

Monaghan, John (1992)

Converting to Dairying

Sect 5 ii 93

# CONVERTING TO DAIRYING

A report prepared by...

John A Monaghan  
Kellogg Scholar 1992

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# PREFACE

In the 1991-92 dairy season an unprecedented 52 drystock farms were approved for conversion to dairying in the Tui Milk products supply area. With a further twenty applications already received for the 1992-1993 season. It seemed desirable that we should try and learn from the hands on experience of others to try and benefit those who convert in the future.

John A. Monaghan

## **SUMMARY**

This report outlines the information collected from a survey of 24 people in the Tui Milk Products Supply Area who have been involved in the recent conversions of drystock units to dairy-farms and the expansion of existing dairyfarms.

- A. The main reasons identified for converting a drystock unit to dairying is to obtain higher and more stable returns. Also a perception of dairying as the star performer in New Zealand Agriculture with a well organised and structured manufacturing and marketing system.
- B. Farms and people involved in the recent influx of dairy conversions vary greatly.
- Those surveyed included - owner operators with and without experience
- owners with sharemilkers
  - Dairy farmers expanding
  - Drystock units to dairying
  - Existing dairy-farmers expanding
- C. The most important and first step in a successful conversion is detailed planning. Have a definite timetable, Financial Budget, Feed Budget and development plan to work to. Most of the problems identified in this report could be avoided through careful planning.
- D. Most of those surveyed were most appreciative of the service provided through the Dairy Company and while finding the Company run seminars useful, felt that they would improve as more practical experience and info was gained through large numbers of people converting.
- E. Banker support has been excellent for those converting. Their understanding of the new conversions has been important as in almost all cases there have been budget over-runs, mostly in the construction costs of sheds, races and in some cases animal health related areas.
- F. The innovative ideas included in this report should be beneficial to any dairy farmer and in most cases are easy to implement.
- G. The case study contributed by Mr Waugh is a good, clearly documented example of the practical experiences of converting a drystock unit to dairying.

## **ACKNOWLEDGEMENTS:**

This report was made possible with the help of the following people - 24 farmers, Sharemilkers, an L.I.C. Consulting Officer.

The Tui Milk Products Production Officer, a Farmwise Consultant and a local Veterinarian.

## INTRODUCTION

This report outlines the information collected from a survey of 22 people (sharemilkers, farmers, farm consultant, L.I.C. Staff) in the Tui Milk products supply area.

The manufacturing dairy industry in the southern half of the North Island, excluding Taranaki is now serviced by Tui Milk Products Limited.

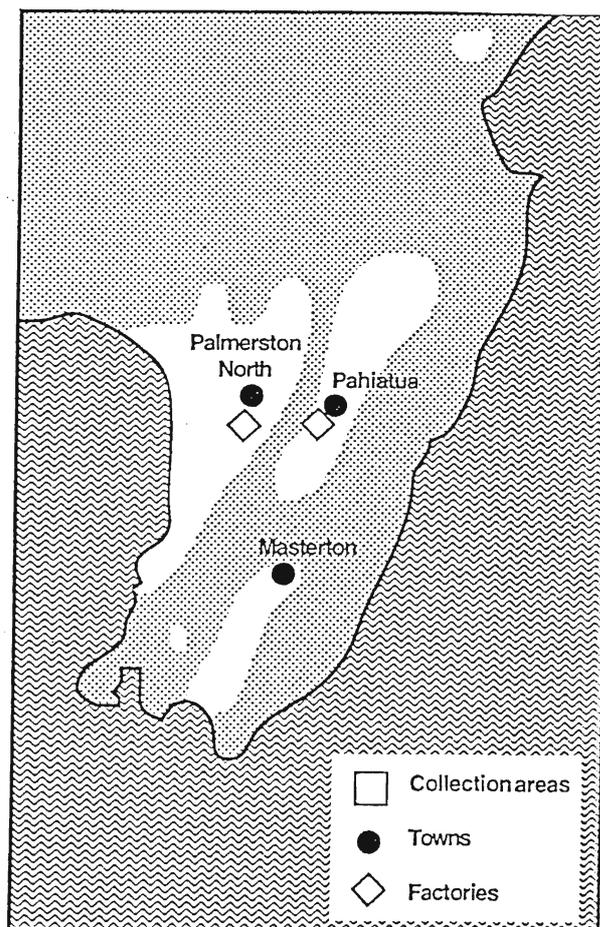
It is the country's third largest dairy company with 1400 suppliers. Its collection area extends from Hunterville to Paraparaumu and the Hutt Valley in the West, and from Tutira north of Napier to Lake Ferry in lower Wairarapa in the East.

Tui Milk was formed by the merger in June 1989 of the former Manawatu and Tui Co-operative Dairy Companies. As part of the rationalisation and rebuilding programme designed to set it up as one of this country's top paying companies in the future, a clear objective was developed to encourage increased milk supply from existing suppliers and new dairy conversions.

Out of the potential land area of 220,000 hectares in the supply area it was noted that only 80,000 hectares currently supported dairying. Also cow numbers had decreased in the last thirty years from 232,750 in 1960-65 to 204,950 in 1991.

Milk production had increased slightly from 30 million kg in 1960-65 to 32 million kg in 1991.

As a comparison the two other major North Island dairying areas had experienced production increases in the last thirty years of 30% for the Waikato and 40% for Taranaki.



## OBJECTIVES

This report does not attempt to provide a step by step guide to dairy conversions. It is designed to give an overall picture of the reasons and experiences others have had in developing dairy units in the Manawatu, Wairarapa and southern Hawkes-Bay.

Specific objectives of the survey were to identify :

- Motives for converting
- To identify common problems experienced when converting
- What could be done differently to help those converting in the future
- Innovative ideas used by others
- A case study

Capital costs of dairy conversion and detailed step by step plans have not been included as these have been covered in previous reports. (Note 1 below)

### Footnote:

Reports on Conversion Capital Costs :

1. "Conversions to Dairying"  
A J Bichan and R R O'Reill, Dairy Board Consulting Officers - 1988
2. "Guide to Future Dairy Conversion"  
R K Boyden and G P Jones - N.Z. Dairy Group Field Representatives - 1991

## STATUS OF CONVERSION

During the course of the survey the following differing types of conversions were identified:

- owner operators - with previous experience
- - with no previous experience
- owners with 50/50 sharemilkers
- Current dairyfarmers expanding
- Dry stock units to dairying
- old dairyfarms being brought back

### TABLE

52 Farms Converted

owner operators	with experience	17
	without	7
Owners with sharemilkers.		25
Dairy farmers expanding,		12
Drystock units to dairying old		29
Dairy farms being brought back.		15

## MOTIVES FOR CONVERTING

The main reasons identified for converting a drystock unit to dairying is to obtain higher and more stable returns, often coupled with the desire to employ labour and reduce physical time input into farming. Another consideration has been capital gain.

The following are situations and reasons under which properties have been converted to dairying in the Tui supply area:

1. A lack of large properties on the market, also many considered to be over-valued. So many existing dairying farmers have created their own large scale operation.
2. A perception of dairying as the star performer in N.Z. agriculture as opposed to a lack of confidence in the Meat and Wool Industry structure.

The dairy industry is seen to be relatively stable with a well organised and structured manufacturing and marketing system.

3. A desire to employ labour and get oneself out of the milking shed or reduce physical and time input into farming.
4. Sharemilkers purchasing their first farm have found it more economical and profitable to convert a drystock unit rather than purchase an existing dairy unit.
5. Family reasons - Existing units too small when family wish to become involved in farming enterprise

Uncertainty about how to provide for retirement in light of recent Government Superannuation announcements.

6. Financial
  - Business challenge
  - Looking for a capital gain
  - Increased return on investment
7. Desirable labour available - at present a large number of highly trained and motivated sharemilkers are looking for bigger jobs. This is a relatively unique situation in the dairy industries history. Conversions with their inherent capability for expansion and increased production are very attractive for many progressive sharemilking couples.

## SUGGESTIONS FOR OTHERS WISHING TO CONVERT - PROBLEMS AND WAYS OF PREVENTING THEM

The following information is based on the experiences of those surveyed and how in hindsight they would have managed their conversion.

Planning: The most important ingredients in a successful conversion are Planning, Planning and Planning. Have a definite timetable, Financial Budget, Feed Budget and a development plan to work to.

### Cowsheds

<u>Problems</u>	<u>Suggested Solutions</u>
Cowshed not finished on time Plant not installed on time	Plan well before the winter and if possible no shorter time period than six months.  If there is a 1st of June possession date try and come to arrangement with previous owner for an earlier commencement
Subcontractors busy on other jobs and not getting on with your job	Have Time Penalty clauses included for job delays <ul style="list-style-type: none"> <li>• Withhold final payment</li> <li>• No Gentlemen's Agreements</li> </ul>
Inclement <u>weather</u>	Talk to a higher authority or alternatively allow more time - you can't start too early
Cowshed cost over-runs	Before calling for quotes for work inspect sheds similar in design to the one you wish to construct - this may involve considerable time and travel but is well worth the effort  Get quotes from several builders

The employment of an experienced and practical dairy farmer to regularly check construction progress would save many obvious building mistakes.

### Problems

Wrong Location of Dairy Shed	<ul style="list-style-type: none"> <li>• Most important shed is sited to suit the practical running of the farm, not just ease of milk collection</li> <li>• Suggested that before commencement of conversion the local discussion group is invited for a farm walk</li> </ul>
Extra cost of mains power, tanker track and water to cowsheds	<ul style="list-style-type: none"> <li>• Extra costs included in correct shed siting are more than compensated for with production increases over a period of time</li> </ul>

## Poor Shed Design

- Most sheds and milking plant included in this survey were of a high standard, but some faults were:
  - Not enough room for comfortable drenching
  - Poor stock flow
  - No adequate store-room next to milk-room
  - Holding yards not large enough

Note: It is important to build shed large enough for the future potential of the farm.

Many of the more successful conversions have had an input in shed design from the prospective sharemilkers.

## ANIMAL HEALTH

<u>Problem</u>	<u>Suggested Solutions</u>
Lameness	<ul style="list-style-type: none"><li>- Sensible siting of cow shed</li><li>- Good race width and high standard of construction</li><li>- Keep cows on concrete a minimum time in first year through running two mobs or changing order of herd by using the backing gate</li><li>- overlay new races with road lime or fine metal</li><li>- avoid some of the consequences of a wet season by installing footbaths to prevent lameness</li><li>- construct the races in the summer and walk other beef cattle on them first</li></ul>

Note: "Most animal health problems are management related"

## High Stock Losses

- If possible take no cows over 8 years old onto conversion coming from sheep to dairy - most of the deaths occurred with older cows
- Dry Cows off early before transferring to new property
- Keep high condition score because of extra stress of new property and dryer pasture
- Involve local vet early to identify any possible animal health problems

Calf Death's

- Have ongoing liaison with vet
- Build or make sure there are adequate calf rearing facilities as part of the development programme
- If using old woolsheds it is suggested that grating is covered in nylon shade cloth and this in turn is covered in wood shavings

Feet Problems

- Water blast or steam clean sheds and then disinfect with 10% mixture of formalin to water.

Low Fertility

- Take soil tests before purchasing property
- Fertilize farm in Autumn
- Identify and budget for on-going fertilizer costs

Low Levels of pasture growth

- Have a surplus feed cover at take-over -
- Ensure previous owner farms in normal manner prior to takeover. Include this in purchase agreement
  - Start rotation at the edges of the farm so that when you reach your feed pinch you are nearer the cowshed. Keep pasture in a growing state.
  - It was suggested that where an early take-over date (Christmas) was possible as much supplement as possible was made.
  - Have an ability to buy supplements.

Low Pasture Growth

- Be aware that drainage that has been adequate for sheep may not be for cattle
- Check that your sharemilker has the ability and knowledge to handle a wet season
- "Remember that a poor operator can get the best farm in trouble ..."
- Be realistic and realize that sheep pasture won't be dairy pasture in 12 months.
- Budget for and carry out a pasture renovation programme.
- Maybe possible to look at cropping and lower stocking rate with a longer lead in period to dairying.

## POSSIBLE SOLUTIONS

High levels of stress among owners and sharemilkers

- Most of those surveyed would have preferred a longer time period for development
- Can't start too early.
- Don't expect too much of yourself or employees.
- Be aware of the demands of seasonal work and the extra staff needed.
- Ensure there is a good standard of accommodation for sharemilkers -

Much anxiety can be avoided through thorough planning and detailed budgeting.

Budget Over-runs

- Use aerial photo to start development plan - then put up different ideas for races and fences and change them.
- Include expected completion dates.
- Take advantage of support available through Dairy Company and L.I.C. and local knowledge.
- Use experts (M.A.F. DAIRY CO., OFFICERS; CONSULTANTS; (ACCOUNTANTS) TO OBTAIN BUDGET FIGURES. Check all facts and figures yourself, take nothing for granted.

## DAIRY COMPANY ISSUES

Most of the owners and sharemilkers interviewed were most appreciative of the Dairy Company service provided, through the Farm, Production, Liaison and Quality Officers. They remarked on the usefulness of the conversion seminars and the on farm help with specifications for farm vat stands and tanker tracks.

The more important issues raised included:

### 1. Shareholding Restructure

There was a general feeling of discontent among new conversions about the lack of prior knowledge to the shareholding restructure. Earlier conversion budgets made no mention of the event.

The Company in September changed its standard share value from a \$1 share for every 20 kg M/F supplied to a \$1 share for every 1.5 kgs M/F supplied i.e., a farm supplying 40,000 kg M/F had its share value change from \$2,000 to \$26,666.

### 2. Conversion Applications

There was a feeling that the Company was slow to approve applications. This had the effect of shortening the time period for conversion.

### 3. No vat washers provided in some instances.

### 4. Seminars

Some of those surveyed felt that more emphasis could have been put on fencing and methods used. Also need to stress the importance of completing cow races early. Due to the wet spring we have experienced, some races still not complete. There have been instances of cows bogged down in races.

Sharemilkers interviewed felt that there was not enough emphasis at seminars on the considerable investment they make in taking on a large conversion. They felt there was a need to make owners aware of this and emphasise that for owners who expect sharemilkers to do large amounts of development work there will be a subsequent drop in farm management inputs and probably production. Most sharemilkers had found the first few months of conversion stressful for the following reasons:

- non completion of shed and plant
- non completion of races and fencing
- slower than expected regrowth of grass
- lack of adequate calf rearing facilities
- inclement weather
- the time needed for development work which interrupted their routine Stock Management and Farming.

### 5. Cowshed Plans

It should be made widely known that cowshed plans are available through the Company.

6. Company Arranged Tours

Those who went on tours to view other conversions found them very beneficial. However not everyone aware of opportunity.

7. Milk Collection

Most of those surveyed had no complaints with milk collection time, drivers speed and courtesy.

8. Outside Services

There was some doubt about the level of competence of tanker drivers installing vats and refrigeration units.

## FINANCIAL ISSUES

In nearly every case the farm owners who were interviewed for this report have experienced excellent support from their Bankers. Although the status of conversion and the experience of the operators varied I found that in nearly all cases the Bank Manager or "client advisor" had a first hand look at all properties.

Before making an appointment with your Banker the following are necessary

- Present and future plans for farm
- Contractors written quotes
- A farm budget (for first 3 years)

Where possible a Development Budget and a first seasons farm budget should be included.

Note: This helps to identify actual development costs v's seasonal expenses.

- The means of servicing the loan debt i.e., estimated production.

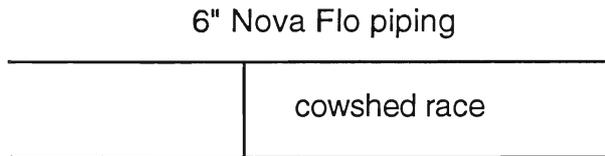
Unexpected Costs - When converting a farm most owners budgeted for the total cost for the project - however in most instances there were cost over-runs. There were many instances where individuals had a total estimated cost for their conversion but had no detailed breakdown of costs. Hence I see the need for a detailed first year development budget and a first season farming budget. I have listed some of the common price over-runs.

1. Cowshed Construction - not enough allowance in budget for vet races - drenching races - cowshed / stock yards too small.
2. Cost of additional road material - for races and tanker track.
3. Electric Power - underestimated the cost of supplying mains power to shed.
4. Calf and Implement Sheds - Not sufficient or no provision made in original budgets for these items.
5. Water - requirements: Underestimated the amount of water required for dry cows eating dry matter feed. Also the cost of additional well or bore.
6. Cost of providing or upgrading Employee's house.
7. Loss of income due to non-completion of cowshed.
8. Production Losses - Production over estimated in Budget - lower performance due to weather, lameness and changing herd to new environment.
9. Lack of production due to bad management decisions i.e., sharemilker with lack of ability.
10. Loans - Higher than expected associated legal costs i.e., changing mortgages.

## INNOVATIVE IDEAS

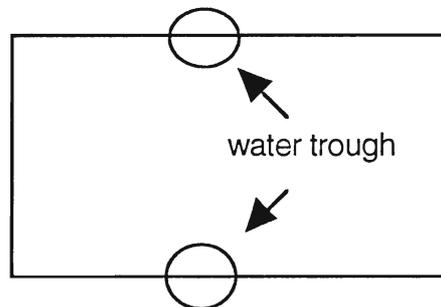
At the time of conducting this summary several innovative ideas were suggested by individuals that could be of benefit to any dairy unit. These ideas are in use on the farms surveyed.

1. Feeder pipes under new races - 6" Nova Flo can be used. This allows for easy installation of water and electricity and saves digging through new races.



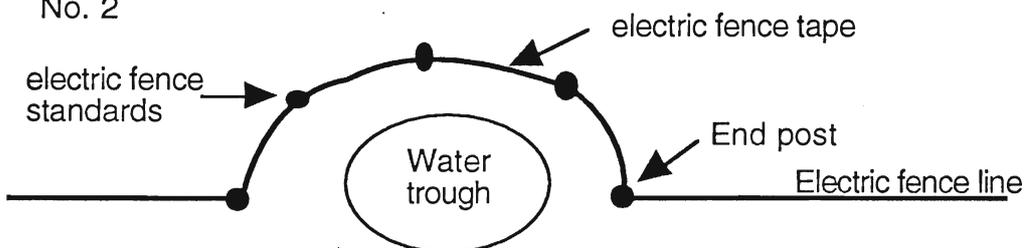
2. Two paddocks - Water trough system

No. 1



Advantage  
Allows stock easy access to two troughs in each paddock.

No. 2



Advantage:

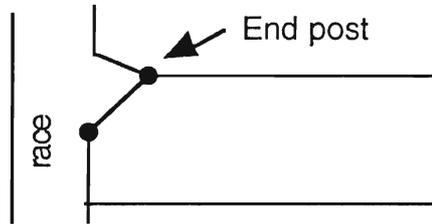
One large trough can service two paddocks and the stock are able to move around entire trough.

Disadvantage

Electric Fencing tape has to be moved when next door paddock grazed.

3. Angle gateway

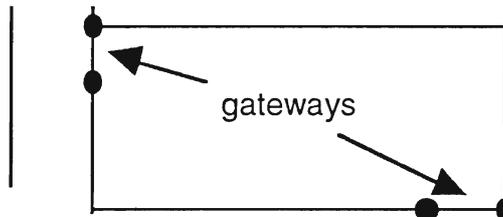
Advantages  
Improves vehicle  
and cow flow



4. Gateways at the front and back of paddocks.

Advantages

provides easy  
access for fertiliser  
truck



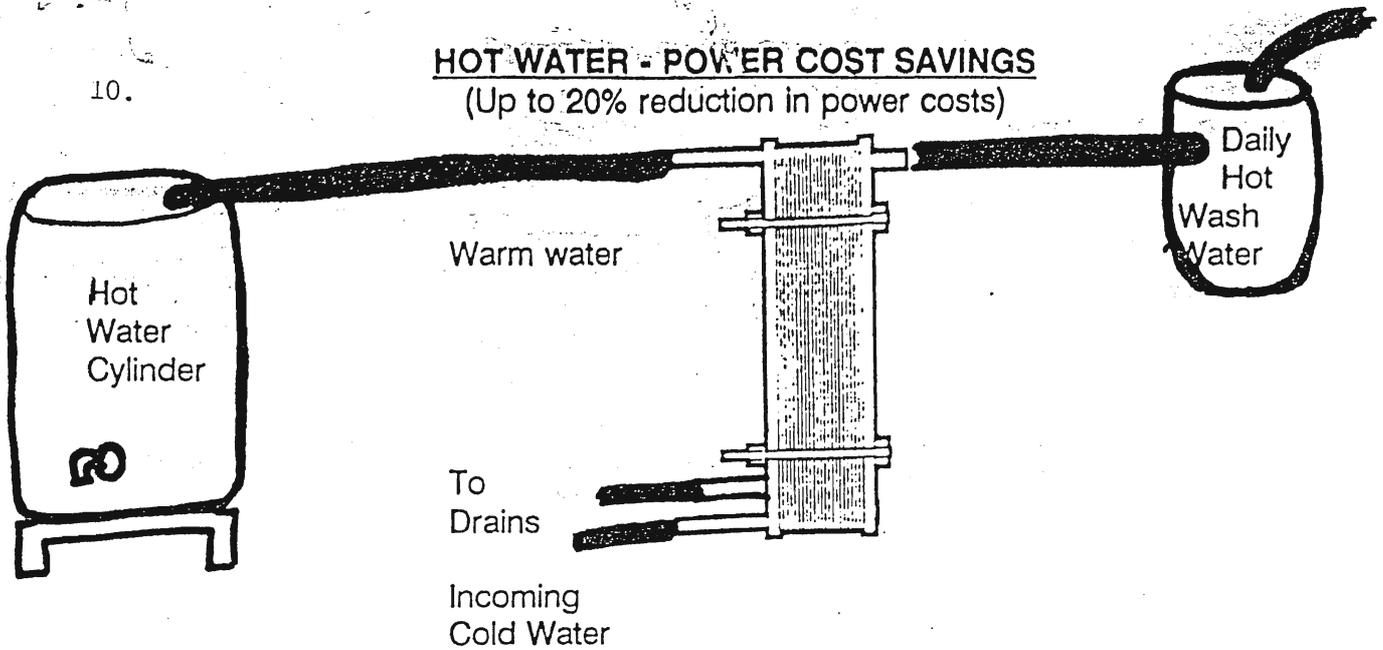
allows access on to back of paddocks in wet season saving pugging

5. When building cow shed use several panels of nova-lite in roof for greatly improved cowshed light.
6. Attach an electric bell to the backing gate which is activated when the gate moves - this trains cows to move forward.
7. Colostrum Vat for Calf Milk:  
Install a second vat for storing colostrum milk for calves - milk can be held at 12-14 C and fed straight from vat to calves.
8. Install a red light in entrance to milk-room to indicate when wash down pump is in use. This prevents over-heating of pump through leaving it running.
9. When building cowshed add on extra room for playroom for children. Many sharemilkers have young children.

10.

**HOT WATER - POWER COST SAVINGS**

(Up to 20% reduction in power costs)

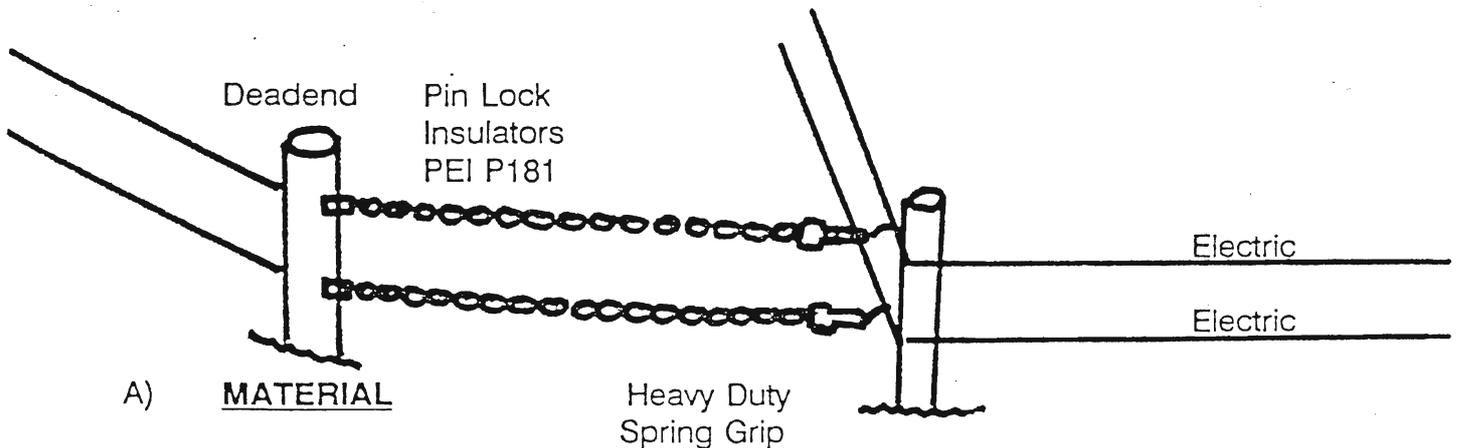


**1 - MATERIAL**

- A) Milk Cooler - Alfa Laval P30 or smaller (used heat exchanger)  
 Savings are created by circulating the normal daily hot detergent water (after going through milk line) through a used plate cooler (heat exchanger) by warming the cold water entering below.  
 The warm water flows to hot water cylinder. This method provides additional WARM water inside the hot water cylinder. Even greater savings can be made by using night "off peak" power with above system.

11.

**HOT WIRE CHAIN GATE SYSTEM**

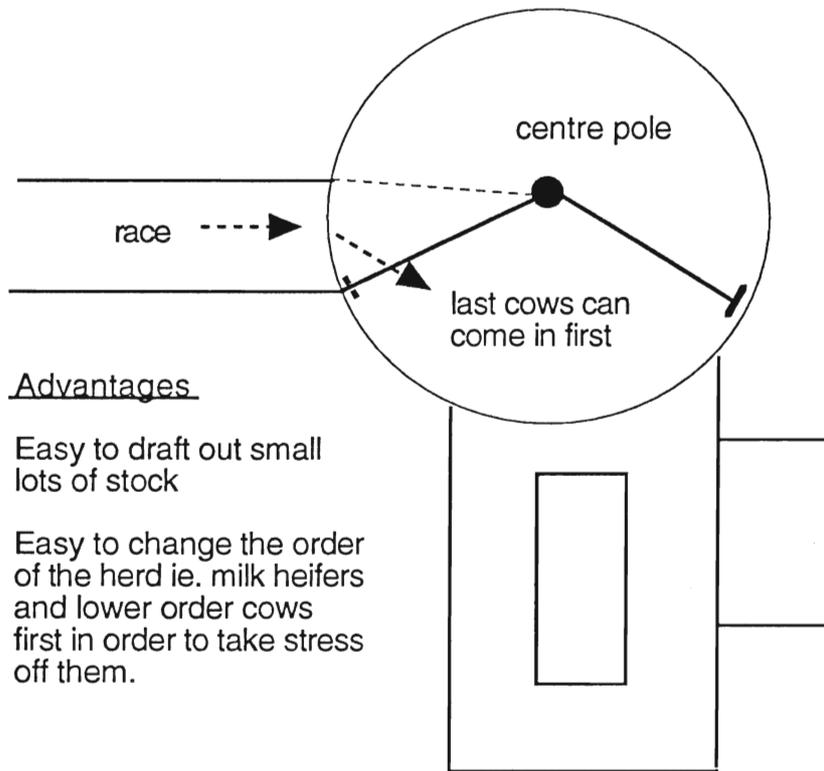


A) **MATERIAL**

- 10 metres light chain
- 2 pin lock insulators
- 2 heavy duty spring grips

Excellent gateway for all sized entrances - easy to attach or remove.  
 "DROP DOWN AND WALK/DRIVE THROUGH"

12. Circular 2 gate backgate system:



Advantages

Easy to draft out small lots of stock

Easy to change the order of the herd ie. milk heifers and lower order cows first in order to take stress off them.

## **SPECIAL ACKNOWLEDGMENT**

FOLLOWING CASE STUDY  
CONTRIBUTED BY ...

TONY WAUGH

TONY IS 43 YEARS OF AGE MARRIED TO JOYCE WHO IS A BUSINESS PARTNER. THEY HAVE FOUR DAUGHTERS AND A SON FROM 18 MONTHS TO 9 YEARS OLD.

TONY HAS BEEN ACTIVELY INVOLVED IN YFC, FEDERATED FARMERS, LIONS CLUB AND OTHER COMMUNITY ORGANISATIONS AND IS CURRENTLY INVOLVED IN THE FORMATION OF HERITAGE TRAILS IN THE MANAWATU.

IN 1991 TONY CONVERTED A 200 HA DRYSTOCK UNIT NORTH OF APITI.

## **CASE STUDY - Tony Waugh**

### Why Convert?

Until 1981 farming 120 ha property at Kimbolton, 60 in dairying milking 120 cows and 60 as a hill block running replacements and up to 700 ewes.

1981 purchased a further 40 ha 3 km away to run bull beef on which we currently run 80 up to 18 mth old.

1984-85 sheep returns plummeted so went into a nurse cow herd of 50 cows on the hill block to rear the bull calves.

During this time employed milkers on a contract basis during the season with the long term aim to employ sharemilkers.

However even though we increased the cow numbers to 165 it became obvious that the returns from a small herd were insufficient for both of us to gain a reasonable living and I was not prepared to return full time to the milking shed and run the operation on my own.

From 1986 I started to look for a suitable sized farm for an operation of 200 to 400 cows no more than 20km away from the bull farm where we live. I also reduced the nurse cow herd and reared more replacement heifers if needed or to be sold if not.

In August 1991 I learned of a 200 ha sheep and beef farm north of Apiti which was going to come on the market and although at a higher altitude than I would have preferred it was within the 20km radius and apart from 40 ha was all flat, was of a similar soil type and had been farmed well over the years.

Negotiations began and a price was settled with takeover at 1st March 1991.

The next six months were spent finding buyers for the two sections making up the 120 ha, surveying a house and section off one of the sections where my mother lived, (if you have ever had any surveying done you will know that they need at least four months to get the most basic work done and if Xmas comes in the middle they take another month), designing milking sheds and water systems, talking to milking installers, power board, contractors, lawyers, bankers, and doing endless budgets.

A soil test was taken early in the piece so that I would have an idea of the farms fertility status.

Discussions were also held with a neighbour on leasing a further 200 ha next door which would have involved an equity partner in the set-up. In the final analysis the price being asked was too great so that avenue was not pursued.

During the planning stage I invited the local discussion group to have a look over the property. This resulted in the milking shed being moved onto a more desirable situation.

By the first of March all was in place for a successful transfer of ownership and final decisions were made on the design of a 40 bail rotary shed and plant.

Work on the tanker track and shed foundation started near the end of March with most of it being completed by the middle of April at which point it started to rain. By the end of April we had had 280mm and we were working under tarpaulins hired from the Hire Pool to dig the foundations for the concrete.

Most of the work on the shed was carried out by myself, a local builder and two labourers, an ex employee turned engineer to do all of the steel work, and at a later stage a roofing contractor who also completed the walls, all on labour only basis.

For the platform I purchased a second hand 22 bail unit and once on site added on to the perimeter 1.5mtr of extra platform and re-used the modified bails.

Turnstyles provided and placed the platform supporting wheels, track, and drive unit.

I also installed a grain feeding system. This is designed to use barley which is bought in and stored in a 50 tonne silo already on the property. At the shed is a 2 tonne silo mounted over a barley crusher which crushes enough grain each day and which is then automatically dispensed into troughs in front of each bail as the platform turns.

Despite the continual cold wet winter complete with four falls of snow our first milking was on the 21st August about three weeks later than we had been planning on. During that time I also had to install about 4 km of polythene water pipe which was pulled in by moleplough and get the water system up and running. The system is designed with pumps and an in line dispensing unit situated at the milking shed.

Early in March I moved our 50 in calf heifers and 70 yearlings onto the farm (the cows were to be milked on until drying off on the old property). During late March and April, Merrill and Clare Dickie our sharemilkers (an ex employee) moved their 72 in calf heifers and 30 cows from Whakatane onto the farm. Our 150 cows and 10 rising 2yr bulls arrived early May.

During early June I purchased 68 rising 2yr bulls. These were to be grazed until Dec-Jan.

The sharemilking agreement with Merrill and Clare was based on a 30% share with a lease of his cows by us for the season. They would also receive a 30% share in any increase in value of the bulls which were sold.

Our expectations were a development cost of cowshed, water, and races of \$250,000 and first years production of 37,000kg from 280 cows at \$4/kg. Also to rear 85 replacement heifers, 85 bull calves and 30 other calves for sale at 6 months.

The reality was a development cost of \$31,000, production of 29,300kg at \$6? from a peak of 257 cows and 60 replacement heifers, 65 bull calves and 28 weaners sold.

What went wrong?

There are several laws that one needs to apply when starting out on a project such as this:

1. It will always take longer than you think!
2. It will always cost more than you think!
3. It will always start to rain when you don't want it to!
4. It's bound to get worse before it gets better!

I think that pretty well sums up the development side.

As for the production, I will list them in the order of contributing factors.

1. Feed quality:

Because of the good growing season much of the farm had a fairly good cover on at the 1st of March, which meant that with the low stock numbers during early winter each paddock was only grazed once from 1st March, which meant that with the low stock numbers during early winter each paddock was only grazed once from 1st March until mid August, and although there was not much growth on those paddocks the quality deteriorated badly so that when the cows were needing good quality feed close to calving they were only getting rubbish plus hay. Consequently we had quite major problems with ketosis at calving. As mentioned earlier we experienced snow falls during the winter one of which fell on the 18th of August to a depth of 4 inches. That same day we had 9 cows calve of which 2 died and none of the calves lived.

2. Water requirements.:

We totally underestimated the water requirements for dry cows eating high dry matter feed and because the existing water system was totally inadequate to meet the demand, the two mobs of cows had to spend alternative nights in the only paddock with running water. We even lost a heifer when during one night she was tipped upside down into a trough and drowned.

3. Early calvers.:

Because Merrills cows were mated for a Bay of Plenty calving date we had our first cow calve on the 3rd of July and by the time that we were able to use the milking shed there were some 80 cows, mostly heifers in milk. In the meantime they were milked in the neighbours 10 aside herringbone cowshed and were restricted to the paddocks close to the boundary. Those early calvers also created later feed problems.

4. No regrowth:

As experienced elsewhere in the rest of the country last spring was exceedingly cold and wet right through until December which in our situation of low initial fertility and at least half the farm of poorer sheep pasture meant virtually no growth. Average cover dropped to as low as 1200kg during spring rising to 1300kg in early November and peaking at 2,000kg in mid January.

About early August we were able to get grazing for half the yearling heifers which helped a bit.

Unfortunately grain feeding was not commenced until late September and most cows did not take to their ration until well into October..

In hindsight we would have benefited quite considerable I believe if we had applied urea several times during the spring. This year we will be closely monitoring pasture cover and applying urea if and when necessary.

5. Older Cows:

To make up numbers I kept older cows (10 to 14yr old) in the herd which would normally have been culled and it wasn't until we had several of these old girls go down at calving time did we realise that they had no teeth and couldn't eat the short grass.

6. Empty Cows and Slips.:

Like many herds there always seems to be those cows which do not show up as empty until late winter and there are those annoying slips that have no explanation, we had our fair share with 10 empties and 7 slips.

7. Calf rearing

Calf rearing was to be carried out under the large fairly new covered sheep pens beside the woolshed with the floor suitably covered in sawdust. However this came unstuck when we suddenly found our calves dying after only a couple of days after being taken off the cow. We had a major outbreak of Salmonella and were in a dilemma. If we put them outside they died of the cold, if we put them under the covered pens they contracted salmonella. We lost count of the deaths.

Well just your normal dairying problems perhaps a little exaggerated when putting together a new enterprise but you know that things can only get better.

Now for the successes.

1. After several blood tests and a pasture analysis we have found that there is only a slight copper and selenium deficiency and no other trace element imbalances. We are correcting these with selenium prills and supplementation in the water system and annual copper injections. We are also using blood tests to ensure that magnesium levels are adequate.
2. Mating. Tail paint was applied 5 weeks prior to mating and at 1 week before mating we were concerned at the low numbers that had shown pre-mating heats. We decided to have all those without pre-mating heats examined by the vet and of the 140 examined 104 CIDRs were inserted plus a prostaglandin injection. A further 55 were examined 23 days later of which 32 were for a second time with 44 CIDRs inserted plus PG injection.

This has resulted in submission rates of:-

1st week	42%
2nd week	60%
3rd week	75%
4th week	86%
5th week	90%
Total	96%

AB was used for 4 weeks followed by NM for a further 8 weeks.

Non return rates have been

1st mating	73%
2nd mating	80%
Total to AB	75%

We also split the yearlings in half on weight and mated the heavier yearlings to AB with 38 of the 40 mated in the first 3 weeks. They were run fairly close to the cattle yards and observed at least twice a day.

Seven weeks after the start of mating most of the herd was pregnancy tested, and again in early April the later mater cows, plus any doubtful ones, and the yearling heifers were tested of which 2 yearlings and 26 cows were found to be empty.

This quite satisfactory outcome will mean that our calving this spring should be able to be confined to 6-7 weeks.

The current position for the coming season is much better feedwise and with the herd calving at a more normal time (20th August) and without the pressure of development we are looking forward to a successful season.

FARM PROFILE

Situated 8km north of Apiti.

AREA:	Total	500 acres	200 ha
	Grazeable	450 acres	170 ha
	Flat area	400 acres	160 ha

Soil.

Kiwitea loam. Bottom flats stony. Top flats free of stones.

Rainfall 1200mm - 1800mm 40-70 inches

Height above sea-level 550 mtr 1800 ft.

Fertility

pH	Ca	P	K	S	Mg	PR
5.8.6.1	5-8	5-6	3-6	10-22	12-19	96-98

Recommendations.

At least 70 kgs Phosphate & 30 kgs Potash in first 6-9 months.

Fertilizer applied since March 1991.

April-May-June	150 kg/ha	DAP
Aug -Sept	150 kg/ha	DAP
January 92	320 kg/ha	20% Potash P.A.P.R.
Total Phosphate	100 kg/ha	
Total Potash	30kg/ha	

Stock on hand 31/5/91

M.A.	Cows	180	
Rsg 2yr hfrs		120	
	Total		300
Empty Carryovers		15	
Empties		10	
Slips		7	
Died		12	
			44
Cows milked			256
Yearling heifers			85
Bulls Rsgng 2yr			78

Drying off date 1/5/92

Production 29,300kg milkfat 22,400kg protein 616,300 ltrs

Pasture renewal programme during year.

Feed crop. 6ha Pasja direct drilled Nov. Resow into pasture in November after greenfeed oats.

12.5 ha sprayed with roundup February for direct drilling new pasture.

12.5 ha sprayed with roundup early March for direct drilling new pasture.

9 ha leased to potato grower resowing in pasture November.

7 ha leased to carrot grower resowing in pasture November.

1992-93

M.A. Cows	225	
Rsng 2yr hfrs	145	
		370

Projected milking cows 350.

Budgeted production 43,000kg 122kg/cow.

Aiming for 50,000kg 142kg/cow.

Cows wintered away from drying off to 1/7/92.

90 replacement heifers grazed on grazing contract from 1/6/92-31/5/93 by neighbour in exchange for him grazing 100 acres of gully at back of farm plus a weight gain payment.

Supplements on hand 1/5/92.

Estimated requirements 20 bale equivalents/cow	=	111t DM
Silage 250 cu mtre	=	45t D
Hay 4020 bale equivalents	=	60.4t DM
Total		105.4t DM

15t Barley  
(2160 bale equivalents purchased off farm)

Fertilizer

May 1992 100kg DAP/ha

May 1992 14 tonne urea over paddocks shut for early calvers.

Proposed further application 100kg DAP + 100kg Potash/ha in paddocks in August.

Application triple phosphate @ 380kg/ha in December.

12 ha to be cropped with summer crop next season.

GOAL

yr 5 400 cows producing 180kg - 72,000kg

DEVELOPMENT COSTS	Incl. GST	
Milking Shed	\$276,000	245,300
Capital Fertilizer	\$ 50,000	44,000
Roading	\$ 13,000	11,500
Water reticulation	\$ 18,000	16,000
Fencing & general	\$ 3,000	2,600
<b>Total</b>	<b>\$360,000</b>	<b>319,400</b>
Land & Buildings	\$460,000	460,000
<b>Total</b>	<b>\$820,000</b>	<b>779,400</b>
@ 30000kg =	\$27/kg	25
@ 50000kg =	\$16/kg	15
@ 60000kg =	\$13/kg	13
@ 70000kg =	\$11/kg	11