

**The South
Australian
Dairymen's...**

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JOURNAL

BREAK-THROUGH IN DRUG PRICE

Association Negotiates Deal On Dry Cow Treatment

Association members have, for some years, expressed their dissatisfaction at the high price charged for Dry-Cow therapy treatment, their objection being based on the necessity to obtain a prescription from a veterinary practitioner.

Whilst it is acknowledged that strict control is necessary on S4 drugs, to prevent abuse and mis-use. members claim that no diagnosis is necessary to indicate the use of dry-cow therapy, no disease is involved. and a veterinary practitioner is not required to examine the animal, so control by the veterinary profession. and the cost of a prescription. are not warranted.

This view, of course. overlooks the fact that the drug used in dry-cow therapy is a broad-spectrum antibiotic. and its unsupervised use by dairyfarmers is more a concession to their skill and common-sense than a reason for removing all restrictions.

Nevertheless. the cost of the treatment is high, particularly where the whole herd is treated at drying off. and the Association decided. in February, to see whether it could negotiate a lower price for its members, with the manufacturers and the veterinary profession.

The negotiations have proved to be successful, and Orbennin Dry-Cow treatment is now available to all members from their regular veterinary practitioners at the heavily discounted price of 80c per unit. This price is conditional on a bulk purchase in unbroken cartons with cash over the counter.

The plan is based on a very large bulk order, the financing of which . at the expiry of the manufacturer's credit terms. will be carried by the Association, thereby avoiding the need for vets to lay out large sums in initial purchase and have a large investment in unsold stocks.



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THE GENERAL PRESIDENT'S PAGE

Greetings.

OUR VISIT TO VICTORIA. In the early hours of Sunday 28 February, 48 dairy farmers of both sexes and one baby took advantage of the opportunity to have a close look at some of the most progressive dairy farming practices in Victoria.

The tour was arranged by our General Secretary and Jack Green, the energetic and highly respected advisory officer of the Victorian Department of Agriculture.

Our tourists quickly learnt to keep pace with the very tight schedule set by Jack Green, designed to give them a look at many interesting facets on a wide variety of dairy farms. All were on seasonal calving, some flood irrigation, one irrigated with sprinklers, whilst others were dry land farms. All used automatic cup removers and plate coolers.

The first three days were spent on farms in the Murray Valley and surrounding districts with the tour concluding on the fourth day at a farm in the Gippsland area. Both the Kyabram and Ellinbank Research Centres were visited and members had the opportunity to meet farmers and allied industry personnel from Begga, N.S.W., who were also touring the region. No doubt our own dairy companies will hear more about that encounter.

The hospitality shown to us by our Victorian friends was magnificent. The motel stopovers were used to great advantage with many interesting discussions and some lively debates which rounded off the experiences of the day. Some of the party concluded that dairy farming was a far more reliable method of making profit than playing the poker machines.

Members also met Mr John Bennett, President of the Australian Dairy Farmers Federation, Chairman of the Australian Dairy Industry Conference, and Deputy Chairman of the Australian Dairy Corporation, who dined with us on the fourth night.

The tour was acclaimed a great success by all who participated and plans are already in train for further similar tours to Victoria and Tasmania.

JACK GREEN ON FARM WALKS AND TALKS For those who missed the tour, the Association arranged a visit by Jack Green to South Australia, for a series of farm visits with evening discussions to be held in three different areas. This gave our members the opportunity to "tour" and understand our own industry in South Australia and was a challenge to us all.

COMPARING SIRE POTENTIAL . Dairy farmers have, for many years, complained about the difficulty of comparing the breed potential of AI bulls available to us from the various sources of supply.

The Australian Dairy Farmers Federation will assume the management of the Australian Dairy Herd Improvement Scheme (ADHIS) in July 1982. BLUP (Best Linear Unbiased Predictor) is a key factor of the scheme and the terms ADHIS and BLUP are going to mean a great deal to the industry in the future.

The scheme is designed to identify the leading cows in Australia (not necessarily those producing the highest amount of fat) so that future bulls for artificial breeding may be bred from them. BLUP is the method used to estimate breeding values and will rank bulls and cows in each breed in order of genetic merit.

With careful attention to basics and the co-operation of artificial breeding centres and private breeders of bulls, a target greater than 1% annual genetic improvement should be well within our grasp, while those using herd recording to full advantage should obtain at least twice this yearly gain.

Further details will become available during the next few months, and I believe that the period ahead will see intense competition between AB centres to produce the top proven bulls, to our ultimate advantage.

Sincerely yours,

Aub Kretschmer



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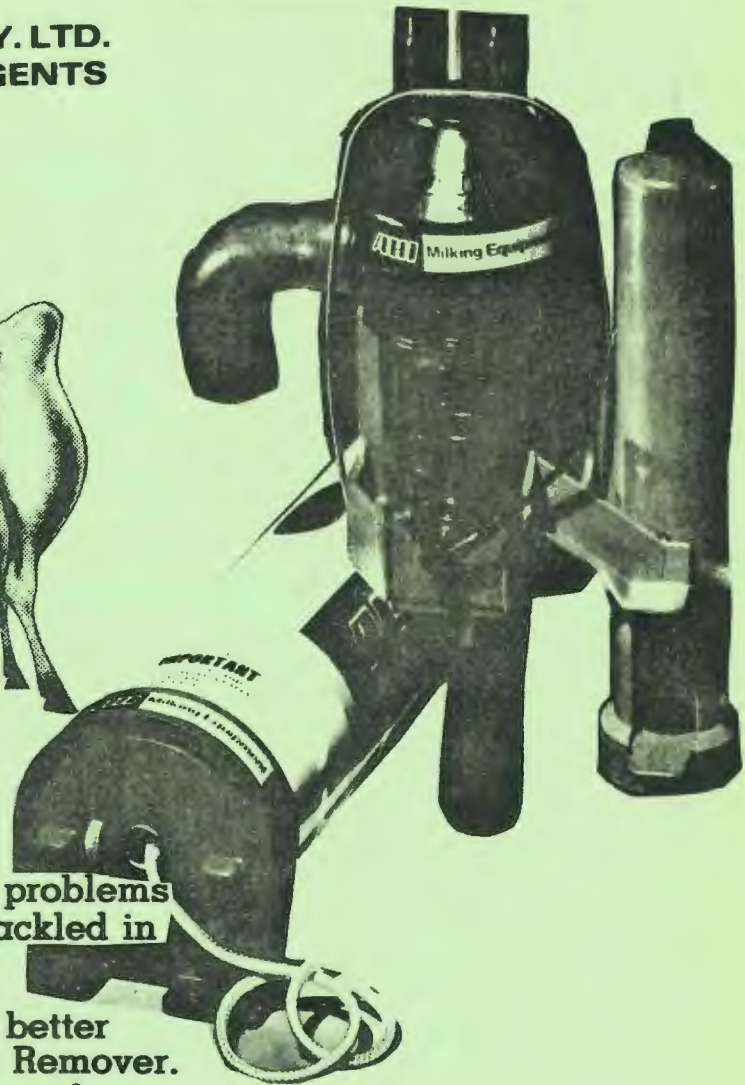
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Scientific

Aids to

Milking

Page 3.

AUTOMATIC

TEAT CUP REMOVER

A NEW LINK

The S.A. Department of Agriculture has accepted with pleasure the SADA invitation to use the Journal to report developments in the dairy industry as seen by the Department's officers.

This is the first of what is intended to be a regular contribution. It has always been my hope to develop and maintain a strong two-way link in communication between our two organisations. This column can help to forge such a link, so inevitably strengthening the bonds that hold the industry together -- G.R. Norman - Principal Dairy Officer.

INDUSTRY DEVELOPMENT - A SAGRIC VIEW

DAIRY RESEARCH COMMITTEE : A research initiative recently developed by the Department is the establishing of a Dairy Research Advisory Committee. The Committee consists of representatives of dairy farmers, two dairy manufacturers and four Departmental representatives.

The Committee's brief is to find the problems in the industry which will justify the use of research resources, and to recommend projects which can be carried out by the Northfield Research Centre. The SADA members of the Committee are David Higbed and Alan Manning, who will bring to the Committee any problems identified by the Association and its members.

If the resources of this State are insufficient to tackle a desirable project, the Committee can direct the attention of other States' research groups to the problem. Solutions can often be found by a joint approach.

BASIS OF PAYMENT : In February, Standing Committee on Agriculture (State and Commonwealth Directors of Agriculture) considered a recommendation that the milk payment method be changed from the current "weight of fat" basis to one including both weight of fat and weight of protein. This recommendation was made in 1977 by a special SCA investigatory committee.

It was considered necessary for all States to apply the proposal together, and SCA was asked to agree on a commencement date.

The February meeting agreed to take no action on the proposal. If producers still wish to develop this method of payment they will have to make that wish known more clearly than they have previously.

LEGISLATIVE TIDY-UP : The Minister of Agriculture, Mr Chapman, has presented to the autumn session of Parliament a Bill to amend the current Dairy Industry Act.

The Bill tidies up the Act, which is out of date in many instances, and repeals the Dairy Cattle Improvement Act (no more bull licenses!) and the Dairy Produce Act.

The amendments will require changes to the Regulations which apply under the Act, but industry organisations will be given the chance to comment before these changes are approved.

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TWO RETROSPECTIVE PAYMENTS ON THE WAY

Two retrospective payments will be made in the near future. The first, at about 4 cents per kg fat equalised, on all production from 1 July 1981 to 31 March 1982 will probably be paid in early May. The second, at perhaps a little under 1 cent per kg fat equalised, for all production during 1980-81 should be paid in early June. It is expected that the 1981-82 step-up will increase the interim basic price to almost 312 cents per kg.

A question which is never far from the mind is, is it worthwhile to supplement a milking cow's grazing? Before an answer is given, let us first look at the requirements of the mature dairy cow.

The nutrition of the mature dairy cow can be separated into three clear stages:

1. MAINTENANCE : This is the level of nutrition required for the dry cow to maintain her body weight.
2. GESTATION : When the cow is pregnant additional nutrients, above those required for maintenance, are essential to allow for efficient foetal growth. The requirement is greatest in the last two months of the gestation period.
3. LACTATION : The level of milk production and the fat content of the milk, will depend on the level of nutrients taken in by the cow. These requirements are in addition to maintenance and gestation.

An important point to raise here is that if you wish to condition a cow for the next lactation, it is more efficient to do this while the cow is still lactating, not during the dry period, as lactating cows are more efficient in converting feed energy to meat, than when they are dry.

Water is often the forgotten nutrient; we assume that it is present and drinkable. Cows may drink 50-100 litres of water daily. If a brake is put on this requirement, feed intake and milk production will decrease. For this reason water troughs should be cleaned regularly to prevent bacterial and algae growth.

When we look at the overall nutrition of the dairy cow, the aims are to produce milk. To achieve this the cow must calve regularly, attain a peak milk yield, and then decline over a period. First, to achieve peak yield, the cow has to milk off her own reserves, as feed intake will not supply all the nutrients required. It is therefore important to have the cow in the correct condition at calving, to enable her to reach her peak yield. It should also be pointed out that excess fat on cows at calving can lead to reduced feed intake, due possibly to restricting gut capacity and by the release of larger than normal amounts of free fatty acids into the blood, which depresses appetite.

As can be seen from the above two examples, the condition of the cow, and her previous feeding program, dictate her production capacity as well as her feed requirements. It is for these reasons that, when we discuss feeding of the dairy animal, we must look at a period of a full year.

For seasonal calvers its important that the cows get sufficient nutrition in the early stages of lactation, to ensure their peak yield is reached. The level of peak yield reached greatly influences the total milk production during the lactation period. If the season is late to break, or feed is not there, then feeding concentrates in early lactation is necessary to obtain adequate peak yield.

As stated before, a cow in early lactation is in negative nutritional balance. To achieve good milk production over the animal's lifetime she has to be mated at the optimum time. A cow in a negative energy balance will have a very low conception rate, if she cycles at all. It would be accurate to say, that, in at least 50% of infertile cows, the cause of this infertility would be malnutrition, another reason for supplementing the feed of a dairy cow.

Robin Reed - Manager, Technical Service.

For Further Information contact :-



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BUS TOUR TO VICTORIA A GREAT SUCCESS

Lots Learnt In The Throbbing Heart Of The Industry

As reported in the General President's page the tour of the Victorian dairy industry by a bus load of 48 members and the General Secretary, was unanimously considered to be a great success, both technically and socially.

The one major lesson to be learned from such a trip is that it is impossible to write a handbook on "How to Be A Successful Dairy Farmer" because of the spread of herd sizes, the varied topography, and, most of all, the range of techniques used, but the one factor common to all the dairy farms visited was that the successful farmers that we met were successful because they had taken nothing for granted, had not been afraid of innovation, and had gone out of their way to meet and overcome challenges.

The outstanding features of the farm run by Ann and Lindsay Jarvis at Kerinngoh in the Kiewa Valley were the scale and simplicity of their flood irrigation scheme in which they irrigate 32 ha (and plan to double that area in the next two years) by a series of tiered paddocks watered from a 135 megalitre head dam.

The farm carried 145 milkers 39 heffers and 38 calves, and had doubled production in fifteen years to 20 000 kg fat in 1980-81, which was expected to increase to 21 000 kg in the current season.

The highlight of Sandy Wallace's operation at Kergunyah was his method of calf rearing, using whole milk pumped directly from the milking shed to a calf house where it is fed through a "suckle-bar". the calves being housed on sawdust.

Kevin Gadde, higher up in the mountain country at Tallandoon, runs a herd of 450 milkers using, naturally, a rotary dairy, and employing a very spectacular and fast flooding system to clean his holding yard.

Without doubt, the highlight of the tour was the field day on the property of the winners of the 1981 Victorian Farm Management Production and Improvement Competition, Bob and Doris Wild. If ever there was a show place, it was this farm, all the work of one man, a self-confessed "workaholic" whose milking shed is a marvel of labor saving gadgetry and near-luxury because Bob claims that he "enjoys" milking, which partly explains his production of 183 per kg cow, compared with the district average of 148kg . and 306kg per hectare. against the district's average of 174.

Bob Blamey's property at Kyabram possibly came nearer to the South Australian pattern being a fairly typical irrigated dairy farm. But Bob is not a typical dairy farmer. He is, like the other farmers that we met, innovative : he is prepared to accept nothing without question, and although many of his improvements are "do-it-yourself" they work, and have augmented Bob's obviously superb cowmanship to attain his current production of 194kg from each of his 104 milking cows, and 576 kg per hectare.

The last farm visited was what the Victorians call a "dry-land" farm in Gippsland; annual rainfall 42" with a fairly even 3 " per month. But rainfall alone was not the reason for Rob Johnson's success; Rob obviously places little value on the mechanics of dairy farming : his milking shed was workman-like but far from flash - instead his attention was given to getting the most out of what the farm would grow.

The tour also visited the Ellinbank and Kyabram Research Centres, the main features of which, were, at Ellinbank, an intensive study into silage-making and feeding, and at Kyabram, as well as the spectacular irrigated fodder crops, research into lot feeding with grain-supplemented silage.

To sum up . a very well spent and educational and equally enjoyable 5 days, at the modest all-up cost (transport . accomodation, breakfasts, and dinners) of \$200 per head.

AND THE NEXT TOUR IS FILLING RAPIDLY

THE NEXT VICTORIAN TOUR - 11. to 15 JULY

The number of participants is limited to 48, so early application is recommended (and as the tour is completely different from the first tour, members who went on the first tour might like to go aboard this one also).

AND WHAT ABOUT A TOUR OF TASMANIA?

Interest has already been expressed in a tour of the dairy districts of Tasmania including the rugged scenic beauty of Tasmania's high country and the Franklin and Gordon Rivers.

As for the Victorian tours, members would board the bus at convenient stopping places as close as possible to their properties, proceed to Melbourne, cross Bass Strait on the ferry, and, still in the same bus, travel through Tasmania and then retrace the same route home.

No costing has been done at this stage, but \$400 might be about the place.



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AUSTRALIAN AND NZ DAIRY INDUSTRIES REACH AGREEMENT ON CER

The President of the Australian Dairy Farmers' Federation, Mr John Bennett, welcomed the agreement between the Australian and New Zealand dairy industries on the place of dairy products within the proposed Closer Economic Relationship with New Zealand.

Mr Bennett said, "the agreement between the industries has allayed fears the ADFFF has had in regard to the potential disruption to the Australian dairy industry that would result from unrestricted trans-Tasman trade in dairy products."

"The agreement will ensure that imports of New Zealand dairy products will not undermine the returns to Australian farmers, or the established domestic market price structure for dairy products within Australia."

"Obtaining satisfactory safeguards for the dairy industry within the CER has been ADFFF's most important objective over the last two years".

"The ADFFF is grateful for the support it has received with this campaign from State dairy farmer organisations, other rural industry associations and from a number of key politicians."

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9.00	Lobethal	11.15	Collingrove HS	2.30	Springhead (Mt. Torrens)
9.30	Kenton Valley	11.45	Flaxman Valley	3.00	Charleston
10.00	Gumeracha	12.15	Eden Valley	3.30	Woodside
		1.30	Springton		

TUESDAYS - SOUTHERN 1

9.00	Myponga	11.30	Second Valley	2.00	Parawa 2
10.30	Wattle Flat	12.00	Delamere	2.30	Torrens Valley
11.00	Normanville	1.30	Parawa 1	(truck will stop if hailed)	

WEDNESDAYS - CENTRAL

8.45	Echunga	10.45	Range Hall	1.00	Page's Flat
9.00	Meadows 1	11.15	Kyeema	1.30	Mt. Compass Factory
9.30	Meadows 2	11.45	Hope Forest	2.15	Tooperang
10.00	Kangarilla	12.00	Yundi	2.45	Finnis

THURSDAYS - SOUTHERN 2

9.00	Waitpinga	10.45	Inman Valley	1.00	Hindmarsh Valley
9.45	Willow Creek	11.30	Back Valley	1.45	Mt. Jagged

CURRENT CALF PRICES

Weight (kg) and Grade	40A	B	C	35A	B	C	30B	C	Less than 30
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MINISTER LIFTS CEILING ON CATTLE COMPENSATION

Upper Limit Now 400 Dollars

Minister of Agriculture, Ted Chapman, has agreed, following a joint deputation from SADA and UF & S to lift the maximum compensation payable for condemned cattle from \$300 to \$400 per beast.

The Association's request for an increase was based on the potentially disastrous effect of compulsory slaughter in connexion with the brucellosis eradication campaign.

The joint deputation stressed to the Minister the importance of not placing any barrier in front of the ready cooperation of cattle owners with the Brucellosis Eradication Campaign, and the Minister readily accepted the argument that, as no State funds were involved, the higher ceiling would actually be funded by the cattle industry itself.

Although the higher figure may fall far short of the actual value of a condemned beast, as a milking or breeding cow, it more nearly reflects the value of beef animals than did the previous figure, and places this State midway between Victoria where the ceiling is \$350, and New South Wales, where the ceiling was recently raised to \$550.

The Minister assured the deputation that he would institute the new ceiling immediately.

S.A. PASTORAL AWARD (unchanged from 2.11.81)

ADULT RATES per 40 hour week without keep :-

Station Hand	- less than 12 months experience	170 50
Station Hand	- more than 12 months experience	172 20
General Stationhand		173 80

JUVENILE RATES per 40 hour week without keep :-

Age	\$	Age	\$	Age	\$
15	76 70	17	93 80	19	127 90
16	85 30	18	110 80	20	153 50

WITH KEEP :- The above rates less \$35 69 per week for adults and juveniles.

The South Australian Dairymen's...

IN THIS ISSUE

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Getting Something Back From The Tax Man
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JOURNAL

IMPROVED LEGAL SERVICE FOR MEMBERS

First Hand Advice Now Available

The response to our warning to "Ask First And Act Afterwards" has led the Association to take a further step in obtaining access to professional legal advice for its members.

Previously the Association has acted as an intermediary between our solicitors and the member, with any direct advice required by the member being on a fee-charged basis.

The new procedure is that the member can now avail himself of a first direct consultation with the solicitors at no cost, the fee that would otherwise have been charged being now included in a retainer paid by the Association.

Any legal work extending beyond the first consultation, or arising out of it, will be charged by the solicitors to the member.

Contact must first be made with the Association; it is quite possible that we may be able to advise the member without the need for legal opinion.

Alternatively, the matter may be of such general application to our members that the Association may wish to seek legal opinion on its own behalf, and at its own cost.

If neither of these conditions apply, an appointment convenient to the member will be made with the solicitor by Miss Last, in the Association's office.

In general the no-charge consultation will be limited to one per year for any member.

It is expected that this new procedure will provide members with professional advice as to what course, if any, should be taken in connection with any legal problems they may have, without incurring what might turn out to be wasted expenditure.



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THE GENERAL PRESIDENT'S PAGE

Greetings,

The returns to dairy farmers appear to have been going through a favorable period with the price per unit of butterfat increasing beyond the rate of inflation. Confidence is, as a result, higher now than it has been for many years. Many dairy farmers are catching up on maintenance that should possibly have been completed in past years but has been delayed for economic reasons. Others are equally confidently improving their living and working conditions to standards more appropriate to the times we are living in.

It is consequently alarming, though not surprising, to note that the Milk Board's latest Cost Survey shows an increase in farm costs of 14.2 per cent. Obviously some farmers costs have increased at an even greater rate.

Seasonal conditions have contributed to this situation with lower milk production, (the Metropolitan Producing District average for the 12 months ending 31 May is down 8.4 per cent on the same period last year), and the need to spend more on the purchase of fodder because of the poor season we have just experienced.

More frightening though, is the continued excessive rise in the cost of items under Government control, with electricity charges increasing at a level far beyond the rate of inflation, and the ever increasing burden of interest rates where trends give no encouragement to think that this will be reversed for several years to come.

Couple this with the expected difficulties in the dairy export markets created by the mounting stocks held by the EEC and USA and it may be suggested that the industry should be very cautious when making decisions on future expansion.

Too often in the past, hesitation has meant lost opportunities. Now more than ever before we need a very aggressive marketing approach on the local scene. We produce some of the best food products available and we should never flinch from asking an appropriate price for it.

Difficult times demand bold and progressive decision-making by all sectors if a viable dairy industry is to be maintained. We need profitable companies and they need profitable dairy farms.

Dairyfarmers should therefore, grasp every opportunity to increase their awareness of modern farming methods and technology whether by attending seminars, participating in discussion groups, grasping opportunities to visit other dairying areas, talking to neighbours about differing methods, or even by reading. It is all too easy to get in to a rut by staying in our own back yard and watching progress pass us by.

I feel very strongly about the need for dairy farmers to take holidays with their families and it may be surprising to know there are relief milkers around that are capable of milking your cows as efficiently as you can.

The Association has from time to time encouraged the use of particular relief milkers but one of the difficulties has been to keep them fully employed for twelve months.

It can only be a matter of time before each dairy company will employ on its staff one or more personnel capable and willing to milk cows, especially in cases of misfortune e.g. sickness and accidents. I am sure that such a service would be a means to prevent some very good dairy farmers from leaving the industry.

In the meantime it will be necessary for us to use our own resources, and the Association is endeavouring to compile a register of relief milkers for the guidance of our members.

Action of this nature is just one more step along the path to a more prosperous living and a more acceptable lifestyle.

I hope that you share with me a determination to succeed in this aim at a personal level and to see that dairy farming generally reaches a level of efficiency and prosperity of which we can all be proud.

Sincerely yours,

Aub Kretschmer.

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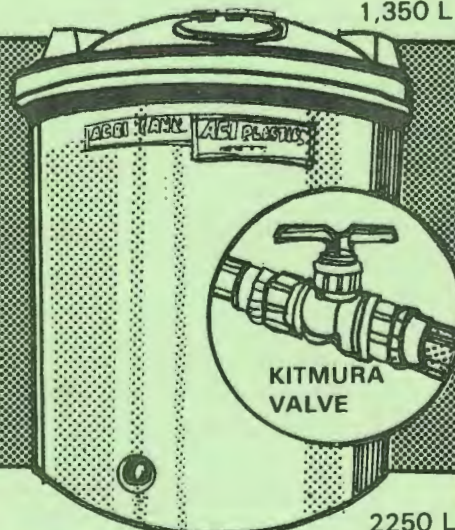
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CALF-RUN PRICES RAISED

And Changes Made To The Timetables

Negotiations with W. Jacobs Pty Ltd have gained a 10 cents per kg increase in the price for quality top-weight calves, with proportionately lesser increases for smaller and poorer- condition grades.

From 21 June minimum prices in cents per kilogram liveweight will be as under :-

Weight & Grade	40 kg	A	B	C	35kg	A	B	C	30kg	B	C	Less than 30 kg
cents		80	50	35	65	40	25		35	25		\$4 per calf

The large differentials in prices between top and lower grades indicate the importance placed on condition, and it should be noted that outstanding calves (including calves less than 30kg) and calves heavier than 40 kg will bring prices higher than those quoted above.

Northern Run Extended To Greenock

A new pick-up, at the Golden North depot at Greenock has been added to the Northern run at the request of members in that vicinity, who are disadvantaged by having access to only one market per month.

IT WOULD BE A PITY IF THERE WAS A NOTICEABLY LOWER NUMBER OF CALVES PICKED UP AT THE NEW STOP IN THE ONE WEEK EACH MONTH WHEN THE SALE IS HELD.

Southern Runs Combined As Calving Falls Off

As is usual at this time of year, the two Southern runs will be combined from 6 July, due to the lesser number of calves available.

Lower Murray Flag Run To Resume

Because of members' dissatisfaction at the generally low and variable prices being received at auction during the past year, compared with prices on the Hills calf-runs, it has been agreed to reinstate the calf pick-up "flag-run" along the lower River Murray on a trial basis.

The flag run was terminated in 1980 because of the poor patronage, and continuation of the new run after a month will again depend on a reasonable number of calves being offered.

The procedure, for those not acquainted with the service, is to tether the calf by the roadside (initially, and preferably on all occasions, with a label attached showing name and address of seller) on the lefthand side of the road (see explanation of route in next paragraph), and to place a super-bag, or similar indicator, over the gate-post, as a signal to the driver.

The route to be followed will be as before - commencing at Murray Bridge at 9.a.m., thence north along the west side of the river to Mannum, thence south through Taillem Bend, via Jervois, to Wellington, then back through Jervois on to the freeway.

Payment will normally be by cheque; if cash is required the seller must be in the vicinity when the truck arrives.

The run will be speeded up, and costs and problems minimised, if groups of near-by farmers tether their calves at a single point, to reduce the number of stops. It is important to ensure that, if no calves are being offered, the "flag" from the previous week's run has been removed, to avoid time-wasting, unnecessary stops.

Just To Refresh Your Memory And Improve The Service

In 4 years of operating, the calf-run has evolved into a routine operation, but perhaps, after that length of time, it may help to maintain a satisfactory procedure, and even to improve the quality of the service, if we refresh our memories on some points that we regarded as important when the calf-run began. These are :-

HELP WITH LOADING : Although there is no obligation to do so, any help given by dairyfarmers in loading calves will avoid delays, reduce the need for extra paid labor hours, and increase the ability of the buyer to pay acceptable prices.

VERY YOUNG CALVES : We will overlook the legal prohibition on the sale of immature calves and repeat the hope, expressed at the time when the calf-run was introduced, that the premium prices paid for heavier and good-condition calves might act as an inducement to dairyfarmers to rear their calves to a marketable standard.

PUBLIC HOLIDAYS : The calf-run operates according to timetable even when the scheduled pick-up day is a public holiday. The only exceptions to this rule are on the pick-up days immediately preceding a mid-week public holiday or on a Friday.

Most public holidays are held on Mondays and the Monday calf pick-up runs on those days, but in the week before Easter the run that would normally be held on the Thursday before Good Friday is moved back to Wednesday.

Similar arrangements apply in the week in which Anzac Day is held, when Anzac Day falls on Tuesday, Wednesday, Thursday or Friday. The calf run that would be held on Monday, 24 April moves to Wednesday 26 April, the run that would be held on 24 April when that day is Tuesday, Wednesday or Thursday is held on 23 April.

REVISED CALF PICK-UP TIME TABLE

MONDAYS - NORTHERN from Monday 5 July 1982

8.45 Murdocks Hill Cnr (will stop if hailed)	10.30 Williamstown	1.45 Springton
9.00 Lobethal	11.00 Greenock	2.15 Birdwood
9.30 Kenton Valley	11.45 Collingrove H/S	2.45 Springhead (Mt Torrens)
10.00 Gumeracha	12.15 Flaxman Valley	3.15 Charleston
	12.45 Eden Valley	3.45 Woodside

TUESDAYS - LOWER MURRAY FLAG RUN from Tuesday 3 August 1982

9.00 Leaves Murray Bridge en route to Mannum, Taillem Bend, Wellington, Jervois.

WEDNESDAY - CENTRAL from Wednesday 7 July 1982

8.45 Echunga	10.45 The Range Hall (instead of Sawmill cnr)	1.00 Page's Flat Corner
9.00 Meadows 1 (will stop if hailed)	11.15 Kyeema	1.30 Mt Compass Factory
9.30 Meadows 2	11.45 Hope Forrest	2.15 "Clelands"
10.00 Kangarilla	12.00 Yundi	2.45 Tooperang
		3.15 Finnis

THURSDAY - SOUTHERN COMBINED from Thursday 8 July 1982

9.00 Page's Flat Corner	11.15 Normanville	12.30 Back Valley
10.30 Myponga	11.30 Torrensvale Cnr	1.45 Hindmarsh Valley
10.45 Wattle Flat	12.00 Inman Valley	2.15 Mt Jagged

S.A. PASTORAL AWARD (unchanged from 2.11.81)

ADULT RATES per 40 hour week without keep :-	\$
Station Hand - less than 12 months experience	170 50
Station Hand - more than 12 months experience	172 20
General Stationhand	173 80

JUVENILE RATES per 40 hour week without keep :-					
Age	\$	Age	\$	Age	\$
15	76 70	17	93 80	19	127 90
16	85 30	18	110 80	20	153 50

WITH KEEP :- The above rates less \$35 69 per week for adults and juveniles.

In this issue I will outline Calf Feeding Programs and present some cost analysis.

Basically, there are two differentiated systems of rearing calves to weaning. The First is the system in which high-level diets are used for veal production or for subsequent intensive systems of beef production.

At the other end of the scale the system of Calf Feeding involves the early development of the rumen and a minimum quantity of liquid diet. All other systems of Calf Rearing are a compromise between these two systems.

Rather than concentrate on the feeding of vealers I will outline the two systems as applied to rearing replacement dairy heifers.

The first system is to use a milk replacer such as Lactomilk. This product is a complete milk replacer consisting of highly digestible milk proteins, milk sugars, fats, vitamins, and trace minerals. With this product, after the calf is one week old, it can be fed once a day, which generally reduced the labor input of rearing a calf. So that the calf can be weaned it must be eating dry feed.

An unrestricted level of Calf Weaner Pellets from one week will encourage rumen development. On this type of rearing, calves can be weaned between eight to twelve weeks depending on the type and size of calf. The age at which you wean your calves is dictated by how quickly you can get them eating dry food.

This principle is the basis for the early weaning plan, the object of which is to encourage the early development of the rumen of the calf. Fostermilk is formulated to contain ingredients that are readily digested and will help promote rumen development. The correct restricted levels of this liquid diet also encourages dry feed intake, and this is the important factor in early weaning.

Again Calf Weaner Pellets are an important ingredient in maintaining and promoting calf growth. Twice a day feeding up to day 32 most calves can be weaned. The major advantage with this system is the reduction in the time spent rearing calves and the lower feed costs involved.

It is probably fair to say that calves fed using the early weaning plan will not grow quite as fast as calves on milk replacer. If you are rearing calves for dairy replacements you do not require to have calves on high weight gains.

The comparative cost of ten litres of whole milk (4.0 per cent fat, \$5.20/kg) Lactomilk and Fostermilk are as follows :

Whole milk	\$2.08
Lactomilk	\$1.42
Fostermilk	\$1.02

With any system of Calf rearing adequate shelter and careful attention to hygiene are important. It must also be remembered that each animal is an individual and that some calves may need a little extra feed in the first three weeks of their life.

Robin Reed - Manager, Technical Service.

For Further Information Contact :-

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Telephone (08) 352 8088

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MORE ENTERING - LESS LEAVING?

Cow Numbers May Be Increasing As New Producers Become Established

How valid is the widely held belief that the continuing decline in producer numbers has now been halted? That new producers with large herds are replacing those with average to small herds leaving the industry?

The belief is not positively supported by the statistics, but the figures must be viewed with caution, first, because of what they do not record, second, because the initial herd size stated by a new producer is likely to be somewhat smaller than when the property is fully established.

What the statistics do show is that the rate of exit has slowed down substantially, whilst the rate of entry of new producers has accelerated, also substantially, but, overall, it looks as though the total herd remains pretty well unchanged.

In the past 12 months licences have been cancelled or not renewed by 40 producers, with herds ranging from 7 to 142 cows, averaging 52 cows per herd and totalling 2 090.

During the same period new licences have been granted to 29 applicants, but only 18 of these stated the sizes of their herds, which ranged from 15 to 100 cows, averaging 47 per herd and totalling 860.

So, on the face of it, there has been a net loss of 11 producers in 12 months, and a net loss of 1 230 cows, not taking into account the 11 new producers whose herd sizes were not stated.

A better interpretation of the position may be gained if it is realised that the 11 new producers whose herd sizes were not stated would need to have 107 cows each to offset the outgoing herds, but this assumption does not take account of the probable increase in the size of the herds of the 18 producers who did state their numbers.

Movements in producer numbers (and in cow numbers) during the past 6 years are shown below

	1981-82*	1980-81	1979-80	1978-79	1977-78
Licences granted	29	18	11	16	4
" cancelled	40	61	66	64	69
Difference (minus)	11	43	55	48	65
Total Licences	n.a.	969	1001	1052	1108
Total Cows	-	70 270	71 230	71 770	75 210

*At 31 May 1982

NOTE : The number of total licences shown for each year is the number of licences renewed in the month following the end of the year shown, therefore the change in number of total licences does not conform exactly with the "difference" shown in the line above.

NEW DEVELOPMENTS - A SAGRIC VIEW

Induced Calving Of Dairy Cows

Induced calving is the practice of causing cows to calve before their due date and the technique is used as a management aid to :-

- § concentrate calving into a shorter period which allows the dairfarmer to make greater use of the advantages of seasonal calving.
- § provide a longer interval until mating which improves the chance of conception by an earlier service. The method of calving cows earlier by early mating is time consuming because of the low conception rate of cows mated very early after calving.

The practice of inducing calves, however, if not carried out correctly has some limitations and disadvantages which have been the subjects of numerous field studies. The following is a review of these studies.

CALF MORTALITY

One of the potential problems that can develop in association with induced delivery is that of prematurity of offspring, and decreased birth weight. As both these factors tend to predispose to higher calf mortality, the increasing loss of calves must be balanced against the benefits of concentrating the calving of late-conceiving cows.

RETAINED FOETAL MEMBRANES

The proportion of induced cows with retained foetal membranes, whilst higher than would be expected in a normal calving population, did not adversely affect the subsequent fertility of cows compared with the cows that shed the foetal membranes promptly. There appears to be an increase in the incidence of retention with increasing prematurity.

COW HEALTH

The possibility that compounds used to induce calving could lower an animal's resistance to infection is real, but difficult to test experimentally. Some workers have suggested that the compounds used in this way predispose cows to mastitis but others have found no evidence to support this view. Photosensitisation of the udder after treatment to induce is known to occur but the reasons for this are not known.

FERTILITY

- In general there were no significant differences between control and induced cows in :-
- § interval from calving to first oestrus
 - § percentage of cows in which pre-mating heats were recorded
 - § interval from calving to conception
 - § conception rate at first mating

MILK PRODUCTION

There was no significant loss of milk production between treated and control groups when the reduction in duration of pregnancy was less than 30 days.

TREATMENT

Studies indicate that a period of 30 days prior to calving represents the limit of pre-calving during which delivery can be induced without major side effects. The treatment most commonly used consists of an injection of a long-acting compound, followed 7 - 14 days later by an injection of a short-acting compound.

CONCLUSION

A program of induced calving requires careful planning between the dairyfarmer and his veterinary practitioner, so that the full potential of the long-acting injection followed by the short-acting injection can be utilized. In this way the proportion of the herd needing to be induced each year is more likely to be reduced.

The advantages of the technique in assisting the concentration of calving should be considered by those dairyfarmers aiming for seasonal calving.

Peter Carroll.

(Peter Carroll is a dairy adviser with the Department of Agriculture of Murray Bridge. He has recently returned from study leave at New Zealand's Lincoln College where he undertook the Advanced Diploma in Farm Management.)

LEASE, SHARE PROPOSITION OR AGISTMENT

Dairy farmer with small herd is seeking lease or share proposition on a dairy farm with milking shed already licensed or suitable for licensing - will purchase existing herd as part of the deal.

Alternatively would consider agistment on part of, or adjacent to, operating dairy property, with right to use licensed milk shed. Apply this office :- (08) 51 3034

MASTITIS DETECTORS AGAIN AVAILABLE

We have obtained further stocks of the original NIRD (tubular) pattern mastitis detectors. Although not quite as effective and convenient as the AMBIC pattern, they are only a fraction of the cost, and at \$6 per set of 3 they could by early diagnosis, save time and money. Telephone this office on (08) 51 3034.

GETTING YOUR OWN BACK FROM THE TAX MAN

Honestly ! A Super Idea And A Super Rate Of Return

Increasing dairy farm returns bring increased taxation, and the need to look at ways and means of maximising tax deductions if we are going to keep abreast of inflation.

One absolutely certain way, with an equally certain benefit, is to take advantage of the direct deduction that was granted by the Federal Government in 1980 to self-employed persons on contributions to approved superannuation funds.

The scheme allows the whole of the contribution, to a maximum of \$1200 per year (per taxpayer, so that a husband-and-wife partnership can deduct up to \$2 400 in total) to be deducted immediately from the taxpayer's assessable income.

This means, simply, that, if your tax rate is 32 per cent, you are, in effect, increasing your "nest egg" by \$1 200 at an actual cost to you of only \$816 (and an actual cost of only \$648 if your marginal tax rate is 46 per cent).

The result is that, at the end of, say, 10 years, your "nest egg" will have returned the equivalent of 31 per cent per year (or 34 per cent on the higher tax rate) before taking into account the additional interest earned by the superannuation fund itself, and, furthermore, when you collect your "nest egg" only 5 per cent of it is subject to income tax.

Despite the claims made for investing in diamonds, old masters, Persian rugs, or rare coins, there are very few, if any, investments that can show that rate of guaranteed return. Nor do diamonds and old masters provide your widow with any more than their current value (which may be less than you paid for them) if you should die in the meantime.

The Association believes that the scheme offers real benefits to self-employed persons, and recommends that members contact either Des Mangan or Terry Payne at A.M.L. Assurance Limited (08) 223 6483 or our field representatives, Brian Rainey at Murray Bridge, (085) 32 3093 or Jim Paton at Rowland Flat, (085) 638 264.

SUPPORT THE S.A.D.A. CALF PICK-UP SCHEME



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Division of Steetley Industries Limited,
4 Railway Terrace, DRY CREEK, 5094.

DRY COW TREATMENT PRICING

A Slight Change In The Rules

We made two mistakes in our article in the previous Journal, explaining the arrangement negotiated for the benefit of our members in the purchase of Orbennin Dry Cow.

Cloxacillin is not, as stated in the Journal, a broad-spectrum antibiotic, but that knowledge won't make any difference to your pocket.

What is important is that the arrangement applies not to "a bulk purchase in unbroken cartons", which contain 240 units, but to "a bulk purchase of a minimum of 5 boxes" or 100 units.

And Some Hesitation By Some Vets

The arrangement has not, however, been received as readily, by some rural practitioners, as we had expected.

We do not know whether this is only because the vets were not sufficiently informed, but some have, it seems, refused to supply at the negotiated price.

If your local veterinary clinic is not supplying in accordance with the arrangement, contact this office immediately, so that we can explain the arrangement or otherwise clear up the misunderstanding.

GLYCERINE IS CHEAPER IN BULK

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Available from S.A.D.A. Office for \$50 per 28kg can (22 litres), equivalent to \$1.80 per kg.
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WHO WAS THE MEMBER FROM EUDUNDA?

Who sent in a clipping from a 1967 newspaper article entitled "Mastitis the World Over"? The General Secretary would like to discuss the subject further, as he has another lead that he thinks would be of interest.

The South Australian Dairymen's...

IN THIS ISSUE

Changes in Association Officials
The Central Council Looks At Current Topics
Feeding For Fertility
Controlling Cattle Parasites
Milk Sales Reach Record Total

JOURNAL

"...THIS MOST UNPREDICTABLE OF INDUSTRIES..."

The General Presidents' Annual Report For 1981-82

Delegates :-

In its latest review of the rural economy the Bureau of Agricultural Economics had this to say - "The economic performance of the Australian dairy industry in 1981-82 has been high by historical standards".

This, I believe, was true of the industry both nationally and in this State, but I doubt that the Bureau will be able to make the same claim a year from now. It is possible that, in real value terms, and relative to the level of returns, dairy farmers' net receipts per unit of output reached a peak which will not be attained in the year we have just entered, or even in the next few years.

The increase of 14.2 per cent in farm factor prices since last year, as revealed by the Metropolitan Milk Board's survey, is close enough to the figure of 15 per cent derived last year, in Victoria, by W.D. Scott and Co., for us to be able to claim that farm costs are rising considerably faster than the inflation rate generally, as measured by the Consumer Price Index.

It is, therefore, disturbing to have to forecast that the opening pool value for leviable cheese, from which our basic milk price is determined, is a mere 5.7 per cent above the opening value last year, in sharp contrast to the 17.7 per cent increases in the opening pool values of the two previous years.

We cannot, at this stage, announce the opening basic milk price, which has yet to be negotiated. In each of the two previous years the increase in the opening price has been substantially greater than the increase in the pool value, reflecting great credit on the technical and managerial skills of the dairy companies to which our milk is supplied, but it is not impossible that this year the impact of an increase of \$46 in weekly wage rates, and the granting of a 38 hour week to the factory milk force, may keep the increase in the opening basic price even lower than that in the pool value.



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It is little comfort to be able to claim that the farm-gate price for market milk, which is closely linked to the Board's cost survey, has kept pace with increasing farm prices. Market milk takes up only 45 per cent of our total milk output, and we have, furthermore, yet to see the extent to which the Board's next price gazettal will reflect the results of the latest survey.

Consequently, with a widening gap between farm costs and gross returns, we must examine whether there are any other means whereby our net incomes can at least be maintained in real terms, even if we cannot match the increases enjoyed by the rest of the work force.

Previous Annual Reports have offered the promise that the future of dairyfarming would be assured for the "survivors". I believe we have now arrived at the stage where we are all "survivors". I doubt that there is much fat still to be trimmed off the industry, either in this State or in Australia. Nationally the industry's output has fallen to a level where the volume of exports is perhaps little above a safety margin; in this State, using a different measure, we find output at a stage where any further decrease in throughput may adversely affect the viability of the few dairy factories that still remain after 10 years of rationalisation and integration.

We could, perhaps, raise milk production by increasing the average herd size, but such action is not costless, either in terms of financial cost or of physical input. Equally we could increase output by more supplementary feeding, but there is no point in lifting production with no economic gain, as the extra dollars earned by this method do not always balance the extra outlay.

There is, however, one tool of management which, although widely used, is, I believe, not used to even a fraction of its potential. I refer to "herd improvement", which combines artificial breeding, from proven bulls, with herd recording to measure, and to guide, the effectiveness of the associated management skills.

But although dairyfarmers who combine artificial breeding and herd recording in this way are probably satisfied that the technique is worth using, I doubt whether it is being used as effectively as it could, and should be used.

Statistics indicate that, during the past 15 years, the average annual increase in productivity per cow in all tested herds has been considerably less than 1 per cent, a gain worth not much more than the cost of herd recording itself.

The failure to utilise the technique to its best effect may, I suggest, be linked to the limitations which herd recording at present suffers, a conclusion which has been shared by the two Committees of Inquiry into Herd Improvement, in 1976 and 1981, each of which recommended, as at least a partial solution, the establishing of a Central Testing Laboratory, offering a wider range of tests.

For this reason this Association has, during the past year, collaborated with Herd Improvement Services Cooperative Limited, in seeking the most satisfactory and expeditious means of funding such a Laboratory. The search is not yet ended; a number of options of varying degrees of acceptability and feasibility are yet to be explored, and today's meeting will, I hope, give some firm indication of the direction which the search should now take.

Herd recording does not, however, do more than measure the results of management practices; the practices themselves are still paramount, and in the year under review the Association has continued the policy of providing its members with opportunities to expand their knowledge of farming techniques, by the organising of what is expected to be the first of regular bus tours of dairying regions in Victoria, where members made personal contact with a select group of top dairy farmers, and, immediately following the tour, by the holding of a number of "farm walks", under the tutelage of Victorian dairy adviser Jack Green, to inspect the methods used by some of our own innovative farmers.

From the Association's point of view the most notable outcome of the tour and the "farm walks" was the belief that we should, with the Department of Agriculture, urge the development of "discussion groups" as the major vehicle of extension.

It is hard to avoid the feeling that the extension service as now provided by the Department of Agriculture lacks direction, relying as it does on adventitious enquiries from individual dairyfarmers seeking guidance.

The "discussion group" technique could simultaneously redirect the Department of Agriculture's activities and substantially increase the involvement of dairyfarmers in the extension program, to the very great advantage of both groups and, ultimately, of the dairy industry generally.

One of the major benefits of the "discussion group" technique would be the wider and faster dissemination of the results of research, both that carried out at the Northfield Dairy Research Centre and the dairy farming research carried out nationally under the control of the Australian Dairy Research Committee.

We have always been worried at the rate at which the industry adopts the results of such research. Our dairy scientists at Northfield, and at other research centres, are constantly adding to our store of knowledge of dairy cow health, nutrition and management, and of fodder and crop raising techniques, yet, on the farm, management practices appear to change slowly, and in some cases, not at all. Perhaps the blame can be shared between the research scientists, the extension services, and the farmers themselves.

A wise and necessary step was taken in 1980 by the adding of representation of the Association to the Animal Industry Research Committee, which approves research projects and reviews their progress, but an even more important step was taken in the year under review, by the establishing of a representative Dairy Research Advisory Committee.

So far the frequency of the meetings of the more practical AIRC has exceeded that of the meetings of the DRAC, but this may not be the best arrangement. It could well be for the better if advice on the research that the industry believes should be undertaken were given precedence over the preferences and judgements of the researchers themselves.

But, notwithstanding the scientific and practical resources available to us as dairy farmers, seasonal conditions still overwhelmingly dictate the level of our production, and the economics of our enterprises.

The previous Annual Report expressed the hope that "... little better than an average season might enable (the record output in the Central Region of 266 million litres in 1969-70) to be again achieved". That hope was based on a production total, at the time the Report was written, of just under 232 million litres, but the close succession of an abnormally wet, cold winter and an abnormally dry, hot spring reduced production during the year under review by 6.5 per cent, to 217 million litres, the lowest annual output since 1963-64.

It is pleasing to be able to report that seasonal conditions have now improved substantially, and the 12 per cent increase in milk production in the past two months above that of 1981 promises a resumption of the upward trend of the previous 4 years, though little hope of equalling the 1969-70 peak.

Fortunately the financial impact of low production was cushioned by a continuation of the steady increase in market milk sales which began in September 1980, so much so that milk sales in March of this year, at 9.2 million litres, were the highest ever recorded, topping the previous record of 9.1 million litres set in March 1973, and repairing the damage done, 9 years ago, by the termination of the Free Milk for Schools Scheme, and by the milk vendors' action in adopting 6 day delivery.

It is not possible to say, with certainty, that the increase in milk sales was due to advertising, but we cannot overlook the fact that the upturn in milk sales 2 years ago tended to coincide with greater spending on advertising, and the Association has endorsed a further increase in the promotion budget in the new financial year.

The combination of higher milk sales and lower production resulted in considerably higher interim equalised prices each month throughout the year, reaching a maximum in March of 490.75cents per kilogram of butterfat, 24 per cent above that for the same month in the previous year, and the final equalised price for the whole of the 1981-82 fiscal year may reach 450 cents (excluding the advance bonus payment, currently 6 cents, and the dairy companies' final bonus distribution).

We have in the past been aware of the need, when comparing prices in one year with those in another, to take production into account also, as gross farm incomes may actually be greater in a year of high production and correspondingly low price than when the factors are reversed.

There is a possibility that, in coming years, we will need to be doubly cautious, as production levels will now tend to reflect, as well as seasonal conditions, the growing influx of newcomers to the industry.

During the past 20 years we have become accustomed to a continued shrinking in the number of producers in the industry; since the 1962-63 peak of 2 371, the number of producers licensed by the Metropolitan Milk Board has declined at an average annual net rate of 4.5 per cent, with a handful of newcomers only slightly offsetting the number of those leaving the industry.

Whilst, in the year under review, the rate of exit has not diminished, the number of entrants is far higher than at any time in the past 20 years, and the net decline is a mere 1.5 per cent. This sign of confidence in our industry may be gratifying, but its immediate effect will be to reduce the unit return for milk by an amount which can, at best, be only slightly countered by any higher profitability gained by the dairy companies through increased output.

With the hope of minimising the impact of lower milk returns, by lifting non-milk income, the Association has continued to promote the calf pick-up scheme, which handled, during the year, approximately 16 500 calves, with a total cash value of \$350 000, and since the close of the period of this report we have negotiated a price increase of approximately 15 per cent.

The success of the scheme has been demonstrated by an extension of the Northern run further into the Barossa Valley, and by the resumption, after a 2 year recess, of the flag run along the Lower Murray.

We have also contributed, in a small way, to lowering the costs of farm inputs, by successfully negotiating with the manufacturer and the distributor, a scheme which, by underwriting the cost of very large bulk purchases, enables members to purchase their requirements of a widely-used dry-cow treatment at a heavily discounted price.

In any review of the year's progress, the influence of your Association cannot be overlooked, whether participating at national level as a constituent member of the Australian Dairy Farmers' Federation, the Australian Dairy Industry Conference, or the Market Milk Producers' Council or negotiating such relatively small matters as drug prices, or the recent lifting to \$400 of the compensation ceiling for condemned cattle.

It is consequently disturbing to note that a handful of dairyfarmers, who, whilst they may deny the part played by the Association in influencing prices, in all probability do not refuse to use those services which have, unquestionably, been provided through the agency of the Association, still remain outside the Association's membership. In the coming year I hope that District officers may be able to convince them that they should demonstrate, if not gratitude to the Association, at least support for what we have done, by joining as members.

Such support would recognise not only the work of the Association as an organisation; it would give credit for the efforts of those who hold office in the Association, at District and Central Council level, particularly for the dedication of the members of the Executive Committee, each of whom devotes much of his time, at considerable financial cost, to the management of the Association and the welfare of its members.

To all those I express my heart-felt gratitude for their support during my first year in office.

We have, during the year, received cooperation from the management and staff of the dairy companies to which the milk produced by our members is supplied, from the members and staff of the Metropolitan Milk Board, from the officers of the Department of Agriculture, and from the Minister of Agriculture, the Honorable Ted Chapman, M.P., and his cabinet colleagues. I am grateful to them all for the assistance they have given.

I thank also the Association's staff, the General Secretary, David Higbed, and Miss Victoria Last, his clerical assistant.

The gloomy tone of my opening remarks is meant to be taken seriously but it is not intended to destroy the spirit which pervades the dairy industry in South Australia at this time. In this most unpredictable of industries it may well be that its economic performance in the year we have just entered may reach even greater heights, by historical or any other standards.

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CHANGES IN ASSOCIATION'S EXECUTIVE COMMITTEE

Norman Green Leaves Executive Committee After Years

Three new members, Frank Beauchamp, of Mypolonga, Stan Schofield, of Strathalbyn, and Don Zweck, of Blyth, were appointed to the Association's Executive Committee at the Annual Meeting of the Central Council on 8 July 1982.

They replaced Norman Green, of Monteith, and Ron Fromm of Williamstown, each of whom declined to accept nomination, and Mark Eckermann, of Eudunda, who has transferred his dairying operations to the Shepparton district, in Victoria.

Mr Green, who has been a delegate to the Central Council since 1958, was first appointed to the Executive in 1966, and became Senior Vice President in the following year.

In 1968 he succeeded Mr Harold Loechel as General President, and became Chairman of Directors of the Metropolitan Milk Equalisation Committee Limited, a position which he still holds, in the same year.

No other changes were made, and the Association's officials for 1982-83 are :-

General President	-	Aub Kretschmer , Jervois.
Senior Vice President	-	Allan Manning, Birdwood
Junior Vice President	-	Michael Diener , The Point
Executive Committee Members	-	Frank Beauchamp, Mypolonga Graham Camac, Meningie Andrew McEwin , Inman Valley Stan Schofield , Strathalbyn Ken Turvey , Milang Don Zweck, Blyth
Directors of MMEC Ltd	-	Norman Green (Chairman) Michael Diener Aub Kretschmer Ken Turvey

THE CENTRAL COUNCIL LOOKS AT

SALVATION JANE - Delegates were told that the scheduled Supreme Court hearing, over the injunction obtained by apiarists against the release of biological control vectors by CSIRO, had been cancelled, and replaced by an independent 3 person tribunal, to study the arguments of both sides.

The parties to the hearing had agreed to abide by the decision of the Tribunal, but this did not mean that the matter would rest there. There was nothing to stop any aggrieved person, or organisation, from taking further Court action if such person or body disagreed with the decision of the Tribunal.

BRUCELLOSIS - It was reported that queries concerning quarantine in connection with suspected outbreaks of brucellosis had been further examined and discussed with officers of the Department of Agriculture. On the one hand it could be said that the doubt which must exist concerning the wisdom of notifying adjoining landholders in cases of slight reactors suspected of being post-vaccination, endorsed the Department's view that notification of quarantine should not be mandatory but should be used with discretion, predominately when the reaction was suspected as being other than post-vaccination.

On the other hand the relatively large number of positive reactors required the Association to keep a very close watch on the situation, to ensure that the State, the Commonwealth, and particularly, the Dairy Industry, continued to move towards a brucellosis-free status with the minimum of delay.

Dairyfarmers agreed that straying cattle creates a problem in the progress towards eradication, and it was up to dairyfarmers to decide what action was necessary to control this and other factors affecting eradication.

Dissatisfaction was expressed about reported time delays in notifying neighbours of quarantined properties, it was also decided to ask the Department to shorten the period of quarantine.

LICENSING OF SHOPS TO SELL MILK - Delegates were told that, following investigation, asked for by the Central Council, the Association had supported a proposal from a working party in the Premier's Department that licences to allow shops to store and to sell milk be abolished.

REGISTRATION OF WORKING DOGS - The Director of the Department of Local Government had refused the request for notice to be given to the owner of a working dog in the event of accidental omission to re-register the dog, the Director's grounds being that "...dog registration fees are low and every endeavour is made to keep them at a minimum level, there is a fixed date of June 30, in each year when all dog registrations expire, and a very reasonable period of grace of some two months until August 31, and most councils publish reminders in the local press and some do in fact forward dog registration reminder notices".

It was agreed that, as some councils did send out reminder notices, delegates press their own council to take similar action.

FARM DISCUSSION GROUPS - Delegates supported the suggestion in the General President's Annual Report that the forming of farm discussion groups would revitalize the Department of Agriculture's extension activities, as well as providing an effective, and productive way of interchanging information between dairyfarmers, and a challenge to participating members to increase individual productivity and efficiency.

ADVANCE BONUS PAYMENT - Delegates were concerned at the forecast low opening basic price, and argued that, in view of the substantial increase in flavoured milk sales during the past year, from which dairyfarmers received no direct benefit, as farmgate prices for flavoured milk in South Australia were not fixed by a milk authority, unlike all other States, the advance bonus payment should be substantially increased, and instructed the Executive Committee to negotiate for a minimum of 9 cents per kilogram butterfat on all production.

CENTRAL TESTING LABORATORY - Delegates were informed that a Sub Committee, consisting of representatives of the Executive Committee, HISCOL and the Department of Agriculture had been looking at the most convenient means of financing a Central Testing Laboratory, as recommended by the two Committees of Inquiry into Herd Improvement in 1976 and 1981.

The means that had been looked at included a small reduction in the basic milk price, as had been done to finance the promotion campaign against imported Victorian cream in 1969, a grant or low-interest loan from the State Government, and a legislative change to permit the Government to levy dairy farmers, on a per cow basis, by adding a further clause to the amendments to the Dairy Industry Act being considered by Parliament.

Advice from the Association's solicitors and a firm of chartered accountants had indicated that deductions by any means other than a statutory levy would be subject to tax. In the meantime the amendments to the Dairy Industry Act had been passed by Parliament, closing that option.

The Association had now made an application to the Australian Dairy Corporation on behalf of HISCOL, for a grant from the Dairy Industry Stabilization Fund, for a grant to allow the South Australian scheme to be linked to a large computer at Kyabram, which was being sought by Herd Improvement Organisation of Victoria (HIOV) from the same source, together with a supplementary grant to provide the remainder of the equipment needed for the CTL.

In the meantime the Metropolitan Milk Board was investigating the feasibility and economics of combining the functions of the proposed CTL with its own laboratory.

Delegates discussed the various options still remained, including the possibility of raising the fees for herd recording to cover the cost of the CTL, with a promotion campaign to convince users of herd recording that the higher fees were still good value in relation to gains from herd improvement.

It was finally decided to defer further discussion until the outcome of the Milk Board's investigation was known.



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S.A. PASTORAL AWARD (unchanged from 2.11.81)

ADULT RATES per 40 hour week without keep :-		\$
Station Hand	- less than 12 months experience	170.50
Station Hand	- more than 12 months experience	172.20
General Stationhand		173.80

JUVENILE RATES per 40 hour week without keep :-					
Age	\$	Age	\$	Age	\$
15	76.70	17	93.80	19	127.90
16	85.30	18	110.80	20	153.50

The total (lifetime) milk production of a dairy cow is dependant on both milk production per lactation and the number of lactations, inadequate fertility inevitably impairs the cow's total milk output during its lifetime, as it decreases the number of possible lactations.

Infertility can be attributed to the following causes :

- | | | | |
|---|---------------------|---|--|
| 1 | MALNUTRITION | 3 | BAD MANAGEMENT |
| 2 | SPECIFIC INFECTIONS | 4 | PHYSICAL DEFECTS OF THE REPRODUCTIVE ORGANS. |

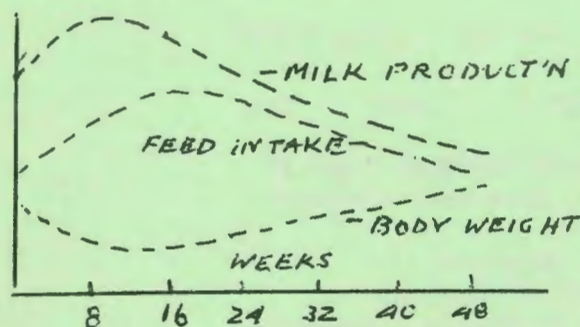
PHYSICAL DEFECTS of the reproductive organs may be legacies of injuries in past calvings.

SPECIFIC INFECTIONS such as brucellosis, vibriosis, or virus abortion can all be identified by your veterinary practitioner and the causes of the infertility cured.

BAD MANAGEMENT includes heat detection and consequent failure to mate or inseminate at the right time.

MALNUTRITION which I believe to be the greatest cause of infertility.

Unfortunately, the period of maximum milk production coincides with the time of mating. Basically, weight loss is inevitable during the early stages of a cow's lactation. However, it can be limited by correct feeding, so that infertility due to nutritional reasons should not, in practice, occur. The following graph highlights the importance of correct feeding in the early stages of the lactation.



As can be seen from the graph, the cow's weight in early lactation, acts as a brake on ovulation and conception, because of an energy deficiency.

Again from the graph, it can be seen that the cow takes about 15 weeks to reach its peak dry matter intake, while peak milk yield is reached some weeks earlier.

It is therefore imperative, if the cow is to be mated successfully, that it be fed a ration of high digestibility and high energy, so as to minimize this weight loss problem.

To ensure that appetite and metabolism are kept at a maximum, correct vitamin and mineral supplementation is required. At present, phosphorus deficiency is being named as a possible cause of infertility. It is a well accepted fact, that phosphorus deficiency does play a role in infertility.

It is a problem that has been diminishing, due to the greatly increasing phosphorus intake through concentrates, if concentrates only make up about 10-15 per cent of the animal's intake. Water supplementation would be a satisfactory method, if phosphorus deficiency is a problem.

The punchline of this article is that a high percentage of infertility is due to malnutrition. This under-nutrition is a result of high milk yield at the time of planned mating. Also the fact that the cow has not attained its maximum feed intake, dictates that if we wish to overcome this problem, the cow has to be fed a high energy, high digestible ration.

Robin Reed - Manager, Technical Service.

For further information contact :-



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NEW DEVELOPMENTS - A SAGRIC VIEW

Controlling Worms & Lice In Dairy Cattle

Keeping lice and worms at a low level in the dairy herd is part of good management, but must always be carried out in the knowledge that particular care must be taken, in the choice of treatments for deworming and delousing, because of the danger of insecticide and pesticide residues in milk and milk products.

CONTROLLING WORMS

The best approach to the control of internal parasites in dairy cattle is a strategic one, i.e. drenching to prevent worm build-up at a particular time of the year.

Because the small brown stomach worm (ostertagia) is most prevalent in higher rainfall areas in South Australia, any drenching program should aim at control of this worm. Therefore at least two drenches should be given annually, one in summer to control dormant worms, i.e. around February, and another around April/May to control build-up of worms in the pasture-growing season.

Dairy farmers should concentrate on younger stock i.e. weaners and yearlings, as older stock are more resistant to worm attack. If possible cattle should be moved to a clean paddock immediately after drenching. Particular care should be taken in the choice of drench as some are unsuitable for use in lactating animals and others do not control some worms.

Those suitable for dairy cattle which will control most worms include Systemex, Panacure, Rintal and Ripercol. In the selection of a chemical drench ALWAYS READ THE LABEL to ensure that the drench will do the job you expect and will not contaminate the milk.

CONTROLLING LICE

Lice infestation can be quite a problem on dairy farms, particularly in young animals, as it can cause a severe loss of condition and restriction in growth.

The main sign of lice infestation is excessive licking of the coat, or continuous rubbing of affected animals against an object in the paddock. The main areas involved are the top of the head, neck, shoulders, back and rump, although this will vary with the type of lice causing infestation.

Treatment of lice infestation will mainly be carried out in winter months when lice populations tend to increase. Lice can be treated with any of the proprietary lines registered under the Stock Medicines Act in this State.

However, particular care should be taken with lactating animals, because of the possibility of some products remaining in the milk.

Substances such as Tiguvon are suitable for use in dairy cattle but strict attention should be paid to manufacturers' recommendations regarding the dose rate and the number of treatments, and, again, READ THE LABEL before applying the treatment.

Michael Shallow.

(Dr Mike Shallow is the District Veterinary Officer for the Southern Hills with the Department of Agriculture's Central Region. He can be contacted by telephoning (08) 227 3119).

ASSOCIATION'S SUBSCRIPTION GOES TO \$20

The Central Council, at its Annual Meeting on 8 July 1982, voted to increase the subscription for membership of the Association from \$15 to \$20 per year.

Members whose subscriptions are paid on their behalf by dairy companies will be notified by the companies.

SUPPORT THE S.A.D.A. CALF PICK-UP SCHEME



TUNE IN TO
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COUNTRY HOUR FOR
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TIME TABLES AND CALF PRICES

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**CURRENT MARKET PRICES PAID FOR CALVES
WEEKLY PICK-UP SERVICES - AS SCHEDULED**

FACTORY-DOOR PURCHASING AT OUR MOUNT BARKER PLANT

CALF PICK-UP TIME TABLE

MONDAYS - NORTHERN from Monday 5 July 1982

8.45 Murdocks Hill Cnr (will stop if hailed)	10.30 Williamstown	1.45 Springton
9.00 Lobethal	11.00 Greenock	2.15 Birdwood
9.30 Kenton Valley	11.45 Collingrove H/S	2.45 Springhead (Mt Torrens)
10.00 Gumeracha	12.15 Flaxman Valley	3.15 Charleston
	12.45 Eden Valley	3.45 Woodside

TUESDAYS - LOWER MURRAY FLAG RUN from Tuesday 3 August 1982

9.00 Leaves Murray Bridge en route to Mannum, Tailern Bend, Wellington, Jervois.
Telephone Michael Diener (72 6042) for details.

WEDNESDAY - CENTRAL from Wednesday 7 July 1982

8.45 Echunga	10.45 The Range Hall (instead of Sawmill cnr)	1.00 Page's Flat Corner
9.00 Meadows 1 (will stop if hailed)	11.15 Kyeema	1.30 Mt Compass Factory
9.30 Meadows 2	11.45 Hope Forrest	2.15 "Clelands"
10.00 Kangarilla	12.00 Yundi	2.45 Tooperang
		3.15 Finnis

THURSDAY - SOUTHERN COMBINED from Thursday 8 July 1982

9.00 Page's Flat Corner	11.15 Normanville	12.30 Back Valley
10.30 Myponga	11.30 Torrensvale Cnr	1.45 Hindmarsh Valley
10.45 Wattle Flat	12.00 Inman Valley	2.15 Mt Jagged

FARM SAFETY REGULATIONS

Explaining The Latest Change

Enquiries have been coming in from members about recent news items referring to apparent changes in tractor safety regulations.

There are, in fact, no changes. The basis of the news reports is that we are now approaching the end of the period of grace that was allowed, when the regulations were introduced in 1975, in respect of tractors purchased before 1975.

These tractors, if driven by employed labor, must be made to conform to the regulations, by the fitting of safety frames, by 1 October 1982.

That date also marks the deadline for bringing all rotating machinery into conformity with the regulations, by ensuring that rotating parts have no protruding components, such as keys and set screws.

The regulations refer to employed labor. The question often asked is "Is a share farmer classed as employed labor in respect to safety regulations?" The answer is "Yes, if he is using equipment provided by the principal. If he is personally using his own equipment he is not required to fit safety frames".

HOW MUCH MILK IN YOUR VAT?

Differences Between Dip-Stocks And Meters

Some members have reported differences, which they believe to be significant, between the milk volumes registered by the meters on the tankers and the readings which they have taken with their dipsticks.

Discrepancies as high as 3 per cent have been reported, and those members who have logged the two readings daily over a considerable period claim that the differences are almost invariably negative, from their viewpoint, only a handful of readings showing higher on the dipstick than on the meter.

Members who have gone to the trouble to compare readings claim that they have taken every precaution to ensure an accurate reading, such as allowing ample time to permit entrapped air to be released, and ensuring that the surface of the milk is still, and without froth.

(They have not, however, indicated the temperature of the milk when dipped. The indicated volume of milk in a vat increases by a small but possibly measurable amount for each Celsius degree of temperature above 4 degrees.)

The problem has been discussed with Southern Farmers Co-operative Limited, which has countered with the offer that, if any member so aggrieved has his dipstick tested by the Standards Branch of the Department of Business and Consumer Affairs, and the dipstick is found to be absolutely correct, the company will reimburse to the member the value of the difference in milk volume since the introduction of meters.

MILK SALES REACH ALL-TIME RECORD

Nine Years Lost Ground Recovered

Total market milk sales in March 1982, which totalled 9.17 million litres, were the highest ever recorded, exceeding the previous record of 9.13 million litres set in March 1973.

It has, consequently, taken exactly 9 years to correct the damage done, first, by the termination of the Free Milk for Schools Scheme, and second, by the milk vendors' action in adopting 6 day delivery.

Milk sales within the metropolitan area at 8.13 million litres did not quite reach the 8.46 million litres sold in March 1973, but were the highest ever recorded for any other month, also we are within 2.5 million litres of exceeding the record 12 months milk sales, previously set in the same year, with a total of 103.21 million litres in the year ended 31 July 1973.

The South Australian Dairymen's...

IN THIS ISSUE

Metropolitan Producing District Redefined
Importance of Fodder Stalk Length
New Zealand Tour Report
Fodder Crops - Filling The "Feed Gap"
No Reduction In Price For Stock And Shed Water
Save Water With A Home-Made Evaporimeter

JOURNAL

LOW FAT TESTS & HIGH PLATE COUNTS

Can Be Due To Inadequate Agitation Of Milk In Vat

Although the importance of proper cooling of milk is naturally greatest in summertime, problems can arise in cooler weather in those early models of farm vats fitted with agitators that operate only when the compressor is running.

In these vats convection causes the warmer milk to rise to the top, leaving the cooler milk in the bottom of the vat, adjacent to the thermostat.

Consequently extended periods may elapse before the refrigerating unit is activated by the thermostat, which may give rise to two conditions, both of which are to the dairyfarmer's disadvantage.

The first is that the butterfat in the milk tends to "layer out" on the surface, leading to lower fat tests if correct sampling procedures are not scrupulously observed; the second is that there is a rapid build-up of bacteria in the upper stratum of warmer milk, which can lead to plate count troubles.

Some dairyfarmers have now fitted timer switches to their vats, to bring the agitator into action for a short period each hour, irrespective of whether the refrigerating system is operating or not, thereby eliminating any deleterious "temperature gradient" in the vat and ensuring that butterfat is, at all times, evenly dispersed throughout the milk.

Suitable timer controls can be fitted to most, if not all, of the older type vats for approximately \$50 installed.

RETROSPECTIVE PAYMENTS

Two retrospective payments will be made shortly. The first, for 1980-81, at the rate of 2.21 cents per kg butterfat, will be included in the September cheque. The second, for 1981-82, at 0.49 cents per kg butterfat, will be paid in the following month.



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THE GENERAL PRESIDENT'S PAGE

Greetings,

I have, on earlier occasions, frequently emphasized the importance that we should place on ensuring that the milk we produce is of a quality that will, in turn permit the dairy companies we supply to manufacture products of equally high quality, which will be in demand by consumers in the domestic market, the one area where we can, in some measure, exercise control over our future.

It is therefore disturbing to learn of cases where dairyfarmers have failed to maintain that quality, and even more disturbing to learn that doubt is expressed about the need to do so. Recent cases that have come to our attention include *milk above the prescribed temperature *milk that is tainted, and * milk containing antibiotics. Fortunately they were isolated incidents, but our members must be made aware of the additional costs which such cases impose on the dairy companies, and which, in the end, reduce the payment received by us as dairyfarmers.

The expense of sending out a tanker especially to pick up one supplier's milk is something the industry cannot afford, but worse is the expense of having to throw the whole contents of a tanker or silo down the drain, because, the milk will not be suitable for processing, but, more important, the presence of antibiotics is unacceptable to the public and prohibited by law.

The problem was considered at a recent conference attended by manufacturers, the Metropolitan Milk Board, the Department of Agriculture, and other industry representatives, where it was agreed that milk of unacceptable quality will not be picked up by the dairy companies if detected.

Each tanker load will be tested for antibiotic and, if antibiotics are found to be present, they will be traced back to the source of supply. I sincerely hope our members will do everthing possible to ensure that our milk products are of the highest quality at all times.

Members of the Executive Committee, along with other key representatives of the industry, recently attended a workshop, held at Northfield Research Centre, for instruction in the theory behind the Australian Dairy Herd Improvement Scheme (ADHIS).

The ADHI Scheme, which will be explained in more detail in later issues of this Journal is designed primarily to ensure that the genetic gain in the aggregate Australian dairy herd is as great as it ought to be. Simply, it will identify the best breeding cows available, from which young bulls may be bred and then proven in a recognised program.

Currently, in Australia, bulls are bred from pedigree animals only, thereby restricting by 90 per cent the range from which selection can be made. It is considered important to the success of a national breeding program that the intensity of selection of elite cows be as high as possible. It is recognised that the primary goal of most commercial dairy farmers is to maximise economic gains, and, as milk yield, fat yield and protein yield have a large and positive genetic correlation, it should not be difficult to improve these traits.

The ultimate success of the Scheme relies heavily on the supply of accurate details both of pedigree and production.

Probably the most comforting thought for dairy farmers is to know that people have been working hard, behind the scenes, for a number of years, to ensure that the national breeding programs are capable of taking us into the future with confidence.

The Scheme is now ready to become fully operational, but it will yield the results of which it is capable only if it receives the co-operation and understanding of stud breeders, and a greater use of artificial breeding and herd recording by commercial dairyfarmers.

Sincerely Yours

Aub Kretschmer

As I pointed out in Nutrition Notes No 3, it is not until approximately Week 15 after calving that the cow has reached maximum intake of feed. As the aim of feeding in this first period is to minimize weight loss and maximize milk production, then the ingredients fed during this period must be high in both digestibility and energy value.

For those dairymen who employ seasonal calving, much of the cow's intake at this time can be hay if the season is late in breaking or if weather conditions are not conducive to pasture growth. For this reason it is most important that the hay you make or purchase is of high quality.

The following table highlights the effect of hay quality on production. (The early cut hay has a 70 per cent digestibility factor versus 60 per cent for the late cut hay.)

	Dry Matter Intakekilograms per cow per day.....	Milk Yield	Butterfat Yield
Early Cut Hay	18.5	14.75	6.500
Late Cut Hay	13.0	13.0	0.425

From the above table it can be seen that milk yield and butterfat yield, as well as dry matter intake, are lower on the late-cut hay, the reduced dry matter intake being related directly to the lower digestibility of the hay.

If the period when late-cut hay is being fed coincides with the early stages of lactation, then weight loss will continue for a longer period of time and milk yields will be depressed.

A period of two to three weeks would be the time taken for pasture to drop from 70 per cent digestibility to 60 per cent digestibility. Due to weather conditions it may not always be possible to cut hay as early as necessary to produce the quality of fodder that is required for cows in early lactation but where possible I recommend that dairyfarmers aim to produce some high digestibility (early cut) hay for the cows in the herd which are in early lactation.

For cows late in lactation later cut hay may be suitable, depending on pasture quality, the condition of the cows, and their milk yield.

Although cutting hay earlier will result in a smaller hay crop the consequently higher milk yield will more than compensate for this loss.

Robin Reed - Manager, Technical Service .



For further information contact :-

MILLING INDUSTRIES
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A "TREACLE-GATE" MAKES MOLASSES EASIER TO HANDLE

One of the major problems of handling molasses in drums (and there are plenty of other problems), is the slowness of discharge if an ordinary bib-cock is used in the bung-hole. The alternative, of using an open bung-hole, requires brute force to lower and raise the drum, and risks molasses dribbling everywhere during the operation.

Treacle gates, which, as the name implies, are designed for a similar liquid (they are sometimes called "honey gates") are quick opening, quick closing, non-dripping full-bore faucets, which make maximum use of the diameter of the bung-hole. Cast in aluminium alloy (the cast-iron pattern is soon corroded by the 25 per cent water content in molasses), they are available at the Association's office for \$28, or \$30 posted.



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Dandy Meats (Australia)

CURRENT MARKET PRICES PAID FOR CALVES
WEEKLY PICK-UP SERVICES - AS SCHEDULED

FACTORY-DOOR PURCHASING AT OUR MOUNT BARKER PLANT

CALF PICK-UP TIME TABLE - SOME SMALL ADJUSTMENTS

MONDAYS - NORTHERN from Monday 6 September 1982

8.45 Murdocks Hill Cnr*	11.00 Greenock	2.00 Mt. Pleasant*
9.00 Lobethal	11.45 Collingrove H/S	2.15 Birdwood
9.30 Kenton Valley	12.15 Flaxman Valley	2.45 Springhead (Mt Torrens)
10.00 Gumeracha	12.45 Eden Valley	3.15 Charleston
10.30 Williamstown	1.45 Springton	3.45 Woodside

TUESDAYS - LOWER MURRAY from Tuesday 3 August 1982

This run is no longer a flag-run, but now operates to a time table with 20 scheduled stopping points, of which some key times are :- 9.00 Murray Bridge; 10.00 Mypolonga; 11.00 Cowirra; 12.00 Long Flat; 2.00 Jervois; 3.00 Wellington; 4.00 Jervois; 4.45 Swanport. Telephone Michael Diener (72 6042) for further details.

WEDNESDAY - CENTRAL from Wednesday 8 September 1982

8.45 Echunga*	10.45 The Range Hall	1.00 Page's Flat Corner
9.00 Meadows 1	11.15 Kyeema	1.30 Mt Compass Factory
9.30 Meadows 2	11.45 Hope Forrest	2.15 Tooperang
10.00 Kangarilla	12.00 Yundi	2.45 Finnis

THURSDAY - SOUTHERN COMBINED from Thursday 9 September 1982

9.15 Myponga	11.30 Torrensvale Cnr	1.30 Newlandtown*
10.30 Wattle Flat	12.00 Inman Valley	2.00 Hindmarsh Valley
11.00 Normanville	12.30 Back Valley	2.30 Mt Jagged

* will stop if hailed.

METROPOLITAN PRODUCING DISTRICT REDRAWN

Milk Board Corrects "Anomalies" In New Gazetteal

As reported in our May-June 1981 issue the Central Council, early in 1981, informed the Metropolitan Milk Board that it opposed the granting of any application for a milk producer's licence for any property situated outside the boundary of the recognised "production area" as shown in the Board's Annual Reports.

Later in 1981, as reported in our November-December issue, the Central Council reaffirmed its opposition to the granting of licence applications from outside the "production area" : and also to the redefining of the "metropolitan producing district", which is a legal entity differing from the "production area".

Despite the Central Council's view, the Milk Board, in January 1982, redefined the "metropolitan producing district", and redrafting the boundaries to give a somewhat larger overall area which eliminated some claimed anomalies to embrace the previous "production area" (rendering it redundant as a separate concept).

FIBRE LENGTH AND CHEWING TIME AFFECT PRODUCTION

In the September-October 1981 issue of this Journal, Northfield research scientist Brian Bartsch warned of "the doubtful benefits of hammermilling and chaffing hay"

Mr Bartsch's argument was that small particle hay did not stimulate the cow to chew her cud and so failed to create the rumen environment needed to optimise fodder conversion into butterfat. This view is confirmed by two scientists from the University of Wisconsin (USA) in a recent article in the "Ontario Milk Producer", which advised Canadian dairy farmers not to rely only on fodder analysis when computing rations.

Dairymen must compensate for the limitations of the feed tests now used. These tests indicate the amount of fibre, but don't adjust for source, physical form or proportion of fibre from different sources.

Particle length and proportion of grain affect fiber value and cows' use of nutrients. The shorter the particle length, the less time cows spend chewing. A decrease in chewing time means less saliva. Rumen pH drops and rumen microbial populations change, producing more propionic and less acetic acid. Acetic acid is a precursor of milkfat. A decrease in rumen acid could lead to a decrease in milkfat test.

A cow spends about 28 minutes per pound chewing (dry matter basis) when fed long alfalfa. This drops to 20 minutes with chopped alfalfa, to 17 minutes with pelleted alfalfa. Cows should chew about 660 minutes daily (14 to 15 minutes per pound of total dry matter) to maintain milk fat levels near their genetic potential.

Chewing time also decreases as the proportion of grain in the ration increases. When finely chopped silage is the only forage in a ration containing one-third forage and two-thirds grain, cows spend about 55 minutes per day chewing. Chewing time increases to 660 minutes when two-thirds of the finely chopped silage (22 per cent of the ration) is replaced by dry hay chopped at a 1 inch theoretical length of cut.

Forage particle length can make a difference in the milk cheque. The average milkfat level of cows chewing 554 minutes daily is 2.8 per cent while that of cows chewing 676 minutes is 3.5 per cent.

The relationships between forage particle length and the proportion of forage to milkfat levels will eventually be included in ration-balancing. Until then, however, dairymen must do some figuring on their own so the length of chop and fibre particles will keep cows chewing.

1982 ADFP NEW ZEALAND TOUR REPORT

Each year a group of farmers selected by the constituent organisations of the Australian Dairy Farmers Federation travels to New Zealand for an on-the-spot study of that country's dairy industry and dairy farming practices.

Members of this Association who have undertaken the tour in previous years are the General President, Mr Aub Kretschmer, and the two Vice Presidents, Allan Manning and Michael Diener.

The Association's representative in 1982 was Executive Committee member Andrew McEwin whose report appears below.

The 1982 ADFP Dairyfarmers Tour, consisting of 19 people from all dairyfarming States, spent the last two weeks of June in the Northern half of the North Island of New Zealand.

We were hosted by dairyfarmers in the Waikato for the first week and attended the Ruakura Farmers Conference and Field Day and the Mystery Creek Field Days as well as touring AB centres and farms in the area.

The second week was spent in the Bay of Plenty area starting in the Galatea Basin and finishing in the Waimana Valley. During this week we saw more farms, inspected a dairy factory and visited horticultural farms.

GENERAL COMMENTS

Throughout the tour farmers, advisers and service industry people were aggressively confident about the future of the dairy industry. Despite 17% inflation, a growing national debt and a wage and price freeze everyone spoke without reservation, about increasing production, either on existing farms or on new dairy farms.

The ability of factories and the NZDB to sell the extra product was not questioned. The general attitude seemed to be that the Government needed farm exports and would stand by farmers.

Our hosts did not seem as concerned about borrowing \$200 000 to buy a dairy and some had debt loadings as high as \$1 000 per cow compared to an annual gross return of \$600 per cow.

It was quite common to meet farmers who had bought their farms after only five years share milking. Rates of interest are 7.5 to 9 per cent, with terms up to 30 years. There has been very high capital gain in dairy farms in the last 3 years and my impression is that these concessional rates of interest are counter-productive in that when buyers have access to cheap money they pay more than commercial value for land. Federated Farmers of N.Z. officials told us that the secret of increasing N.Z. dairy production is the high debt loading on new farm owners and share milkers.

Despite assistance of this sort, on-farm costs have risen 20 per cent per annum for the last 3 years.

My overall impression is that the N.Z. farmers are subject to the same cost/price squeeze as Australian farmers but are receiving more Government assistance. If this is correct it has important implications for CER.

FARMS

The NZ dairyfarmers must be worldleaders in producing milk from grass. Although the system is not generally directly applicable to Australian conditions there were many ideas, especially labor saving ideas, which we could adopt.

The Mystery Creek Field Days highlighted the inventiveness of the NZ farming community and the readiness of N.Z. Companies to manufacture almost any saleable idea.

AB SERVICES AND STUDS

It was generally conceded that NZDB's predominant position in AB had led to some complacency; they are now under some pressure from Ambreed which now handles 30% of inseminations.

Bull testing schemes have been extended to include testing for physical traits. Our group was surprised at the generally small stature of the cows and some NZDB proven bulls.

Eighty per cent of the cows now used in the NZDB bull proving scheme are grade cows. The owner of Pukeroo Stud, Mr Bill Chynoweth, believes this system introduces some uncertainty into the bull proof because there is no depth of breeding records in many of the farms. There has been a big swing to the Friesian breed, which has increased its share of inseminations from 15% to 60% in 20. years.

FACTORIES

We visited the Reporoa Factory, one of the N.Z. Co-op Limited's factories. This factory makes milk protein products. The NZDB buys all product at the point and time of manufacture, although the product may remain stored at the factory until sold.

When we asked the management about shelf-life and the cost of waste if not sold they showed no concern, claiming it was the NZDB's problem, not theirs, another example of the lack of concern fostered by the Government backing of NZDB.

The factories were all shut, it being the "dry" period of the year. Management is becoming concerned about the rising peak of the milk flow each spring, which contrasts starkly with the shut factories each June. One factory spokesman predicted the need for a new factory every three years to cope with this increasing problem and pointed out that product age, due to the restricted production period, is restricting some sales options. (An opportunity for Australia to "pot hole" N.Z. production under CER??)

There seems to be a poor farmer/factory relationship with many farmers deploring the amalgamations of small factories and the subsequent loss of personal contact.

SERVICE INDUSTRIES

Considerable Government input is made through MAF advisory services, herd testing and cell count schemes, bull proving schemes, research facilities, experimental farms etc.

Government input plus the concentration of farming areas allows good services to be provided relatively cheaply.

The cost for a monthly herd test, quarterly cell count, and AB service (including repeats) for 8 weeks, costs about \$11 per cow per year, plus a herd cover charge.

Farm clubs and discussion groups are everywhere; MAF and factory advisers are available at no charge. Some groups are employing private farm advisers which cost each member \$500 per year for 21 hours on-farm visits per year, plus an accountancy advice service plus unlimited access to the adviser by phone.

FEDERATED FARMERS OF N.Z.

FFNZ officers were our very capable tour organisers in the Bay of Plenty. This Association is justifiably proud of its National Farm Cadet Scheme. They have 1000 young people enrolling in on-farm training each year.

The course involves 3 years practical training on-farm, with time off for technical training and exams. At the end of this period a written record is available showing their achievements, which is a valuable aid to getting further employment or borrowing money to buy livestock for a sharemilking job.

Employers receive wage subsidies and other Government assistance.

COMMENTS ON THE TOUR

The trip was very worthwhile but more planning, especially in the first week, would have allowed us to use our time more productively.

Detailed maps showing points of rural interest are essential.

Our tour leader was unable to plan ahead because of the lack of detailed information. I would like to suggest that a member of a previous trip lead each new trip so that his/her experience can be used to advantage.

ANDREW McEWIN
Member of Executive Committee

"Filling The Feed Gap"

In recent years, increasing interest has been shown by dairy farmers in the use of fodder crops to fill the "feed gap" on dairy farms in autumn and early winter. Those being used include hybrid forage sorghums, millet and, to a lesser extent, maize.

HYBRID FORAGE SORGHUMS - These are crosses between sorghum and sudan grass. The most common variety grown previously has been ST6 Sudax, but more recently, late flowering hybrid forage sorghums such as Magic, Honeydrip and Jumbo have become available.

Forage sorghums can be toxic at certain stages of growth, but large areas have been grown with few stock losses because farmers have generally been aware of the problem.

These sorghums should be planted from late November to the end of December when soil temperatures should be about 20 degrees C. Patchy germination and poor early growth are often caused by sowing too early.

Management of the crop will depend on whether it is to be grazed or conserved. Crops should be grazed when from two-thirds of a metre to one metre high. Wastage will be minimised if the crop is strip-grazed using high stocking rates. When cutting late flowering hybrid forage sorghums for silage, maximum dry matter yield will be attained by harvesting once in late autumn.

MILLET - Millet can be sown earlier than hybrid forage sorghums, as it requires a lower soil temperature (13.5 degrees C) for germination, and can, therefore, be sown from late September. The most common variety has been Japanese millet but Shirohie is gaining in popularity.

Millet does not have a long growing season, so sowings should be staggered to provide feed later into autumn.

Crops should be grazed when 20 to 30 cm high (about six to eight weeks after sowing). It is important to keep the crop well fertilised and watered. Once stressed, it will run to head and not recover after grazing.

MAIZE - Maize, unlike hybrid forage sorghums and millet, does not produce regrowth after cutting. Early, mid-season or late-maturing varieties can be planted. The crop can be strip grazed, fed as green chop or ensiled.

Maize can be sown from early November, but it is recommended that sowing be delayed until soil temperature is about 16 degrees C.

Seeding rate depends on size of seed. A plant population of 20 to 40 plants per square metre maximises dry matter yield. As seeding rate increases, size and proportion of cobs is reduced.

The following summarises data collected on irrigated fodder crops in South Australia:

SOWING & FERTILIZING	H. F. Sorghums	Millet	Maize	
Seeding rate (kg/ha)	20	16	depends on size	
Fertilizer - Sowing	super- 200	super 200	super 200	
-Top Dressing	50urea	50 urea	50 urea	
	after each cut	after each cut	when 30cm tall	
FEED VALUE	Immature	Heading	Immature Cobs	Maturing
Dry Matter (%)	15	25	15	35
Digestibility (%)	65	60	65	60
Crude Protein (%)	15	10	12	8

Peter Carroll , Martin Cochrane

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Martin Cochrane is a Senior Technical Officer (Research) with the Department of Agriculture at Northfield. Telephone (08) 266 0911

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CALVES NOT AFFECTED BY BLUE DYE MARKER

But Feeding Mastitic Milk May Be False Economy

The feeding of calves with milk containing antibiotics with blue dye marker will not have any permanent effect, according to veterinary advice.

The blue dye will gradually clear from the tissues when normal milk is fed, and there will be no lasting effect, deleterious or otherwise.

But it is possible that mastitic milk may not be all that good for calves. It is, after all, more or less affected with microorganisms, some of which may give rise to subsequent troubles in the calves that are being fed with such milk.

All in all, it seems wise to make the first loss the last loss, and dispose of the milk in a way that is not likely to lead to further problems.

WITH-HOLDING TIME SHOULD BE OBSERVED BEFORE SLAUGHTER

Antibiotic Restriction Extends To Carcass Also

It appears not to be widely known that, when a cow fails to respond to treatment which involves injecting an antibiotic drug, it should not be sold for slaughter until after a required withholding period.

In theory, at least, the vet attending the cow should inform the owner of the withholding period (which varies from one drug to another and is generally printed on the label of the drug container) but it is possible that the warning may not be given because it is not anticipated that the cow may eventually need to be slaughtered. Carcasses are not totally tested for the presence of antibiotics; in most cases it is probable that detection will only occur as the result of a spot check, but a carcass will be rejected if there is evidence of an injection having been given.

It is recommended that members ask their vet for the length of the withholding period following an injection, just in case the animal fails to respond and is sold for slaughter.

TAKE THE GUESS WORK OUT OF IRRIGATION

To Maximize Fodder Growth And Optimize Water Use

The correct scheduling of irrigation is important to maintain vigorous, healthy, productive pastures. Over-irrigating results in wastage of water, time and running costs. Under-irrigation means reduced pasture productivity and a loss of the less hardy species.

At Maffra, in East Gippsland, Victoria, pasture productivity over an irrigation season increased 13 per cent when the irrigation interval was shortened from 13 days to 10 days. At the peak of the growing season, the pasture growth rate on the 13 day interval was 44kg dry matter/hectare/day while on the 10 day irrigation interval it was 53 kg dry matter/hectare/day - a 20 per cent increase.

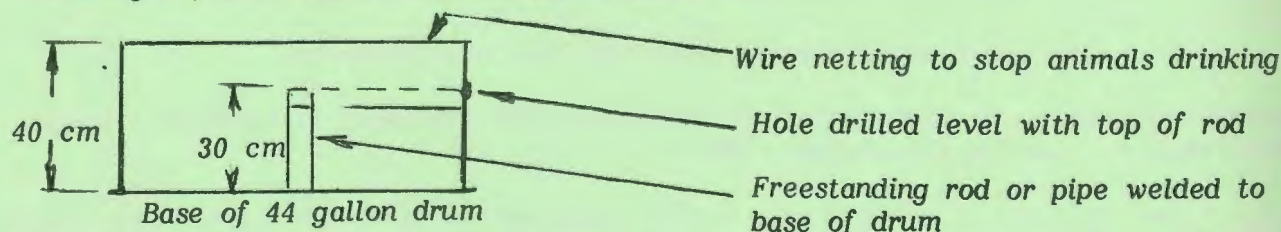
The timing of irrigation must be related to the moisture content of the soil. Pastures require watering when soil moisture levels drop to what is called "50 per cent of maximum water holding capacity (W.H.C)". This moisture level is the halfway point between a completely dry soil and a saturated soil from which all free water has drained.

Different soil types have different characteristics when they reach 50 per cent W.H.C. For example, sandy loams will make a week ball when soil is squeezed firmly in the hand at 50 per cent W.H.C. while a clay loam will ball but won't ribbon when rubbed between the thumb and forefinger, at 50 per cent W.H.C.

Regular sampling throughout the season to determine percentage W.H.C. is tedious, and requires special equipment.

A simple alternative is to make an evaporimeter, calibrate it to your soil type and use that as a basis for scheduling irrigation.

The design of the evaporimeter is shown below .



The evaporimeter must now be calibrated and this is done in the following way.

Soil from several spots in the paddock is mixed and equal amounts put into two jam tins. One jam tin of soil is dried in the kitchen oven to give a sample with 0 per cent moisture content. The other tin, which has a hole in the bottom, is left to stand in water to saturate. Remove the tin from the water and let the excess water drain.

This sample is not at 100 per cent moisture capacity.

By mixing the two samples together a sample of 50 per cent W.H.C. is obtained.

Place the 50 per cent sample in an air tight plastic bag and store in a cool place.

Place the evaporimeter on level ground in an open situation, avoid shady or protected areas.

Irrigate the paddock and fill the evaporimeter until water runs out the hole.

Sample the soil daily from the paddock to a depth of 15cm and compare it with the 50 per cent moisture sample. When both samples feel the same and behave the same when they are squeezed or rolled between the palms of your hands, mark the water level on the rod in the evaporimeter. Irrigate the paddock, refill the evaporimeter and repeat the sampling to check the result. The evaporimeter is now calibrated for that soil and irrigation should take place whenever the water level reached the mark on the rod.

Jim Shovelton, Pasture Specialist, Department of Agriculture, Wodonga, Victoria

KNOCK-BACK FOR CHEAPER WATER FOR STOCK AND SHEDS

Minister Arnold Rejects Request For Concessional Rate

A strongly supported application for cheaper water for stock and milking-shed cleaning has been refused by the Minister of Water Resources (Hon. Peter Arnold).

The request, in the form of a petition signed by practically every dairyfarmer along the Lower Murray, was for the Minister to use his powers under the Waterworks Act to grant a concessional rate for mains water used primarily for hosing-down of milking sheds and for stock-watering.

The grounds for the request included the fact that the water was drawn by the E & W.S., from the nearby river, at minimal cost, that very large quantities were required to be used in order to conform with Milk Board cleanliness requirements, and that the rate charged was related to water of domestic quality, which was not necessary for the purpose.

In rejecting the request from the deputation (which comprised Mr Norman Green, Mr Mervyn Kelley, and the General Secretary) the Minister stated that the Governments policy was to charge uniformly throughout the State, without regard to the nearness or remoteness of the source of supply, although the case in question did differ from the Adelaide region in that the charge was on a "supply by measure" basis, instead of rating on a capital value.

In a later letter confirming his refusal of the request, the Minister drew attention to the fact that the average cost, during 1980-81, of water supplied to the area was 98 cents per kilolitre, compared to the price charged in that year of 27 cents per kilolitre, which resulted in an average deficit per service of \$445.

During discussion the Minister expressed surprise that dairyfarmers did not make their own arrangements for stock and shed water, by drawing directly out of the river or out of channels.

Although that option was not previously believed to be available, because of various restraints, prohibitions, and the need for permits, the possibility of achieving economics in this way will be explored with the Minister if there is sufficient support from our members.

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The South Australian Dairymen's...

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JOURNAL

COPING WITH DROUGHT CONDITIONS

Possibly the greatest difference between the present drought, and other droughts of the past 30 years is the marked gradient between the less affected areas such as the Fleurieu Peninsula and the inner Central Hills, and the worse affected areas to the north and east.

It is not too late, even now, for a change in the weather to bring about some slight recovery, and equally, not too late to see a worsening in conditions in the areas now only moderately affected, but this uncertainty can only mean that conditions may get slightly better, or far worse.

Either way, there still remains the need to look at how to feed the State's milking herd during the coming summer, autumn and possibly winter, not to maintain milk supply - however disastrous the season there will be ample for the State's market milk requirements - but for the economic survival of dairy farmers until the next spring flush.

Feeding large quantities of purchased fodder can never be profitable, but it can provide sufficient margin over actual cost to make more economic sense than allowing production to fall whilst cows are kept on a mere survival ration.

Brian Bartsch's advice, (on page 3), is to feed grain, simply because feeding hay alone will be too expensive and not sufficiently productive. Robin Reed's article (on page 4), provides some basic facts on nutrition which will help dairyfarmers to understand what to feed, and why.

What about the cost of feeding? On the surface the economics of feeding are not good (though better than the economics of not feeding) but a factor to be used in the sums is the amount of assistance, State and Federal, that is available, chiefly the 50 per cent fodder subsidy and the 75 per cent fodder freight subsidy.

No attempt has been made in this Journal to explain these subsidies and the other assistance available. There has been plenty of explanation elsewhere, and, in any case, the extension officers of the Department of Agriculture must, eventually, approve the application, so it makes sense to go to them for both explanation and approval.



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THE GENERAL PRESIDENT'S PAGE

Greetings,

I have often been asked, both by our own members and when interstate, to explain why the retail prices of milk in South Australia, "the driest State in the driest continent", are lower than in all the other States.

The three main reasons are, I believe:

- § the dairy industry in this State is less regulated than in other States; compared with their Dairy Authorities our Metropolitan Milk Board is small, and correspondingly low-cost;
- § our dairy companies have, during the past 10 years, rationalised, modernised and automated their operations to a degree probably unmatched elsewhere;
- § our dairy farming practices are very efficient for the conditions under which we farm. (How many Victorian dairyfarmers could survive in the Golden North region?)

The price that we, as dairyfarmers, receive for market milk is based on the results of the Farm Production Cost Survey, which has been carried out by the Metropolitan Milk Board annually since 1959, using volunteer dairy farmers, who make their financial records available for the Survey. The figures obtained from these records are the participant's actual cash costs, to which are then added an "imputed" labor allowance, related to the size of the herd, and based on the State Pastoral Award, with a small additional provision for management.

Depreciation is assessed on the cost price of all depreciable assets.

An imputed "return on investment", based on the average medium term bond rate, is allowed on the original cost of the farm (less the value of the homestead), which is less than generous when it is realised that when many of the dairyfarmers in the survey purchased their properties they were at only a fraction of current dairy farm prices.

Dairy farmers participating in the survey use the comparison between their own performance and the average for the district to improve their farm management performance, a logical decision but one which, by reducing their own costs, ultimately leads to lower retail prices and no obvious benefits to the dairy farming sector.

When conditions get tough (and they won't get much tougher than in the coming season) dairy farmers tend to defer expenditure on maintenance and the purchase of new equipment, so, again, the consumer benefits. Our Association is looking at these deficiencies in the cost survey in the hope that we may receive a more satisfactory return for our product.

I suggest that those of our members who are participating in the survey remember that the real purpose of the survey is not to ensure that South Australian consumers have the cheapest milk in Australia, but to assess the cost of producing a litre of milk on an AVERAGE dairy farm, managed and maintained at a standard appropriate to the status of the industry.

Perhaps a similar comment can be applied to the margins received by the local dairy companies. Although the differing methods of pricing used by the various milk authorities in each State make exact comparison difficult, there is little doubt that the milk treatment margins in this State are the lowest in Australia.

We give full marks to the companies for the progress they have made in rationalising their operation and improving their efficiency, but eventually there comes a time when there is little more that can be done in that direction, and when the companies are entitled to expect some recognition for the economies they have achieved and some return on the money they have spent to achieve them.

It seems to me that, in an industry notorious for its penny-pinching image, insufficient allowance may be made for a reasonable return to capital and the other factors that enable a firm to maintain its financial viability.

The fact that both the Adelaide dairy companies have paid "big bonuses" has no relevance to prices for market milk. We have often claimed that the factory bonus is not all profit; much of it consists of deferred payment for our milk, and the bonus should not, therefore, be used to excuse treatment margins set below an economic level.

Sincerely yours,

Aub Kretschmer .

KEEPING COWS MILKING IN A DROUGHT

Grain - An Economic Alternative To Hay

With hay stocks low, after the last couple of poor seasons, prices from \$3 per bale (\$150 per tonne) to even more extravagant levels of \$5 are already being quoted or anticipated.

Now dairy farmers face the prospect of their own hay crops ranging from half normal yields down to nothing at all.

So it makes economic sense to look at grain feeding as an alternative, even if grain has not previously figured largely in your herd's ration.

The following table shows the amounts of hay, or a mixture of hay and grain fed in the ratio of 1:1 (50% grain), required by dairy cows to maintain liveweight at various levels of production, and by heifers for normal growth. The assumed values in the table are - milk \$5.00 per kg butterfat; hay, \$3.00 per 20 kg bale or \$150 per tonne; grain \$150 per tonne.

(It is also assumed that the hay is of good quality; the energy content of 1kg grain is equal to that of 1.5kg hay of good quality, but where the hay is of poor quality the ration falls to 1kg grain equals 2kg hay).

TYPE OF ANIMAL	RETURN	TOTAL FEED REQUIREMENTS & COSTS	
		All Hay	50% Hay:50% Grain
Friesian Cow (mature, 500kg)			
dry in calf	-	10kg, \$1.50	8kg, \$1.20
producing 10 ltrs/day	\$2.00	15kg, \$2.25	12kg, \$1.80
producing 15 ltrs/day	\$3.00	19kg, \$2.70	15kg, \$2.25
producing 20 ltrs/day	\$4.00	cannot eat enough	18kg, \$2.70
Friesian Heifer			
6 mths, 150kg liveweight	-	6kg, \$0.90	4.8kg, \$0.72
yearling, 300kg liveweight	-	8kg, \$1.20	6.4kg, \$0.96

The table shows that, at the prices used, returns above feed costs result when higher production is achieved by including grain in the ration.

After providing the cow's maintenance requirements (which is necessary whether the cow is milking or not) it can be seen that 1 kg of grain produces approximately 2 litres of milk, so that, at current grain prices of approximately \$150 per tonne, the return from milk should be at least twice the cost of the extra feed needed to maintain the herd at normal levels of production.

Whilst this may be less profitable than feeding pasture, if cows are going to be milked through a drought period, when pasture is not available, it is more economical to keep them at full production than to allow their production to drop dramatically through underfeeding.

In the short term, higher production per kg of feed may be obtained by allowing the cows to "milk off their backs", and fall away in condition, but in the long term this practice will result in a short lactation with lowered production, and probably low production in the next lactation also.

Increasing the grain:hay ration in the diet to above 50 per cent will result in higher production, but careful management is needed to prevent a reduction in the butterfat percentage (and in the total butterfat, but not in volume, or protein), especially if some green feed is available.

A higher proportion of grain can also be fed to young stock. The grain should be rolled or hammermilled, fed AT LEAST TWICE DAILY, and introduced into the ration over a period of at least 2 weeks.

It must also be remembered that, for cows to produce milk efficiently, the diet must contain at least 15 per cent of protein in early lactation and 13 per cent protein in mid-lactation.

Grain legumes such as lupins or peas should, therefore, make up part of the grain portion of the ration, particularly if the hay has a low clover content, if high protein sources such as green pasture or brewers grains are not available to the stock.

Because of the uncertain conditions prevailing at present, in respect of feed availability, the following article sets out to explain the roles played in the animal's diet by the protein, energy and minerals available in the various feed ingredients that may be looked at during the coming period.

PROTEIN Animals are continuously synthesising and degrading protein in their bodies. Proteins are composed of chains of chemically combined building blocks called amino acids and a constant supply of amino acids is required. Some of the 22 or 23 amino acids found in protein are manufactured by the animal itself; others come from the diet, or, as is the case with dairy cattle and other ruminants, are synthesized by the bacterial flora of the rumen.

Nitrogen is an essential component of amino acids and must come from the diet. For most animals the only usable source of nitrogen is protein. However, ruminants, due to their unique bacterial flora, may use non-protein nitrogen sources, such as urea or ammonium salts, to satisfy up to 30 per cent of their nitrogen requirements. Non-protein nitrogen must be introduced gradually to the ruminant diet so that the appropriate rumen bacterial species have time to increase in number. On no account should ruminant feed containing urea be fed to non-ruminant species, as urea toxicity may occur.

During growth, pregnancy, and lactation an animal requires a higher amino acid intake per unit of body weight than does the fully-grown mature beast, as, during growth, there is a retention of ingested amino acids in the form of muscle and other structural protein whilst during lactation there is a net loss of protein in the milk. Pregnancy also requires an increased amino acid intake to support foetal growth.

The following table illustrates the increase over maintenance requirements to support pregnancy and lactation.

PROTEIN REQUIRED FOR MAINTENANCE OF MATURE DAIRY COW				
Body Weight (kg)	400	500	600	700
Dairy protein requirement(gms)	240	300	360	420

PROTEIN REQUIRED TO MAINTAIN BODY WEIGHT DURING PREGNANCY				
Body Weight (kg)	400	500	600	700
Daily protein requirement(gms)				
8th month	300	375	450	525
9th month	390	450	540	630

PROTEIN REQUIRED TO MAINTAIN BODY WEIGHT DURING LACTATION				
Fat test (per cent)	2.5	3.0	4.0	5.0
Daily protein requirement (grams/litre milk)	-	45	55	65

From tables such as this the amount of feed to provide the required nutrients can be calculated. For example, a 500kg cow requires 300 grams of protein per day to maintain body muscle mass. If the cow is being fed a ration containing 8 per cent protein (80grams/kg), it is clear that 3.75kg of feed will be required to satisfy that intake. ($300 \div 80 = 3.75$)

ENERGY Living organisms require a source of energy to produce chemical reactions which result in growth, movement, reproduction etc. The source of energy is the breaking down of chemical bonds in the feed. The energy released can be used to synthesize chemicals which are coupled to reactions sustaining these processes.

The compounds most used to provide energy are carbohydrates, fats and proteins. As an animal usually eats to satisfy its energy needs, the level of energy in a feed must be known so that other nutrients can be adjusted to their correct relative proportions, thus ensuring that the animal obtains a balanced diet allowing the maximum growth or production.

As with protein, the rumen has a marked effect on the energy metabolism of cattle. Non-ruminant mammals in general do not possess enzymes capable of catalyzing the breakdown of cellulose into sugars. However, some rumen bacteria do possess such enzymes which act on plant material during the time the food is retained in the rumen. Therefore, the form of the dietary roughage will determine, to some extent, the amount of cellulose broken down in the rumen. Finely ground material will tend to pass too quickly through the rumen without being subjected to bacterial digestion.

As cattle are capable of using a wide range of materials as energy sources, the energy content of a cattle feed can be expressed in terms of the digestibility of its constituents.

The term Total Digestible Nutrients (T.D.N.) was arrived at in this way. In this system each raw material is assigned a coefficient of digestibility (e.g. oats is 70 per cent TDN). From such figures a TDN value for the whole feed can be calculated from the coefficients of digestibility of each raw material.

ENERGY REQUIRED FOR MAINTENANCE OF MATURE DAIRY COW

Body Weight (kg)	400	500	600	700
TDN (kg/day)	3.1	3.7	4.2	4.8

ENERGY REQUIRED TO MAINTAIN BODY WEIGHT DURING PREGNANCY

Body Weight (kg)	400	500	600	700
TDN (kg/day)	4.0	4.8	5.6	6.3

ENERGY REQUIRED TO MAINTAIN BODY WEIGHT DURING LACTATION

Fat test (per cent)	3.0	4.0	5.0
TDN (kg/litres milk/ day)	0.280	0.330	0.380

MINERALS (Macro Minerals) Sodium, potassium and chlorine, are all essential for maintaining the body's electrolyte balance, must be adequately supplied in the diet, whether in the ration or by means of a salt block. The reason cattle need so much salt is because of their extremely high water turnover. About 0.1 per cent in the total ration will provide adequate salt for the cow's requirements, whilst concentrates should contain about 1 per cent salt. Alternatively further salt supplement can be provided with a salt block or lick.

BONE GROWTH IN YOUNG ANIMALS - The macro mineral most often deficient in dairy cows is phosphorus. Feeding lucerne hay as a high proportion of the animal's diet accentuates the problem as lucerne is usually high in calcium but low in phosphorus. Milk production places a further strain on the supply of this mineral. Concentrate rations should contain at least 0.25 per cent phosphorus.

Calcium is a prime constituent of bone, and is also essential for muscle contraction. As such, it must be supplied in the diet, and, if concentrates are being fed, they should contain 0.6 per cent to 0.7 per cent calcium.

To ensure efficient utilization of calcium and phosphorus, vitamin D must be adequate. If the animal is in the open there is no problem, but cattle kept permanently in shade must have vitamin D supplement.

The above information is provided as a guide. As stated in earlier Nutrition Notes, it has been shown that animals in early lactation respond to higher levels of nutrition than those calculated directly from the tables.

Robin Reed- Manager Technical Services

For further information contact:-



MILLING INDUSTRIES
36 Franklin Street,
ADELAIDE S.A. 5000
Telephone (08) 352 8080

LEPTOSPIRA HARDJO IN DAIRY HERDS - A SAGRIC VIEW

Its Effect On Your Cows, And You!

Recent publicity concerning leptospiroses as diseases in Man has been further emphasised by the evidence of widespread exposure of Australian livestock to bacteria of the genus *Leptospira*.

There are several hundred leptospira and, as there are only two which are significant in human infections in South Australia, it is worthwhile assessing what this means in terms of human health and animal production.

The two important bacteria in South Australia are pomona - primarily infecting pigs, and hardjo - primarily infecting cattle. Other bacteria of the group occurring in this State rarely cause disease, but their presence may complicate and confuse blood-testing.

The bacterium *Leptospira hardjo* is widespread among dairy herds, and is probably present on the majority of dairy properties, and as it is well adapted to cattle, it usually causes little or no disease, providing the animals have had exposure from a young age. However, when newly introduced into a herd, it is more likely to become apparent.

Some cows abort, and many show a spectacular fall in milk production. Some cases of abnormal milk may be seen, and recovering animals may be more susceptible to mastitis.

Where young stock are raised separately from the main farm, it is possible that, whilst the milking herd is infected, the replacements have not been previously exposed. Consequently an active case may develop each time a young cow is brought into the herd.

Convalescing animals retain infections in the kidneys, and pass large numbers of bacteria in the urine. Environmental contamination may last several weeks, especially in wet weather with mild temperatures.

In the case of *Leptospira hardjo*, human infections appear to be wholly associated with the milking of cows, or with slaughtering animals. For the dairyman it is not the milk that is the danger (the bacteria survive poorly in whole milk), but urine splashes in the dairy. Infection is likely through the sensitive surfaces of the eyes, nose and mouth, and by way of minor cuts and scratches, but only a small proportion of exposed persons become infected, and less than one-third of these suffer any illness.

There is, in fact, greater danger from kicks and accidents than from this disease, but infection should, nevertheless, be avoided, and awareness of the condition can assist in so doing.

It is the New Zealand experience that human infection is more likely after a wet spring, which favors spread among the cattle, and heavier contamination of the environment results. There is likely to be more human exposure in a herringbone dairy, particularly if the milker's legs and feet are exposed, and barefeet and shorts should be avoided.

Curiously the wearing of aprons appears to increase risk of the infection, perhaps due to the indifference to urine splashes which this practice engenders. Personal hygiene and protection of cuts are also obviously important.

Hardjo infections in humans typically cause headaches, backaches, chills and fevers, and some cases can be severe - one or two weeks absence from work is not uncommon, but some people have only the impression of a mild attack of influenza, and many suffer no sickness at all.

Vaccination will protect the milking herd, and hence eliminate the dairyman's exposure, but will need to be carried out yearly. If this artificially induced immunity is allowed to decrease the herd will become highly susceptible to re-introduced disease.

R. W. Newlands

(Dr Ron Newlands is a Senior Veterinary Officer with the Animal Health Division of the Department of Agriculture. He may be contacted by telephoning (08) 227 2480.)

OVER-PRODUCTION ? AND PRODUCTION CONTROL ?

And What Do We Receive For Exported Cheese?

After all the publicly-expressed fears during the past 3 years that the Australian dairy industry was shrinking into extinction, and that we might have to rely on New Zealand to make up our domestic shortfall, the proposal, by John Bennett, President of the Australian Dairy Farmers Federation, Chairman of the Australian Dairy Industry Conference, and Deputy Chairman of the Australian Dairy Corporation, for a two-price production control scheme, to curb over-production and avoid selling on low-priced export markets, may seem surprising.

In his Annual Report to the Australian Dairy Farmers Federation, Mr Bennett claimed that the decline in Australia's milk production had now been halted, and we are likely to see, in the current (1982-83) season, an increase of about 2 per cent over that of the previous year.

Mr Bennett stated that massive amounts of capital were now being injected into the dairy farming sector to implement the technical developments that had been made in recent years, and that there had been a renewed commitment by dairyfarmers in market milk producing regions, resulting from high returns for market milk sales. The equalising of market milk prices with manufacturing milk prices encouraged the production of manufacturing milk, which, if allowed to continue, would cause a rapid escalation, in some areas no regarded as market milk areas, of manufacture of prescribed products, which, Mr Bennett believed, should, on economic grounds, be left to Victoria and Tasmania.

Mr Bennett expressed the fear that, because world dairy production was increasing, and stockpiles were growing, the coming year would see a fall in the export prices of dairy products, and for this reason the ADFF would have to tell dairyfarmers "...that increased production, and indeed some of the present production, will be sold on international markets at prices which bear no relationship to the cost of production. It will be sold at dumped prices; prices which suggest it would be better if the product had never been produced. Our second responsibility, given the present situation, is to have, by the end of the calendar year, a two price quota scheme which should be implemented at the beginning of the next production season."

Because all dairying regions in Australia are, to some extent, affected by drought conditions, it is not possible, at this stage, to forecast the reactions of the member organisations of the ADFF to Mr Bennett's proposal, but when the matter was discussed at a recent District meeting of this Association, the request was made that, to insure informed debate, the returns received from cheese sold on export markets should be published so that members can see the actual value of milk produced in excess of domestic requirements.

Because of marketing, freight and other costs, exact figures are not readily obtainable, but the following table attempts to compare returns received by dairyfarmers for milk manufactured into cheese which is subsequently exported. The figures in the table are calculated on the basis that manufacturing and marketing costs are the same for cheese for all markets, and make the assumption that the marginal costs (of the last units produced) are the same as the average cost of all production.

Current values are used in each case, as, although domestic prices will increase during the season, and the equalised return will also increase substantially, trends in export returns cannot be forecast.

MARKET	Price per tonne cheese	Price per kg fat at farm-gate
	\$	c
Domestic	2 140	440
EEC (U.K)	2 100	430
U.S.A.	1 800	357
Japan	1 650	319
Other exports	1 500	281

The farm-gate return is based on 300c per kg related to the current underwritten value of \$1 575 per tonne.

MOLASSES AS A DROUGHT FODDER

What Are You Prepared To Pay?

The economics of using molasses for dairycow feeding, disregarding whatever value it may have as a source of vitamins and minerals (which make up something over 10 per cent), is related to its energy value as expressed in the equation 1 litre of molasses = (approximately) 1 kg of grain.

So with feed wheat at around \$160 per tonne, molasses may be said to be "worth" 16 cents per litre, or \$33.60 per drum, which is rather more than the \$30 per drum charged by the Association for small quantities (2 to 9 drums) and very much more than \$24 per drum (charged for 26 drums or more).

Unfortunately we have used up the quota allowed to us by CSR, and cannot guarantee any further deliveries before mid-December. But ample supplies of mill molasses are available from the sugar mills on the Queensland border at a price of \$42.75 per drum, the price including a reconditioned steam-cleaned medium weight drum.

At this price the drums would be delivered to your property, for an order of 5 drums or more, otherwise delivery will have to be taken at a nominated point en route.

When asking yourself whether, at this price, molasses is worth buying, it should be borne in mind that, depending on your circumstances, the purchase may qualify for drought relief subsidy; either the fodder subsidy (50 per cent) or the fodder freight subsidy (75 per cent).

Please contact the office, (08) 51 3034 if you are interested.

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or your Field Representatives, Brian Rainey, at Murray Bridge
telephone (085) 32 3093 or Jim Paton at Rowland Flat, telephone (085) 638 264

SITUATIONS WANTED

People seeking dairyfarm employment or sharefarming are often referred to us by the Department of Agriculture, or the Metropolitan Milk Board, and, in addition, some people come direct to the Association for this purpose.

So we currently have several applicants, all with dairyfarming experience, with good references, from previous employers, looking either for full time employment, or for sharefarming or lease opportunities.

They range in age from 17 to adult. Please direct enquiries to this office (08) 51 3034.

SELLING MILK TO LOCAL VENDORS

- And To Your Neighbours

For a number of reasons, relating to both industry economics and public health, the Association does not favor the sale of raw (i.e. unpasteurised) milk in bulk direct from farms, either to local vendors or to neighbours, and supports the policy that all milk should be pasteurised and packaged or bottled.

But some of our members do sell bulk raw milk, and in the September 1980 issue of the South Australian Dairymen's Journal we printed an article headed "Selling Milk To Local Vendors - Make Sure You Charge A Reasonable Price".

This article has now been revised and brought into line with current prices, and will be sent to members who engage in raw milk sales on receipt of a stamped, addressed envelope.

But remember - if you do sell milk from your dairy either to local vendors or by retail to the public (which includes your neighbours) you must first obtain a licence from your District Council (your Milk Board producers licence will not be sufficient) and you must also pay a levy to the Commonwealth Department of Primary Industry on all the milk you sell other than directly to the customer who is going to consume it.

Failure to hold a local government licence to sell milk, and failure to pay the DPI levy both render you liable to prosecution.

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S.A. PASTORAL AWARD (unchanged from 2.11.81)

ADULT RATES per 40 hour week without keep :-		\$
Station Hand	- less than 12 months experience	170.50
Station Hand	- more than 12 months experience	172.20
General Stationhand		173.80

JUVENILE RATES per 40 hour week without keep :-					
Age	\$	Age	\$	Age	\$
15	76.70	17	93.80	19	127.90
16	85.30	18	110.80	20	153.50

WITH KEEP :- The above rates less \$35.69 per week for adults and juveniles.

SUPPORT THE S.A.D.A. CALF PICK-UP SCHEME



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 THE LATEST CHANGES IN
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 WEEKLY PICK-UP SERVICES - AS SCHEDULED

FACTORY-DOOR PURCHASING AT OUR MOUNT BARKER PLANT

CALF PICK-UP TIME TABLE - (* indicates "will stop if hailed")

MONDAYS - NORTHERN

8.45 Murdocks Hill Cnr*	11.00 Greenock	2.00 Mt. Pleasant*
9.00 Lobethal	11.45 Collingrove H/s	2.15 Birdwood
9.30 Kenton Valley	12.15 Flaxman Valley	2.45 Springhead (Mt. Torrens)
10.00 Gumeracha	12.45 Eden Valley	3.15 Charleston
10.30 Williamstown	1.45 Springton	3.45 Woodside

TUESDAYS - LOWER MURRAY

9.00 Murray Bridge	11.15 Ponde	3.00 Wellington
9.45 Mypolonga	12.00 Long Flat	3.40 Jervois
10.15 Wall	12.00 Monteith	4.20 Woods Point
10.45 Mannum	2.00 Jervois	4.45 Swanport

The above are key points out of more than 20 stopping or hailing points. Telephone Don Brooks (31 4361) or Michael Diener (72 6042) for details.

WEDNESDAY - CENTRAL

8.45 Echunga*	10.45 The Range Hall	1.00 Page's Corner
9.00 Meadows 1	11.15 Kyeema	1.30 Mt Compass Factory
9.30 Meadows 2	11.45 Hope Forrest	2.15 Tooperang
10.00 Kangarilla	12.00 Yundi	2.45 Finnis

THURSDAY - SOUTHERN COMBINED

9.15 Myponga	11.30 Torrensvalle Corner	1.30 Newlandtown*
10.30 Wattle Flat	12.00 Inman Valley	2.00 Hindmarsh Valley
11.00 Normanville	12.30 Back Valley	2.30 Mt. Jagged

CALF PRICES (minimum price per kg liveweight)

Weight & Grade	40kg	A	B	C	35kg	A	B	C	30kg	B	C	less than 30kg
Cents		80	50	35	65	40	25		35	25		\$4 per calf

The South Australian Dairymen's...

IN THIS ISSUE

Dairying & The Drought
It Pays To Crush Lupins
Molasses Price & Quality Both Up
Dairy Farm Tours
Christmas Changes In Calf Pick-Up

JOURNAL

THE NEW GOVERNMENT'S DAIRY POLICY

Twenty three words sufficed for the dairy industry in the A.L.P.'s pre-election policy statement for rural industry :- "An A.L.P. Government will introduce amendments to the Metropolitan Milk Supply Act to allow the South East Augmentation Scheme to be properly implemented"- it can consequently be hoped that, in its current term of office, the Government will not exhume the Dairy Industry Bill which it introduced in 1978.

LIFT IN MANUFACTURING MILK PRICE

An increase of \$50 per tonne in the interim pool price for leviable cheese will result in a rise of 12.75 cents per kg fat in the Interim Basic Milk Price, to 325.75 cents early in 1983, probably from 1 February.

This rise will be accompanied by a retrospective payment of about 6.3 cents per kg fat equalised on all production from 1 July 1982.

VOLUNTEERS WANTED FOR BOARD'S COST SURVEY

More dairyfarmers are wanted for inclusion in the Milk Board's annual production cost survey. Practically no work is involved other than sparing a brief period to go through the farm accounts with Mr Brian Orr, the Milk Board's Cost Officer, and the time spent is more than repaid by the advice that Mr Orr can give.

Participation is open to all dairyfarmers except those with very small herds, or those whose income from other sources exceeds their income from dairying, but the greatest benefit to individuals is gained by relative new-comers to the industry, who can measure their expenditure and their performance against those of other participants and take appropriate action to reduce their costs or improve their management.

For this reason the Association suggests that dairyfarmers who have participated in the cost survey for many years, and have gained considerable benefit therefrom, should consider withdrawing to make way for other dairy farmers, less well established, who can make more effective use of this very valuable management tool.

If you are interested, please telephone Mr Brian Orr at (08) 223 2277.



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THE GENERAL PRESIDENT'S PAGE

Greetings,

Mr Norman Green, President of this Association for 13 years and Chairman of the Metropolitan Milk Equalisation Committee Limited (MMEC) for 15 years, was honoured for his long service to dairying by past and present leaders within the industry, headed by three past Ministers of Agriculture, at the MMEC Annual Dinner on 18 November.

Mr Green was praised for his patience, tolerance, and consistency and for encouraging the various sectors of the industry to talk out their problems. He was said to have "the wisdom of Solomon and the patience of Job". Mr Green was presented with a recliner chair as a small token of appreciation for his services to the industry and Mrs Green a brooch for her behind-the-scenes support and encouragement for Norm.

The Australian dairy industry has by now pulled itself out of the doldrums into a period of relative stability. During the mid-seventies the industry was deeply concerned with over-production throughout the Commonwealth. Production has since declined and rationalisation in all sectors has provided the consolidation which the industry needed, leaving it with what appears to be no more surplus production for export than that necessary to safeguard the domestic market supply against a seasonally induced downturn.

Nevertheless, total milk flow may now be so delicately poised that an "average" season (whatever that means) in the nation's major dairying regions could lift production to a level that, by throwing more product on a highly competitive export market, would lower dairyfarmers' returns, and see dairy manufacturers and the exporting States attempting to disrupt local markets.

The solution is to develop the Australian market to consume more of our products and there is, without doubt, scope for increased domestic sales. The industry still has much to achieve to protect the interests of those who have invested in it, and there is a continuing need to subject everything that we do to continuous review in search of ways to improve our great industry.

One subject of concern is the persistent criticism from outsiders with a very unbalanced view of the industry and the practices it employs.

The industry must maintain communication with the consuming public, and our legislators, too, so that they can understand our problems and help us to look for realistic solutions. That is not a job that should be left to the industry's leaders; there is a need for all of us to be ambassadors for our industry, not whingers, as our profits come from sales, not sympathy.

At this time of the year it is interesting to look at some key statistics taken from the 1982 Annual Report of the Metropolitan Milk Board. The number of licensed producers declined, in 10 years, from 1 666 in 1972 to 963 in 1982, compared with 969 in 1981.

During the same period the average production of butterfat per cow declined from 132.4 to 131.8kg (140.50kg in 1981) although milk volume per cow increased slightly from 3 028 to 3 115 litres (3 228 litres in 1981), a trend that was reflected in the production of cows on the 72 farms in the Board's cost survey - 152.7 kg and 3 425 litres in 1981, 147.8kg and 3 336 litres in 1982.

The Department of Agriculture is the source of statistics of a different type, showing a rise in the average cell count of all herds in the Central Region from a 1979 low of 359 000 per ml to 488 000 in the season just past. Central testing should be a "goer" by mid-1983 and with the availability of cell counting on individual cows, it will be interesting to watch the State counts over the next 5 years.

In conclusion I wish all of the Association's members, the office staff and other readers of this column the true peace of Christmas and good health, with a touch of prosperity, in 1983.

Sincerely yours,

Aub Kretschmer



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Our earlier model is still available consisting of a major stop-cock, with droppers to each bail, originally fitted with P.V.C. pressure valves, so that you may control the flow of molasses to each bail.

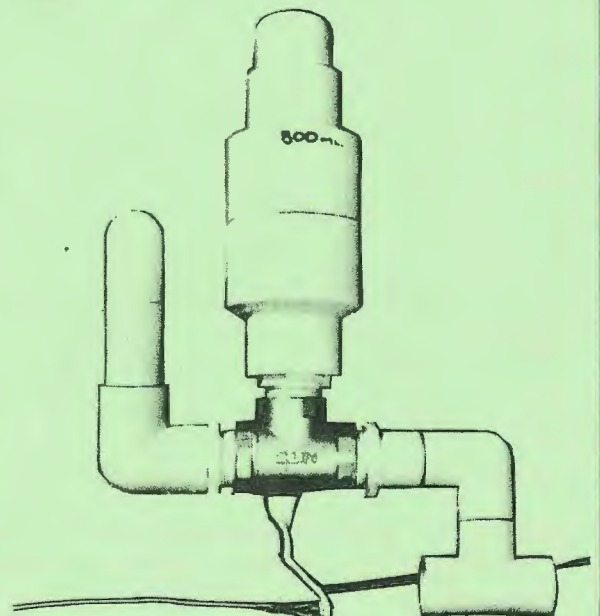


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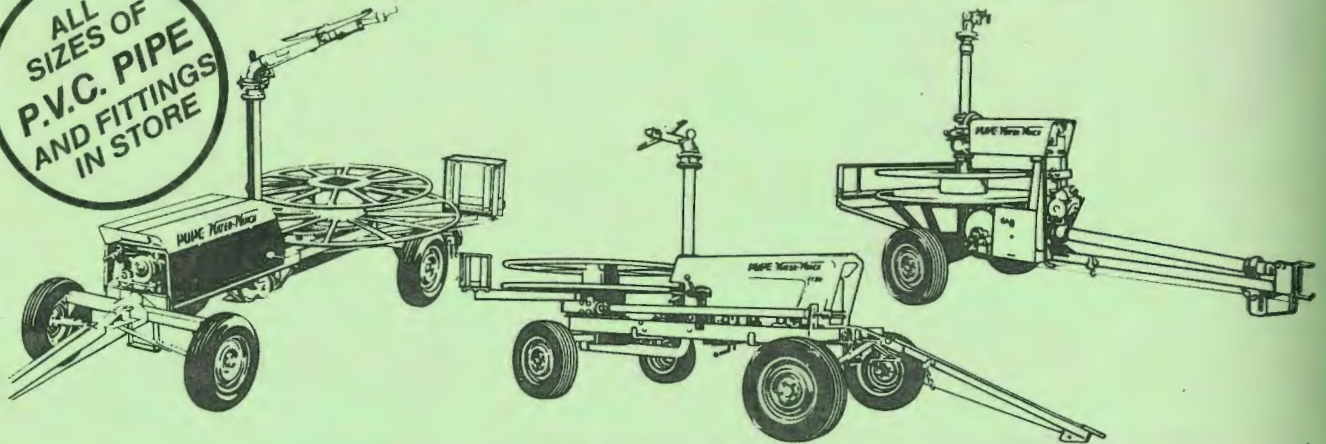
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THE DAIRY INDUSTRY & THE DROUGHT - AN OVERVIEW

MILK PRODUCTION - The Victorian Department of Agriculture has expressed a fear that, because of the drought, output of some dairy products will be less than domestic market requirements, and it may consequently be necessary for New Zealand dairy products to come in to make up the shortage.

There are no grounds for such a fear in South Australia. So far, despite the early set back caused by heavy winter frosts, the subsequent absence of any worthwhile rain, and the onset of early high temperatures, milk production is above that of last year, in fact not measurably different from that of the previous 4 years.

We cannot, of course, disregard the possibility that production is being kept up by the herds grazing on paddocks that, in a normal year, would have been closed up for hay, but that does not mean that, when paddock grazing is finished, milk production levels will collapse.

Past droughts have demonstrated that, when faced with a critical situation, dairy farmers have made the well-being of their herds their prime aim, regardless of the cost. Records of the past 30 years show that, through the heavy usage of purchased fodder, milk production in a drought situation, during the most hazardous period, from November to the end of April, has never fallen by more than 7 per cent below that of the same period in the previous "normal" year.

There is, therefore, absolutely no need for panic to be felt (or to be created) by the consuming public, the media, or anyone attempting to prove that changes should be made to market milk supply arrangements in South Australia.

DROUGHT AID - Every dairyfarmer should, by now, have decided whether, in his opinion, he is "drought affected" to the extent that he is eligible for one or more of the several forms of drought aid available, and if, in any case, a conclusion has not been reached, why not let the system make the decision?

It would be foolish for any dairyfarmer (other than the very rare exception, if, in fact, there is one, who is totally unaffected by the season and has experienced a normal year in respect to his grazing and fodder conservation needs), to refrain from applying for drought aid just because he thinks he may not be eligible.

A complete set of application forms, and explanatory notes, for all the types of aid applicable to dairy farmers will be posted from the Association's office immediately on receipt of a telephoned request. Remember the drought aid available covers, as well as the subsidies (on freight for fodder and agistment, on the price of fodder, and on interest on loans) on expenditure already incurred, carry-on loans to finance the costs of fodder and other expenditure necessitated by the drought.

Dairyfarmers must also take into account the high prices being asked (and paid) for fodder. Whilst some are due to lower yields, the availability of subsidies has played at least an equal part in inflating prices, and it would be foolish to refrain from applying for assistance merely on one's own judgement.

MILK PRICES - It would be pleasing to be able to forecast that milk prices will rise to a level that will compensate for the heavy expenditure on fodder and other drought related costs such as water pumping, but these expenses will not become apparent until later in the coming year, and will, even then, be reflected only in the price for market milk, which represents less than half of the total milk production.

In a similar situation, and at this time of the year, in 1967 the then Minister of Agriculture, the Honorable G.A. Bywaters (now a Member of the Metropolitan Milk Board) approved an increase of 4 cents per gallon in the retail price for milk, with the whole of the increase going to the producer, thereby lifting the farmgate price by 10.2 per cent.

It is not known whether the Milk Board, which is believed to be reviewing milk prices at the moment, will adopt a similar policy this time, or whether it will take the opportunity to review the whole price schedule as it would in a normal six-monthly review. If the Board takes the latter course it is possible that no relief will come from this source before the end of the year.



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66 Wyatt Street, Adelaide, 5000, telephone (08) 223 6483**

**or your Field Representatives, Brian Rainey, at Murray Bridge
telephone (085) 32 3093 or Jim Paton at Rowland Flat, telephone (085) 638 264**

When Nutrition Notes No. 5 were being written there was still some hope that late spring rains might arrive in time to improve fodder reserves. Unfortunately the hoped-for rains did not arrive and the result is an acute shortage of hay and pasture.

Furthermore, of the hay that is available, much is of less than satisfactory quality, due to growers aiming for maximum bulk rather than nutritive content, or perhaps through just waiting for that shower of rain that didn't come, added to which were a few days with temperatures in the high thirties which put paid to much of the clover.

Consequently, when calculating how much hay to feed, it must be realised that the nutritional value and the digestibility may both be substantially reduced, so that the cow may not be able to consume enough nutrients for her maintenance requirements and milk production. Fodder of this quality should, therefore, be used for the end of lactation and the dry period.

When considering alternatives to hay and pasture there are a number of factors that must be considered. These are :-

- § the cow's requirements for
 - (a) energy
 - (b) protein
 - (c) calcium and phosphorus
 - (d) vitamins and other minerals
- § the storage of the alternative fodder, and the method of feeding;
- § the price of the alternative fodder;
- § whether the alternative fodder must be processed before feeding.

Prepared feeds adequately provide the nutrient content required, can be delivered weekly, or monthly, thereby eliminating the need for large-scale storage, and can be fed directly to the cow without further processing.

I will not attempt to compare costs of alternative fodders, as costs will vary between regions depending on the availability of the various alternatives, and the cost of transport, whilst processing costs will depend on the equipment available to the user, or the availability of processing capacity elsewhere.

In comparing alternative feed costs I refer you to Brian Bartsch's article in the previous issue of this Journal; Linmex and Challenge Dairy Ration are comparable with grain in the equation in that article.

Challenge has 16 per cent protein level and should be fed in early lactation and when feeding low protein materials such as maize, millet and grass-dominant pastures. Cereal hays are also low in protein and need to be supplemented with Challenge or used only during the dry period.

Linmix can be fed if lucerne or a good clover-based pasture is being grazed. It is also suitable in late production as a supplement to the lower protein pastures.

In a season such as we are now experiencing it is important that the animals are not allowed to slip back in condition as this will have an adverse effect on next year's production. Care should also be taken to ensure proper growth of heifers and calves.

May I take this opportunity to wish you Season's Greetings and all the best for 1983.

Robin Reed - Manager, Technical Service

For further information contact:-

MILLING INDUSTRIES
36 Franklin Street, Adelaide S.A. 5000.
Telephone (08) 352 8088



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ABAS COMES TO SOUTH AUSTRALIA

With A Special Offer For SADA Members

Intending members often ask "Does the SADA have a merchandising service, where I can buy things cheaply?". The answer is "No". We do, if requested, buy at near wholesale prices, some expensive items for farm or personal use, but beyond that the cost of maintaining a merchandising service would possibly absorb any potential savings.

Our colleagues in the United Dairyfarmers of Victoria were in a similar position until the Victorian Farmers and Graziers, of which they are a part, became associated with ABAS, the Australian Buying and Advisory Service.

ABAS has now opened an office in Adelaide, and has offered our members a similar concessional rate to that available to members of the UDV and the VFGA, as described below.

SAVE \$\$\$\$\$ on almost ANYTHING

as a member of Australia's fastest growing consumer advisory and research organisation
- THE AUSTRALIAN BUYING ADVISORY SERVICE.

ABAS HISTORY - The Company has branches in NSW, Vic, and SA, and its members, (there are over 40,000 of them in Australia) are offered a number of unique services on just about anything than concerns spending money.

The most popular of the 13 ABAS services is the Buying Advisory Service (BAS), where members can shop by telephone for all purchases of \$100 and over and almost be assured of getting the lowest possible prices anywhere for a particular item.

"In 88 per cent of cases our research shows we are able to better prices quoted to our members even if they have shopped around extremely seriously" said Mr Ern Cooper, ABAS's Chief Executive.

ABAS instigates savings on more than \$100 million dollars in retail sales per year.

Consumers in the rural sector can save big \$'s on a wide range of agricultural and farming machinery, as well as tools.

ABAS also offers reduced rate transport services to members in country areas.

A total of 13 individual dollar saving services are available to members - including travel, wines and spirits, photography, pharmaceutical goods, dry cleaning, restaurants, car rental and hotels.

ABAS's highly skilled consultants will assist you in almost any purchase ... large or small.

Some of the money saving items handled by ABAS are listed as follows :-

Air conditioners, baby equipment, barbecues, bicycles, blankets, calculators, carpet tiles, clothes lines, compost bins, cork tiles, counter savers, dishwashers, dryers, electrical general, exercise bicycles, exhaust fans, food processors, food warmers, freezers, heaters, hotplates, hot water services, incinerators, insinkerators, lawn mowers, microwave ovens, mixmasters, playgyms, range hoods, refrigerators, sheds, stoves, televisions, trampolines, vacuum cleaners, vinyl tiles, vinyl sheeting, wall ovens, washing machines, weeders, trimmer edgers - and many, many more.

ABAS GUARANTEES that if members cannot save the cost of their membership fee over four purchases through the BAS service in one year, the fee will be refunded.

The staff of the BAS department are close to all markets and know how to use the very real buying power that its 40,000 plus membership provides.

"Our organisation does the buyers' running around, and we do it much better, too" the Chief Executive of ABAS, Mr Cooper, said. "It's pretty hard for the individual to compete with us when it comes to driving a hard buying bargain".

Last year the Company saved its members over \$130,000 a week, just on the BAS service. That's \$7 million a year added to the savings made on all other ABAS services.

In addition to its many services, the ABAS produces a four-page newsletter every two months which is distributed free of charge to all members. It contains articles of an informative nature on consumer subjects including family budgeting, life assurance, property investments and "consumer watch" articles, plus details of special purchases which have been arranged for members during the preceding month.

For information regarding ABAS - phone Enquiries Department - (08) 212 7388

AUSTRALIAN BUYING ADVISORY SERVICE,
159 FRANKLIN STREET, ADELAIDE, S.A., 5000.

FEEDING LUPINS TO DAIRY COWS

Greater Digestibility More Than Covers Milling Costs

With lupins now costing over \$220 per tonne, it is essential, despite their 28 to 32 per cent protein content, to ensure that maximum use is made of their nutritive content, which raises the question - what is the loss in nutritional value if the lupins are fed whole?

Previous research carried out by the South Australian Department of Agriculture at the Struan Research Centre showed that, when yearling beef heifers were fed lupins, together with hay, growth rates were similar whether the lupins were whole or rolled, whilst a report from Western Australia indicated that, when whole lupins were fed to cattle, less than 1 per cent of the grain appeared in the dung.

However, dairyfarmers in this State who have fed whole lupins to their cows have expressed concern about the apparent large proportion of whole lupins in the dung, and a recently completed experiment carried out by Steve Valentine and Brian Bartsch at the Northfield Research Centre has shown that the dairy farmer's concern may well be justified.

In the experiment dairy cows were fed amounts of up to 9.5kg per day of either whole or hammermilled lupins, supplemented with either cereal hay or green oats. The amount of feed eaten and the amount of dung from each cow were measured and from this the dry matter digestibility of each cow's total diet and of the whole and hammermilled lupin grain was calculated. The amount of whole lupin grain present in the dung of each cow was determined on both the cereal hay and green oats diets.

The results showed that the hammermilled lupins were more completely digested than whole lupins. It was found that 36 per cent of the number of whole lupin grains eaten were excreted in the dung when cows were fed green oats and 24 per cent when fed cereal hay.

However, since the dry weight of the whole lupin grain in the dung was only 73 per cent of the dry weight of the lupin grain as fed, the loss of whole lupin grain in the dung on a dry weight basis was 26 per cent on the green oats diet and 18 per cent on the cereal hay diet, giving a mean loss of 22 per cent.

If we assume a price for lupins in the current season of around \$200 per tonne, a 22 per cent loss of lupin dry matter in the dung represents a cost of \$44 per tonne.

If, however, the 27 per cent of the dry matter lost from the whole lupins present in the dung has been fully digested, the economic loss would be reduced to \$40 per tonne.

But even if the lower figure of \$40 is used, the value of the increased utilisation resulting from hammermilling (or rolling, or similar treatment) considerably exceeds the cost of the hammermilling or other treatment, thereby making the processing of lupin grain a worthwhile economy.

LUPINS FROM W.A. MAY STILL BE AVAILABLE

It is possible that lupins from W.A. may still be available when this Journal is received. The price will be approximately \$237 per tonne delivered to the farm; a phone call to this office (08) 51 3034 will confirm the price ruling at the time. Orders can only be accepted in full loads of around 25 tonnes; members who require less than a full load must find buyers in the near vicinity who are prepared to take the balance of the 25 tonnes.

INCREASE IN MOLASSES PRICE

But Higher Energy Content Still Makes It A Good Buy

The ex-refinery price of molasses was increased on 6 December, and the prices charged by the Association have been adjusted accordingly.

The new price is, however, for BBO syrup which contains 55 per cent total sugars, compared with 47 per cent total sugars in the CBO syrup on which the previous prices were based.

The new prices for members of the Association are :- 1 to 9 drums - \$34 per drum ; 10 to 17 drums - \$32 per drum ; 18 to 25 - \$29 per drum; 26 drums or more - \$27 per drum. An extra \$8 per drum will be charged if members do not have SOUND, CLEAN empty drums to exchange.

We emphasize that the drums must be sound and clean as we have received some exchange drums that were fit only for scrapping and some drums that contained appreciable quantities of distillate or other liquids. The drivers have been instructed to reject poor quality or contaminated drums.

For members who are prepared to take molasses in drums the new price is still strongly competitive with molasses from other sources, where it is understood that the prices will be increased by at least the same proportion.



NIGHTINGALE CHEMICALS

Leaders in Dairy Sanitation present NEW

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READY MIXED IODOPHOR TEAT DIP
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SAVE TIME — SAVE MONEY

Available from your Dairy Factory

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This NIGHTINGALE service is available to you at no extra charge.



NIGHTINGALE CHEMICALS
Division of Steetley Industries Limited,
4 Railway Terrace, DRY CREEK, 5094.

CALF PICK-UP DURING CHRISTMAS BREAK

The calf pick-up timetable will not be changed during the week before Christmas, except that receivals over scales will be accepted at the factory door on Friday 24 December.

There will be no pick-up during the week following Christmas Day and the service will resume with the River run on TUESDAY 4 January, followed by Central - WEDNESDAY 5, Southern - THURSDAY 6 January.

There will be NO NORTHERN RUN on Monday 3 January, but receivals will be made at the factory door on Tuesday 4 January.

CALF PRICES - FROM 29.11.82 - (minimum price per kg liveweight)

Weight & Grade	40kg A	B	C	35kg A	B	C	30kg B	C	less than 30kg
New Price (cents)	60	55	40	45	40	30	35	25	\$2 per calf

Higher prices than the A grade rates shown will be paid for calves in excellent condition.

SUPPORT THE S.A.D.A. CALF PICK-UP SCHEME



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**CURRENT MARKET PRICES PAID FOR CALVES
WEEKLY PICK-UP SERVICES - AS SCHEDULED**

FACTORY-DOOR PURCHASING AT OUR MOUNT BARKER PLANT

PLACES AVAILABLE IN JACK GREEN'S N.Z. STUDY TOUR

Early application must be made (direct to this office (08) 51 3034) for inclusion in Jack Green's 1983 New Zealand Study Tour, from 15 April to 1 May.

Details of the itinerary, which includes visiting New Zealand's scenic wonders, as well as inspecting its dairy industry, are available from this office.

The cost of the tour is \$1 370 (subject to adjustment if the NZ/Australian exchange rate varies) per person, Melbourne to Melbourne, but we will try to negotiate a special rate, Adelaide to Adelaide if any members are interested in participating in the tour, which we very highly recommend.

THE ASSOCIATION'S TASMANIAN TOUR

Although considerable interest and some firm bookings followed the proposal for a tour of Tasmania, after the very successful tours of Victoria, indications have been received that the tight financial conditions caused by the drought may result in insufficient support for a Tasmanian tour in 1983.

If you are interested in such a tour, extending over about 8 days, towards the end of February, at an estimated cost of between \$400 and \$500, all inclusive, please inform the office immediately.

AND ANOTHER VICTORIAN TOUR

Almost 100 members and their families took part in the Association's two Victorian tours in March and July this year, and all expressed their pleasure at the enjoyment and education they received, for the very modest, all-inclusive, cost of \$200 for the 5 day tour.

So, as for the Tasmanian tour, if you are interested in participating in a tour of Victoria dairy industry, around March and July, please inform the office as soon as possible, as the tours will be arranged only if there is evidence of adequate support.