22.25	21.84						
				No longer applies					
By Schools (FMS)— **Zone 1:**									
½ pint	80.00	35.25	34.84	82.20	35.40	34.99	68.50	29.50	29.16
By Schools (FMS)— **Zone 2:**									
½ pint	81.00	36.25	35.84						
				No longer applies					
By Schools **Zone 1:**									
Bulk	64.00	19.25	18.84	67.50	20.70	20.29	56.25	17.25	16.91
½ bottle	78.00	33.25	32.84	81.90	35.10	34.69	68.25	29.25	28.91
Bottle	70.00	25.25	24.84	72.30	25.50	25.09	60.25	21.25	20.91
By Schools **Zone 2:**									
Bulk	66.00	21.25	20.84						
½ bottle	82.00	37.25	36.84						
Bottle	72.00	27.25	26.84						
				No longer applies					

Price Paid to Retail Vendors per gall.

By Householder— **Zone 1:** **Loose**								
½ pint	80.00	21.47		96.00	34.20		80.00	28.50
1 pint	78.00	19.47		86.40	24.60		72.00	20.50
2 pints	78.00	19.47		81.60	19.80		68.00	16.50
½ bottle	92.00	19.47		96.00	19.80		80.00	16.50
Bottle	84.00	19.47		86.40	19.80		72.00	16.50
½ carton	108.00	19.47		115.20	22.20		96.00	18.50
Carton	96.00	19.47		96.00	18.60		80.00	15.50

By Householder—

Zone 2:

Loose	80.00	20.47
½ bottle	96.00	20.47
Bottle	86.00	20.47
½ corton	108.00	20.47
Carton	98.00	20.47

No longer applies

Retail Price per pint—

Zone 1:

Loose

½ pint	4.88	6.00	5.00
1 pint	9.75	10.80	9.00
2 pints	19.50	20.40	17.00
3 pints	29.25	31.20	26.00
4 pints	39.00	40.80	34.00
5 pints	48.75	51.60	43.00
6 pints	58.50	61.20	51.00
7 pints	68.25	72.00	60.00
8 pints	78.00	81.60	68.00
½ bottle	5.75	6.00	5.00
Bottle	10.50	10.80	9.00
½ carton	6.75	7.20	6.00
Corton	12.00	12.00	10.00

Zone 2:

Loose	10.00
½ bottle	6.00
Bottle	10.75
½ carton	6.75
Corton	12.25

No longer applies

* After payment of administration contribution to Milk Board this:

	Before	After	
Producer:	14/2/66—pence 0.250.	14/2/66—pence 0.252;	cents 0.21
Factory:	14/2/66—pence 0.406.	14/2/66—pence 0.408;	cents 0.34

KEEPING THE MILK OUT OF MILK RECORDINGS

Fumbling with pencil and record sheets to write down milk yields not only slows up milking routine, but wet hands can make the entries illegible. Two developments in Britain in milk recording make this kind of paperwork a thing of the past.

On a Basingstoke, Hampshire farm the herdsman simply grasps a microphone and speaks each cow's name and yield into it. The mike, being spring-loaded, automatically switches on a tape recorder in the dairy when pulled down to mouth-level, and when let go switches it off. The tape is then transcribed by the farm secretary.

Fancier still, is the dial-a-number recording device now in use on a Sussex farm. The cow's identity number is dialled first, then the yield, and the dialling box then transmits the figures to a miniature teleprinter in the farm office.

THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

The Official Publication of the South Australian Dairymen's Association Incorporated

Published Bi-monthly

Vol. 5, No. 6

Adelaide, MAY-JUNE, 1966

GLENJOY RAELENE POSCH

Holder of the Australian J2 Production Record at 709 lbs. b.f

Owned and bred by M. R. & G. D RATHJEN—GLENJOY—SPRINGTON

PRICE

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THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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General Secretary: DAVID J. HIGBED
Advertising Rates on application

COST SURVEY RESULT

Despite Continued Price Rises

INCREASED EFFICIENCY HOLDS UNIT COST STABLE

Licensed producers have again, as in previous years, succeeded in holding unit production costs stable in the face of inflationary trends, and continue to give the lie to the accusations of "inefficiency." Figures just released by the Metropoltian Milk Board indicate that farmers in the production cost survey, despite overall price rises which pushed total farm expenditure up by 4% above last year, managed to maintain costs per gallon to within ¾ cent of last year's figure by a further increase in productivity of over 1,200 gallons per farm despite a poor season which was reflected in a reduction in productivity per cow from the previous 678 gallons (310 lbs. b.f.) to a still very creditable 654 gallons (295 lbs. b.f.).

The major increase in paid-out costs was for fertilizers and seeds, when the averoge expenditure rose by 25%, from .90 cent per gallon to 1.14 cents, followed by repairs and maintenance (other than tractor and motor) which rose by 8% from 1.03 to 1.11 cents.

The total figure for cash and imputed costs together was 35.58 cents average cost per gallon for an average output of 32,553 gallons per sample farm, compared with 34.81 cents for 31,339 gallons for the previous year.

GLENJOY RAELENE POSCH

by producing 709 lbs. butterfat from 15,360 lb. milk at 4.6% test in 300 days has become Australia's greatest Junior Two-year-old of all time, eclipsing by a 4-lb. margin the previous all-breeds record set 33 years ago by Hawkesbury College's Jersey cow RICHMOND HONOUR. GLENJOY RAELENE POSCH is out of HIAWATHA RENUNION POSCH, by GLENJOY RAELENE DUKE 2nd, whose dam, the Elite Register of Merit cow, GLEN JOY SOUTHERN RAELENE, has produced a 6-lactation total of 4,239 lb. at an average test of 4.9%, with a maximum yield of 905 lb. at 5.2%.

BRITISH DAIRY FARMERS FIND NO PROFIT IN PEDIGREE

In terms of production, grade cows are as good as pure-breds, reports the U.K. Milk Marketing Board in its latest report.

In a survey the Board found that grade Friesians averaged 906 gallons against 898 gallons for pedigree animals. Grade Guernseys, with 708 gallons, were better than pure-breds with 706, and the non-pedigreed Jerseys also came out ahead with 672 gallons against 657 for their aristocratic sisters.

Only the pedigreed Ayrshires beat their proletarian relatives, with 778 gallons against 768.

NOT SO IN SOUTH AUSTRALIA

This is certainly not so in South Australia. In this State pedigreed cows, on the average, out-produce their grade sisters by 30% regardless of breed, and what is even more noteworthy appear, in the case of Friesians and Jerseys, to out-produce their British cousins also, the pure-bred Friesians in South Australia producing 1,078 gallons, and the Jerseys 687 gallons.

The South Australian pedigreed Guernseys, with 685 gallons, and the Ayrshires with 756 gallons were both slightly below the U.K. figure.

and, talking about production figures . . . HERE ARE SOME RECORDS

In our last issue we referred to the many categories for which records were claimed, a subject that had been sparked off by the death of ELLENGOWAN MAYBELLE, Australia's "greatest ever" producer of **milk** with a **lifetime yield of over 25,000 gallons.** By a mis-statement in that announcement it brought to light the fact that Australia's "greatest ever" producer of **butterfat** now and still is, VYNETTE GADJET'S DAINTY, with a **lifetime total of 9,599 lb.** and still producing.

News is now to hand that BELVEDERE PARK I JILL, featured as our "cover cow" in February, 1965, has for the third successive year, broken the "Melba barrier" of 32,522 lb. milk, with a magnificent 36,570 lb. (1,240 lb. b.f.). Following her two previous totals of 35,245 in 1963 and the all-time record of 38,880 in 1964 this magnificent performance is given greater emphasis by the reported negotiations for the purchase of JILL by Senator Harry Hays, formerly Canadian Minister of Agriculture, who recently visited Australia to judge the Friesian classes at the Royal Sydney Show, and who plans to form a syndicate of Canadian breeders for the purpose of mating JILL with top Canadian bulls and conserving semen from her male progeny.

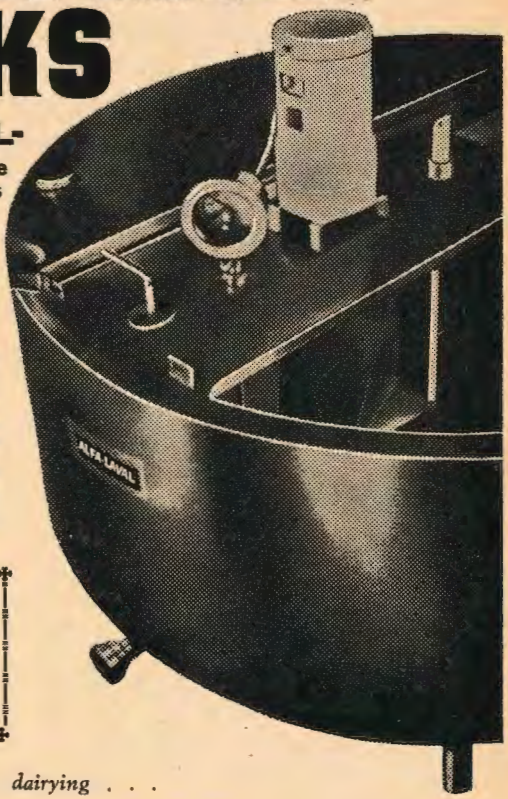
Another champion earlier reported in the Journal and still heading the list is the imported New Zealand Friesian, GREYLANDS GALENA ALINE, which has now completed a 365-day record lactation with the **production of 1,114 lb. butterfat.** Her lifetime production to date, after eight lactations, is 5,392 lb. butterfat, from 126,120 lb. milk at 4.3% average test.

And More About Fish

. . . in fact, another apology!

The fish caught by our General President and pictured in the last Journal was not 30 lb., as reported by us but **60 lb.,** and we have had numerous enquiries from piscatorial producers as to why such a large fish should weigh so little. It has even been suggested that it must have been weighed on dairy factory scales, but this imputation has been indignantly rejected.

BULK MILK TANKS



ALFA-LAVAL-FIRST to meet the standard specifications laid down by the Standards Association of Australia.

The Standard Testing Authority, the S.E.C. of Victoria, reported:

"A production 200-gallon unit selected from a stock batch model has been tested by the State Electricity Commission of Victoria for compliance with specification No. ASN46/1-1963 of the Standards Association of Australia, and its report No. 64.C2/ASN46 may be inspected on request."

Higher quality milk! Less work! More profit! Available in capacities from 100-485 gallons. ● Fully guaranteed. ● S.A. Kelvinator units used exclusively. ● All stainless steel construction, fully insulated with polyurethane rigid foam.

The very latest in modern dairying . . .

- The tank is mounted on stainless steel pipe legs with adjustable feet and is fitted with hinged, self-supporting, interchangeable, removeable covers for easy access.
- Highly polished walls, sloping floor, and 2 in. outlet pipe enables rapid draining, efficient cleaning and minimises milkstone formation.
- Circular design gives construction rigidity and all-round accessibility for easy cleaning.
- Agitator is driven by a totally enclosed electric motor incorporating a nylon-geared reduction box to give 35 r.p.m. — no lubrication required.
- Other components consist of a centrally located dipstick calibrated in pounds of milk; a 4 in. dial-type thermometer with thermostat and a tank levelling device.

ALFA-LAVAL

ALFA LAVAL (S.A.) PTY. LTD. 8 5271
338 King William Street, Adelaide

HOMOGENIZED MILK — THE KEY TO IMPROVED SCHOOL MILK CONSUMPTION

(J. F. Howeler-Coy, Department of Health Services, Hobart)

One of the most puzzling mysteries in the whole-milk industry is the apparent failure of the processing companies to seize on the undoubted ability of homogenized milk to increase consumption.

World technical dairying literature abounds with examples where the introduction of homogenized milk has resulted in immediate and sustained sales lifts of up to 25 per cent and close to home we have ready-made examples of consumer preference for this product, in Broken Hill for example, where, despite a general increase in consumption, the sale of homogenized milk is threatening soon to outstrip the sale of normal milk.

We know there are disadvantages and even problems, but most, if not all, of these can be overcome by attention to the quality of the incoming product, by rigid control of the processing, and by care in handling and marketing—all of which should be observed whatever the nature of the milk.

Certainly one of the companies has overcome these problems to such an extent that it has been supplying a number of South Australian schools with homogenized milk, and it is known that there was an immediate and substantial increase in consumption in the period following this innovation, although statistics relating to current consumption are lacking.

In Tasmania, however, there has been no tentativeness about the approach to homogenized milk for schools. Following a series of dietary surveys, in which concern was expressed by health authorities at the low level of consumption by Tasmanian school children (and also, note well, by Tasmanian 'teen-agers, although these, not coming within the scope of the free milk scheme, could not be so readily treated, and so probably still remain at below minimal intake) a study was made of the reasons for the low milk intake.

The answer was found in homogenized milk and the article which follows, reprinted by permission, from the journal of the Australian Society for Dairy Technology, describes in detail the nature of the problem and the results of the cure.

Is it too much to hope for a similarly positive approach by the industry in this State?

Inadequate Milk Intake

At home, ten-year-old Tasmanian children drink inadequate quantities of milk. This fact came to light when state-wide dietary surveys were conducted. Table 1 shows survey findings in a cross section of Tasmanian primary schools during 1963, 1964 and 1965.

The figures indicate that the children in six schools had less than ½-pint of milk at home (range 3-9½ oz.), in four schools the daily intake was between ½-¾ pint (range 10½-11½ oz.) and in only one school, Ringarooma (situated in a prosperous dairy district) the intake was over ¾-pint (16 oz.).

Since 1954 at least five dietary surveys have been conducted each year in different areas of Tasmania, all of which confirmed the important contributions

to the children's diet which was being made by the Commonwealth Free School Milk Scheme. In many instances the one-third pint bottle of school milk brought a most inadequate milk intake up to a more reasonable level.

The efforts of many people were reequired to utilise this school milk efficiently. The Commonwealth Milk Liaison Officer played his part in competently organising supplies to all schools, however remote from a milk factory, or whatever the problem of transport. Teachers of the Education Department, who all receive nutrition lectures during their teaching education years, could not have been more helpful in the way in which they supervised the consumption of milk in their classrooms. Much credit is also due to the school sisters for promoting and encouraging milk drinking by giving talks to pupils about it and keeping a motherly eye on its proper storage in specially erected school milk shelters and in collecting consumption data relative to the number of children eligible to receive it.

TABLE 1

Milk intake at home of ten-year-old Tasmanian school children:—

School	Average intake at home	Time of survey
South Bruny	10½ oz.	November, 1963
Bothwell	9½ oz.	October, 1963
Branxholm	11½ oz.	October, 1963
Bridgewater	8 oz.	November, 1963
Derby	7½ oz.	October, 1963
Invermay	11 oz.	September, 1964
Molesworth	3 oz.	July, 1965
Reekara (King Island)	10 oz.	April, 1963
Ringarooma	16 oz.	December, 1964
Risdon Vale	7 oz.	August, 1964
St. Mary's	9 oz.	October, 1964

However, in spite of all these efforts not all children would drink school milk and during the diet interviews it became clear that the cream layer on top of the milk bottles was disliked by some children and that this discouraged them from drinking milk. There was a percentage of children who never drink school milk. An extra drop in consumption was noticeable during winter months when the proportion of children drinking school milk used to drop to 75 per cent. of those eligible.

Increased Consumption

Homogenized plain and flavoured school milk was introduced on a trial basis in Northern Tasmania in May, 1964. The immediate result was that school milk consumption increased by 1,835 one-third-pint bottles daily. As the normal daily requirement in this area during April was 777 gallons, the immediate increase was 10 per cent.

Furthermore, since a drop in milk consumption of at least five per cent. had always been experienced during winter, the actual improvement following the introduction of homogenized milk was approximately 15 per cent.

The improved school milk intake in the Northern area, encouraged Bakers Milk, Tas. Pty. Ltd., to instal the necessary plant and equipment in its Hobart factory also. Processing and supply of homogenized plain and flavoured milk to the schools in Southern Tasmania started in January, 1965. In July, 1965, a winter month, most pleasing results were achieved. Of the 29,340 children eligible to receive school milk, 29,241 or 99.66 per cent. were participating, compared to 75 per cent. in previous years.

Advantages of Homogenized Milk

Homogenization is the mechanical treatment of milk to reduce the size of the fat globules. The U.S. Public Health Service defines homogenized milk as milk which has been treated in such a manner as to ensure the break-up of the fat globules to such an extent that, after 48 hours' storage no visible cream separation occurs on the milk, and the fat percentage of the top 100 c.c. of milk in a quart bottle does not differ by more than five per cent. from the fat percentage of the remaining milk as determined after thorough mixing. Homogenized milk differs slightly from normal milk in appearance, aroma, flavour, palatability and digestibility.

The fat globules in homogenized milk are small and remain distributed evenly throughout the milk with no cream-line formation. This lack of cream-line improved the acceptability of the milk by school children. Appearance is also of great importance in selling flavoured non-homogenized milk as was learnt in two Tasmanian secondary schools. In Launceston where flavoured milk is sold in cartons and is not seen it has retained its popularity and has been sold for years each school day at the Brooks High School. At the Brighton Area School, on the other hand, it was found that although initially flavoured non-homogenized milk sold well, after a few months the school decided that there was no longer a market for it. The product, being packed in bottles did not look attractive or appetising because, since the milk was not homogenized, the components did not remain uniformly mixed for long but separated out. The coloured flavouring substance forming the bottom layer contrasted adversely with very off-coloured milk and cream layers on top. On the other hand flavoured homogenized milk retains its uniformity throughout its shelf-life. The palatability of homogenized milk has been favourably commented upon and it is generally considered its taste is "fresher" or "richer" and the digestibility improved because the smaller fat globules are more efficiently absorbed.

Factors Contributing to Acceptance.

Because many children disliked the cream "plug" in the bottles, consumer research by school and health personnel indicated that homogenization might increase the popularity of school milk, porticularly if it was flavoured.

Bakers Milk Tas. Pty. Ltd. provided milk and flavouring for acceptability trials. Teachers of the Education Department kindly recorded acceptability scores in their classes to test this out. These tests showed that homogenized milk was the perfect vehicle for flavouring.

The Milk Advertising and Publicity Committee of the Tasmanian Milk Board made a request for an impartial report to evaluate the advantages and disadvantages of homogenized milk. This would enable the milk company which had experimented with the acceptability tests of flavoured milk to assess the practical implications and cost factors of the homogenization and flavouring processes. The milk company decided that this scheme could be commenced provided complete backing of the Departments of Health Services, Education and Agriculture and of the dental profession could be obtained. The project was given whole-hearted approval by these bodies.

The composition of the flavoured milk is given in Table 2. The sugar content of the flavouring was to be kept as low as possible and amounts to no more than one teaspoon of sugar per one-third-pint bottle of milk.

After this advance work had been done, a lot of thought was given to the proper introduction of homogenized milk to schools. Teachers received special information folders from the Directors of Education and Public Health, supporting this new development and stressing that it was not intended as an alternative

to ordinary milk but rather to attract those children who do not readily take normal milk.

TABLE 2

Composition of flavoured milks—

Flavouring ingredients percentage W/V.	Chocolate	Strawberry
Sugar	1.9	1.9
Citric Acid	0.008	0.008
Colouring and Flavouring	0.15	0.28
Cocoa	0.420	—
Milk	97.657	98.064

TABLE 3

Information concerning the effectiveness of the Commonwealth Free Milk for School Children Scheme in all States—

State	No. of Schools	No. of Schools Participating	No. of Schools Not Participating	No. of Eligible Children	No. of Eligible Children Participating	No. of Eligible Children Not Participating
Tasmania	343	343	Nil	58,147	56,783	*1,364
South Australia	859	719	140	165,000	130,000	35,000
Western Australia	887	766	121	117,000	91,000	26,000
Queensland	1,336	?	?	224,000	183,000	61,000
Victoria	2,591	?	?	445,000	348,000	97,000
N.S.W.	2,990	?	?	603,000	470,340	132,660
All States	9,006			1,612,147	1,279,123	353,024

*Mainly N.W. Coast children. In this area the school milk is not homogenized.

State	No. of Schools	Potential Expansion per day gal.	Potential Expansion per year (205 School Days), gal.	Value of Potential Expansion at 6/- per gal. (excl. freight)	
				$	
Tasmania	343	57	11,685	7,010	(1965)
South Australia	859	1,458	298,890	179,334	(1964)
Western Australia	887	1,083	222,015	133,210	(1963)
Queensland	1,336	2,541	520,905	312,544	(1963)
Victoria	2,591	4,041	828,405	497,042	(1963)
N.S.W.	2,990	5,527	1,133,035	679,820	(1963)
All States	9,006	14,707	3,014,935	1,808,960	

A most attractive leaflet explaining homogenization in simple terms was produced by the Australian Dairy Produce Board and distributed to the children through the Department of Health Services and the Education Department. The children were instructed to take home the leaflets for their parents' information, while the Country Women's Association also organised the distribution of this leaflet to all its Tasmanian members. Special television news items featured the start of the programme, which was given generous publicity in the press and radio news.

As figures have shown, the experiment turned out very satisfactory. It seems important to stress that these results were not brought about by applying modern pressure techniques of team organisation, team thinking and group decisions, or by management skills or the manipulation of individuals until they agree. On the contrary, every person concerned was free to decide what was best and everybody in turn headed for the rudder. In terms of what the

"Comprehensive Dictionary of Psychological and Psycho-analytical Terms" describes as "co-operation," this was a co-operative situation in which the co-operators worked on a common task and each performed specialised activities. Each party felt that advantages were to be derived from the scheme, either financially, professionally or ideologically. Willingness to try out new ideas, adequate time to consider and solve the problems (four years), and some simple curiosity about possibilities, brought about results which exceeded the expectations of everybody concerned.

Financial Advantages

As Tasmania's population is only four per cent. of the total Australian population, doubts might rise in other States whether the cost of installing the required homogenization equipment and flavouring material could be absorbed by milk companies within the framework of the present price structure of the Commonwealth Free Milk Scheme.

Table 3 compares the possible expansion of school milk in each State and the potential financial rewards of these consumption increases. This information was compiled for annual reports to the various State Parliaments of each Education Department and from other sources. Most of these reports are incomplete and to produce the information cautious estimates were made based on the complete information available in Tasmania, South Australia and Western Australia.

The totals relating to the possible expansion are as a consequence possibly under-estimated. Most States have not produced 1964 and 1965 reports as yet, while the number of eligible children and the number of schools have increased and therefore the increased financial returns could very well be $2,000,000 per year.

If the system developed in Tasmania could be implemented in other States, viz., complete coverage of all eligible children, and an extensive sales campaign in the secondary and tertiary schools, as is to be launched in Tasmania on December 1, 1965, results could be achieved which would not only be satisfying to all interested in child nutrition, but exceedingly gratifying ot the dairying industries in all States.

JAPAN—SALES, SALES AND MORE SALES

Sales of Australian cheeses to Japan continue to grow at an extraordinary rate. Total cheese imported from all countries during the calendar year 1965 were as follows:—

	Tons
Australia	3,198
Norway	2,866
Netherlands	1,585
New Zealand	1,513
Sweden	251
Denmark	207
Italy	81
Finland	36
France	13
U.S.A.	7
Others	32
Total	9,789

It can be seen, therefore, that Australia still retains her position as number one overseas supplier in face of strong pressure from Norway.

It is estimated that during the next financial year 1966-1967, Australian shipments may exceed 8,000 tons.

Sales of Australian fancy cheeses including Gouda and Cheedam indicate a future potential for fancy type cheeses.

Statistics

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1965	1966	1964/65	1965/66	1965	1966
April	2,854	3,056	42,030	42,493	13,519	13,492
May	3,117	3,214	45,147	45,623	16,636	16,706

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1965	1966	1964/65	1965/66	1965	1966	1965	1966
April	1,706	1,761	16,755	17,482	59.8	57.6	27.60	28.74
May	1,765	1,786	18,520	19,268	56.6	55.6	25.62	27.50

Moving Average Quota for 12 months ended 30/4/66, 42.86%; 31/5/66, 42.82%.

INTERIM PRICES TO LICENSED SUPPLIERS

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

1966	Basic (per lb. butterfat)	C.M.B.	Total	3%	3.5%	4% (per gallon)	4.5%	5%
April	38.40	28.74	67.14	20.79	24.25	27.72	31.18	34.64
May	38.40	27.50	65.90	26.61	23.80	27.20	30.60	34.00

LONDON PROVISION EXCHANGE QUOTATIONS

(Sterling Currency)

	April		May	
	1965	1966	1965	1966
Butter—Choicest Australian	342/–	300/–	331/–	300/–
Cheese—First Grade Australian	255/–	225/–	245/–	225/–
Rindless Australian	265/–	260/–	260/–	260/–

The production in April, 1966, was again a record figure, 3,055,612 gallons compared with last year's record of 2,854,431, and exceeded 3 million gallons for the first time on record for April production, giving an average surplus of 49,000 gallons per day above the metropolitan daily requirements of 52,700 gallons. This production would provide a 10% margin above the estimated metropolitan requirements in 1987.

Safeguard your milk production with a McDonald 'Imperial' Milker

McDonald Milkers have built-in quality and provide all these important features:—

- ★ Solid Stainless Steel Milkway — rules out all possibilities of 'copper contamination'.
- ★ No 'Dairy Metal' or copper alloys used.
- ★ Exclusive 'UNIWELD' construction Releaser and Vacuum Tank ensures perfect hygiene.
- ★ Smooth polished contours — completely eliminates 'bug traps'.
- ★ McDonald Mastermatic Relay or Magnetic Pulsation systems — guarantee faithful, accurate reproduction of milking cycle to all bails.

Write in or ask your local representative for McDonald's free informative booklet "12 Principles of Machine Milking".

McDONALD *Imperial* **MILKERS**

A. H. McDONALD (SALES) PTY. LTD.,
299 Prospect Road, BLAIR ATHOL, S.A.
Country Rep.: J. Simmons
169 Shepherds Hill Rd., Eden Hills, S.A. 8815/S

THE CASE FOR THE QUOTA

At present a strong publicity campaign against the maintenance of table margarine quotas is being conducted through the Australian press, radio and television by an organisation interested in the possibilities of an extensive increase in the manufacture of this product. We feel that you as a member of the dairy industry will be interested in knowing **our** side of the story and in taking the **strongest possible action** to see that your own interests are protected.

We believe, as you undoubtedly do, that the State Government's action in restricting production of table margarine is vital to Australia's dairy industry and is therefore vital to the national economy. We believe that it is just as important, if not more so that the dairy industry continues to be protected against unfair competition which undermines the sales of one of its chief products.

The Quota—What Is It?

The quota to which these documents refer to is that which limits production of table margarine in Australia. Technically there are six quotas—one for each State—which when added together total 16,072 tons.

Why are there limitations on the manufacture of table margarine?

Basically for the good of the country. They protect a vital primary industry whose stability and prosperity is important to the national economy. They protect the dairy industry's key product—butter—from unfair competition from products being made from imported or inferior products that can sell at a lower price. Naturally the quotas are not acceptable to certain private manufacturers who are not concerned with the national economy so much as their own selfish interests. Some of these organisations are going to extraordinary lengths to break down the system.

Table margarine quotas were introduced simultaneously in each State at the request of the Australian Agricultural Council in 1940 under the State Margarine Acts. These Acts, which are uniform in each State, set down conditions for the manufacture and sale of all types of margarine. Manufacturers of table margarine are each allotted individual quotas within the overall total permitted. (There is no restriction on the manufacture of cooking margarine. Cooking margarine is defined in the Acts as "margarine which contains beef fat or mutton fat or beef and mutton fat in a quantity of not less than 90 per centum by weight of the total quantity of fat and oil contained in such margarine." Table margarine is officially defined as "margarine which is not cooking margarine".) The following are the State quotas as they stand at present. The quantities in brackets signify the original amounts set when quotas were first introduced in 1940. The amount of table margarine now permitted has risen by 304% since 1940. This compares with a population increase of 61% over the same period.

State	Present Quota (tons)	% increase (since 1940)
New South Wales	9,000 (1,248)	621%
Victoria	1,196 (1,196)	—
Queensland	4,236 (645)	557%
South Australia	528 (312)	69%
Western Australia	800 (364)	120%
Tasmania	312 (208)	50%
TOTAL	16,072 (3,973)	304%

SOYA BEAN MEAL AS A SOURCE OF PROTEIN

Twenty-five years ago high protein feeds amounted to only 3 or 4 per cent. of all concentrates fed in North America and Europe. Today high protein feeds constitute more than 10 per cent. of concentrates fed, with over one-third of the total going to the poultry industry, followed by dairy cattle, pigs and beef cattle.

But even so, less protein is still generally fed than is recommended in standards of nutrition, even though we come much closer to feeding adequate amounts than we did 20 or 30 years ago.

A relative newcomer to the field of high protein feeds in Australia is soybean meal, although it is widely used in other countries in the feeding of pigs and dairy and beef cattle.

Soybeans are processed by three methods, the screw press and the hydraulic being the two older. Solvent extraction is the newer method and now accounts for about 95 per cent. of total production of meal. There are few hydraulic mills still operating on soybeans.

The solvent extraction process is used to make 44 per cent. and 50 per cent protein meals. With the 44 per cent. protein meal, the hulls are retained. With the 50 per cent. protein meal they are removed.

Soybean meal is not a rich source of vitamins, although, because of its extensive use in feeds, it does contribute significantly to meeting many of the vitamin needs of non-ruminants and young calves, nor does it provide minerals in any quantity other than phosphorus, of which it is a fair source.

But provided the mineral supply is adequately maintained, satisfactory and economical rations for dairy cattle, particularly high producing cows, have been formulated using the soybean meal as the only high protein ingredient. It has been fed at levels as high as 18 pounds daily per cow with complete safety.

WHAT IS AROUND THE CORNER?

As we go about our daily business some of us build castles in the air, some day-dream and others perhaps take life in a philosophical manner, prepared to go with the tide, not worrying of what the future may have in store for them.

All of us would be very happy to receive a windfall from a lottery and certainly none of us would wish to be confronted with tragedy or financial loss.

Insurance Companies, over the years, have in no small manner become a comforting friend, holding out the hand of friendship at a time of sorrow and loss.

An insurance policy is not a cure for or a guarantee against disaster, but it is a relieving agency of worry and financial burden resulting from the unfavourable turn of the wheel of fortune.

How would you be placed if an unexpected accident prevents you from working your farm? What would you do?

At the very least, the farm work must be trusted to others, usually involving additional and expensive hired help.

WHATEVER RECOURSE YOU TAKE YOU ARE NEVERTHELESS GOING TO SUFFER SOME FINANCIAL LOSS.

The special personal accident policy designed for the farmer can afford some alleviation of your loss.

Your special personal accident policy is available to you from The Federation Insurance Ltd., the all-Australian company recommended by your Association.

Contact them now while you are thinking about it!

SITUATION WANTED

PREFERABLY FOR FATHER AND SON

20 years general and dairy farming experience, married (five children), seeks dairy farm position where 15-year-old son can also be employed. References available. Telephone in the first instance, this office, 51 3034.

BULK MILK HANDBOOK IN DEMAND INTERSTATE

The Handbook on Refrigerated Bulk Milk Transport and Storage, which was published as a supplement to the Sept.-Oct. issue of this Journal, has created considerable interest interstate, where it was described by one authority on bulk handling as "the most comprehensive publication available."

The value of the Handbook can be judged by the number of repeat orders that were placed by dairy factories in the eastern States, quantities of up to 20 at a time being purchased by some companies.

It is perhaps, unfortunate that South Australian factories were considerably more moderate in their reaction.

COPIES ARE, HOWEVER, STILL AVAILABLE FOR SALE FOR 30 CENTS, POST FREE, on enquiry at this office.

VERSATILITY IN FODDER PROCESSING

The big problem facing the farmer who tries to feed his dairy cattle scientifically is how to handle and prepare correctly balanced rations in view of the great fluctuations in the availability of the various classes of basic materials.

The processing of each class of material in a way that provides optimum assimilation and hence maximum economy, plus the necessity to admix the processed materials and to add the desired supplements in correct proportioning, requires specialised equipment with the ability to handle the materials and to cope with the many variations in the conditions of the materials, and many farmers have found that traditional equipment has shortcomings that lead to wasted time, wasted fodder and eventual monetary loss. Recognition of these failings, backed by engineering research of a high order, has led to the development of a range of processing equipment which is capable of handling each class of basic fodder in the most satisfactory way and provides the wherewithall to produce balanced rations from the widest possible range of fodder material.

The equipment, manufactured by the American company, Wetmore, Incorporated, and widely used throughout America and other countries of the world, has now become available to the Australian farmer through a South Australian agency, which, having seen the rapid spread of Wetmore machinery elsewhere, recognized the need for its adoption here, and set in motion the establishing in this State of a company to be known as Wetmore Proprietary Limited, for the manufacture and assembly, in conjunction with a number of other local industries, of the Wetmore range of stock feed mills and grinder-mixers.

No Limitations in Feed-Mills

The feed-mills are designed to be a combination of hammer-mill ensilage chopper and blower, with the operative components of hammers, knives and vanes all combined in a single assembly that serves as the rotor.

There are three models of feed-mills, the smallest of the range being known as the "Little Dilly," the intermediate is the "Glutton" and the largest the "Clipper," and although they vary in size they all possess the basic features intended by their inventor, Ernest Wetmore, of versatility with one-man operation. Each model is capable of providing any stock feed requirement. For example an attachment enables molasses or other additions to be injected into the mill at a regulated rate during milling, an achievement that is of great value and represents a triumph of applied design.

The one-man aspect of operation is highlighted by a number of other attachments which can be added to standard mills, including self-feeders, comprised of an elevator which picks up from ground level and delivers to an auger which force feeds material into the mill, extension chutes (delivering to a height of 50 feet in the case of the "Clipper") and dust collectors, which can be quickly positioned for left, right or centre discharge, and extended with a long track for bin filling.

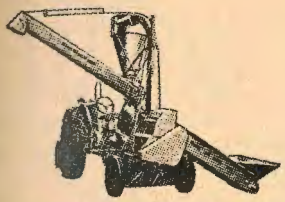
Where fodder is transported on trucks, it may be fed direct to the mill from the tailboard by the "Drag-Feeder."

Delivery is also simplified by a collector-auger which delivers up to eleven feet from the mill.

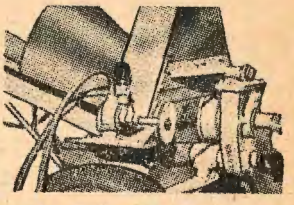
All accessories are transportable with the mills, and a magnet for extracting wire and other iron particles provides a worthwhile safety innovation.

Grinder-Mixers

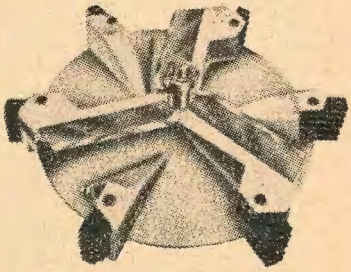
Using either of the two larger feed-mills, Wetmore engineers have developed "Grinder-Mixers" that enable farmers to grind grains, chop hay and incorporate minerals and other additions in one operation and haul the prepared feed-mix direct to the feeding point.



Mill Equipped with Self Feeder and Auger



The Unique Molasses and Additive Attachment



The Single Plate Rotor

For dairy farmers the particular interest in grinder-mixers lies in their ability to prepare a coarse feed and to incorporate high moisture content hay, whilst fine meals for poultry and pigs are just as readily produced when required.

Hay Mills

The production in this State of the Feed-Mills and Grader-Mixers is well advanced, and will be followed by Hay Mills, capable of grinding up to five standard bales per minute, and a range of Roller Mills, Burr Mills and Roller-Mixers.

Special Features

As well as the one-man operation, by which the farmer can operate all controls from the feeding point or from the tractor seat, the units have been specifically designed for efficient processing without the production of excessive quantities of fines. Hammers impinging on braker bars crush the grain, knives chop the hay (dry, wet or green), and air ducts built into the single rotor unit provide for air induction and discharge so that the feed follows the air stream in, up and out of the mill.

This arrangement with a screen located above the rotor, renders the feed air-buoyant to the screen until it is reduced to screen size, avoids reworking sediment and provides clean, dust-free samples and permits the handling of high moisture content feeds.

Belt Problems Eliminated

Except for "Little Dilly," which is designed primarily for use with stationary engines or electric motors, Wetmore Mills do not use belts, but are driven through a patented gearbox with a shock-drive coupling that eliminates tractor pulsations and maintains constant drive speed without slip.

The Feed Mills are adequately safeguarded, with safety sleeves on p.t.o., shear pins on drive shafts, and safety devices on the rotor shafts that protect knives and mills against foreign material.

The Australian agents are Primary Implements Pty., Ltd., 203 Hanson Street, Adelaide.

HOW MUCH MASTITIS?

In the article written by the Department of Agriculture's Senior Veterinary Research Officer (Mr. Martin Dobson) and published in a recent issue of this Journal under the title "Let's be Sensible about Mastitis," it was stated that a programme for eradication must be preceded by a survey of the incidence of mastitis throughout the dairying districts of the State, with an intelligent attempt to assess the cost of mastitis to the industry, and reference was made to the survey being made in Western Australia as a precursor to an eradication campaign.

The preliminary report of this survey has now been published. The real meaning of the survey will not be clear for some time, but the findings already made indicate how big is the problem to be tackled in Western Australia.

We have no reason to suppose that conditions in this State will be any better, and the possibility of a similar survey should be receiving attention **now!**

SURVEY OF BOVINE MASTITIS IN WESTERN AUSTRALIA

Some Comments on Preliminary Findings

(By M. R. Gardiner and E. Munch-Petersen)

The survey of the incidence of bovine mastitis in 100 dairy herds in W.A. has been completed. As has been stated previously, the opportunity was taken to obtain simultaneously with sample taking of milk, information on husbandry methods, on milking machine efficiency, on the clinical status of the herd and on the health of the operators. These various items gave rise to a number of questions, the answers to which, coupled with the results of field and laboratory examinations, yielded over 400 items of informatoin for each farm.

The grand total for all farms should (i) give us a picture of a cross-section of the husbandry practices and methods, etc., adopted by dairy farmers in both whole milk and butterfat areas, and (ii) provide reliable information on the udder health of a fair cross-section of dairy cattle, including causal organisms of mastitis.

However, since a total of some 18,000 individual items of information now need to be correlated and interpreted, some time must elapse before the information can be tabulated, digested and presented in a meaningful way.

Meanwhile, some preliminary observations on some readily obtainable items can be presented. Rather more than one half of all herds were described by the Agricultural Advisers as being "Fair" or "Good" in respect of hygiene in shed practices and equipment.

Checks on the milking machines revealed that more than one-half were not working at their optimum.

The average number of cows in herds was 45.

About one out of every four cows was culled every year. The most common reason for culling given by farmers was low production, followed by mastitis; together they accounted for over 70% of the total number culled.

Whereas most farmers recognised clots in the milk or swelling of the udder as signs of mastitis, very few accepted hardened quarters as a sign or looked for them. The strip cup was rarely used as a routine measure for detection of mastitis.

Two out of every five cows yielded abnormal milk or had one or more quarters with clinical abnormalities or both. Of potentially pathogenic organisms, the **staphylococci** alone was found in milk from one out of every three (33%) in combination with streptococci in one out of about every 35 cows (nearly 3%); whilst streptococci alone were found in one out of about every 25 cows (4%). For mammary quarters the figures were: for staphylococci one out of about every five (20%), streptococci one out of every 45 (about 2%).

One out of every 20 quarters yielded milk with high cell counts, but no potentially pathogenic organisms; in one-fourth of all these no organisms whatever could be found, but the remainder yielded either micrococci or diptheroids or both.

In four herds antibiotics were rarely ever or never used. The milk from cows in these herds yielded streptococci, mostly **Str. agalactiae** and their incidence in quarters ranged from 15% to 50%. In all other herds, where antibiotics, usually penicillin alone or with streptomycin, were used, staphylococci predominated.

When the incidence of (i) clinical signs, or (ii) milk with a high cellular or microbial content or both was determined in various fractions of same of the herds sampled, it was found that this relationship varied considerably. In some herds the first and last fourth of four fractions had an incidence of similar magnitude, in others the incidence was higher in the first than in the fourth fraction. This will be more closely examined to assist in obtaining a better understanding of the spread of infection in a herd.

Most owners made no attempt to prevent the spread of bacteria by the teat cups, e.g., by dipping them in water with or without sanitizer. Even where dipping was practised, the method was judged not to be efficient.

Phage typing of the staphylacoccal strains recently obtained revealed that a relatively high proportion was typable with the "bovine phages" obtained from Queensland. However, strains from some herds were untypable by any of the phages used.

Heifers up to about two years of age kept in the national herds of advanced dairy countries usually constitute some 40% to 50% of mature cows, i.e., those lactating or dry, after having experienced at least one lactation. In W.A. the figure is about 75%.

The **average** age of cows in a **section** of the herds which we examined was 4.5 years for cows in wholemilk areas, 3.7 for those in butterfat areas. Yet, the average age at which maximum production usually occurs is generally given as about 6 to 7½ years. Less than 15% of the cows in a fraction of the herds we examined, **on the average,** reached such an age.

It will be clear, then, that an economic loss of some considerable magnitude is involved, when—**on the average**—(i) all members of an ordinary dairy herd are replaced every five years, mostly due to low production and mastitis, (ii) about 75% of heifers 1 or 2 years old or older are kept as replacements (cost of rearing and losses through diseases, etc., cannot be estimated), and (iii) only a small fraction of the milch cows in W.A. reach the most productive stage of a cow's life.

ACTION BY QUEENSLAND BUTTER BOARD RESULTS IN CENSORSHIP OF MARGARINE ADVERTISING

The Queensland Butter Board has had a significant victory in its efforts to curb the objectionable and misleading promotion claims of the manufacturers of margarine in the relation of poly-unsaturated fats in the human diet. In future, margarine advertising and publicity copy will be censored by the Australian Newspaper Council's Advertising Board before approval is given for publication.

The decision of the Australian Newspaper Council followed protests made on two occasions last December by Mr. G. W. Coombs, general manager of the Q.B.B., says a report in the last issue of the "Queensland Dairy-farmer," official organ of the Q.D.O. Mr. Coombs drew attention of the Newspaper Council to margarine advertisements which linked consumption of animal fats with cholesterol build-up and heart disease.

The newspaper report says that Mr. Coombs has been advised by the Australian Newspaper Council secretary (Mr. B. G. Osborne) that, because of the deal of contradictory evidence available in respect of butter and other products, such as margarine, the Advertising Board considered it necessary to consult with the Commonwealth Health Department to ensure that all aspects of this important matter were investigated.

COUNCIL DECISION

Mr. Osborne said that the council had decided:—

- **As from January 15, 1966, all advertising of animal and vegetable fats (margarine, vegetable oils, dairy products and foods, etc.) would be subject, to censorship in accordance with the A.N.C. rules covering such advertising.**

- **As from January 31, 1966, all advertising copy already approved would become subject to censorship reconsideration for the purpose of any amendments necessary in line with the censorship decisions arrived at by those responsible for such activities in respect of the metropolitan press, radio and television. It would be necessary to submit amended copy for consideration at least seven days before January 31.**

SECTION MUST BE DELETED

- **The advertisement featuring Marrickville Holdings Ltd., headed . . . "Who put the safflower on your toast and marmalade? . . ." and keyed 27.69 (about which Mr. Coombs had written on December 22) would not be accepted in member newspapers again unless the section of copy wording was deleted, which read:—**

". . . Precious oil that cuts down saturated fats in the diet and helps control blood cholesterol levels. You may be using it now, having read that medical research has linked clogging and choking arteries with high blood cholesterol and an excess of animal (saturated) fats in the diet. . . ."

"It should be explained that the Advertising Board was concerned to note

the reference referred to and no censorship approval was held for the inclusion because, as I informed you over the telephone, the newspaper space was booked for an 'institutional' advertisement," Mr. Osborne told Mr. Coombs.

"The company and its advertising agency personnel considered that censorship was not required because of this, although they since have been very definitely informed of the actual position.

"Action has been taken on the advertisement, of which you wrote about on December 15 to the Advertising Board, and, indeed, other similar advertisements in respect of the product margarine."

DAYLIGHT SAVING

Although this proposal has been rejected in the past, it recurs periodically. The Association's opposition to the proposal has been communicated to the Acting Premier in the following letter:—

30th May, 1966.

The Acting Premier,
Parliament House,
North Terrace,
ADELAIDE.

Subject: "Daylight Saving."

Dear Sir,

The South Australian Dairymen's Association has, on several occasions in recent years, considered the subject of so-called "daylight saving," and on each occasion has confirmed its opposition to the adoption of the proposal.

This opposition does not stem from any innate conservation but from the very real hardships that would ensue. At present the farmer awaits the onset of the longer days in the knowledge that they will bring him relief from the drudgery of performing a substantial portion, if not all, of his milking routine in the dark, at each end of the day. Under "daylight saving" this relief would be denied to him in the morning, at least at the onset and the decline of the "daylight saving" period, and in the "evening" he would, if he wished to preserve a uniform and satisfactory interval between milkings, be forced to milk his cows at a time when the temperature was still high and conditions were unsatisfactory for either the movement of cattle or the storage of milk.

Whilst it may be argued that dairyfarmers, being only a small group, could adjust their working times to offset "daylight saving" it must be realised first that morning milking times are scheduled to suit dairy factory operations, in which the employees would, doubtless resist any variation from ordinary factory times, and second, that the dairyfarmer has also a social and o family life which requires that his working times be such that he can associate with his family and his friends at what, under "daylight saving" would be normal times.

The Association emphasises that whilst a change of the amount envisaged in the relation between clock-time and sun-time may seem small, it must be realized that the greater part of South Australia **already practises "daylight saving,"** as the meridian on which Central Standard Time is based is located **east of the South Australian border** and hence gives to Adelaide a perpetual daylight saving of 16 minutes, and to South Australian dairyfarmers a handicap that is not suffered by their colleagues in the Eastern States, where clock-time is actually behind sun-time in the environs of their capital cities.

Yours faithfully,

DAVID J. HIGBED,
General Secretary.

DAIRY PRODUCE BOARD URGES MORE CHEESE

Although the market for Australian (and other) cheeses in the United Kingdom has been slow during recent months, exports to other countries and prospects of increased demands from world markets has caused the Australian dairy industry to look for increased production of cheese.

Negotiations are currently being conducted with the United States, and, with the relaxing of trading restrictions imposed during periods of surplus production, the General Manager of the Board, Mr. E. B. Gilbert, said that it was possible that the United States would be taking substantial quantities of cheese from Australia if such were available. Shipments to the United States have for the past few years been restricted largely to Colby cheese, which is unobtainable locally.

Prospects of shipments of other dairy products to the United States are also under consideration.

CANADIAN BUTTER CONSUMPTION OUTSTRIPS PRODUCTION

For the second year in a row Canadian butter consumption has been higher than production.

The 1964 output was about 352 million pounds, which meant a deficit of five million pounds.

In 1965 the deficit was even greater with preliminary figures indicating a deficit of 22 million pounds. Butter production in 1965 was about 16 million pounds below the 1964 rate.

Because of these deficits, Canadian butter stocks have been drawn down to about 90 million pounds. The government has increased its selling price of creamery butter by 1.85 cents a pound to 52.73 cents in an effort to forestall a wider production-consumption deficit in 1966—I.F.A.P. News.

CONFLICT IN N.S.W. MILK TRADE

The dairying region on the North Coast of New South Wales has become increasingly insistent that it be given a share of the whole milk trade controlled by the N.S.W. Milk Board and at present confined to producers in the Milk Zone.

With Milk Zone farmers seeking a price rise based on drought-caused cost increases, North Coast farmers claimed that they could supply milk at the current price without an increase, and that a 10% share of the milk market should be granted to them.

Their submissions were disregarded by the Milk Price Enquiry Committee and the committee's report to the N.S.W. Government resulted in a 1 cent retail price increase to 11 cents per pint, with no supply from outside the present zone.

North Coast farmers are now reported to be working on a plan to break into the Sydney market within a month, and are beginning an advertising campaign, inviting metropolitan consumers to buy North Coast milk at the old price of 10 cents.

TOP RATED TV PERSONALITY TO BOOST DAIRY PRODUCTS

Well-known TV personality, Graham Kerr, whose light-hearted and entertaining programme on cooking has attracted a following of thousands of Australian viewers, will support the industry's promotion by personal appearances at State Bake-Offs, endorsement of the Board's general advertising, plus of course, his own commendation of dairy foods on his programme.

Reporting on this new association, the Australian Dairy Produce Board's Advertising Manager, Mr. G. W. Waye, said that the industry would welcome the support of this popular food and cooking expert. The association will obviously be no hardship for Mr. Kerr as he is a self-confessed devotee of dairy products and has always lavishly used and generously praised butter and ghee on his programme.

Members and friends of the industry are urged to give themselves an entertainment treat and to see dairy products promoted par excellence by tuning into Graham Kerr's programme.

RUSSIA No. 1 MILK PRODUCER

Russia has taken over the lead as the world's largest milk producer.

Production in 1965 is estimated at 127,880 million pounds. This is about 2,000 million pounds more than United States output. Hitherto, the U.S. has been the world's number one milk producer.

The third biggest milk output comes from France with 56,750 million pounds. West Germany is fourth with 46,740 million pounds.

Other major milk producers in 1965 include: United Kingdom, 29,635 million pounds; Poland, 27,880 million pounds; Italy, 19,455 million pounds; Canada, 18,345 million pounds; the Netherlands, 16,100 million pounds; Australia, 14,825 million pounds; New Zealand, 13,135 million pounds; Brazil, 13,960 million pounds; East Germany, 12,125 million pounds; Denmark, 11,765 million pounds; and Argentina, 10,215 million pounds.

Substantial drops in 1965 milk production compared with 1964 occurred in Hungary, Rumania, Argentina, Chile and Australia. Sharp rises occurred in Mexico, Belgium, Ireland, Switzerland, United Kingdom, Czechoslovakia, East Germany, Russia, Japan, Brazil, Colombia, Venezuela and New Zealand.

COMPUTERS SPEED UP FARM MANAGEMENT

With interest being shown in the formation of farm management groups in the dairying districts, particularly in the Central Hills and the Inman Valley area, where plans for the formation of clubs are well under way, it is timely to report that what is claimed to be the first commercial computerised farm planning service in the world has just been launched by a British company with the aim of providing an increased profit level for farmers.

The firm has set up a national service after completing a two-year pilot scheme covering 18 East Anglian farms averaging 563 acres.

The pilot scheme showed profits up by as much as 100 per cent.—calculations taking two minutes instead of two years.

The service is based on technical information and financial data on a farm's operation, which is collected by a specialist consultant.

This is programmed and fed into a computer which provides answers on the exact policy that should be adopted for type and rotation of crops, how big they should be, how many men and what type of machinery should be used, together with how much profit can be expected.

A report, which analyses the farm in the smallest detail, is prepared by the consultant and includes a discussion and appraisal of specific problems. The report also includes a choice of up to 20 plans for different circumstances and a discussion of what is considered to be the most appropriate plan.

Two of the company executives have degrees in agricultural economics, farm planning studies and linear computer programming studies, and a third is a business man who farms 540 acres in Northern England.

ROCK PHOSPHATE AS A FERTILIZER

The Association has, for some years, been seriously concerned by the threat posed to primary producers in Australia by the diminishing supplies in the Pacific area, of phosphate rock of a quality suitable for processing as superphosphate, and by the failure to find further sources of sufficiently high quality, and because the diminishing supply has been accompanied by increased prices, we have made considerable enquiry into the possibility of using ground phosphate rock instead of superphosphate.

The use of rock phosphate of a grade lower than that necessary for superphosphate would, we believe, enable us to conserve the higher quality material, but being of a lower quality, this could only follow if it were attractively priced in relation to the subsidized superphosphate.

The advice we have received, as the result of our enquiries, from C.S.I.R.O. and other authorities is that "rock phosphate has been shown to be of value on certain acid soils, with increasing value relative to superphosphate after a number of years", but that this is not always so, and before any real conclusions can be drawn as to the possibility of using rock phosphate as a substitute for super "there is a pressing need for further research."

Research will take money, and time, and it would be foolish to make any statement that would imply that rock phosphate should be used here and now as a replacement for super which is at present in short supply and likely to be dearer in the near future.

Caution is necessary, and although there is no reason why farmers should not experiment, they should do so only after fully considering what is known about rock phosphate at present, and in order that our members may be informed we publish an assessment of the present state of knowledge, as seen by two authorities in this field — Professor C. M. Donald and Mr. J. K. Powrie, of the Waite Agricultural Research Institute.

From time to time interest has been shown in the possibility of using rock phosphate as a fertilizer in South Australia. At present almost all the phosphatic fertilizer applied in Australia is superphosphate, whereas in other countries appreciable amaunts af rock phosphate are used. In the United Kingdom, for example, eight per cent. of the phosphatic fertilizer used is rock

phosphote. It is, therefore, worth while considering whether rock phosphate has any useful role on Australian soils.

Rock phosphate occurs as a natural deposit in many parts of the world. The bulk of Australian supplies are drawn from Nauru, Ocean and Christmos Islands where the rock is of high quality. More recently this supply has been supplemented on a considerable scale with imports from the U.S.A. and other countries. There are very small deposits of rock phosphate in South Australia, but these are of lower grade than the material imported for superphosphate manufacture.

Rock phosphate will not dissolve in pure water. Over a hundred years ago two British scientists, Lawes and Gilbert, of the Rothamsted Experimental Station, invented a process for the treatment of rock phosphate with sulphuric acid. This process converts the insoluble calcium phosphate of the rock to a soluble form, giving the commercial product we know as superphosphate.

Superphosphate contains about 10 per cent. phosphorus (commonly 9.6 per cent. in Australia) nearly all of which is soluble in water, and about 10 per cent. sulphur. Rock phosphate may contain variable amounts of phosphorus depending on its source and degree of refinement; the imported rock phosphate usually contains about 16 per cent. phosphorus. It is important to remember that rock phosphate does not contain sulphur which is known to be deficient on many Australian soils.

If we now compare the performance of the two fertilizers we find that rock phosphate has generally given extremely poor initial responses compared with superphosphate. Experiments carried out on soils in the Adelaide hills, on Kangaroo Island and in the South-East have all shown that rock phosphate has negligible value when applied broadcast to virgin soils. In a recent experiment in the Upper South-East for example, it was found that one ton of finely ground rock phosphate was needed to give the same effect as one hundredweight of superphosphate.

In some experiments, however, pastures topdressed with rock phosphate, although initially showing very poor response, have gradually improved until they are as good as those topdressed with superphosphate. For example, in an experiment on the topdressing of notural pasture at the Waite Institute, rock phosphate was little better than the untreated plot in the first three years of treatment, whereas a marked response to superphosphate occurred. However the difference between the two fertilizers decreased as topdressing was continued. After ten years the rock phosphate plot yielded as much per annum as the phosphate plot and thereafter more. The explanation for the change would seem to be partly due to the accumulation of a sufficiently large amount of residual phosphate in the soil and also to an actual improvement over a long period of years in the availability of the phosphorus compounds supplied in the rock phosphate.

We know of no situation in South Australia in which rock phosphate will give responses comparable with superphosphate during the early yeors of application. After applying rock phosphate for a period of possibly from five to ten years, the level of production may improve on some soils to equal that of superphosphate. On other soils, however, rock phosphate does not give satisfactory yields even after long periads of use.

The evidence suggests that the use of rock phosphate on most soil types in South Australia is at present a very doubtful economic proposition compared with superphosphate. Nevertheless, experimental work is continuing to see whether rock phosphate may have a useful role on some soils with special methods of fertilizer placement.

THE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

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THE SOUTH AUSTRALIAN DAIRYMEN'S JOURNAL

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"A CONSTRUCTIVE YEAR"

General President's Annual Report

Production and Prices

The Australian dairying industry is at this moment passing through a period of uncertainty and change from which it will emerge with undiminished strength and greater prosperity only if wise counsels prevail at all levels of the industry, and we in South Australia are fortunate that, at such a time, we have been spared the burden of drought that continues to harass our colleagues in the eastern States and have, through the work of this Association, been able to make advances in some aspects of the industry.

Although the rainfall, both during the past year and in the new season, has been well below average in most regions, it has been sufficient to enable dairyfarmers in the Adelaide milk supply area to continue, for the sixth year, their run of production records by producing a total output of 49,151,000 gallons, which represents an increase of over 60% during that period.

Sales of liquid milk have risen, in step with the growing population, and with the assistance of sales outside the metropolitan area, by an unprecedented annual increase of 761,000 gallons, to the record total of 21,000,000 gallons, an amount that exceeded the increase in output and so halted the decline in the ratio of consumption to output, which rose during the period under review from 41.62 to 42.74 per cent.

This increase is, however, too small to affect the financial position of the dairyfarmer, or to counter the rise in production costs, and the Association, being alert to the need to take every step possible to prevent further decreases in farm income, submitted to the Milk Board in September last a proposal for the inclusion in the production cost survey of provisions to offset the continued inflationary trends. These provisions were accepted by the Board and later formed the basis of a case for an increased return to the producer which was subsequently incorporated into the revised price structure resulting from the conversion to decimal currency in the form of an increase in the producer's price of 1.7 cent per gallon, bringing the increases gained by this Association for licensed suppliers since 1959 to 6.7 cents. per gallon out of a total of 8.7 cents rise in the retail price.

The Cheese Situation

With well over half our produce being used for the manufacture of cheese it is gratifying to be able to report the satisfactory market position of that product.

Consumption in Australia has continued to increase and now stands at more than 7lbs. per head to account for almost 60% of total production, and there is every possibility of further increase, particularly in view of the emphasis that is now being placed on the production of cheese of high quality, such as rindless cheddar, for which there is, at home and overseas, a growing demand.

This demand is particularly clearly seen in the United Kingdom, where, although the price for waxed cheese has declined during the year by 20/- cwt. to 225/-, the price for rindless cheese has remained very firm at 260/-. Unfortunately in other States the drought conditions and the difficulty of meeting quality standards have halted the rate of increase in cheese production which has continued over the last seven years, and shipments to the United Kingdom during the year were nearly 7,000 tons lower than in 1964-65.

In markets outside the United Kingdom the position is most encouraging with sales exceeding by 4,000 tons the previous year's total to reach a record 15,000 tons. Of this Japan accounted for more than 4,000 tons and it is forecast that shipments to Japan will be doubled during 1966-67.

In view of the market situation for cheese the Commonwealth Dairy Produce Equalization Committee Limited has nominated an interim opening value which will return to licensed producers in the Adelaide milk supply area an interim basic price of 36.8 cents per pound butterfat, which is the highest since 1954, and is 1.4 cents above the opening price in 1965.

It can give us little comfort, however, to go back 12 years for a comparable price when we consider the decreased purchasing power and the higher costs that prevail today, and although the increased output that has followed the dairyfarmer's pursuit of greater efficiency and productivity has enabled him to continue in the industry despite cost rises he has not shared in the higher incomes that have been gained by the work force in the rest of the economy.

For this reason we must strive at all times to counter any factors that may further reduce our income, such as the growing volume of imported cheese which has increased threefold in five years to a wholesale value of four million dollars.

As befits our position as representatives of the Commonwealth's second highest cheese-producing State we have consistently supported the proposal for an increase in the rate of tariff protection for cheese from the present 5.8 cents per pound (which, when it was originally set in 1927, represented almost a prohibitive tariff), to a level more in keeping with current values. In the three years since this proposal was first mooted we have been disturbed and disappointed at the apathy exhibited by the cheese manufacturers who, almost without exception, failed to supply the support or the evidence that was required, even up to the point where a Tariff Board Inquiry had already been arranged. It is consequently gratifying to be able to report that an adequately supported case has now been submitted to the Tariff Board for an increase in duty to 25 cents per pound.

However, it is not only the financial aspect of cheese importation that is causing concern to the Association; we are disturbed also by the health hazards that imported cheese may introduce, both to the human population and to domesticated animals. Whilst the countries to which Australian cheese is exported impose stringent requirements for the quality of our produce no such requirements exist for the cheese which is imported into this country, and which could be the medium for the transfer of disease organisms which would be unpleasant enough for humans but would, in the case of some of the stock diseases endemic in the countries of origin but not yet introduced into Australia, spell virtual ruin to many of our rural industries. Here, too, this Association has played a leading role, and, with the support of the officers of the Depart

ment of Agriculture, has endeavoured to convince the Commonwealth Department of Health of the existence of this hazard, and I am pleased to be able now to report that on 8th July, 1966, regulations under the Quarantine Act were gazetted requiring all imported cheese to be furnished with a certificate of pasteurization and a phosphate test report issued by a government veterinarian in the country of origin.

We would, however, be inconsistent if, recognising a world trend towards higher quality standards for cheese, and ourselves demanding higher quality in imported cheese, we did not make some move towards lifting the quality of cheese available to the Australian public. However buoyant the export markets may be, the domestic market still yields the greatest return to the producer, and we must not allow this return to be inhibited by the unsatisfactory quality of the cheese available. That there are wide variations in the quality of Australian cheese, that it is often impossible to buy cheese to one's taste, and that there are grave shortcomings in the descriptions, where such exist, of the cheese that is sold, cannot be denied, and it must be admitted that action which would have the effect of improving the quality of cheese and providing some form of descriptive identification could not fail substantially to increase domestic sales, and hence the return to the dairyfarmer. The Australian Dairyfarmers' Federation has submitted to the Australian Agricultural Council a request for action towards this end, and we await its outcome with interest.

The Butter Situation

Although the concern of most of our members is with cheese, the position of the butter section is of no less importance because of its effect on the well-being of the dairying industry as a whole, and the declining consumption in Australia, the depressed prices on the export markets and the possible breakdown of the margarine quota legislation are equally our problem.

There is little doubt that changes in dietary and social habits have been the main causes of a reduction in the level of butter consumption and the Australian Dairy Produce Board has directed the greater part of its promotional activities to countering these changes and towards restoring butter to its place on the table and in the kitchen. If this promotion can be supported and enhanced by the butter manufacturers giving to their product the attention in packaging and displaying that is demanded in modern merchandising, the decline may be arrested and even reversed.

But such a trend will hardly be possible if the situation relating to margarine is not resolved. Although the "morality" of the quota legislation is questioned not only by the interested party but also, unexpectedly, by a group of economists who have not in the past, to our knowledge, raised their collective voices on ony other "moral" aspect of the economy, the undoubted facts of the case are that the law has been knowingly flouted, and flouted often, that misstatements, half-truths and innuendoes have been used to engender in the public an attitude concerning the relation between certain fats and heart disease, and that this attitude has, by implication, been applied to the other types of margarine which in volume far outweigh the production of the poly-unsaturated variety, and which if there were any truth in the contentions, would be just as harmful as butter is claimed to be.

But in all this campaign, there has been no mention by any participant, of the fundamental truth, which is this, that by subtle advertising and sophisticated merchandising there has been foisted on to the public a counterfeit "butter"; a product that relies for its sale on the fact that it is made and packed to resemble butter, and that would, if the law required that it be sold in its natural form without spurious colouring, lose almost all its appeal, despite its lower price, and although in South Australia we have for so long prided ourselves on the imagined impregnability of our quota legislation on table margarine, we must realise that these strictures apply with equal force to cooking margarine, which, being outside the scope of the table margarine quota, has had the effect of reducing butter consumption per head in this State to the lowest in the Commonwealth.

Whatever may be the outcome of the Australian Agricultural Council's review of the margarine position, the dairying industry is firm in its attitude that to increase the quota to embrace the illegal production would be to run the risk of encouraging further illegality. To this policy we might well consider adding the subject of colouring, in the belief that whatever eventuates in the way of quota legislation, all margarine for table and cooking should be marketed "under its true colours."

But apart from promotion and the control of substitutes is there any positive action that the industry can take to improve the domestic sale of butter and lift the income of the dairyfarmer?

Although we would not claim that no improvement can be made in the manufacturing and marketing of butter we do not consider that the improvements in methods and efficiency that could be made would be of such magnitude as to be capable of bringing about ony worthwhile reduction in the price of butter, particularly when it is realized that **the price of butter in Australia is lower than that in any other major dairying country except New Zealand.**

I believe that a more practical answer can be found in a statement made in 1964 by the Chairman of the Australian Dairy Produce Board, Mr. E. G. Roberts, when he referred to the rising world demand for protein and foresaw the time when the protein content of milk would sell for as much as, or more than, its fat content and so enable the price of butter to be reduced. Such a scheme would require o period of adjustment, ond problems as yet unforeseen would undoubtedly arise, but the world demand for milk protein and the prices also are at unprecedently high levels, and this proposal should certainly not be overlooked when consideration is being given to the renewal of the Stabilization Plan.

The Stabilization Plan

On 30th June, 1967, the current Dairy Stabilization Scheme, under which the Commonwealth Government allocated a sum of 27 million dollars annually over a period of five years, will efflux, and thought is now being given to the form and extent of stabilization that will be provided in its place.

Originally the purpose of dairy stabilization, when it was first established in 1942, was to bridge the gap between returns and assessed cost of production, but, in the year that followed, the inflationary trend in the economy and the continuation of a Federal policy of massive protection for manufacturing industries forced costs to a height above returns that even the Commonwealth Government could not bridge, and for many years now the dairying industry has been provided with an annual subsidy which has remained constant in amount but has declined in real value in eoch succeeding year.

Certainly if any proposal was made now to bridge the gap between returns and costs (which are no longer calculated, having been excluded by the Terms of Reference from the lotest survey) a subsidy of at least twice the present amount would be required. Alternatively the industry has many critics who clamour for the removal of all support, an action that would make Australia unique among the dairying countries of the world.

It is not likely that either extreme will eventuate, but the industry has a right to ask that in deciding on the form of the coming Plan, the Commonwealth Government add to all the cost movements that have occurred during the last five years the spiral of increases that will inevitably follow the recent rise in the basic wage, the subsequent rise in margins that will ensue, and the additional tariff protection that will then be sought because of the increased wage level, all of which will combine to increase the costs of dairyfarm operation and nullify the effect of our striving for greater efficiency and higher productivity.

The Whole Milk Situation

Since 1958, the year in which we reached the danger point in autumn milk supplies, the adoption of improved husbandry, scientific feeding and widespread irrigation has increased autumn production beyond the most optimistic expectations, with the result that April production in this year, for the first time, exceeded 3,000,000 gallons, leaving an average surplus of 43,000 gallons per day in excess of whole milk requirements, and being sufficient to supply, with a 10 per cent. margin, the estimated metropolitan population in 1987. We can, therefore, regard as solved, for many years to come, the problem of production in the lean period.

Reference has already been made to the record output of 21,000,000 gallons, and it is pleasing to note that this was also accompanied by a slight increase in the average daily consumption to 0.604 pint per head, but despite this, and despite the reduction of 3% in the number of licensed producers, the ratio of consumption to output remains at well below 50%.

We must examine with the greatest care any proposals that are made to improve this ratio to ensure that the well-being of our members is not adversely affected.

Technical Progress

We are fortunate that the factories supplied by our members keep well abreast of technical progress. Insofar as cheese is concerned the overall quality of the produce from these factories is unexcelled in the Commonwealth, and enjoys strong demand from the exclusive Japanese market.

A further development in the direction of improved quality has been the introduction during the year, by two of the companies, of refrigerated bulk

milk transport, the results of which are reported as being very satisfactory in terms of both quality and economy. It would undoubtedly be in the interest of all producers if the maximum economies that result from complete conversion to this form of transport could be achieved without increasing the financial burdens carried by many of the smaller dairyfarmers, and any scheme that could convert the gains from improved quality and the savings in transport into a worthwhile premium payment for producers would deserve our most diligent study.

The proposed production of "long-life" milk by the ultra-high temperature short-time process is also of interest, and although this product will not compete with fresh milk on the markets now supplied, it will be of importance in bringing a valuable dietary supplement to remote areas in Australia and to the developing nations in Asia and the Pacific.

Unity

Your Association has continued its policy of liaison with our colleagues in the Australian Primary Producers' Union in matter of mutual interest, and we confidently expect that even greater collaboration may follow from the election of Mr. J. Adams, a member of our own Association, to the position of Chairman of the South Australian Division's Dairy Commodity Committee.

We have watched with very great interest the formation, from the merging of the South Australian Division of the Australian Primary Producers' Union and the South Australian Wheat and Woolgrowers' Association, of the United Farmers' and Graziers' Association, and we wish the new organization success in its field.

Other Activities

As in the past the Association, directly, or through its representation on the appropriate State and Federal organizations, has maintained a watch and taken action on all matters that affect the well-being of its members, and during the year we have conferred with the authorities concerned on such matters, in addition to those referred to elsewhere in this report, as the marketing of cream, the operation of the Equalization Agreement, the design of dairy premises, the adequacy of veterinary services, the certification of milk tanks, the training of farm labour, land valuation and taxation, and noxious weeds.

As may be seen from the earlier references to the tariff on cheese and to quarantine regulations, results are not always immediate, but the Association will continue its representations in these and other matters until finality is reached.

ACKNOWLEDGEMENTS

The wide scope of our activities brings us into contact with numerous departments, authorities and officials, and I am pleased to be able to state that the occasions are rare on which we do not receive the fullest assistance and consideration. In particular we are grateful to the Minister of Agriculture, who has been always ready to confer with us at any time, to the Department of Agriculture and to the members and staff of the Metropolitan Milk Board.

The Association has, I believe, completed a successful and constructive year, and I express my thanks to the delegates and to the staff who have enabled this to be achieved.

H. E. LOECHEL,
General President.

OPEN SEASON ON BUTTER

. . . Poly-Unsaturated Crocodile Tears

If you want to see your competitor criticised . . . break the law.

This seems to be the moral of the current situation which has developed since Marrickville Holdings Ltd. lost their application for leave to appeal to the Privy Council against their sentence for exceeding their table margarine quota.

One would imagine that this organisation (and its case) would now sink back into obscurity. Not so. Margarine's intellectual champion, Mr. Alan G. Lloyd, Senior Lecturer in Agricultural Economics at the University of Melbourne, recently pulled his fellow Economists into the fight. This resulted in a letter outlining a number of reasons why the quota should be lifted being given prominence in the columns of leading metropolitan and national newspapers.

None of their arguments could stand close scrutiny and, at the time of writing, the dairy industry is hoping that the same newspapers that printed the statements will give equal prominence to the reply. It reads as follows:—

"Table Margarine Quotas"

"Much publicity has been given to a series of arguments against table margarine quotas set out and signed by leading Departmental heads and Faculties of Agricultural Economics and Economics.

These gentlemen are still basing their theories on propositions the validity of which have been progressively exploded over the past few weeks.

To bring them, and anyone who has been at all impressed by their arguments, up to date the Australian dairy industry sets out detailed answers to the points made. For convenient reference, the essence of these points and the reply to them are set out as they appeared in the circular letter sent out by the Economists.

Point 1

There would be a shortage of margarine if the quotas were enforced.

Answer:

There is no evidence to this effect.

The present demand for the amounts manufactured in excess of legal quotas has to be constantly stimulated and sustained by promotion. If this promotion were cut back, the demand would drop accordingly.

Point 2

The quota legislation represents a serious infringement of consumers freedom of choice.

Answer:

This argument can hardly be classed, in itself, as a sound economic argument. If it were, one could make it a case for free trade with no tariffs or any other form of protection for any industry against competition from overseas. Few economists would advocate this. Most Australians would prefer to buy duty free cameras and radios yet their sales are tempered by the economic needs of the country.

Equally unobjective and based on pure surmise is the argument that "restrictions on the production on such a food are repugnant to freedom loving Australians." Such arguments should be backed up.

Point 3

The edible vegetable oils industry is a technically more efficient source of table fats than dairying.

Answer:

This is a very loose statement indeed and it should certainly be enlarged. Leading agriculturalists have warned growers against switching to safflower growing to any great extent as it is a risky crop. Although over 70,000 acres of safflower were planted last year, compared with less than 50,000 acres the year before, the overall yield fell by more than half. Two-thirds of the crop had to be grazed off. The vegetable oils industry has a long way to go before such statements can be made about it.

Point 4

Quotas are mainly at the expense of low income consumers.

Answer:

We have repeatedly pointed out that if the margarine manufacturers' arguments against the quotas are to be taken seriously, they want them relaxed in order to manufacture more table margarine from locally produced vegetable oils. Such margarine sells at the same price as butter. All these economists are aware of this and it is sheer humbug to keep making a point time and time again after it has been shown up as fallacious. As far as the argument that benefits to dairying resulting from the quota system accrues to the larger butter producers, we would defy any of these academics to produce a significant number of dairy farmers on low incomes who would support the abolition of the quota. In fact, the low income farmer is the most vocal advocate of the quotas and he is not talking from academic theories, he is speaking from experience.

Point 5

Dairying's future seems to be in the form of fresh milk, cheese, processed milk, etc.

Answer:

The dairy industry fully agrees with this. However, this whole question concerns the present and not a situation which is likely to develop in a few years' time. At the present moment dairying's economy is butter based.

Point 6

Whilst increased table margarine consumption in the local market would displace some butter to the export market, the estimated effect of this on the butter price to producers is quite small.

Answer:

The Australian dairy industry does not agree, that is why it has been spending large sums of its own money for many years in attempting to sell more of its butter in the home market. With the threat of Britain's entry into the E.E.C. any tendency to rely more heavily on our overseas markets would surely be a retrograde step.

Conclusions

No argument put forward by this impressive array of Australia's intellectual talent stands scrutiny. It is a pity that such a shaky set of arguments has received such wide publicity and has inspired stinging editorials against the more balanced and reasonable case advocated by Australia's dairy industry."

MEDICAL MEN AIR THEIR THEORIES

. . . Resurrection Of Old Ideas

If this were not enough a leading medical man and university professor, Professor R. B. Blacket, apparently decided to enter the fray and give the old cholesterol bogey a run. At least one prominent radio personality in Sydney quoted the Professor's remarks verbatim and hence did the dairy industry much damage. (We wonder how many companies would allow their product to be publicly castigated on the strength of unproven and, to a large extent, unsupported theories. We have an idea that most companies would be issuing writs.)

His letter evoked replies against his arguments including one from Dr. R. R. Reader, National Medical Director of the National Heart Foundation.

Earlier in the year Dr. Reader strongly advised against unsupported switches to poly-unsaturates.

The industry also replied to Professor Blacket's letter along the following lines:—

"Butter and Health"

"Professor R. B. Blacket's somewhat heated letter on the subject of diet and health would appear to fall down on two fundamental points.

First of all he implies that present quota, when strictly enforced will prevent the manufacture of poly-unsaturated table margarine. He sees this situation arising because Marrickville Holdings Ltd. will now have to obey the law like everyone else.

It should be clearly understood that the Marrickville Company are not the only marketers of poly-unsaturated margarine—there are three other brands available, the manufacturers of which have met public demand whilst still operating within the law.

Under the quota system the margarine industry could, theoretically, market 16,000 tons of the poly-unsaturated product. At present, production is less than a third of this amount. If the margarine industry chooses to "deprive the public of a good product" the blame must rest upon its head.

Certainly neither the dairy industry nor the Privy Council can be held responsible for the fact that margarine manufacturers prefer, in the main, to market a product which in Professor Blacket's eyes is less health giving.

This raises the second point. Professor Blacket airs his own opinions in the press and quotes statements issued a year ago by the American Health Association. He does not mention that medical opinion is split on this important matter, that not only do doctors and scientists disagree on the relationship of animal fats to heart disease, they also disagree on whether a switch to poly-unsaturated fats is beneficial or harmful.

Going even further, Dr. David Turner, of the Hospital for Sick Children, Toronto (Canada), said that pregnant women who go on low cholesterol diets may have mentally retarded children. In an official statement, the Victorian Division of the National Heart Foundation said that 'the changing of established dietary habits is too radical and if widely adopted might cause more harm than good.'

There are dozens of other scientific viewpoints against a switch to poly-unsaturates and in view of this we are amazed at the dogmatic tone of the Professor's arguments. He is certainly far from objective in his statements.

Now that Marrickville Holdings Ltd. have lost their legal battle and have failed to convince the Australian public that margarine quotas are holding back an important primary industry it is only natural that this outworn series of medical arguments will now be thrust upon us as an argument for allowing Marrickville to make greater profits for their shareholders."

HOW MUCH SAFFLOWER ACREAGE IS THERE IN QUEENSLAND?

. . . Some Confusing Figures Cloud The Issue

Arguments on the safflower angle have tried to prove that "this rapidly booming primary industry" is enjoying phenomenal growth of acreage. Figures published by margarine interests claim that acreage jumped from 48,000 acres in 1964/65 to 72,000 acres in 1965/66 (although they omit to mention that the actual yield was halved over this period).

Estimates for 1966/67 are given at 150,000 acres. Yet unofficial estimates give the total acreage in Queensland as 25,000 acres planted to the end of July and it is estimated that if suitable rains come before the end of August another 10,000 acres may be planted.

If these figures are factual, this will give a total of 35,000 acres against the 72,000 acres planted last year—a far cry from the estimate of 150,000 acres which has been bandied about so freely during this present controversy.

OVERSEAS MARKETING OF AUSTRALIAN DAIRY PRODUCTS

In the year July, 1964, to the end of June, 1965, total milk production in Australia amounted to 1,508,690 thousand gallons. Of this 62.4% (941,617 thousand gallons) was used in butter manufacture; 22.4% (338,400 thousand gallons) mainly for direct human consumption; 9.1% (136,891 thousand gallons) for cheese; and 6.1% (91,782 thousand gallons) for preserved milk products.

Processed milk products—216,500 tons—consisted of full cream sweetened condensed milk, full cream unsweetened evaporated milk, skim milk powder, casein, infant's and invalid's foods, full cream powder, skim condensed milk, buttermilk powder and whey powder.

Of the 203,464 tons of butter produced 52.4% was consumed in Australia and 47.6% exported. 83.8% of butter exports went to the United Kingdom, the other 16.2% of exports being divided amongst 80 other countries.

As a safe generalisation approximately 60% of Australia's total dairy production is consumed on the home market, the remainder being exported. Over the years the value of exports has steadily risen and is now approximately $117 million a year—a sizeable sum of significance not only to the dairy industry, but to the Australian economy as a whole.

How this export trade is controlled and administered is explained below.

THE AUSTRALIAN DAIRY PRODUCE BOARD

The Australian Dairy Produce Board is a statutory body formed in 1924, which operates under the Dairy Produce Export Control Act (1924-1965) and the Dairy Produce Research and Sales Promotion Act (1958-1965). Its thirteen members are made up of the Chairman, who is an appointee and representative of the Commonwealth Government; three elected representatives of dairyfarmers; one member from each State to represent the co-operative butter and cheese factories in each of those States; two members to represent proprietary or privately owned butter and cheese factories and one member to represent factory employees. The Board is elected for a period of three years, the next term of office will start in July of this year (1966).

Its primary function is to control the export of all butter, cheese, butter oil, ghee, casein and dried skim milk. Butter and cheese shipped to the United Kingdom are purchased by the Board in Australia and sold in the United Kingdom through its London Agents. Cheese is sold to Japan under similar conditions. Nearly all the other exports are carried out on a trader to trader basis and the Board's role in these sales is to fix prices, terms and conditions under which they can be sold. For this purpose the right to export is controlled by the Board, and every transaction is required to be covered by a Board export permit issued to licensees.

By these means the Board can ensure that available supplies reach the right markets and yield a maximum return.

It should be noted here too that all dairy produce exported is subject to quality tests by the Department of Primary Industry, which also issues licences to export to approved agents (licensees) on the recommendation of the Board.

Developing Markets

In addition to controlling exports the Board is empowered to take action in developing new markets and to secure and expand existing markets both in

Australia and overseas.

To this end it directs funds to the Overseas Trade Publicity Committee, The Butter Information Council and the Cheese Information Bureau. In the year 1964-65 $529,684 (£A264,842) was spent through these three organisations to promote Australian butter and cheese in the United Kingdom.

As will be discussed later, the Board has also taken action to develop new markets in South-East Asia.

A further function of the Board under the Dairy Produce Research and Sales Promotion Act (1958-65) is to administer a programme of research and sales promotion within Australia. This aspect of its activities is not, however, covered in these notes. (Readers are referred to "Australian Dairy Produce Board Promotion Activities").

United Kingdom Market

The United Kingdom market is the industry's most important single overseas outlet. Since the end of 1962 Britain has imposed restrictions on butter imports, each of the major suppliers being limited by a quota on the amount which they can send. These quotas were introduced because, prior to their inception, butter prices had reached a drastically low level (at that time Australian butter was selling at 240/- stg. per cwt.)—and traditional suppliers were being undercut by heavily subsidised exports from other countries. Prices immediately became much more stable although this was only partly due to the imposition of quotas. Another major contributing factor was a worldwide shortage of dairy foods aggravated by a severe European winter (1962-63) during which time thousands of dairy cattle were killed for beef.

Australian butter prices which had remained steady for well over a year at 334/- per cwt. rose in 1964 to 350/- per cwt. During 1965 the British Government implemented a policy of stock build-up in a successful effort to force prices down. By April, 1966 the Australian wholesale price had dropped to 300/- sterling per cwt. and tough competitive conditions were increasing.

To increase United Kingdom public acceptance of Australian butter the Board introduced, in 1963, a national "Kangaroo" brand butter on to the market. Hitherto Australia had had no national brand in the United Kingdom and most of our butter reached the consumer "incognito," often in the form of blending butter or a not nationally identified brand.

"Kangaroo" brand butter was therefore designed to establish a loyalty to Australian butter and only choicest quality is used.

The brand is packed in the United Kingdom and, because of favourable market conditions at the time of its introduction, made a good impact.

Sales dropped during 1965, but the brand is still holding its own and has certainly succeeded in building a demand for the Australian product and a series of vigorous trade promotions periodically stimulate sales.

Australia supplies between 15-16,000 tons of cheese a year to the United Kingdom market. As is the case with butter the market for cheese has hardened in recent months.

Japan

Japan is likely to become one of Australia's biggest dairy markets of the future. Exports of cheese to this country have grown considerably over recent years from less than 100 tons in 1959 to a figure which is expected to exceed 4,000 tons in this current financial year. In face of competition from other countries Australia has secured and held the position of Number 1 overseas supplier of cheese to this important market.

In June, 1964, the Board opened its own Secretariat in Kobe. Japan is the only overseas country other than the United Kingdom where the Board maintains its own office and staff.

Bulk cheese exported to Japan is purchased by the Board and shipped for sale through approved agents. Some stocks are held in cold stores in Japan to ensure continuity of supply. Processed and fancy cheese exports, which are at present strictly limited as the result of Japanese import policy, are in the hands of private traders acting under the normal Board system of control of licences and permits.

Some small imports of butter have in the past been permitted under similar arrangements but at present larger purchases are being negotiated fairly regularly through the Japanese Government agency Jigyodan (e.g.—towards the end of 1965 Australia won a contract to supply 500 tons to Japan). The quality specifications are very high and are rigorously enforced by the Board to safeguard the future of this market.

Although Japan's dairy industry is very large and is growing in capacity, the demand for dairy foods is rising much more quickly than production. It seems likely that the rise in cheese sales will continue and that exports of other dairy products, including butter may gradually be liberalised.

Peru

Working in close co-operation with the Australian Trade Commissioner, the Board over the past two or three years, has constantly promoted Australian butter in Peru.

These efforts have had notable results as sales of butter to this country have risen from 100 tons in 1960-61 to 1,619 tons in 1964-65. Sales in 1965-66 are expected to exceed 2,000 tons.

Other Markets

Other good markets for butter are Ceylon, Hong Kong, Singapore and Malaysia. Top overseas purchasers of cheese in 1964/65 (other than the United Kingdom and Japan) were the Philippines (where the establishment by Kraft of a new processing plant is helping to stimulate sales), West Germany and Saudi Arabia.

Readers of the Board's Annual Report are referred to the interesting statistical tables contained therein. Of particular interest will be Tables 11 and 27.

Asian Milk Plants

At the time of Britain's proposed entry into the E.E.C. the Board intensified its efforts to develop alternative markets in South-East Asia. The main demand for dairy products in these areas is in the form of processed milks either sweetened condensed milk or evaporated milk. To take advantage of this the Board formed, in association with Asian private enterprise, a Company named Asia Dairy Industries Limited. The purpose of Asia Dairy Industries is to organise the setting up of milk plants in the South-East Asian area.

In the past three years four such outlets for Australian raw materials have been developed. In Singapore and Bangkok the Board and Asian interests have set up plants with designed production capacity of approximately one million cases of sweetened condensed milk a year. These plants are newly built and equipped and are in commercial production. The Singapore plant enjoys pioneer status which means important tax concessions and assistance. By March, 1966, the Singapore Government had cut down imports of sweetened condensed milk by 95% thereby creating a substantial market for the locally produced product. (Also in Singapore is a sterilised milk plant with which the Australian industry is associated.)

BULK MILK TANKS

ALFA-LAVAL-FIRST to meet the standard specifications laid down by the Standards Association of Australia.

The Standard Testing Authority, the S.E.C. of Victoria, reported:

"A production 200-gallon unit selected from a stock batch model has been tested by the State Electricity Commission of Victoria for compliance with specification No. ASN46/1-1963 of the Standards Association of Australia, and its report No. 64.C2/ASN46 may be inspected on request."

Higher quality milk! Less work! More profit! Available in capacities from 100-485 gallons. ● Fully guaranteed. ● S.A. Kelvinator units used exclusively. ● All stainless steel construction, fully insulated with polyurethane rigid foam.

The very latest in modern dairying . . .

- The tank is mounted on stainless steel pipe legs with adjustable feet and is fitted with hinged, self-supporting, interchangeable, removeable covers for easy access.
- Highly polished walls, sloping floor, and 2 in. outlet pipe enables rapid draining, efficient cleaning and minimises milkstone formation.
- Circular design gives construction rigidity and all-round accessibility for easy cleaning.
- Agitator is driven by a totally enclosed electric motor incorporating a nylon-geared reduction box to give 35 r.p.m. — no lubrication required.
- Other components consist of a centrally located dipstick calibrated in pounds of milk; a 4 in. dial-type thermometer with thermostat and a tank levelling device.

ALFA-LAVAL

ALFA LAVAL (S.A.) PTY. LTD. 8 5271
338 King William Street, Adelaide

In Manila the Board has a major shareholding in a modern plant equipped to produce unsweetened evaporated milk and being equipped to produce also sweetened condensed milk.

The concept of financing and building milk plants throughout South-East Asia is a relatively new departure and is already providing a valuable new type of outlet for Australian butter oil and skim milk powder.

It is envisaged that these outlets will play an increasingly important role in future overseas marketing of Australian dairy produce.

THE COMMONWEALTH DAIRY PRODUCE EQUALIZATION COMMITTEE LIMITED

The principles of Equalization outlined as follows are comparatively simple. Their actual implementation and administration are, however, extremely complex matters and they are handled by the Commonwealth Dairy Produce Equalization Committee Limited, a Company formed for this purpose. The Equalization scheme is entirely voluntary, but practically all manufacturers of butter and cheese operate within it.

The retail price of butter in the United Kingdom—Australia's main export market—is usually considerably lower than the price in Australia. This is due to international competition. Obviously, unless there existed machinery to equalise returns from the home and overseas markets all butter manufacturers would wish to sell their production on the home market for the higher price. The resultant competition for the home market inevitably would reduce its value to the level of export parity.

Under the system of Equalization all proceeds from sales of member factories' butter, cheese and casein (irrespective of whether they are made in Australia or overseas) go into separate "pools" for each commodity. The respective pools are then progressively averaged so that member factories receive a return, or an equalization rate. The Commonwealth Equalization Committee is, therefore, responsible for establishing at the beginning of the season (i.e., a new financial year) an initial interim return to factories which in turn pay the farmer. Obviously this cannot be payment of what the final equalized price for the product will be—that is dependent upon the state of the overseas market throughout the year—it is in fact a conservative estimate. This initial interim return may be adjusted upward as the season progresses according to export returns. When the whole of the produce of the particular season is sold, a final return is calculated and a final payment made.

Government Bounty

Under the terms of the current five-year dairy industry stabilization plan the Commonwealth Government makes available each year a $27 million subsidy to the industry. The sum is a fixed amount which is independent of production levels.

The subsidy is allocated between butter and cheese and is paid to farmers through the factories which supply butterfat for butter and cheese production. The funds are paid into the butter and cheese equalization pools and thus raise the equalized price payable for these products.

FINANCE

The activities of the Board and their close link with those of the Dairy Produce Equalization Committee are of tremendous financial benefit to the industry. In discussing equalization we saw that the producer and the manufacturer do not have to wait until their products are eventually sold overseas before receiving the bulk of their payment.

To enable these advance payments to be made the Commonwealth Government guarantees the Board's account with the Reserve Bank to the order of $80-100 million and to enable payment of reasonable returns to farmers as early in the season as possible the Government underwrites the return to dairy farmers for commercial butter at 33.3c (40d.) per lb.

NFU Puts Farmers' Case To Federal Government

The National Farmers' Union recently submitted to the Commonwealth Economic Sub-Committee a plea for consideration in view of seasonal and economic circumstances, and called for assistance in the rehabilitation of drought-stricken areas. The case presented was as follows:

Continuing Drought

Drought conditions still exist in many areas of the eastern States and the consequences for the economy are referred to in reports upon business activity in a number of sectors. Rail transport, farm machinery manufacture, veterinary chemicals, newspaper advertising and country airlines, among others, have suffered. Livestock numbers in Queensland and New South Wales have been falling. New rural investment in the same States has been checked.

It is true that some rain has fallen and that some unusually warm conditions have produced growth in pastures in some areas. It will be necessary for these locations to receive "follow-up" rainfall before any real progress can be reported. Meanwhile, there are still wide areas which have been gripped by drought without any intermission.

Unless primary industry prospers, stimulating the economy by artificial means can only be abortive. Rural exports lost through drought or any other cause represent export income lost to the nation. Despite the expansion of the mineral section of primary industry, the economic success of the farming and grazing sector will be, for many years to come, the key to the health of the whole economy. No amount of stimulus elsewhere can fully compensate for a shortfall in value of output on the farms and stations. Had farm incomes not fallen over the last eighteen months, the reported slackening in activity referred to above, would not have occurred. Any prescriptive action must, therefore, have regard, not to the symptoms, but to the cause of this easing in economic pace.

Interest Rates

It has been suggested that one helpful measure would be a reduction in bank interest rates. This would be of considerable assistance to all those carrying heavy commitments to banks, but particularly to primary producers. Not only is the drought a major debt-creating factor, but, in Queensland, the considerable expansion of the Australian Sugar Industry which has been undermined by low returns, has caused extreme difficulties for many growers. The profit margins in the 1964 and 1965 seasons were practically negligible and the Queensland Cane Growers' Council points out that there is no indication of improvement for the 1966 season.

There will be general agreement with the Minister for Trade and Industry in referring to the ruinously low price of sugar on the London Market of £16stg. per ton as "an intolerable situation." A reduction of interest rates would be a helpful step in alleviating the difficulties of growers in the industry until international arrangements and/or external events provide a stronger market.

There might need to be a measure of more careful and selective lending in order to minimize speculative activity taking advantage of the cheaper cost of borrowing. The benefits, however, to hard-pressed producers carrying substantial debts, could vary up to $4.00 per week, not an insignificant amount at low income levels.

Fertiliser Prices

Fertilisers must be among the most significant inputs for achieving greater rural productivity, and the prices of both superphosphate and nitrogenous

fertilisers are of a certain national importance. The proposed price increase for the former and lack of any cost-reducing measures thus far, for the latter, cannot but exert an inhibiting influence upon application. We ask the Commonwealth to consider:

(i) increasing the existing $6.00 ton subsidy on superphosphate by the appropriate amount, so as to restore the original price incentive effective when introduced in 1963;

(ii) introducing a subsidy on nitrogenous fertilisers, in order to reduce the cost disadvantage. We have submitted regular submissions to the Commonwealth for some years, underlining the benefits of such a measure and the rising level of prices facing users. A useful side effect at this time would be the measure of cost-relief on the hard-pressed sugar industry, which is the most substantial user of nitrogenous fertilisers.

We emphasize the cumulative benefits of measures of this kind. They do not represent outgoings which are lost forever, but are of the nature of an investment which returns increased taxation on higher incomes, expanded export earnings and more economic activity.

Labour Supply in Country Areas

In our submission in March this year, we proposed in brief outline, a scheme for encouraging persons to consider taking up employment in distant rural areas. It was suggested that taxation deductions from wages paid should be progressively reduced, in proportion to the distance from proclaimed cities, at which such persons took up employment.

Already 60% of the Australian population lives in nine cities, most of which are on the eastern seaboard. The trend of population movement supports that some day, seven out of every ten people in Australia will live in our nine largest cities. The rural industries are hard pressed for satisfactory labour just as much as the nation is hard pressed to people the continent. The existing provisions for taxation zones were created in an earlier period, when population distribution was of a different order. We ask, therefore, that the practice of permitting reduced taxation for residents of remote areas be extended to cover persons employed in the rural industries located at a considerable distance from proclaimed city areas. The important role which many rural industries play in earning export income and the challenge advanced by Government spokesmen that rural exports will need to reach $4,000 million a year by the mid-1970's, justify, we feel, sympathetic consideration of this request.

Nor should it be forgotten that Government funds have already played a significant part in contributing to the attractiveness of urban life. Facilities for education, hospitalization and transport—whatever their shortcomings in the cities—are often vastly superior to those available in the vast rural areas of our land. Salary levels alone show how handicapped farms and stations are in competing for labour with secondary and tertiary industry, some of which has the benefit of tariff protection which rural exporters cannot avail themselves of.

Forced Sale of Breeding Stock

The forced sale of breeding stock because of drought conditions has been an unfortunate result on many properties. While we acknowledge the provision in taxation legislation of particular methods of treating proceeds of sale of stock, we remind the Government that breeding stock are to be distinguished from "stores and fats" and that obtaining suitable replacements so as to restore the distinctive characteristics sought after, is likely to be a difficult and expensive business. For this reason, we ask the Government to permit stock owners who have been forced to sell their breeding stock becaus

of drought conditions, to treat the proceeds thereof as capital and invest same in purchasing replacement breeding stock after the drought, and not be obliged to treat such proceeds as income.

We point out that breeding stock are the nucleus of a herd or flock and are, in a sense, comparable to specialized machinery as found in a factory They are in no sense surplus stock and are often retained by their owner in a drought till everything has to be sold. They can represent the result of the work of many years in selecting and crossing so as to achieve the desired characteristics. In a real sense, they are for many farmers, capital items. The assistance which we request would help in rehabilitating industry in a way in which the present averaging provisions cannot.

Profit Margins on Automotive Parts

In our submission to the Government last March, we drew attention to the unjustifiable margins between factory door and retail counter in the motor vehicle spare parts industry. We pointed to the Tariff Board's Report dated September 30th, 1965, which

(1) indicated that some items are retailed to the public at nearly seven times their production cost;

(2) noted little evidence of price competition between members of the Federation of Wholesale Automotive Supplies and Parts Association and spare parts divisions of motor vehicle manufacturers and assemblers; and

(3) called for more effective merchandising and thus lower costs to the consumer.

We asked the Commonwealth in March to take steps to protect the public interest, but nothing so far appears to have developed.

Timing of Government Works

Having regard to the Government's interest in achieving greater efficiency and productivity in rural industry, we would, in turn, express the wish for maximum efficiency in all Government Departments and the hope that the scale and timing of public works will not make worse the already scarce condition of the labour market. Events so far this year have already provided enough possible causes of cost inflation, and national housekeeping from now on would do well, we believe, to keep costs stable.

Daylight Saving

The economic implications of introducing daylight saving in summertime are probably varied and many. We content ourselves with the observation that rural industry, probably more than any other sector, relies upon the daily progress of nature. The dew in summertime cannot be expected to rise an hour earlier to permit haymaking, simply because man puts forward one unit, his own notion of time. Daily farm programmes on some properties would, therefore, be dislocated by the introduction of daylight saving. Labour in the country is difficult enough to secure now and may be expected to become more difficult if daylight saving is introduced, in those cases where early rising before dawn is necessary.

Statistics

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1965	1966	1964/65	1965/66	1965	1966
June	3,354	3,528	48,501	49,151	19,990	20,234
	1965	1966	1965/66	1966/67	1965	1966
July	3,848	4,038	3,848	4,038	23,838	24,272

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1965	1966	1964/65	1965/66	1965	1966	1965	1966
June	1,725	1,738	20,245	21,006	51.4	49.3	23.54	24.76
	1965	1966	1965/66	1966/67	1965	1966	1965	1966
July	1,772	1,778	1,772	1,778	48.0	44.0	22.81	23.09

Moving Average Quota for 12 months ended 30/6/66, 42.74%; 31/7/66, 42.59%

INTERIM PRICES TO LICENSED SUPPLIERS

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

1966	Basic (per lb. butterfat)	C.M.B. (per lb. butterfat)	Total (per lb. butterfat)	3% (per gallon)	3.5% (per gallon)	4% (per gallon)	4.5% (per gallon)	5% (per gallon)
June	38.40	24.76	63.16	19.55	22.81	26.07	29.33	32.59
July	36.80	23.09	59.89	18.54	21.63	24.72	27.81	30.90

LONDON PROVISION EXCHANGE QUOTATIONS

(Sterling Currency per cwt.)

	June		July	
	1965	1966	1965	1966
Butter—Choicest Australian	321/–	300/–	319/–	300/–
Cheese—First Grade Australian	245/–	225/–	245/–	240/–
Rindless Australian	260/–	260/–	260/–	265/–

NEW OPENING PRICE HIGHEST FOR 12 YEARS

The interim equalization value for cheese for the 1966/67 season has been determined at a level which will return an interim basic price to licensed producers in the Adelaide milk supply area of 36.8 cents per lb. butterfat, being 1.4 cent higher than the opening price in July, 1965, and the highest since 1954/55 when the interim basic price was 38 cents.

NEW TREATMENT FOR MASTITIS

A new British treatment for mastitis in cows—inflammation of the udder—became available recently. The treatment arises from research carried out by Hadleigh-Crowther Ltd. on the causes of the condition, which affects about half the cows in Britain and costs dairy farmers about £20 million Stg. ($A50 million) a year. Overseas countries, notably Australia and the U.S.A., face a similar-sized problem.

A cow in its natural conditions would be unlikely to suffer from mastitis. It would have several methods of protection against infection from the bacteria that cause it. The udder would be dry and the upper surface of its skin would scale off periodically, removing large numbers of bacteria. Its skin would be acid, which bacteria cannot tolerate and its udder would be small.

However, cows have been brought to the point of producing about 2,000 gallons of milk during lactation instead of 80. The udder has had its structure changed and is subjected to abnormal stresses and strains.

Growth of Bacteria

The udder is washed in normal hygienic techniques used with milking machines and is frequently damp, encouraging the growth of bacteria. The washes are alkaline, so that the acid protection is lost.

In addition, the wide use of antibiotics against mastitis, though it has controlled streptococci, has increased the resistant staphylococci—the notorious "hospital staph" which are responsible for cross infection there.

Research by the firm showed that udder washings did not remove bacteria. Washed teats could still produce contamination with staphylococci which were present on their tips immediately after milking. It is the entrance of these bacteria into the teat canal which causes the inflammation.

Two Treatments

The firm has now produced two treatments which, used together, have practically eliminated mastitis when used with dairy herds. First, the udder is washed in a solution which is mildly acid as well as germicidal. This does not interfere with the natural acid protection of the skin. Then a film of germicide is applied from an aerosol.

The treatment takes about two seconds and the aerosol film dries almost instantly, leaving a waterproof barrier which lasts until the next milking. It builds up long-term protection as the treatments go on.

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Education --- Research And Extension

By Prof. John L. Dillan, University of New England, Armidale, N.S.W.

(A paper presented to the Rural Convention on Maximum Use of Australia's Rural Resources)

How Big a Gap in Efficiency?

There are doubtless lots of statistics filed away in odd places that could be used to assess the gap between what is and what's possible in Australian agriculture. I've not made a full study but I have got together two sets of comparative figures that I find convincing. Indeed the more one thinks about them the more amazing they are.

The two comparisons both relate to matching the average performance of B.A.E. 1960-63 Sheep Industry Survey farms against the average performance in 1963-64 of comparable farms employing the services (say 10 days per year) of a professional Farm Management Consultant.

One comparison is far farms in the high rainfall zone. The B.A.E. survey farms cover all States on a statistical sompling basis. The Consultant-assisted farms are spread over N.S.W., Victoria and South Australia, and consist of all those farms whose 1963-64 records were processed by U.N.E.'s Farm Management Service Centre. Full details of the comparison are available in the First Annual Report of the Service Centre. The statistics I want to stress here are as follows:

	Wheat-Sheep Zone		High Rainfall Zone	
Characteristic	Consultant Farms 1963-64	B.A.E. Survey 1960-63	Consultant Farms 1963-64	B.A.E. Survey 1960-63
No. of farms	138	208	148	225
Area per farm (acres)	1,905	2,377	1,919	1,188
Capital ($ per acre)	103	32	98	58
Gross Income ($ per acre)	25	7	16	9
Net profit ($ per acre)	9.6	1.8	5.6	1.7
Return on capital (%)	9.3	5.6	5.7	3.0

Taking the Consultant-assisted farm as representing what's possible and the B.A.E. Survey farms as representing the average, and making allowance for all the riders that might be made to such an interpretation—for example, that Consultant-assisted farms probably have better managers and better land anyway; that the samples are inadequate both over space and over time; that the demand for produce is inelastic, etc., etc.—I believe the discrepancy between these sets of figures is fully enough to justify the bald statement that, from both his own and the national point of view, our average farmer is only doing half the job he might be doing. Half the job, moreover, measured not in terms of what some backroom scientist might see as technically feasible, but in terms of what a not insignificant number of farmers are already doing.

In postulating an efficiency gap of at least 50 per cent., I know full well that the average farmer is up against all sorts of limitations. Mr. Walker's comment aside, he just doesn't have the managerial skill and finincial resources to enable an overnight doubling of his efficiency through reorganization of his production program. But that's no excuse for closing our eyes to the existence of the gap.

The crucial question is, what strategies might be followed to jump the gap? In terms of alternatives available to the farmer? In terms of policy instruments aavilable to the Government? Indeed, can we jump the gap—or do we have to run to stay still? In particular, in terms of my brief, what are the implications for education, research and extension? Obviously I can do no more than set the stage for discussion. In trying to do so, I'll emphasize those implications which I feel are important but not generally given as much attention as they should be.

Education

These days, education is "in." In terms of the efficiency gap, the more education the better because education is aimed at man as he is the main actor in the farm sector. As Wharton has put it:

> "Education pushes back cultural prohibitions. It reduces the restrictions of traditionalism and facilitates innovation.
>
> It broadens a person's ideas of the possible. It increases the geographic and occupational mobility of people. It makes it easier for a person to think through the problems which he faces and not merely accept them as unchangeable givens."

Efficiency wise, we need to think and plan in terms of three particular areas of education influencing agriculture:

First, the education of rural youth who are needed for agriculture as such, be it a question of mechanics or managers or something in between. Regardless of its level this education ought to be in terms of principles, not rote memory of the parts of the harness. Like it or not, we'll have a smaller work force in agriculture. It ought to be of increasing quality. Currently it seems that about 98 per cent. of those entering farming do so without any special full-time vocational education.

Second, the education of rural youth who are not needeeds for agriculture. Much, indeed 80 to9 0 per cent. of rural youth won't be needed in agriculture. It will need education to facilitate its transfer out of agriculture if it's not going to be a drag on the land.

Third, the education of those who serve agriculture directly be it via the public purse or business. In particular, there's probably no more important unpublicized deterrent to efficient agriculture than the general incompetence that farmers have to face in their accountants and bank managers. The exceptions stand out like beacons. Another point to watch is to be careful that we don't squander educational resources by over qualifying those who are to serve agriculture—the District Agronomist who spends most of his time certifying seed potatoes doesn't need a four-year degree.

As well as these three areas of education, I'd like to stress the education of farm leaders and policy makers. But short of drafting them for night school, it's hard to see how the job might be done.

Of course, in neither the public nor the private sense is education costless. To get it, we have to forego something else. To make reasoned decisions

on education, therefore, we need information on its costs and returns—a topic I'll return to later, briefly. Suffice to note here that the factual information, let alone research on Australian rural education is pitiably small.

Research

The implications of the current efficiency gap for agricultural research are easily stated. Bluntly C.S.I.R.O. gets far too much support overall, too much support is blindly given to research aimed at the production of new technology; too little support is given to applied research aimed at making new technology operational; and far, far too little support is given to economic and behavioural science research aimed at the efficiency of farm business decisions under whatever price regime farmers currently happen to face. Too often our research is posed in terms of "Under what conditions will it work?" rather than "Under what conditions will it pay?" In particular, we need a tremendous increase in co-operative research between physical and economic scientists, and budget planning to lessen the size disparity between economic research services (e.g., the B.A.E.) and technical research services (e.g., C.S.I.R.O.). Why should C.S.I.R.O. be able to offer a career research salary scale to its physical researchers but not the B.A.E. to its economic researchers?

How do I justify such conclusions? My argument runs as follows:

First, it is clear that we cannot do away with the efficiency gap completely. We need a steady supply of new technology—not least to sustain and improve our competitive position in international trade. To have immediate adoption of such new technology can be no more than a Utopian dream. So some flow of new technology is essential and, for this reason an efficiency gap of some size is here to stay. Note though that, over time, this gap will relate to a changing bundle of new technologies as creation and implementation proceeds.

Second, relative to the efficiency gap we can distinguish two types of research. On the one hand there is the C.S.I.R.O.-type research aimed at developing new production technology. Such research can make no contribution to decreasing the gap. Of itself, such research can only enhance the gap. Indeed, by producing results faster than the average farmer can handle them, such research is to some extent a cause of the gap. In contrast we can distinguish research aimed not at generating new technology, but aimed at understanding and overcoming the barriers that retard the average farmer from performing as well as he might in the face of an already given technological array. Such research can only reduce the efficiency gap.

Given these two avenues of research, we have a choice as to what mix of gap-increasing and gap-decreasing research we might select. This choice will then control the size of the efficiency gap in just the same way as our use of the hot and cold taps controls the shower water. Alternatively stated, relative to our limited research resources, what size efficiency gap between actual and possible performance do we want? Having chosen the gap, what does it imply about the distribution of our research (and other) resources?

I think a gap of 50 per cent. is too big. It implies an unnecessary imbalance between the production of new technology and research pertinent to consumer acceptance of the technology. As business testifies, new products without acceptance research and promotion can stay on the shelves forever.

Rather than a gap of 50 per cent., I believe a gap of 25 per cent. odd is all we need. This would imply the average farmer was performing with 75 per cent. of the efficiency of the top rung of producers. Economically, a gap of 25 per cent. would be better business in a national sense. On the one hand, the technological carrot would still be there for the efficiency leaders;

and on the other hand the nation and farmers would gain from not having to wait so long to gain the benefits of new technology and we would not be expending funds on an oversized stockpile of new technology. In short, we'd be working our manufacture and inventory of new technology more efficiently. Instead of producing new technology indiscriminately and overstocking the technological warehouse with a fast inflow and an unguided dribble of outflow we'll be keeping a more rationally chosen stock of technology in reserve and at the same time be paying more attention to balance the inflow and outflow of the warehouse.

My main point, therefore, is that we need a far better balance between research aimed at the soil, plants and animals with which the farmer operates and research aimed at understanding and appreciating the farmer himself and the business and social environment in which he has to operate. After all, the farmer—not the soil, plants or animals—is the prime factor in our agriculture. Why should he be ignored?

Perhaps I can make my point with two simple examples. We all know the vast amount of grazing and pasture research that has been carried out in Australia over the last two decades. But, would you believe it, despite this tremendous volume of research, we still have no picture of the relations between wool production, stocking rate and superphosphate such that nothing but the broadest of recommendations can be made to a farmer as to what combination of stocking rate and super would be most economic in his circumstances.

Likewise, what would a Martian think to be told that although the costs of marketing wool from producer to mill are equivalent to about 20 per cent. of the producer's production cost, only something less than a half of one per cent. of wool research expenditure has gone to research into the economics of wool marketing. No wonder the recent Reserve Price debate was conducted against a background of virtual economic ignorance.

Overall, our research policy historically seems to have been overweighted towards such 1,000 to 1 long shots as we might find in the sheep's third stomach. Scant attention has been paid to the surer but less exciting bet of making sure that standard things are done properly. It is interesting that the Commonwealth has paid some account to this situation recently with the promise of an annual Extension Grant of $5,400,000.

While this grant was initially aimed for extension, it now appears that much of it will go for regional research on the basis that extension is no good without having something to extend! It's hard to argue with the logic of this policy decision.

Extension

In terms of maximum use of our rural resources, extension has to get three types of knowledge across to farmers:

(i) knowledge about new inputs;

(ii) knowledge about new techniques of production; and

(iii) knowledge about how to economize in production and marketing.

The first two are the technical aspects of farming. The third is the economic aspect of farming and is by far the most difficult task that confronts the farmer. It involves not routine transmanlike skills that once learnt are in the kitbag forever, but the decision-making function of evaluating and choosing between alternative strategies. To be efficient in an economic sense, the farmer has to use logical processes of thinking-through problems himself as alternative choices continuously arise under a bewildering array of situations

As Wharton puts it:

> "The task of sound economic decision-making is a difficult one which rests on each farmer's skill at **individualizing** information to meet his unique needs. . . . The individualization process is complex and difficult . . . [It] is where extension education has been deficient . . . . The skill and competence required for "individualization" is not one capable of simple transmission or diffusion but one which rests upon self-discovery, practice and personal experience. . . . Providing the farmer with new inputs or new techniques may result in adoption but they need not result in efficient (economic) utilization of resources. And it is the degree of economic efficiency in the utilization of resources which leads to sustained growth towards a modern, prosperous and progressive agriculture."

To date, our Government-sponsored extension has largely concentrated on the dissemination of knowledge about new inputs and new techniques of production. Knowledge about economizing has not received its fair due. Here I want to argue that it should receive its due. And that because of the individual attention that ie demands, it can only receive its due via the services of non-Governmental Farm Management Consultants operating in the commercial arena. Concomitantly, these consultants should be backed up by Farm Management Service Centres serving as "laboratories" in exactly the same way as State extension workers are backed up by State experiment station and laboratories.

Already such developments are well under way. Indeed the pace of these developments and their impact on farmers to date indicates they constitute a revolutionary change in the extension cum farm management side of our agriculture. Beginning with a single entrepreneur in 1955 and rising to about 50 in 1963, there are now some 130 commercial Farm Management Consultants operating in Australia. This compares with the total of some 1,300 Governmental extension and advisory officers (measured in full-time equivalents). Thus the commercial consultants represent about 10 per cent. of all extension workers and are providing farm management advice to about 2.5 per cent. of our total farm population. As my initial data aimed at estimating the efficiency gap indicates (at least in part), these consultant-advised farms must be having a tremendous effect on rural production, especially if—as one would expect—there is a sizeable turnover of a consultant's clients over the years. As I see it, the activities of such consultants are both helping to show the size of the efficiency gap and working towards its reduction. In this they are and will be further assisted by the operations of U.N.E.'s Farm Management Service Centre which commenced operations nearly two years ago, and the University of W.A.'s Farm Management Service Laboratory which will commence operating very shortly.

So far as whether or not commercial consultants are doing a good job, I think the market has already given us the answer. In the space of a few years, 5,000-odd farmers wouldn't begin paying $200 to $400 per year for advice that wasn't worthwhile.

What are the policy implications of this commercial revolution in extension? I think the important ones are these:

(a) The rapid and continuing expansion of commercial consulting, together with what statistical evidence is available, indicates that the gains from such services far exceeds their cost to the farmer. On the same grounds that we subsidize superphosphate and give tax concessions for developmental expenditure, the nation would benefit handsomely from Governmental support given to the training and establishment of commercial consultants.

(b) Similar benefits would accrue from the provision of support for Farm Management Service Centres or Laboratories to serve as back-up facilities for commercial consultants.

(c) If provision is not made for the training of additional agricultural scientists, the (complementary) services (new inputs and technology) of Governmental extension and research agencies will be seriously hindered by a loss of staff to the commercial consulting arena.

(d) The extension field of farm management advice should be left to commercial consultants. They're the only ones who can properly do the job on the individual whole-farm basis that it demands. History shows that Governmental extension services can't do this job on any significant scale.

(e) A substantial job of thinking is called for on all aspects of extension. For one thing, current Government policy appears to be completely oblivious of the revolutionary development that's occurred. As one consultant recently put it:

> "The one bond which unites farmers, public servants, financiers, businessmen and trade unionists, is their concern with the techniques of making money. It is unfortunate that extension authorities have not really recognized this healthy symptom of manhood in their proteges."

Research into Education, Research and Extension

For informed decisions on the policy questions I've raised (and all the others I haven't raised) we need facts and figures on the gains and costs of alternative courses of action in the fields of agricultural education, research and extension. Such research can be done and should be done. As yet virtually nothing has been done in Australia. Overseas, quite a few studies have been done for the U.S. and Japan. As an example let me cite the broad results of one U.S. study. It showed average gross returns per extra dollar invested in various agricultural inputs to be as follows for U.S. agriculture in 1959:

Input	Gross return per extra dollar	Profit per extra dollar
Land and Buildings	\$1.7*	\$0.7*
Machinery	1.2	0.2
Labour	1.2	0.2
Feed and seed	1.2	0.2
Fertilizer	2.7	1.7
Education	1.3	0.3
Research and Extension	10.0	9.0

(*Capitalized value)

Broad as the categories are that these particular figures cover, analogous figures for Australia would give us a much firmer base than we currently have for many of the policy decisions that have to be made.

SUMMARY

I've suggested the following:—

A. The average farmer is at best only half as efficient as he might be. We have an efficiency gap of 50 per cent.

B. To meet this efficiency gap in terms of education, we need better planned and organized education in terms of rural youth needed for agriculture, rural youth not needed for agriculture, and in terms of those who serve agriculture.

C. On the research side we've had too much C.S.I.R.O.-type research relative to research aimed at removing barriers to the proper implementation of currently available technology. An efficiency gap of 50 per cent. is too big.

One of 25 per cent. would be far more economic from the national and average farmer's point of view. We could achieve this with a better balanced research mix.

D. Extension-wise, recent years have seen a revolutionary development of farm management consulting on a commercial basis. It would pay handsomely to support this development via training and back-up service facilities. It would not be economic, and would be quite infeasible anyway for Governmental extension to try and compete with consultants in this farm management field.

E. We need a good rethink on all aspects of extensions and the relative weights to be attached to extension, economic research and technological research. For too long we've concentrated too much on soils, plants and animals and too little on their boss—the farmer himself.

F. We need research into the costs and benefits of alternative policies of agricultural education, research and extension.

DAIRY DESIGNS NOW AVAILABLE

Producers who have had the experience of building new sheds will know the difficulties that can arise from trying to translate into a satisfactory dairy building the builder's ideas, the Milk Board's requirements and his own opinions.

Although the Milk Board requirements seemed to be simple enough they did not always accord with the builder's ideas, and in many cases it was necessary for the farmer himself to do much of the design work if the builder was new to the work.

Certainly it was acknowledged that there were several builders in the dairying district who had shown that they could build satisfactory dairies, but there was no assurance that these dairies had been designed by any more than rule-of-thumb, and although they were satisfactory there were few who would say that no improvements could be made, particularly insofar as time-and-motion economy was concerned.

For this reason the Association in 1964, requested the Metropolitan Milk Board to have designs prepared under expert guidance to ensure that farmers could have available sets of working drawings which would include all the desired features of design, layout, finish and operating efficiency, and which could be passed to local builders with the assurance that if the designs were followed the finished building would be completely satisfactory to the Board and to the farmer.

After some discussion the Board agreed to this proposal, and a technical committee was formed, comprised of representatives of the Milk Board and the Department of Agriculture, the S.A. Dairymen's Association and a firm of architects.

The first of these standard designs has now been produced and is shown on pages 16 and 17 of this Journal.

The external design is neat, simple and attractive, and the general layout is considered to allow a high degree of efficiency in milking and maintenance.

These plans are available at the Milk Board's office at a cost of $2 each.

Statistics

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1965	1966	1965/66	1966/67	1965	1966
August	4,434	4,589	8,282	8,627	28,272	28,861

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1965	1966	1965/66	1966/67	1965	1966	1965	1966
Aug. ...	1,733	1,745	3,505	3,523	39.1	38.0	19.79	20.38

Moving average quota for 12 months ended 31/8/66, 42.48%.

INTERIM PRICES TO LICENSED SUPPLIERS

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

	Basic	C.M.B.	Total	3%	3.5%	4%	4.5%	5%
1966	(per lb. butterfat)			(per gallon)				
August ...	36.80	20.38	57.18	17.70	20.65	23.60	26.55	29.50

LONDON PROVISION EXCHANGE QUOTATIONS

(Sterling Currency per cwt.)

	August	
	1965	1966
Butter—Choicest Australian	319/–	300/–
Cheese—First Grade Australian	235/–	240/–
Rindless Australian	260/–	265/–

INTERIM RETROSPECTIVE FOR 1965/66

1964/65 FINAL YET TO COME

An interim retrospective payment for the 1965/66 season will be paid to all licensed producers early in October at the rate of 2.22 cents per lb. butterfat (equalized).

It is expected that the final payment for the 1964/65 season will be made early in November, at a rate which is estimated will be about ¼ cent. per lb. butterfat (equalized).

MORE TANKS PASS AS N-46

BUT BOARD APPROVAL NOT AUTOMATIC

Although the Metropolitan Milk Board has stated that it will issue a producer's licence to a farm equipped with a bulk milk tank **only if the tank conforms to the Australian Standard N-46,** producers should beware that conformity with the Standard is no guarantee that a licence will automatically be issued.

It is vital that any dairyfarmer contemplating the purchase of a tank should **first** ascertain directly from the Metropolitan Milk Board whether it will approve that particular tank.

CONDITIONAL ACCEPTANCE OF PRE-COOLING

The foregoing warning is particularly important in the case of tanks which have been certified as having passed the standard only **with the assistance of pre-cooling.**

Although the Australian Standard N-46 permits pre-cooling to be used with a tank submitted for certification experience with the problems of milk-cooling on the farm will have convinced dairy farmers of the difficulty in many cases of obtaining water at sufficiently low temperature during the summer months to provide any worthwhile assistance in this way.

The certification of a unit which requires pre-cooling to 70 deg. F. does not, consequently guarantee that the unit will perform satisfactorily in hot weather except in the extraordinary case whether ample water is available at a temperature considerably less than 70 deg.

Because a certified tank which requires pre-cooling is now available, the Milk Board was asked whether it would give approval to the installation of such a tank. The Board's reply is as follows:—

15th July, 1966.

Refrigerated Milk Tanks.

In reply to your letter of 17th June addressed to the Chairman I don't think I can do better than send you a copy of a report submitted by the Chief Supervisor to the Board meeting held on 13th inst. Mr. Taylor's recommendations have been adopted by the Board.

In effect the position is that under present and proposed regulations the Board cannot prevent units such as the Milkwell being installed but will not give its approval to the installation of these units unless pre-cooling facilities enable the milk to be cooled to 70 deg. F. at all times of the year before it is placed in the farm tank.

Yours faithfully,

R. B. CANT, Secretary.

11th July, 1966.

Refrigerated Farm Milk Tanks

In a letter dated 16th ult. the Secretary of the S.A. Dairymen's Association requested advice as to whether the Board would approve for use on a licensed dairy farm a farm milk tank which required the water cooling of milk to achieve certification standard.

This request from the S.A. Dairymen's Association obviously refers to the Milkwell unit which was recently certified as complying with the Australian Standard N-46.

The Compliance of the refrigeration performance with that specified by the Standards Association is dependant on the milk being cooled to 70 deg. F. before being placed in the farm milk tank.

The Board's basis for approval for farm milk tanks is as follows:—

(1) "One unit of each brand of tank to be tested by an authority set up in Australia for the purpose, and o certificate that the unit complies in full with A.S.N. 46—1963 and any amendments thereto is to be obtained.

(2) Other units of the same make but of varying sizes will then be acceptable to the Board provided the unit is stamped with the symbol A.S.N. 46—1963 and a warranty is given to the purchaser by the maker that the unit complies fully with the Australian Standard."

The Milkwell refrigerated farm milk tank complies with these requirements and therefore is acceptable for use on a dairy farm licensed by the Board, where the water supply and the cooling facilities enable the producer to cool the milk to 70 deg. F. before delivery to the farm milk tank.

During the summer months many producers are unable to cool their milk to 70 deg. F. simply because the water used for cooling exceeds this temperature. Such conditions violate the conditions under which the Milkwell refrigerated farm tanks have been certified as complying with the Australian Standard.

Under South Australian conditions the Milkwell unit is not acceptable for general use by licensed producers and before buying such a unit the producer or producers concerned would have to be certain that their pre-cooling facilities enabled them to cool the milk to 70 deg. F. at all times of the year before it was placed in the farm tank.

It is my opinion that producers should be:—

(1) Warned about the limitations of the refrigerated performance of units which require the milk to be cooled with water to 70 deg. F.

(2) Encouraged to purchase units which have sufficient refrigeration capacity to reduce the temperature of the milk from 95 deg. F. to 40 deg. F. in the time specified in the Australian Standard, namely 3½ hours from the commencement of milking.

Mention is made in the letter from the S.A. Dairymen's Association of the undesirability of exposing the milk to atmospheric contamination by using the tubular coolers. Although this method has some undesirable features it has been the accepted method for cooling milk in all States of Australia for many years and with most of the milk still being handled in cans it would be unwise at this stage to attempt to outlaw this method of cooling.

As reported following my visit to the Murray Goulburn Valley in 1964 pre-cooling of the milk is practised by very few farmers because the convenience of cooling the whole of the milk in the farm milk tank outweighs the economy effected by pre-cooling prior to the delivery of the milk to the farm milk tanks.

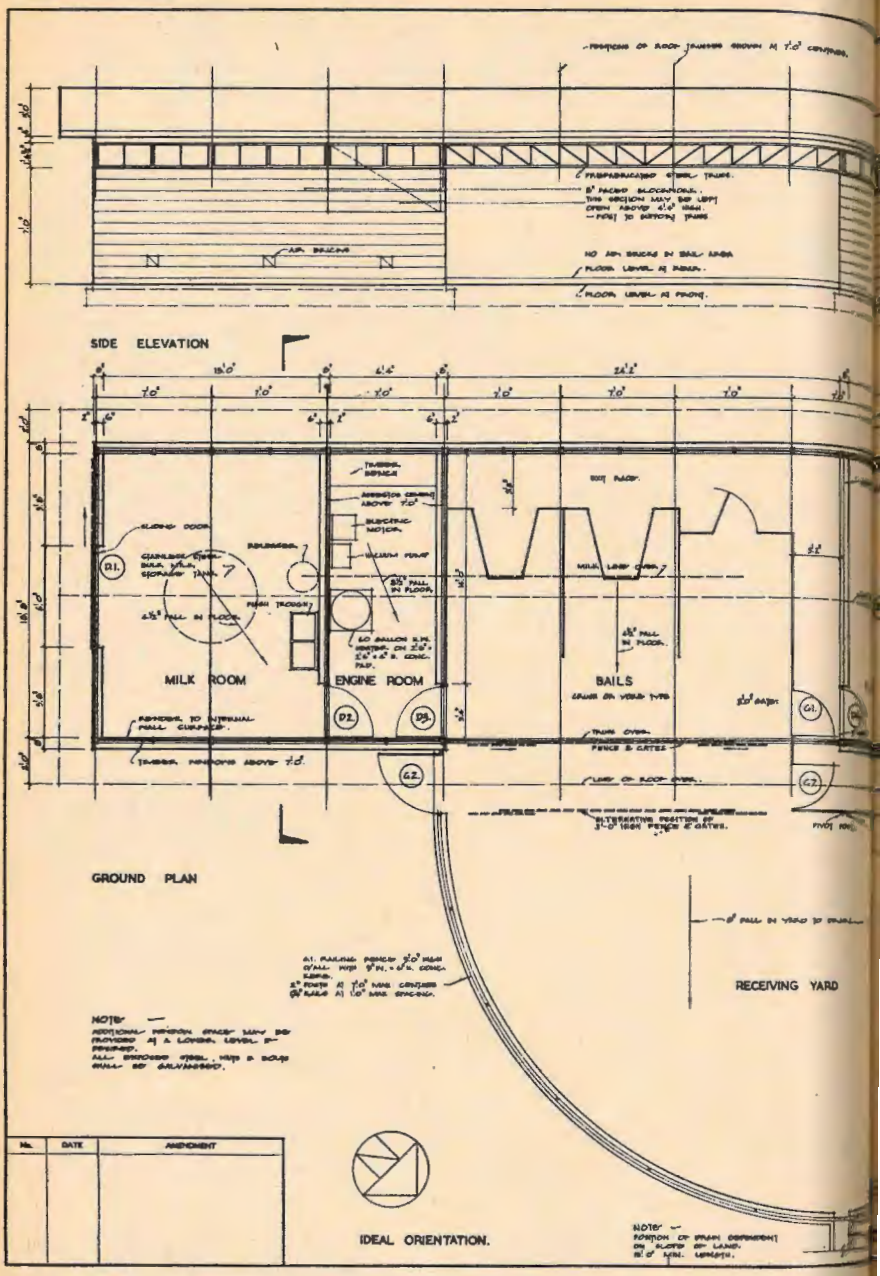
W. J. TAYLOR, Chief Superviser.

USE OF EXISTING ICE-BANK UNITS

A further caution is necessary in regard to the coupling of an existing ice-bank unit to a stainless steel farm tank.

This is a practice that has been frequently used in other States, where the ice-bank unit used for shock-cooling milk for cans has subsequently been coupled to a stainless steel tank to provide for refrigerated holding as well as the usual shock-cooling over a multi-tube cooler.

However, none of these converted units has been required to be certificated as being in accordance with N-46.



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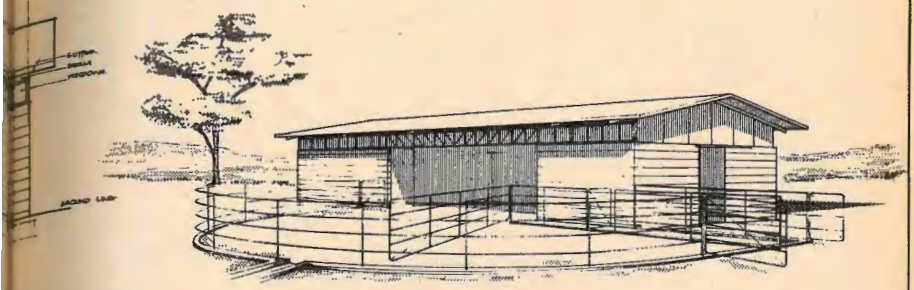
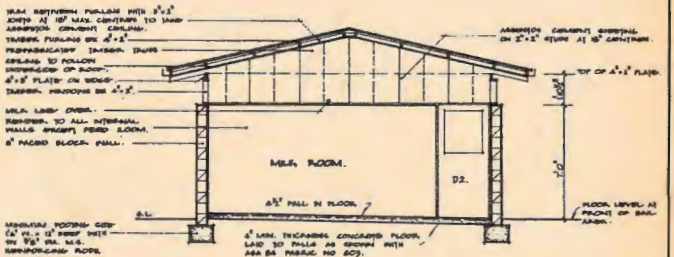
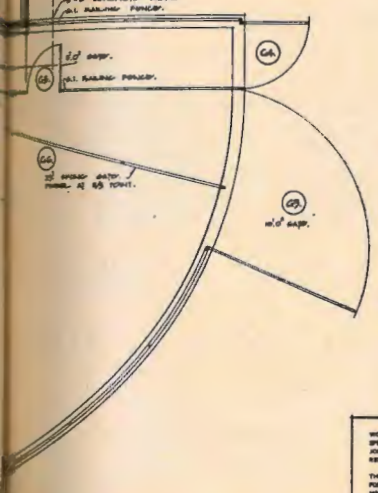
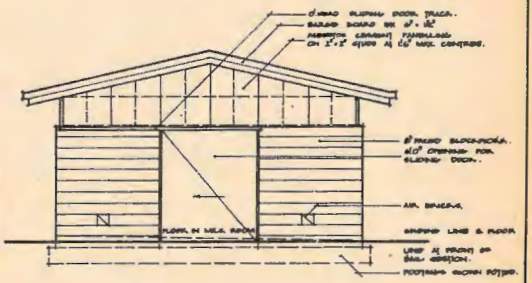


PERSPECTIVE VIEW



SECTION THROUGH MILK ROOM





END ELEVATION

WORK SHALL CONFORM ALSO TO THE SPECIFICATIONS, OTHER DRAWINGS AND JOB DIMENSIONS, AND ALSO TO ALL REQUIREMENTS OF THE BUILDER. THE FINISHED WORK MUST BE ADEQUATE FOR ITS PURPOSE. ANY SHOP DRAWINGS NECESSARY FOR THIS WORK SHALL BE SUBMITTED TO THE ARCHITECTS. COPYRIGHT OF ALL DRAWINGS AND DOCUMENTS IS VESTED IN THE ARCHITECTS.	METROPOLITAN MILK BOARD	SCALE 1/4" – 1'0"
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Certainly it would not be impossible to design a combination of ice-bank generator and stainless steel tank which would be capable of passing the N-46 standard, but it is open to doubt as to whether the rigid requirements of the standard could be achieved by an on-the-farm assembly of a tank and an ice-bank generator that may be several years old.

This case was referred to the Milk Board for a statement as to the acceptability of such a unit. The Board's reply is as follows:—

Adelaide,
17th June, 1966.

Refrigerated Farm Tank Units

I refer to your letter of 14th inst. addressed to the Chairman.

The Board's basis of approval for the above units is as follows:—

"One unit of each brand of tank to be tested by an authority set up in Australia for the purpose, and a certificate that the unit complies in full with A.S. N.46-1963 and any amendments thereto is to be obtained.

Other units of the same make but of varying sizes will then be acceptable to the Board provided the unit is stamped with the symbol A.S. N.46-1963 and a warranty is given to the purchaser by the maker that the unit complies fully with the Australian Standard."

The type of milk cooling unit to which you refer has not, to our knowledge, been tested by a recognised authority, therefore it is not acceptable to my Board.

Yours faithfully,
R. B. CANT, Secretary.

Foreign Cheesemakers Object To New Standards

In the President's Annual Report printed in our last issue, reference was made to the new Regulations gazetted by the Commonwealth Department of Health, and the role played by this Association over the last three years in the framing of these Regulations.

This Association was extremely gratified that the industry's concern at the health hazards presented by imported cheeses had been confirmed by the National Health and Medical Research Council and translated into legislation, and our appreciation was personally expressed to Dr. Forbes who, in addition to holding the portfolio of the Minister of Health, is the Federal Parliamentary representative of many of the Association's members.

To the Australian dairying industry the requirements of the new Regulations did not appear oppressive. Pasteurization is a basic process in commercial cheese making and **is a condition that must be met by all cheese exported from Australia,** and this Association was very surprised at the resulting outcry from foreign cheese manufacturers.

But what was more surprising was the unwarranted attack on the Minister of Health and on the industry by a number of politicians and political commentators, and the completely scurrilous accusations that these Regulations were only a disguise for protection.

We believe that the Minister and his Department were similarly surprised at the outcry and it was, of course, only to be expected that the Minister would order a review of the legislation to see what relief could be given to the countries concerned. Perhaps in the circumstances the six months' respite that has now been granted was reasonable, **but this Association is strongly of the opinion that the Regulations should not be further weakened, that the Australian people and the country's livestock should not be exposed to the dangers of introduced diseases just to suit the pockets of the traders concerned, and that the standards imposed on imported cheese should not be significantly lower than those which must be (and are) met by our cheese exporting factories.**

The sole reason for the new quarantine regulations is to ensure that only disease free cheese is imported into Australia. In this both veterinary and public health aspects are involved.

Pointing this out Commonwealth Director-General of Health, Sir William Rershouge said there exists in various countries especially those bordering the Mediterranean, a disease of humons known as Brucellosis and commonly called Undulant fever, or Malta fever.

Undulant fever is caused by three varieties of the organism Brucella. The most severe form of this is caused by Brucella melitensis which primarily affects goats and sheep. The second variety, Brucella abortus, mainly affects cattle and the third variety Brucella suis, mainly pigs.

Although Brucella melitensis is primarily a disease of goats and sheep there is evidence over the past few years of an increasing infection by this organism of cattle in the Mediterranean area and in some other European countries.

In animals the disease causes septic abortion but in man the clinical picture is entirely different. In man the disease is accompanied by a recurrent high fever with general debility and ill health. The duration is usually three to four months but it may last up to two years. The disease sometimes has very serious results and with the melitensis variety may sometimes cause death.

Brucellosis is difficult to diagnose as its onset may be in an insidious form. In 1966 in Australia 96 cases of Brucellosis were notified. The most common form occurring in Australia is Brucella abortus but some cases of Brucella suis have been reported. However, the most serious form, Brucella melitensis, does not exist here and it is important that it should be excluded.

Apart from Brucella melitensis other pathogenic organisms may be present in cheese—for example Staphylococci, which cause food poisoning and local infection of various body tissues; Solmanella typhosa, which is the cause of typhoid fever in humans, and mycobacterium tuberculosis, which causes tuberculosis in both humans and animals.

Investigations have shown that these organisms can all survive in cheese for months, especially if it is kept at low temperatures. On the other hand all these organisms are destroyed by pasteurisation.

The National Health and Medical Research Council has recommended that only cheese made from pasteurised milk should be sold in Australia.

The Council has also stated that a public health and animal risk exists from the survival of Brucella melitensis in imported cheese and has recommended that only cheese made from pasteurised milk should be imported. The Council has advised that the only valid criterion of effective pasteurisation is what is termed a "negative phosphatase test." This test is used as a matter of course in most dairy produce factories which operate to accepted levels of hygiene.

The recenly gazetted quarantine regulations were designed to implement the recommendations of the National Health and Medical Research Council. The control of the hygiene of cheese produced within Australia is a matter for State Government but the recommendations made by the Council do apply equally to locally made cheese.

It is not intended that the health certification required by the new regulation should have the effect of preventing the importation of cheese. Rather, the intention is to apply standards to ensure that cheeses which have been manufactured from unpasteurised milk and which therefore present a human and animal health risk, are not imported into Australia. These new requirements should not present any real difficulties for overseas cheese manufacturers who have modern equipment and who employ accepted hygienic techniques.

NEW PRODUCT TO CONTROL BLOAT

A new anti-bloat product containing anti-foaming agent developed after eight years of research at six universities in the United States, is now available in Australia under the trade name "Bloat Guard."

The manufacturers, Smith Kline and French Laboratories, have broken production records to make it available in time for the spring "bloat season" this year, only four months after the product hit the American market.

A company veterinarian claims that "farmers feeding the product in the morning bail feed can turn their cows out all day on high production legumes to improve milk yields with no danger from bloat."

It is packed in 5 lb. tins and 20 lb. tapered drums containing enough for 480 individual doses. There is also a drench form for rapid relief of animals already suffering from bloat.

Scientists at the Kansas State University who discovered the anti-foaming agent, poloxalene, were looking for a substance that would prevent bloat for at least 12 hours, act within 10 minutes, be palatable, have no ill effects on health, reproduction, feed intake ar milk quality, not enter the milk stream, or not enter body tissues, and yet be economical.

They claim their discovery meets all these requirements.

PROSPEROUS YEAR FOR FEDERATION

Accounts for The Federation Insurance Limited for the year to June 30 disclose a substantial improvement in both underwriting results and Investment Income.

Underwriting Profit has been lifted to $107,812 ($40,496) whilst Investment Income moved up from $319,962 to a record high of $410,079.

A capital loss of $20,037 (Nil) is also included in arriving at the profit of $337,854 ($210,570) after tax.

Gross Premium Income increased by $550,355 to $10,872,775 which Directors consider to be satisfactory having regard to the serious effect of the disastrous drought in the States of New South Wales and Queensland.

Reserve for unexpired Risks at $3,734,882 has been maintained at 44% on the increased Net Premium Income.

The Company's Life Branch continues to show satisfactory development in all states of Australia. Life Assurance policies were written for sums assured totalling $7,540,106 ($1,348,557). Premiums received were $148,699 ($22,381) and commission and expenses of management totalled $87,172 ($14,797). Investment Income was $13,215 ($5,485) and the Life Assurance Fund now stands at a figure of $154,298 ($58,112).

Directors say that Expenses of Management more especially Salaries, Stamp Duty and Fire Brigade charges continue to increase and give some cause for concern. Notwithstanding these increased costs the expense ratio has been maintained at a satisfactory level consistent with the programme for development in the various States as a Composite Company providing a complete insurance service.

WHAT DO YOU KNOW ABOUT THE METHYLENE BLUE TEST?

Among the tribulations that affect the dairyfarmer's life the "Methylene Blue Reductase Test" must rank with the leaders. Most of us know no more about it than that it purports to be a measure of milk quality, and that it sometimes gives confusing results.

To clear up the misunderstandings and to give dairyfarmers an insight into the why and how of the methylene blue test the Australian Society of Dairy Technology has arranged a Symposium, which will be held in the Meadows R.S.L. Hall on Thursday, 17th November, at 8.00 p.m.

At this Symposium the test will be demonstrated and explained in detail. A panel of experts will be available to answer questions.

The meeting is open to **all interested persons,** and supper will be provided.

N.S.W. LEGISLATES FOR BLUE PENICILLIN

In New South Wales all penicillin, streptomycin and terramycin prepared for the treatment of mastitis by intramammary infusion must now contain a brilliant blue F.C.F. dye.

This was announced by Mr. R. A. Hall, Chief, Division of Animal Industry, Department of Agriculture, Sydney.

"The effect of the dye will be to cause milk contaminated by antibiotics to be coloured blue," said Mr. Hall.

This requirement is the result of a decision by the New South Wales Stock Medicines Board following a recommendation made by the Standing Committee on Agriculture of the Australian Agricultural Council.

Mr. Hall said that even low levels of antibiotics in milk could cause sensitivity in some consumers. In addition, even small quantities of antibiotics could inhibit the action of starter cultures used in the making of cheese.

Used in Victoria

"The dye has been used in Victoria since 1962," said Mr. Hall. "When it was introduced in that State, the amount of antibiotic contaminated milk received at factories dropped from 15 per cent. to 0.4 per cent.

"The dye will enable accurate and rapid testing of milk for antibiotics at milk factories and depots. It will enable detection of antibiotics in milk in much smaller concentrations than formerly.

"Farmers should withhold milk from any treated quarters for 72 hours after treatment, unless a shorter withholding period is indicated on the package," advised Mr. Hall.

Nutrition With Milk Products

(Theme of the XVII International Dairy Congress)

To satisfy the daily requirement of 2,250 calories, 3,000 million human beings consume annually around 72 million tons of protein, 80 million tons of fats and 348 million tons of carbohydrates. Milk and dairy products supply around ⅛ of the required calories.

Milk protein is particularly important in nutrition. 46% of animal proteins consumed in Europe are derived from milk, cheese, etc.; 39% from meat, 9% from fish and 6% from eggs. The indispensable constituents of protein, the so-called "essential amino acids," are found in milk and, should no other form of protein be available, the daily consumption of ½ litre milk or 125 grammes cheese, will prevent any lack of these. About 25% of Europe's nutritional fat is supplied by milk fat. The importance of butterfat compared with other fats has for some time been a point of wide interest. The much supported opinion that butterfat could lead to incidence of atherosclerosis, has now, by the recent publication of research work in the United Stotes and in Germany, been proved false. When butter is the sole fat source in the diet of patients with atherosclerosis, but the same diet also contains sufficient protein, a marked fall in the cholesterol level of the blood can be observed.

Apart from milk and protein, milk and dairy products also provide carbohydrate (25% of the total requirement), as well as minerals and other important trace elements. Milk is, nutritionally, particularly important, as its composition is easily assimilated by the human body. The special advantage of butterfat is the definite structure of its "fat gronules" which can be absorbed directly into the intestinal tract. Other fats, however, need to be assimilated into the body with the help of a complicated chemical process.

The nutrition of the world population with milk was one of the topical problems which wos discussed at the XVII International Dairy Congress, for which 4,000 specialists from the world over met from July 4th-8th. Research workers, dairymen, engineers, agriculturists, doctors and officials, discussed over and obove the general theme of "milk production," "market milk," "butter," "cheese," a series of special subjects, such as preserved milk products, ice cream, milk production in the developing countries, cleaning and disinfection, woter and effluents in the dairy, market research and publicity. During the discussion of these subjects, emphasis was laid on rationalisation and automation on the farm, in the dairy and at the retailers', and on increasing the choice of dairy products to the consumer.

The XVII International Dairy Congress took place in Munich, the city chosen for the Olympic games in 1972. The previous congresses (Stockholm 1949, The Hague 1953, Rome 1956, London 1959, Copenhagen 1962), were all held within easy reach of the sea. Munich, however, lies in the mountains, which, while providing surroundings with dairying interests, also fulfils all the necessary conditions of a modern congress city. Munich is the economic and cultural centre of Southern Germany, connecting the South and South-East of Europe with the North and West. The town, which is over 800 years old, has 1.2 million inhabitants, making it the third largest in the Federal German Republic. Between 1960-1975 the population will increase by 34.4%, whereas in the rest of the Federal Republic the increase will be 14.8%. The economic turnover has increased fivefold since 1950.

Munich is also important in the field of the arts and sciences. Twenty theatres and four symphony orchestras have their homes in the town. 30,000 students make Munich the largest centre for higher education in Germany. In 1965, 480 conferences and congresses were held in Munich, which is proverbially known for its "Gemutlichkeit," an untranslatable catchword. Munich is renowned for having the largest consumption of beer but it can also boast a very high consumption of milk, which recently was the highest in the Federal German Republic.

—Congress Press Bulletin from Munich.

ALEXANDRA MARION

We regret to announce the death of Alexandra Marion, V.H.C., at the age of almost 17. She was probably by far the most frequently shown cow at both Royals and country Shows in South Australia. First shown in 1951 when third as a two-year-old "dry," she was shown at nearly every Royal Show until 1963—12 years later when she was second against all breeds in the Type and Production Class.

Her top record was 555 pounds of butterfat and she produced more than 10,000 pounds of milk per lactation frequently, including once at the age of 15.

Alexandra Marion, V.H.C., will surely rank as one of the most famous cows of the Jersey breed, not only because of her production and breeding record and not only because of her show successes, but also, in our opinion, because she graced the cover of the first issue of this Journal in April, 1962.

IMPORTED SEMEN

Dr. A. J. Forbes, Minister for Health, has replied to a request from a New Zealand owner to export semen from the well-known bull, Merriland Gold Sovereign to Australia.

He has pointed out that his Department protect the dairying industry in Australia in two ways in relation to this request for the use of imported semen in Australia.

Firstly, it protects the livestock industry from the dreadful scourges of Blue Tongue and Foot and Mouth by placing restrictions on import of livestock.

New Zealand does not conform to these high standards.

Secondly, it protects the dairying industry in particular by laying down certain requirements in the testing of bulls for Veneral Diseases such as Vibriosis and Leptospirosis.

The Director, Animal Health Division, Department of Agriculture, New Zealand has, however, informed Dr. Forbes that his Department is unable to meet Australian requirements in respect of testing bulls for Vibriosis, etc. at this time.

Dr. Forbes says that should the New Zealand authorities be able at any time, to comply with all our requirements we would be pleased to receive semen from New Zealand.

HE SOUTH AUSTRALIAN DAIRYMEN'S . . . Journal

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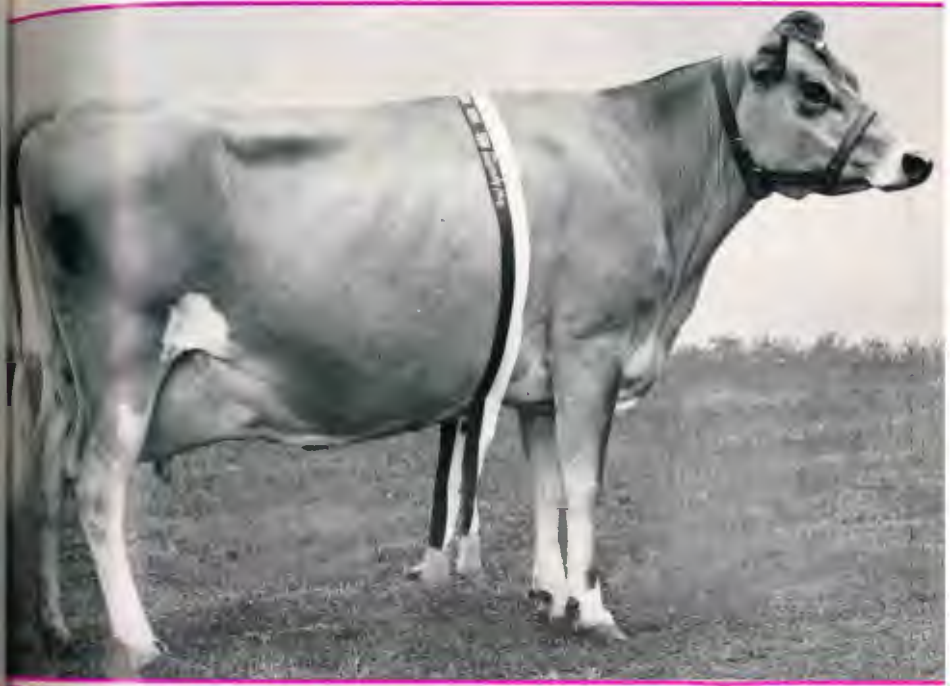

—Photograph by courtesy of "Livestock Bulletin."

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WHAT LIES AHEAD?

Now that the form of a new Federal Government is established beyond doubt we can expect some inklings of its proposals for dairy stabilization over the next five year period.

This is a subject on which there is wide ranging opinion; from those who think the bounty should be abolished entirely to those who believe it should be increased to cover the whole gap between average production costs and the returns from sales.

Certainly within the industry we must appreciate the fact that dairyfarming in Australia has, during the last twenty years, been built onto o foundation in which stabilization was incorporated, and any move to abolish or even to lessen the amount of bounty would reduce the income and deplete the capital of every dairyfarmer in the Commonwealth. Yet it is known that there is strong support, at least outside the Federal Government, for the type of action recommended by the McCarthy Committee in 1961 — a transference of some of the bounty away from direct subsidy towards the relief of poverty and the improving of efficiency by diversification and the aggregation of farms of less than minimum economic size.

The proposals to relieve the undoubted poverty that exists in many places in the industry and to assist farmers to help themselves by improved efficiency through diversification and increased farm size hove merit, but their value must be measured against the objections that must be raised against any proposal to reduce the present level of bounty.

Consideration must be paid as well to the changing conditions which are taking place in some sections of the industry — the decline in butter consumption, the swing to butter substitutes, the increases in returns for skim milk and casein, the increased production of milk protein derivatives, and the technological developments that are occurring.

Bearing all these things in mind, the Australian Dairy Industry Council conferred with the constituent organizations of the Australian Dairy Farmers' Federation and on 27th October presented to the Federal Government the following submission on the form that dairy stabilization should take during the next five years.

Dairy Industry Stabilization: The Next Five Years

1947—1966

On June 30, 1967, the Australian Dairy Industry will have completed a twenty-year period during which it has operated under four successive Commonwealth Stabilisation Plans, each of five years duration.

The original Plan, which ran from April, 1947 to June, 1952, provided a guaranteed return to dairy farmers for all milk and cream supplied for manufacture into butter, cheese and processed milk products based upon the cost of production.

This Plan brought stability to the Industry for the first time and enabled dairy farmers to plan for the future with confidence. During this period, returns to producers supplying milk and cream for manufacture into butter increased from 2/- per lb, commercial butter in 1947-48 to 3/6 per lb. in 1951-52.

The Second Five Year Plan, which commenced on July 1, 1952, provided a price guarantee limited to butter and cheese consumed locally plus 20 per cent. of that quantity. During this period, returns to producers decreased progressively from 3/11.8 per lb. in 1953-54 to 3/8½ per lb. in 1956-57.

The Third Five Year Plan, which commenced on July 1, 1957, provided a price guarantee limited to butter and cheese consumed locally plus 20 per cent. of that quantity with a fixed amount of subsidy determined at the commencement of each year. (In fact, the subsidy was fixed at £13½ million for each year of the Plan.)

In 1958-59 the Commonwealth Government decided to underwrite final equalisation values at a level which would enable factories with average manufacturing costs to pay producers 3/4 per lb. commercial butter. Returns to producers during this period ranged from a peak of 3/10½ per lb. in 1959-60 to 3/8 per lb. in 1957-58, 1960-61 and 1961-62.

The Fourth Five Year Plan, which commenced on July 1, 1962, provided for the payment of £13½ million subsidy to producers of butter and cheese and

butterfat products containing not less than 40 per cent butterfat and for the underwriting of final equalisation values at a level to be determined at the beginning of each year (the underwriting guarantee was fixed at 3/4 per lb. for the first year and remained at this level throughout the period of this plan).

In addition, in 1962-63 the Commonwealth Government provided for the payment of a bounty on exports of processed milk products. The maximum amount allocated in each year was: 1962-63 £350,000, 1963-64 £500,000 (£438,222 actually paid), 1964-65 £400,000, 1965-66 £400,000, 1966-1967 $800,000.

The highest return to producers during the three finalised years of this Plan was 3/10½ per lb. in 1964-65.

The following table shows the final Equalisation Values and Bounty Rates, officially recognised Manufacturing Allowances and Returns to producers from 1947-48 to 1964-65. The final Equalisation Value for 1965-66 has been estimated:

Year	Equalisation Value cwt.	Bounty Rate cwt.	Overall Manufacturing Value cwt.	Producers' Allowance cwt.	Return lb.
1947-48	210/2	35/4	245/6	21/6	2/–
1948-49	237/7	28/11	266/6	23/10	2/2
1949-50	248/11	43/11	292/10	28/–	2/4.37
1950-51	241/8	82/4	324/–	29/8	2/7.53
1951-52	307/9	121/4	429/1	36/11	3/6
1952-53	398/–	85/–	483/–	43/5	3/11
1953-54	400/5	89/10	490/3	43/5	3/11.87
1954-55	395/10	79/–	474/10	39/8	3/10.62
1955-56	400/10	65/1	465/11	43/2	3/9.29
1956-57	392/7	65/8	458/3	43/2	3/8.47
1957-58	380/9	71/8	452/5	43/2	3/7.84
1958-59	412/11	64/11	477/10	45/1	3/10.36
1959-60	417/6	63/6	481/–	46/4	3/10.57
1960-61	399/8	68/11	468/7	49/10	3/8.86
1961-62	398/5	62/7	461/–	49/10	3/8.05
1962-63	411/6	61/6	473/–	49/10	3/9.34
1963-64	417/3	61/–	478/4	49/10	3/9.91
1964-65	422/6	60/10	483/4	49/10	3/10.44
1965-66 est.	$40.75	$6.01	$46.76	$4.983	.373 cents (3/8.76)
1966-67				$5.133	

From this table it will be seen that, in spite of the Government's Stabilisation Plans, returns to producers have declined since 1953. In actual fact the decline was much greater if the drop in the value of money that occurred over this period is taken into account.

There have been some compensating factors for a number of butter producers particularly in certain States because of the change-over by factories from the manufacture of butter only to the manufacture of butter and skim milk powder and casein. The combined skim milk powder/casein production in 1952-1953 amounted to 18,724 tons valued at $4,312,000 ex factory compared with a combined production of 65,889 tons in 1964-65 estimated to be valued at $18,760,000 ex factory. However, amounts paid to farmers for non-fat milk solids vary widely between factories depending upon the degree of competition for milk supplies, factory production costs and cartage costs.

During the period from 1953 to 1965, the recognised dairy farm cost of production based on surveys and index adjustments carried out by the Bureau of Agricultural Economics, increased by 24.5% from 4/1 per lb. to 5/1 per lb. The cost of production figure as at June, 1966 calculated by the Council on the results of the Bureau's Surveys and taking into account usual imputed costs was 5/4 per lb.

The Consumer Price Index for the Six State Capital Cities issued by the Commonwealth Statistician showed an increase from 102.1 in the June Quarter of 1954 to 136.5 in the June Quarter of 1966, and the basic wage increased by 39% to current levels. Dairy farmers, therefore, have suffered a serious decline in the real value of their return.

The serious economic position of the average dairy farmer producing milk and cream for manufacture is illustrated in the initial results of the Bureau's 1961-64 Survey which showed an Australian net dairy farm income of $2,002 (£1,001). This was the total amount the farmer had to cover his own labour, responsibilities of management on a farm with an average of 78 dairy cattle and interest on capital invested of $31,586 (£15,793).

A continuation of the Government's Bounty Policy is essential. The Bounty has, in fact, become an integral part of the Industry's price structure and returns to dairy farmers. Any reduction in the level of Bounty would have a serious effect, not only on farmers' incomes and standards of living, but on the capital structure of the Industry in all States.

Bounty enables dairy farmers to purchase machinery, equipment and other farm and household necessities which would not otherwise be possible. In this way, the benefits are extended to many sections of the community including secondary industries.

Bounty is also a partial compensation for the high cost conditions under which Australian dairy farmers have to produce for export.

Although Bounty is distributed to all producers on an equal basis, there are dairy areas in all States where, because of farm size or climatic and production problems beyond the control of producers in these areas, the present Bounty level in insufficient. Special loans for reconstruction, development and amalgamation would overcome the problems in these areas.

The Industry is also facing severe problems in the marketing sphere.

The home market for butter is threatened by the growing availability of margarine.

Overseas markets are being jeopardised by increased world competition from subsidised dairy exports from other countries. In addition, the outlook for exports of Australian dairy products is clouded by the strong possibility of the United Kingdom entering the European Economic Community.

To meet these problems every effort must be made by the industry and the Government (including the provision of finance) to diversify dairy production and the pattern of the industry's export trade.

Based on the above, the following recommendations are made.

THE PROPOSALS

With the object of ensuring a measure of stability in dairy farmers' returns, providing for farm and factory reconstruction and amalgamation where necessary, to improve the economics of the industry and of overcoming some of the problems of the changing marketing pattern for dairy products both within Australia and overseas, the Australian Dairy Industry Council makes the following recommendations in relation to a new Dairy Stabilisation Plan to operate for a five year period from July 1, 1967:—

(i) The allocation of not less than $27 million each year for the period of the Plan for payment to butter and cheese producers.

(ii) The allocation of sufficient money each year for the payment of a subsidy to processed milk manufacturers on the basis of butterfat in processed milk products exported at a level per pound equal to the bounty paid per pound butterfat to butter manufacturers.

(iii) A continuation of the Commonwealth Government's underwriting guarantee of equalisation values for butter and cheese determined each year at the highest levels at which the Commonwealth Dairy Produce Equalisation Committee could economically finance initial equalisation values with a minimum of 34 cents (41d.) per lb. commercial butter.

(iv) (1) The provision of funds each year for distribution in conjunction with State Governments—

(a) As combined grants and loans to provide for the amalgamation of dairy farm units which are uneconomic because of size.

(b) As loans for dairy farm reconstruction and development, for a period of 15 years secured by second mortgage on the property concerned (if necessary) with interest at a reasonable rate after an interest free period of three years.

(2) The establishment of regional and/or district advisory councils consisting of representatives of dairy farmers, the State Departments of Agriculture and Lands and the Development Bank to assist in the administration of the grants and loans and help farmers to formulate proposals for financial assistance.

(3) An increase in the Commonwealth Government's contribution to the Dairy Produce Research Fund for the specific purpose of instituting research designed to assist in the scheme for the amalgamation, reconstruction and development of dairy farms.

(4) Investigation of the practicability and advisability of introducing a scheme for the training of and/or finding of employment for dairy farmers or their dependents desirous of leaving the industry to enter other employment.

(v) In order to establish the most remunerative return for the milk produced by the reconstructed dairy farm sector, it will be necessary in many areas to increase diversification of dairy products. This need will be most pressing in areas only serviced by a butter factory receiving cream. The weakness of the economy of the industry being dependent upon butter is being demonstrated constantly on the home market through the pressure of margarine and on export markets by heavy butter stocks generated under national dairy policies and subsequent subsidised exports. Values of non-fat milk solids on the other hand have been steadily improving with rising world demand for protein. Managed efficiently, multi-product dairy factories ensure the sale of milk received by them for the best combination of returns.

(a) With the object of encouraging the diversification of dairy production and to meet the high cost of converting factories to take advantage of the rising world demand for protein, the Council recommends the provision of funds each year for loans (subject to the approval of a Committee consisting of the representatives of Commonwealth Government Departments, Development Bank and the Council) over a period of 15 years with interest at commercial rates

after an interest-free period of two years for the reconstruction, development and amalgamation of dairy factories and the purchase of equipment.

(b) To help factories formulate proposals for financial assistance, regional advisory services be established with representation from dairy factories, Departments of Agriculture and the Commonwealth Development Bank.

(vi) With a view to the gradual diversion of greater quantities of dairy products from the United Kingdom, and other European markets, the provision of funds to establish a Dairy Produce Export Development Fund under joint Government and Industry Control to provide—

(a) For loans to Companies at reasonable interest rates repayable over fifteen years in which the Australian Dairy Produce Board has a financial interest in the capital structure, to be used for the establishment of milk plants in overseas countries and the setting up of dairy product processing, storage and distributing centres in overseas countries.

(b) For direct grants to subsidise the cost of Australian dairy product used as raw materials processed in Australian associated overseas milk processing plants where necessary for a development period of two years to assist in the establishment of such plants and for market development.

(vii) Commonwealth Government support for the maintenance of table margarine production quotas at existing levels and their strict enforcement.

WORLD DAIRY POSITION UNSTABLE

The year 1965 as a whole witnessed increases (of 3 to 10 per cent.) in milk supply in all the main producing countries of Europe. This was partially a recovery from low levels in 1964 when a drought had affected production in certain parts of Western Europe. The early onset of winter, however, caused a falling off in supplies in December, especially in Ireland, Switzerland, the Netherlands, Finland, Sweden and the United Kingdom.

The 1964/65 seasons in Australia and New Zealand were record ones, but Australia has recently been hit by a prolonged drought in dairying areas.

In North America production has remained below 1964 levels throughout much of 1965. Both Canada and the U.S. produced two to three per cent. less milk.

In consequence, North American butter stocks have been substantially reduced (by more than one-half compared to 1963) while Europe has built up large stocks during the spring and summer. Prices were maintained, however, except in France and the U.K.

Stocks of skim milk powder, which may be further curtailed by the demands for emergency aid to India, were substantially below 1964 levels at the turn of the year in the U.S., but tended to accumulate in Europe and, to a lesser degree, in Canada.

The world dairy situation is thus in precarious balance and further production increases in Europe, which seem to be likely, could create marketing difficulties.

The recent adoption by E.E.C.'s Council of Ministers of a higher floor level (without any corresponding change in the ceiling level) for this Community price range for 1966/67 can hardly be expected to correct this trend.

Statistics

ADELAIDE METROPOLITAN MILK SUPPLY AREA

PRODUCTION (000 gallons)

	For Month		Total since July 1		Total since Jan. 1	
	1965	1966	1965/66	1966/67	1965	1966
Sept.	5,170	5,189	13,452	13,816	33,442	34,050
Oct.	5,716	5,881	19,168	19,697	39,158	39,931

SALES (000 gallons)

	For Month		Total since July 1		Quota %		C.M.B.	
	1965	1966	1965/66	1966/67	1965	1966	1965	1966
Sept.	1,671	1,690	5,176	5,213	32.3	32.6	16.77	17.73
Oct.	1,756	1,749	6,932	6,962	30.7	29.7	16.35	16.17

Moving average quota for 12 months ended 30/9/66, 42.50%; 31/10/66, 42.34%.

INTERIM PRICES TO LICENSED SUPPLIERS

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

	Basic	C.M.B.	Total	3%	3.5%	4%	4.5%	5%
1966	(per lb. butterfat)			(per gallon)				
Sept.	36.69	17.73	54.42	16.84	19.66	22.46	25.27	28.08
Oct.	36.69	16.17	52.86	16.37	19.09	21.82	24.55	17.28

LONDON PROVISION EXCHANGE QUOTATIONS

(Sterling Currency per cwt.)

	September		October	
	1965	1966	1965	1966
Butter—Choicest Australian	314/–	300/–	314/–	300/–
Cheese—First Grade Australian	235/–	240/–	235/–	240/–
Rindless Australian	260/–	265/–	260/–	265/–

INTERIM RETROSPECTIVE PAYMENT 1965-66 SEASON

A further retrospective payment of 1.21 cent per lb. butterfat (equalized) will be paid to all licensed producers in the Adelaide Metropolitan Supply Area early in December for production during the season 1965-66.

WIDE COVERAGE AT MUNICH

Mr. A. G. Itzerott reports on the XVII International Dairy Congress

The Dairy Congress was attended by 3,812 delegates from 60 countries. Among these were 123 Australians. Messrs. E. G. Roberts, J. A. Ferguson, J. McDermott, G. Loftus-Hills, D. Crowfoot and A. G. Itzerott comprised the official Australian delegation.

Congress was opened by Dr. Lubke, President of West Germany, and closed by Dr. Sen, Director General of F.A.O. Dr. Sen stressed the need for increased food production and the role dairy products could fill in alleviating the ocute shortage of high priority protein foods.

Papers and discussions covered subjects Milk Production, Liquid Milk, Butter, Cheese, Dairying in warm countries, Casein, Whey and other Processed Milk Products, Cream and Ice-Creams, Fermented Milks, Market Research, Hygiene, Nutrition, Water and Effluents.

Sessions varied in quality. The need to cater for large numbers detracted from effective arrangements for speakers, acoustics and discussion. Considerable opportunity wos provided for making contacts and studying organisation. As the 1970 Dairy Congress is to be held in Australia it was possible to have semi-official discussions with delegates from key dairying countries on changes desirable to ensure the more effective organisation of this Congress.

Changes to present procedures could attract participation by other major countries and consolidate I.D.F. and I.D.C. organisation and activities.

An outstanding Dairy Machinery Exhibition was staged, featuring a wide range of interests and dummy run operations. Significant trends included automation, increased use of plastics in packaging and stainless steel, and specialised units for automatic testing of dairy products.

Talks during and after the Congress enabled delegates to obtain a good working knowledge of Research, Teaching, Extension, Production and Processing activities in West Germany.

Social programmes were well organised catering for all tastes, though the large numbers present made it difficult to circulate for informal discussions.

Resolutions from the Congress were as follows:

1. Milk production has reached a high level in the most important milk producing countries and is expected to rise even further. As the market is still able to absorb larger quantities of meat, it is therefore desirable to make suitable alterations in the design of the farm, use selective breeding for beef and by suitable feeding to raise beef production without at the same time raising the production of milk.

2. The production of milk proteins for human consumption should receive greater attention, by taking more account of the milk protein content during progeny testing or the quality payment of milk according to the protein content or by applying restrictions in the use of skim-milk for animal feeding.

3. The feeding for high yields needs to be adapted for correct performance as well as the anatomic and physiological conditions of the ruminant.

4. Improvement in dairy cattle health is a deciding factor for production of milk and milk products of high quality and for the profitability of dairy farming. The epidemic diseases and mastitis (udder infections) have to be eradicated systematically. Use of drugs, especially antibiotics must in no way impair the quality of milk. Further research in this field is needed.

5. These aims presuppose the knowledge and ability of the farmer to be conversant with dairy farming, breeding selection and feeding, maintenance and improvement of animal health, milk production and the treatment and transport of milk as well as farm economics. Educational methods adapted to these needs, advice and control should be encouraged.

6. In view of increasing use of single-service packaging for milk and dairy products, it is recommended that only those materials be used for packaging which are impermeable to light, gas and volatile substances.

7. As it is now possible, with the help of UHT treatment, to produce a milk with satisfactory taste, high nutritive value and long keeping quality, further research is needed to establish if the production costs of UHT treatment could be decreased, and so make UHT milk available to countries which produce little milk.

8. With the use of the continuous buttermaking process, problems concerning the fat content of the buttermilk and regulations regarding moisture content of the butter need to be elaborated.

9. The endeavours to improve butter quality need to remain a primary consideration, with the question of butter consistency of particular importance. Origins of oxidative defects through influence by catalysts need further research.

10. A uniform estimation of butter quality by butter grading on international level is desirable.

11. Elucidation on the high biological value of butterfat needs to be increased.

12. In the last few years, many new data have been collected as regards chemistry, physics and microbiology in cheese making. Research into the enzymatic process of cheese ripening should be increased in the next few years.

13. The Congress has demonstrated that many new manufacturing methods and equipment are developed. It proves therefore necessary to elaborate more analytical reference figures and uniform schemes for an international appreciation of these products, in order to be able to compare cheeses manufactured according to different processes. The international individual standards for cheese will contribute to this purpose.

14. In order to further promote this consumption, it would be advisable to elaborate new scientific data in order to eliminate variations in the quality and to improve the keeping quality of cheeses.

15. International meetings should be held to help solve the problems of milk production in tropical countries.

16. The countries with low milk production should be helped by the provision of reconstituted or recombined milk and request for this help should come from these needy countries themselves. It should be administered in such a way that the indigenous milk production is not prejudiced, but helped.

17. Production and distribution of reconstituted milk is to be preferred to the direct distribution of dried milk. The same applies to "toned milk", which is able to realize high prices for the local producer and low prices for the consumer.

18. The use of hydrogen peroxide as preservative can only be permitted where no other methods are available. Local conditions should be examined with care to ascertain whether the use of hydrogen peroxide is justified. The introduction of simple legislation is in this connection deemed desirable.

19. More casein and milk protein products need to be used in human nutrition. Better production management in the casein and milk protein industry is necessary. The International Dairy Federation should pay greater attention to the utilisotion of whey and the use of milk proteins in human nutrition.

20. The problems of gelotion during storage and the coagulation during the manufacture of evaporated milk needs further investigation. Wider basic research concerning the calcium caseinate — calcium phosphate complex could solve the problem. This appears important in view of the new products and production methods, e.g. recombined products and continuously produced sweetened condensed milk.

21. As the cause of flavour defects in dried milk are not sufficientlly known, more basic research is needed in this field.

22. Publicity for milk and dairy products is an economic necessity. It can only be successful if this refers to really high quality products and if sufficient financial support is available. At present these means are not usually sufficient, and need to be increased as soon as possible.

23. Publicity for milk and milk products should use the significance of those products in human nutrition.

24. To be able to judge the market for a porticular dairy product in a continually rising market the consumption of food in general and of dairy products in particular needs to be followed up os prerequisite of a satisfactory publicity campaign.

25. There has been a reductian in the consumption of butter and cheese in some countries. This development has to be countered, e.g. by increasing the varieties and by better presentation of the milk products in accordance with modern methods of trade. Entry into a new market will only be possible if mixed milk drinks, which are at present popular with the consumers, are made more attractive by addition of "milk modifiers."

26. It is suggested that research into cream and ice-cream be intensified in order to increase the quality of these products.

27. Suggestions for an international minimum standard for ice cream which establishes the hygienic qualities, and standard methods for the bacteriological estimation of ice cream, with particular reference to the total bacterial count and the **E. coli** content. These standards should be suitable to add to the hygienic qualities of the ice cream. (Efforts of the International Dairy Federation in that respect will be welcomed.)

28. Further research into the fundamentals of cleaning and disinfection in dairying are necessary.

29. Standardized methods for the evaluation of cleaning effects should be developed.

30. The problem of combined cleaning and disinfection in all circumstances demands further research.

31. The development of machinery and plant for the dairy industry including automatic methods of cleaning and disinfection.

32. Experts on corrosion should be called in to help with this problem as far as it concerns the dairy industry.

33. Nutrition and dairy experts from all over the world are satisfied that long term feeding experiments with both humans and animals have found that the consumption of high quantities of milkfot in well balanced diet cannot be responsible for the development of atherosclerosis and heart diseases.

34. It is recommended that in experiments on the assimilation and the general physiological importance of lactose in infant foods and adult diet, animals included.

35. The hygienic and bacteriological quality of milk and dried milk for infant feeding needs in the light of experience of contamination with bacterial endotoxins and infection of bacterial anaerobes must be noted.

36. The world wide importance of cultured milks is increasing. The efforts of International Dairy Federation to provide a standard for "fermented milks" is welcomed.

37. New chemical and bacteriological knowledge allow for an increase in varieties of cultured milks.

38. Research into cultured milk varieties should be increased, to allow quality keeping quality and properties to be retained for continuous manufacture in larger dairy factories.

39. It is necessary to increase knowledge of dietetic and therapeutic properties of cultured milks. More publicity could help increased consumption.

40. Estimation on the proportion of dairy wastes in dairy factories can only be made on the aliquot-equivalent test.

41. Safety measures to avoid higher waste water and pollution concentration are to be made.

42. The possibility of utilising the residues of dairy manufacture, particularly whey and the first butter wash water must be taken.

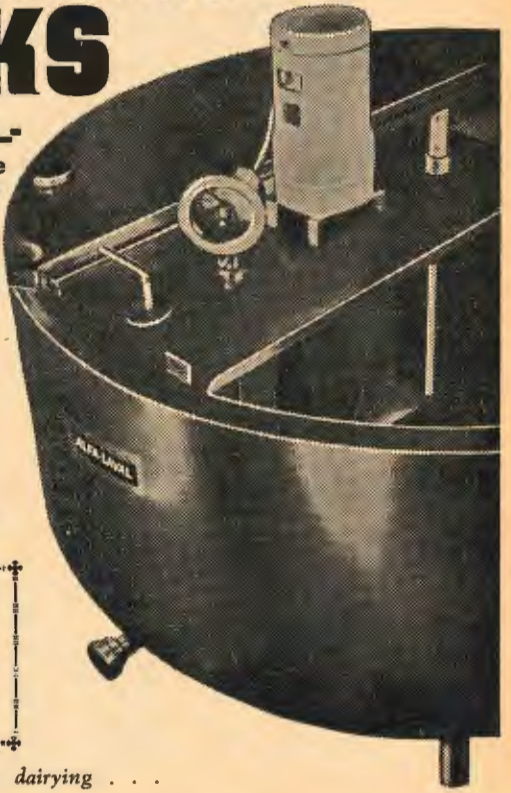
43. Continuous internotional collaboration in the field of dairy waste waters is desirable.

BULK MILK TANKS

ALFA-LAVAL-FIRST to meet the standard specifications laid down by the Standards Association of Australia.

The Standard Testing Authority, the S.E.C. of Victoria, reported:

"A production 200-gallon unit selected from a stock batch model has been tested by the State Electricity Commission of Victoria for compliance with specification No. ASN46/1-1963 of the Standards Association of Australia, and its report No. 64.C2/ASN46 may be inspected on request."



Higher quality milk! Less work! More profit! Available in capacities from 100-485 gallons. ● Fully guaranteed. ● S.A. Kelvinator units used exclusively. ● All stainless steel construction, fully insulated with polyurethane rigid foam.

The very latest in modern dairying . . .

- The tank is mounted on stainless steel pipe legs with adjustable feet and is fitted with hinged, self-supporting, interchangeable, removeable covers for easy access.
- Highly polished walls, sloping floor, and 2 in. outlet pipe enables rapid draining, efficient cleaning and minimises milkstone formation.
- Circular design gives construction rigidity and all-round accessibility for easy cleaning.
- Agitator is driven by a totally enclosed electric motor incorporating a nylon-geared reduction box to give 35 r.p.m. — no lubrication required.
- Other components consist of a centrally located dipstick calibrated in pounds of milk; a 4 in. dial-type thermometer with thermostat and a tank levelling device.

ALFA-LAVAL

ALFA LAVAL (S.A.) PTY. LTD. 8 5271
338 King William Street, Adelaide

NEW RELIEF MILKING SERVICE

The relief milking service conducted by Miss Jenny Blackett during 1964 and 1965 was so outstandingly successful and popular that when Miss Blackett, on medical advice, was forced to relinquish the service, it became obvious that there was a very definite need for such a service to continue.

We are, consequently, very pleased to announce the resumption of the service by two English girls, Miss Penny Jones and Miss Pat Jenkins.

Miss Jones and Miss Jenkins have had considerable experience in dairyfarming in England and farmers can have every confidence in their abiltiy to milk and look after the herds, and to perform such other farm work os may be required during their absence.

The service is self-contained, with a motor vehicle and large caravon and any size herd can be handled.

All enquiries concerning rates and conditions and all bookings must be directed to this office, telephone 51 3034.

ANNOUNCING A PLASTIC MILK CAN

Although there appear to be strong indications that bulk milk handling and storage will be considerably extended in the near future, there is every probability that it will be many years, if ever, before the milk can is entirely eliminated from the scene. Whatever may be the advantages of bulk handling in economy or quality, this policy is forced on the industry by the sheer inability of a large number of dairy farmers to contemplate the expenditure from their own resources of an amount of money which exceeds the nett yearly income from their farms.

This will be so despite the many disadvantages of cans; their weight, their tendency to rust, damage and distortion, the difficulty of cleaning them thoroughly, particularly in the seams, and the large ratio of wasted space when they are used for carrying milk, or stored empty.

There may, therefore, be good news for smaller producers, and even the possibility of slowing down the trend to bulk milk, in the production by A.C.I. Plastics of a 10 gallon plastic milk can.

This can is produced by the powder moulding process in laminated polythene, black outside to prevent ultra-violet degradation from sunlight and white inside for cleanliness. In general appearance and design it resembles o metal can, but has no seams, and is non-corrosive, dent free, noiseless and weighs less than one-third the weight of a metal can. The lid is in polypropolene and would avoid all the problems that are now encountered with metal lids, including poor fitting, rust, and split flanges.

The general excellence of the design, although it has some shortcomings, and the method of manufacture are such that the can received an Honorable Mention in the "F. H. Edwards Laurels Competition 1966" which is conducted by the plastics industry in Australia.

Samples of the cans and lids have been supplied to factories for critical examination and perhaps practical testing.

DAINTY BREAKS 10,000-LB. BARRIER

Vynette Gadget's Dainty, an 18-year-old South Australian Jersey, has become the first cow in Australia ever to break the magic barrier of 10,000 lb. butterfat in her lifetime.

In her first 16 lactations, she had produced 9,951 lb. fat from 153,976 lb. milk, and was already the only Australian cow to record over 9,000 lb. fat.

She calved again on September 19 last and by November 30 had achieved the grand total of 10,039 lb. fat.

The second-best Australian aggregate was recorded by a Guernsey, Yarraview Golden Daffodil, who died six years ago at the age of 15 after having produced 8,934 lb. fat. She died in the fourth month of her 13th lactation.

The production figures of Dainty, who is owned by M. R. and J. E. McKenzie of Tooperang, are:

Calved	Milk	Test	Fat
20 7 49	4,610	5.37	270
8 9 50	7,916	6.65	527
12 8 51	8,016	6.44	516
6 8 52	10,204	6.8	695
24 8 53	11,055	6.4	708
28 8 54	8,850	6.5	574
23 9 55	14,070	6.2	870
15 11 56	13,470	6.6	884
12 11 57	12,075	6.6	803
5 11 58	12,000	6.4	762
1 1 60	10,230	6.5	668
7 12 60	11,760	5.8	679
24 11 61	10,070	6.3	638
24 12 62	9,300	6.7	624
24 10 63	5,685	6.7	381
21 11 65	4,665	7.6	352
19 9 66	17th lactation commenced		

Dainty has not only been a good producer, but her progeny have also been outstanding.

Two of her sons now have daughters listed in the Sire's survey.

Vynette Dainty Boy has six daughters as 4-year-olds who average 509 lb.

butterfat, and 11 matures who average 539 lbs. butterfat. **Vynette Dainty's Lad** has seven 3-year-old daughters who average 531 lb. butterfat.

Dainty's daughters and granddaughters are also top producers.

Vynette Cheerful Dainty holds the S.A. all-breeds production record for a senior three-year-old with a yield of 791 lb.

Vynette Dainty Delight over six lactations has an average of 627 lb. butterfat.

Vynette Lassie Belle 6th has just produced as a junior-four 900 lb. butterfat from 13,560 lb. milk at a 6.6% test, an Australian Jersey record.

Vynette Gadget's Dainty has been a constant winner at the Adelaide Royal Show. She has been shown six times at the Adelaide Royal and won a total of 23 ribbons, including "The Finlayson Memorial Trophy" for all-breeds dairy type and production cow, which she won on the six occasions that she was shown at Adelaide.

AMERICAN JERSEY MILK RECORD

"By Jingo's Opal," a registered Jersey cow owned by Pierson Dykstra, Sumas, Washington, U.S.A., has completed a 305-day lactation on twice-a-day milking to give the highest milk production record in the history of the breed in America.

This was announced by the American Jersey Cattle Club in the magazine, "Canadian Jersey Breeder."

In a lactation started at 6 years 1 month, she produced 21,804 lb. milk and 1,011 lb. butterfat. This is the top 305-day milk record, all ages, as well as a U.S.A. National Class Leader record for Jerseys between 5 and 11 years.

DEATH OF AUSTRALIA'S TOP A.I. SIRE

The well-known Friesian Bull "Sniders Fond Hope King" (Imp. Canada), Classified Excellent, died at Graham Park, Berry, on 2nd August, 1966, when almost 15 years of age.

"Sniders Fond Hope King" was born 27th September, 1951, and imported from Canada by the N.S.W. Department of Agriculture in 1955. Although only rising four years when first inspected, this bull had already been classified "Excellent," and had in addition to other major show awards been made the Reserve Grand Champion Bull, Royal Show of Canada, 1954, which was followed up in this country with the distinction of being awarded Grand Champion Bull, Sydney Royal Easter Show, in 1957 and 1958.

His ability to pass on his outstanding breed type to his progeny is evident by the fact that they have, in addition to numerous other show awards, obtained at least 20 Senior and Junior Champion and Reserve Championship awards at Royal Shows since 1961. Another notable success of his progeny is that they have obtained three first, one second and two third prizes in the "Sires' Progeny over two years" class at the last six Sydney Royal Shows.

After being used for natural service in the Department of Agriculture stud, "Sniders Fond Hope King" entered A.I. Service in 1958. Artificial insemination has permitted the extensive use of this sire in all States and it is estimated that during his service in A.I. he could have sired up to 60,000 progeny.

WORLD FAMOUS COW DIES

In the March-April 1966 issue of this Journal we reported that the Colorado State University's Friesian "College Ormsby Burke" was again in milk after producing 308,302 lbs. milk and 10,457 lbs. butterfat. This truly outstanding cow has since died after adding 892 lbs. to her production to give a lifetime total of 11,349 lbs. from 334,219 lbs. milk, thus eclipsing the previous world record, held by the British Friesian cow "Manningford Faith Jan Graceful" who died in 1955 after producing 326,451 lbs. milk.

TRAINING VETERINARY SURGEONS

How many veterinary surgeons does South Australia need?

Where will they be trained?

Who pays for their training?

Are there any bars to their training?

The answers to some of these questions were recently presented to the Association by Murray Bridge vet., Mr. Don Mackie, in an address to the Central Council, and Mr. Mackie's speech will be published in the next issue of this Journal.

One question, however, he was unable to answer, because circumstances change rapidly from year to year. That question is the one relating to the admission of students from South Australia, which has no faculty in veterinary science, to the veterinary schools in the Eastern States.

The present position is set out in a letter recently received from the Minister of Agriculture (the Hon. G. A. Bywaters) and printed below:

"I refer again to your letter in which you sought information concerning the training of veterinary students.

Specific replies to your questions are as follows—

1. Quota restrictions apply in the Melbourne Faculty and admission will be based mainly on academic merit with a preference for Victorian applicants. Sydney and Queensland Universities have not yet imposed quotas on entries to their respective veterinary schools, but it is expected that this will be necessary before long.

2. In the case of Melbourne, there is a limit on the number of students from **interstate** universities who may be admitted to the second year of the course. Forty-two of the forty-eight places are reserved for those students who do the first year in Melbourne.
For South Australian students, therefore, it is essential that they do their first year in Melbourne to be assured of progression into the second year of the course.
In the case of Sydney, it is now necessary for students from interstate to enrol for 1st year and then seek the approval of the Faculty to do the the first year elsewehere. It would be advisable for intending South Australian students to do the first year in Sydney.
Queensland University strongly recommends that interstate students do their first year in Brisbane as the content of the course differs from other universities.
So far as we know, no South Australian student, either independent or cadet, has yet been refused admission to either Sydney or Brisbone.

3. The conditions applicable to South Australian cadetships have not been varied since the Association was last informed, viz. the allowance was reduced three years ago; but the requirement of obligatory service with the Department was deleted. Cadets are now required only to return and serve in some veterinary capacity within the State for three years unless the Minister's approval is obtained to do otherwise.

Yours faithfully,

(Signed) G. A. BYWATERS."

PROPOSED NEW SUCCESSION DUTIES ACT

The proposals at present incorporated in the Bill before the State Parliament are being subject to various interpretations by various authorities; in some cases the interpretations are even contradictory.

What are we, the people actually concerned, to do in such a case?

Studying the Bill doesn't seem to be of any value and a layman would not be well advised to act in accordance with his own interpretations.

Because of the effect that this legislation may have on life assurance policies, so-called "probate insurance", and retirement schemes, we thought it would be desirable at least to have this aspect of the Bill explained by an expert, and we print below the answers given by Mr. G. R. Schlank, Manager of the Federation Insurance Limited in South Australia, to the sort of questions that are being asked.

Q.1: How will this affect any new life assurance policies?

A.1: Although, for the time being, this legislation will not come before Parliament because of the Legislative Council's action in attempting to move several amendments, I think we should look at it in the light of the Government's determination to pass it in substantially the same form as it was introduced. The whole problem is linked with the way in which the policies are set up. If the policy is effected by the wife, and the premiums paid out of her own income, it should escape any succession duty.

Q.2: What if the wife is not in a position to pay the premiums out of her own income, but still effects the policy?

A.2: Then it will get caught up in the estate in relation to the premiums paid by the husband, subject of course to the $2,500 allowance proposed.

Q.3: Is there any way in which this can be alleviated at all?

A.3: Yes, to some extent, the Federation Self Employed Retirement Scheme is completely free of Federal Estate Duty, although it will, in some way, attract State Duties. To some Primary Producers this can be the ideal answer.

Q.4: What about existing policies. Would it be better to make them paid up and effect new ones?

A.4: Now we are treading on delicate ground. In the majority of cases, it is not in the best interests for a policy holder to do this as there is so much involved. My sincere advice is that no one should be panicked into making any policy paid up before going thoroughly into every aspect. Unfortunately, there have been some untrained commissioned salesmen advising people to do this. I suggest that if any member of the South Australian Dairymen's Association is in any doubt at all, contact the nearest F.I.L. Inspector (who, of course, is on salary only) as he has been specially trained to cater for the needs of Association members.

Q.5: Then, in your view, it is most important for a policy to effected properly from the outset?

A.5: Yes, most definitely, if not, then it could certainly aggravate matters when the estate is administered.

Q.6: If the husband wishes to transfer a policy to his wife, what then is involved?

A.6: Quite a lot, depending on several circumstances, and I think we should deal with them one at a time, bearing in mind of course that these answers basically are concerned with existing legislation and are based on the following assumptions:

WETMORE FODDER PROCESSING EQUIPMENT FEATURED AT ORANGE

The National Field Days at Orange, N.S.W., have now become accepted as the show window of Australian agricultural equipment and the place where the ideas of the exhibitors are matched against the requirements of the man on the land in full view of prospective buyers, overseas experts, newspoper men and the other groups that service primary industry.

Being a true testing ground of the practicability and efficiency of the products exhibited and operated in comparative demonstrations, an exhibitor with any doubts regarding his product would just not dare to present it on an occasion such as this. On the other hand, the exhibitor can use these events for testing customer reaction to his products and gain ideas from discussion with those concerned, in proof of the statement: "WHEN WE SHARE WHAT WE THINK, OUR KNOWLEDGE MULTIPLIES AND GROWS."

This year, for the first time, the WETMORE range of Feed mills was demonstrated at Orange, and attracted great attention from agricultural experts who have been looking for equipment that can prepare stock feeds in the way they want it.

This was particularly true of farmers from Queensland, who have now found in WETMORE Mills and Grinder-Mixers equipment that will cleanly chop, instead of strip, their high moisture content feeds such as maize, that will crush corn and grain to a clean, dust-free sample and will add liquid molasses, which is highly regarded in that State, as well as incorporating the many other new features presented by WETMORE which have not previously been seen in this country.

Among those showing interest in the WETMORE range was an Australian who has recently returned from a world tour of inspection into the raising and topping of beef cattle in "dry lots". This knowledgable gentleman described as his choice of the most efficient dry lots that he had seen, one north of Hastings in New Zealand.

In this dry lot tests are being carried out in feeding beef cattle with lucerne and whole maize. The weekly average gain per head on lucerne is 35 lbs., against an astonishing 50 lbs. per head for maize feeding.

The maize for the trial is imported, but because of the results of this test a member of the syndicate responsible has gone overseas to study the possibility of growing maize in New Zealand where, up to now, this crop has been considered unsuitable.

The disposal of manure, which is always a problem in dry-lot feeding, has been accomplished by spraying direct from a pit through a sprinkler system over half-a-mile away.

Whether you use dry-lot feeding or merely supplement your summer and autumn grazing you will find a WETMORE Grinder-Mixer designed especially for your requirements.

WETMORE GOES ALL THE WAY — in the preparation of stock feed (including the milling of hay) — wet, green or dry.

The WETMORE range of fodder processing equipment is distributed by PRIMARY IMPLEMENTS PTY. LTD., who have now moved to 118 GLEN OSMOND ROAD, PARKSIDE; 72 1000.

RISING DEMAND FOR CHEESE

Boost for Home and Overseas Market

Shipments of Australian cheese to countries other than the United Kingdom exceeded 4,000 tons between the 1st July and 1st October. This is part of a pattern of increased trade in cheese particularly to Japan and other South East Asian countries.

Reporting on the demand for Australian cheese in Japan the Chairman of the Australian Dairy Produce Board (Mr. E. G. Roberts) said that this was still increasing with astonishing rapidity. Average monthly sales from July to September were 528 tons a month compared with 454 tons a month for the earlier part of the year and 272 tons monthly from July to December, 1965. Sales for the month of October exceeded 700 tons. Mr. Roberts said that reliable estimates have put sales of Australian cheese to Japan in excess of 9,000 tons between November this year and September of next year. "There is little doubt," Mr. Roberts said, "that this demand will continue to increase as rapidly as it had done over the past few years."

At the same time there has been a substantial rise in shipments of cheese to the Philippines (746 tons compared with 265 tons for the same period last year) and to the Mediterranean and Middle East countries (822 tons as against 374 tons last year).

The industry is still awaiting results of the United States Tariff Commission Inquiry which may recommend steps to encourage shipments of more Australian and New Zealand cheese to the United States.

Whilst overseas markets for cheese are booming consumption is rising rapidly in Australia. Per capita consumption of cheese of all types is now almost 7½ lb. per head compared with only 4 lb. before the war.

There seems little doubt that the next few months will see the present world shortage of cheese even more pronounced as this trend continues.

BUT CHEESE IMPORTS STILL CLIMB

The Australian consumer's interest in cheese is not only reflected in greater sales of the industry's own product on the home market (33,000 tons this year as against 30,000 tons last year) it is also reflected in the ever increasing imports of cheese.

During the financial year 1964-65, 3,345 tons of cheese were imported at a value of $2.8 million. In the financial year of 1965-66 this increased to almost 4,000 tons at a value of $3.3 million with heavy shipments from Italy, the Netherlands, New Zealand, Poland and Norway.

It was reported at industry meetings that all submissions for greater protection against imports of fancy cheese have now been made to the Tariff Board which is now considering the position. The decision of the Board and any new tariffs which may be applicable as a result of its findings should be known within the next few months.

1. The policy of life assurance is effected on the life of the husband in each of the following cases.
2. Assignment, where applicable, is effected at issue of policy.
3. Where policy is purchased, the purchase is made at issue of the policy and the consideration is the first premium.
4. The death of the husband occurs first.

	State Duty is payable on:
Policy effected by husband and and assigned to wife as a gift	
(a) Husband pays premiums ...	All—Separate Assessment.
(b) Wife pays premiums	Within 1st Year — All — Separate Assessment. After 1st year — Half.
(c) Husband and wife pay premiums equally	Within 1st year — All — Separate Assessment. After 1st year — Half.
Policy effected by husband and assigned to wife for full consideration by sale	
(a) Husband pays premiums ...	Nil — but premums paid within 12 months are dutiable as a separate assessment.
(b) Wife pays premiums	Nil.
(c) Husband and wife pay premiums equally	Nil — but ½ premiums paid within 12 months. Dutiable as a Separate Assessment.
Policy effected by husband and assigned to himself and wife jointly as a gift	
(a) Husband pays premiums ...	All — Separate Assessment.
(b) Wife pays premiums	Half — Separate Assessment.
(c) Husband and wife pay premiums equally	Half — Separate Assessment.
Policy effected by husband and assigned to himself and wife jointly for full consideration	
(a) Husband pays premiums ...	Half — Separate Assessment, plus premiums paid in last 12 months as a gift.
(b) Wife pays premiums	Half — Separate Assessment.
Policy effected by wife who retains ownership	
(a) Husband pays premiums ...	All — Separate Assessment.
(b) Wife pays premiums	Nil.
(c) Husband and wife pay premiums equally	Half — Separate Assessment.
Policy effected by wife and husband jointly	
(a) Husband pays premiums ...	All — Separate Assessment.
(b) Wife pays premiums	Half — Separate Assessment.
(c) Husband and wife pay premiums equally	Half — Separate Assessment.

Q.7: What is meant by the expression for full consideration?

A.7: The wife would pay to the husband all the premiums that had been paid on the policy to that date, in effect she purchases the complete interest in the policy, just as she would do with the purchase of a house or property. Also, Stamp Duty is payable at the rate of $1.00 per cent on the surrender value of the policy at transfer date. Let me emphasise that we have only been discussing State Succession duties and your members must realise that Federal Duty is also applicable in some cases.

EDITOR'S NOTE:

We remind members of the South Australian Dairymen's Association that the Federation Insurance Limited is our approved Insurance Company and we urge you to take full advantage of the services which this Company has to offer to all members. The Three Point Plan Superannuation Scheme for self employed is, in our opinion, the best life scheme on the market. Under this scheme, members have an opportunity to pay a larger premium, and thereby effect more life cover in times of plenty, and a reduced premium for the corresponding lessening of life cover in times of hardship.