

AUSTRALIAN NUFFIELD FARMING
SCHOLARS ASSOCIATION



1998 SCHOLARSHIP REPORT

by

JAMES ANDERSON

Unit 7, 7 Rouse Road
MANDURAH WA 6210

[Email: tarryn@bigpond.com](mailto:tarryn@bigpond.com)

Office: 08 9581 8959

Fax: 08 9582 0976

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THANK YOU

I consider myself very fortunate to have been selected for an Australian Nuffield Farming Scholarship as it has made me more aware of the knowledge, inspiration and opportunities that this great institution has and will provide me. I was constantly amazed on my travels at the trouble not only fellow Nuffield's but all people involved in agriculture in every country I have visited would go to show me things of interest, make information available or just give me things of interest, or just give damn good hospitality. I believe this is to be a tribute to the Nuffield Scholar's who have gone before me.

I must take this opportunity to thank the many people who made it possible for me to spend five months away from home. Firstly my wife Tarryn who encouraged me to apply and apart from giving me lots of help and encouragement with the application and interview process, was able to spend three and a half months with me and share in the Nuffield experience.

William and Jecky Harvey who were totally supportive and made it possible for me to be away combined with the help of Troy Smith and Leigh Whicker. The operation ran very smoothly in my absence and I don't think they missed me very much at all.

Thank-you to the Australian Nuffield Farming Scholars Association for choosing me as a Scholar and welcoming me into the organization. It is an honour and a privilege.

Nuffield UK and Nuffield France organised a very good program and showed us exceptional hospitality both as a group and as individuals.

Many others helped me along the way, far too many to mention. However some key people must be recognised. They were:

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Without the support of these organizations there may not be a scholarship.

INTRODUCTION

I am currently a part owner and manager of a 56,000 dry sheep equivalent merino sheep enterprise growing 21 micron wool on 5800 effective hectares. We are in a 550-650 mm rainfall Zone. We pride ourselves on running an efficient business with good scales of economy. This is backed up by the fact that our farm is above average by any of our industry bench marking standards. For a number of years now we have been appalled by the low return on our capital and lack of reward for our efforts. The other two mainstream agricultural activities in our district are beef and cropping and they are also struggling. It appeared that we needed a new land use for our district.

On investigating the Western Australian Dairy Industry I could see no reason why at least one part of our property would not be suitable for a dairy enterprise. Western Australia has less than 500 dairy farmers, mostly in coastal areas where land values are highly inflated. The deregulation of the dairy industry also seemed a strong possibility, which would give us a good entry point. The Nuffield Scholarship was the perfect chance to investigate this theory further. I was conscious of the fact that there could be other land uses and opportunities that may suit us better.

On February 14 1999 I departed Western Australia keeping all options open with somewhat of a focus on markets and marketing, dairy farming and silage making. My scholarship took five months and I visited Singapore, Malaysia, Thailand, United Kingdom, Southern Ireland, Israel, Turkey, Belgium, France, Switzerland, Northern Italy, Germany, California, New Zealand and Eastern Austria.

SOUTH EAST ASIA

Singapore was our first port of call, it is a very small country of around three million people who enjoy a good standard of living and have virtually no agriculture sector due to such a limited area of land. All food was imported and expensive, generally at least double Australian prices due to high taxes. Singapore supermarkets were full with produce from all over the world.

Malaysia is still reeling from the Asian crises, especially evident by the number of incomplete buildings with no sign of activity. Generally the agriculture we saw consisted of family firms operating at little more than subsistence level using very basic technology and equipment. The exception being tea plantations and palm oil plantations which were of larger scale. Land ownership is kept very much within the family and therefore a struggling ten acre farm could be divided between five siblings and become five very non-viable two acre farms. As Asian agriculture is so poorly paid it is being deserted by the young who are attracted by the higher wages and the excitement of the city. A government agency we visited, set up to help farmers fourteen years ago, had made very slow progress and had an awful smell of corruption about it.

Thailand, as Malaysia, shows great potential having a warm climate, high rainfall and fertile soils. Like many developing nations, Thailand and Malaysia have a plentiful supply of cheap labour but lack of capital infrastructure, education and organization. As both these countries educate their rural communities and their agricultural skills improve undoubtedly their production will rise, especially as there appears to be plenty of land that could yet be developed. This will not be a fast process, as educating rural people does not appear to have a high priority in these countries.

I have no doubt that as Asia pulls through its current economic crises and development continues, the general standard of living will rise and the population will become more Westernised therefore the demand for Western goods and services will rise, thus creating many opportunities.

Australia, especially Western Australia, is well located having a freight advantage in and out of these markets. However, it appears that many other countries are knocking at the doors of these markets. I hope for our sake Asia doesn't become a dumping ground for surplus European and United States produce.

EUROPEAN UNION

One has to be amazed at how the European Union works. Fifteen different countries with fifteen different cultures, eleven different languages and a population of three hundred and seventy four million, all funding and taking funding and directives from one central parliament. The running of this democratic parliament could only be described as a bureaucratic nightmare and I would hate to think what the running costs of such an organization are.

The Common Agricultural Policy (CAP) reforms under Agenda 2000 are basically designed to bring European Agriculture more in line with European and world consumer demands and world prices. This will enable surpluses to be traded profitably on world commodity markets without over subsidising farmers and preventing Europe from having huge intervention stockpiles. These CAP reforms create the possibility of Eastern European countries with large agricultural sectors joining the E.U. sometime in the future.

The agricultural bureaucracies European farmers have to put up with to comply with E.U. regulations are enormous. Of course anybody not complying with the regulations is not eligible for subsidies so therefore in most cases are not viable. When I asked a successful Irish arable farmer what the key to his success was he told me, "The mail box". This being where his subsidy cheque arrived, \$560,000 Australian dollars annual subsidy on an 800 hectare property (\$692. per hectare). These subsidies are a joke by our Australian standards and I wonder how long the European tax-payer will be prepared to support their farmers at this level. The subsidies, of course, keep many non viable farmers on the land and lead to many small inefficient operators. Subsidies have in many ways lead to high cost agricultural inputs as the leaches such as chemical companies, drug companies, machinery manufacturers and agricultural bureaucracies feed off farmers. They price their products to what a market will stand. However, the advantage of the subsidies is the employment created, because like all farmers with money in their pocket, a European farmer loves to spend, and this money flows right through the rural economy (machinery dealers, building contractors, local business etc). This is particularly evident in countries like Italy and France which have many small farmers and rural villages with many little businesses supported by the locals. I could not help thinking if the subsidies were to go how much of the saved subsidy money would be needed for social welfare in rural areas. It would appear the focus of subsidy is to be changed under Agenda 2000, from being production oriented (blue box subsidies) to more environmental land care type subsidy (green box subsidy). This aims to encourage farmers to cater to market demands rather than produce where the best subsidies lie. Importantly much of the reason for subsidies is to keep people in rural areas, to maintain communities and care for the land though the general trend is to make farmers resistance to these changes especially with the general low prices for agricultural commodities at present. I can not ever see a day when European farmers will not be subsidised.

UNITED KINGDOM

The spread of the urban community into small country towns and villages, especially within one and a half hour commuting distance of major cities, has completely changed these traditionally agriculturally based areas. Apart from inflating land values these urban oriented people do not think or vote the same as rural people and farm activities are not always conducive to rural urban life-styles. Pressure is being placed on farmers to modify certain activities, eg spreading effluent in paddocks near villages and working noisy farm machinery close to residential areas.

The majority of the U.K. population has distanced itself from agricultural but is very conscious of the environment. As an Australian farmer I found it hard to deal with the fact that almost all farms have public walkways through them, allowing the public unrestricted access to roam these walkways. As the farmer has no control over this, all that happens in the paddock is open for public scrutiny. Remembering this is a country with a very high population density.

Generally agriculture in the U.K is feeling the pinch. The milk price has dropped from as high as 26 pence (65c Aust.) with the deregulation of the milk market. Beef prices have been depressed with low demand due to the mad cow disease. Lamb prices are down from \$150 Australian per head two years ago to as low as \$75 Australian per head last year. Wool has not covered the cost of shearing for several seasons and some farmers have been told that their wool may not be saleable at all this year. Wheat prices over the last three years have gone from \$300 Australian per tonne to \$175 Australian per tonne. Of the so-called unsubsidised agriculture; pig meat has been as low as half the price of 18 months ago with an over supply

and cheap imports. Egg producers are being squeezed by supermarkets, forcing the smaller operators out of the market whilst the bigger operators with economies of scale are able to strike up deals with the supermarkets. Potatoes have had a good year because of the difficult harvesting conditions; therefore many stayed in the ground causing short supply. These prices by our standards are still quite high but it must be remembered that the cost structure of U.K. agriculture is generally higher because many inputs are priced to what a market will stand. The long U.K. winters require the animals to be housed creating high capital costs for infrastructure, high feeding costs and the problems of dealing with large amounts of animal effluent.

As I paint a bleak picture of U.K. agriculture, one must remember to look at the past. The U.K. as a European Union member, has much of its agriculture subsidised, in turn this has meant that most of British agriculture has been in a comfort zone for a long period of time. As several farmers told me, up until two years ago, anyone could make money farming in the U.K. As the U.K. has had to open its markets up to other currencies and with the general drop in agricultural commodity prices, things have got tough.

The European Union subsidy system has been kind to most U.K. farmers. The reason being that most U.K. farms are bigger than the average European farm where the subsidies are aimed. Therefore the average U.K. farmer receives a bigger subsidy cheque than his European counterpart. An U.K. arable farmer receives around \$600 Australian per planted hectare of wheat or barley and \$800/ hectare for canola. A Welsh hill farmer receives \$70 Australian per breeding ewe per year. A beef farmer receives around \$270 Australian per breeding cow per year.

We visited many well-run U.K. farming operations. Generally these were large operations that had good scale, highly motivated and professional management and a combination of freehold and tenanted land. They generally tended to spread their risk by having more than one enterprise. In my mind the farmers with the most potential were those who were value adding or marketing their own produce as all others were complaining about tightening margins. U.K. farmers tend to have a more hands off approach than their Australian and New Zealand counterparts. Generally they employ more labour and because they are hands off they are less oriented to labour saving devices. A classic example is some of the very old inefficient dairies that are still in use today. Usually the owners of these dairies have seldom if ever milked their own cows.

The great advantage of this hands off approach is the farmer is able to stand back and get a good overview of their business. This, combined with the amount of form filling and paper work involved in dealing with the rules and regulations placed upon them and the claiming of EAU subsidies make them very aware of the performance and sensitivities of their business.

MARKETING AND VALUE ADDING

It seems most farmers see the key to increasing profits as being able to increase production, generally on a declining commodity price (producing more for less). Unless your farm is totally under performing, this strategy would appear short term. Generally farmers operate as a pack, following trends. This I found to be true on a worldwide basis. As all farmers are encouraged into a higher production of traditional agricultural commodities, where the real price has been on a downward trend for decades, the price softens even further from over supply. Therefore the farmer needs to produce even more for less to get a return. It would seem to me that it is time farmers changed their focus from production to marketing and value adding. This is nothing we haven't been told before. The question is how?

We saw some good examples in Europe of farmers processing their own milk into specialty cheeses or ice cream and selling them through a farm shop, a specialty shop or farmer markets. Some ice cream producers had their own mobile ice cream vans. These opportunities are more available in densely populated countries. A farm shop is a good example of how to exploit a dense population where many farmers are situated on busy roads with only a small percentage of passing traffic needed to give the shop a reasonable turnover. Some smarter operators have gone that step further and were diversifying their farm shop, including restaurants, an animal farm, fishing ponds, accommodation, golf driving range etc. One of these operators we visited now considers his focus has changed from farming commodities to farming people.

A good example of smart marketing was in the Bresse area in South East France, where a group of chicken mead producers were producing a chicken to a certain specification, in their particular region, and were marketing it as "Bresse Chicken". In short these farmers produced a limited number of these chickens, which were reared free range and finished on a specific diet, then slaughtered when they reached a certain maturity. They were then marketed at a premium price, providing the farmer with a good profit. The key to the success of the Bresse Chicken is the number of chickens available is controlled. A good marketing strategy has been adopted that involves a brand that is recognised, as well as convincing the consumer that this is a special product, creating a good demand with short supply, leading to a premium price. The farmers control this through a cooperative structure. Personally when eating Bresse Chicken it seemed little different to any other chicken I'd eaten, proving what can be done when the focus changes from mass production.

In Australia we would demand a free market for the Bresse Chicken so then production would sky-rocket and price would drop accordingly and then we could lobby our government to pressure Europe and the USA for free trade in agricultural commodities so we could get rid of our surplus chicken meat because we produce it cheaper than they do. Sound familiar??

The New Zealand Dairy Industry is recognised world wide as a leader in the low cost production of milk. More than ninety percent of New Zealand dairy production is value added and goes to export. All New Zealand milk processors are farmer owned cooperatives and now under deregulation, their single desk selling organization, the New Zealand Dairy Board is going, they plan to form one big mega cooperative to market New Zealand dairy products. Even with so much milk and only a very small domestic market, the New Zealand consumer pays a similar price for milk to the U.K. or Australia. This enables New Zealand dairy farmers to be price settlers not takers, within their own domestic market. This high profit portion of the New Zealand milk market makes money available for further development of export markets. It was refreshing to see farmers for once, working together and united in their quest to improve and keep control of their industry.

The U.K. milk marketing system, previously the British Milk Marketing Board, now under deregulation, formed a cooperative structure called Milk Marque and operates as a milk collector and supplier to processors. Many farmers have abandoned their cooperative, Milk Marque, and entered into direct supply contracts with processors for as little as two cents per litre premium above milk Marque. Milk Marque now only has around forty percent of the U.K. milk supply and is therefore in a weaker position. What many farmers who have signed contracts with processors do not realise is that for a short-term gain they have been fragmented and lost their position of strength as a united body. It will be interesting to see how farmers react when these contracts are renewed at much lower prices. Under deregulation the milk price to the U.K. dairy farmer has dropped from 63c per litre to 38c per litre. Supermarkets have used this opportunity to put pressure on milk processors by tending their milk supplies and putting milk into their shelves at close to cost price to attract customers in the door and in some supermarkets I witnessed bottled water selling at the same price as milk. I consider this a classic case of farmers being fragmented and losing control of their commodity resulting in a much less price. A good opportunity has been lost by U.K. farmers to have some control over their milk price if only they could have stayed united in Milk Marque instead of now being at the mercy of the weakest seller.

SILAGE

Fine chopped pit silage is still the cheapest form of silage. Unfortunately black plastic and tyres still seem the most popular method of covering silage pits. Some plastic netting materials are being used in Europe, instead of or with tyres, to hold down the sheeting and to give protection against bird damage. Some Israeli feed centres were using a thin layer of soil on top of plastic sheeting but removal involves cutting the sheeting into squares, which is not only labour intensive but the sheet can only be used once. Tyres were sliced in half making them easier to handle and less able to retain water.

Large plastic bags (Ag Bags) containing 200 tonnes of pressed silage, as used in California, are impressive as there is no need for a pit and virtually no wastage but need a special machine to pack the bag. This means the cost is around 25% greater than pit silage on a per kg dry matter basis.

As far as silage additives go there seems little evidence of any benefit if conditions are right and they are just another cost. Some farmers are using them but seem to be acting on a gut feeling. Trials generally only show small increases in quality if any, except in low dry matter grass and high dry matter cereal. It seems nothing is better than getting this basics right, ie. Cutting at the content, fine chop, good compaction of the pit and prompt and clean secure sealing of the pit.

Whole crop, other wise known as cereal silage, is an alternative where maize can not be grown successfully. This is widely used in Israel and Northern parts of the U.K. and provides an alternative to maize. This may be of some use to dry land grazing areas of Australia. Generally the economics of whole crop depend on how much pasture can be grown because pasture has greater flexibility and does not need establishing each year. As a rule of thumb, whole crop silage will yield at least twice the dry matter that would have been the grain yield.

There are two main choices when doing whole crop;

1. Fermented whole crop, harvesting whilst the crop is primarily green at 40-45% dry matter, at the soft cheese stage. Has typically a crude protein content of 11%/kgDM and 9.5%ME/kgDM.

2. Urea treated whole crop, harvested whilst the crop is primarily yellow at 50-60% dry matter at the hard cheese stage. Has typically a crude protein content of 22%/kgDM and 8%ME/kgDM

Wheat is the usual choice of cereal, certainly for urea treatment when the crop is taken more mature.

Fermented whole crop is the simpler option, being conventionally harvested and without the difficulty of applying urea. It therefore has a low protein content (in common with maize silage) and high digestibility. Urea treated whole crop dry matter yield, and is stable at feeding out, but has low digestibility. A major difficulty is in the application and even distribution of urea. Therefore fermented whole crop is by far the more common option and it allows the use of all cereals, though wheat and barley are the most common.

Additives have had some success in whole crop when at high dry matter most of the sugars have been converted to starch. This speeds up fermentation with aerobic spoilage losses minimised. Research by Dr Shirley Heron of the U.K. has found the overall substitution of grass with whole crop has rarely shown an increase in milk yield but usually improved milk quality, particularly milk protein and benefited cow health. The main benefits have been in reduced forage production costs and increased over all dry matter intake.

In dry land Western Australia I see the main advantages for whole crop cereals being;

- as an opportunity crop when renewing or changing pasture species,
- giving flexibility to cereal grain crops when extra silage may be needed,
- as an alternative feed source to increase intake of high production cows
- low cost harvesting, because of the large quantities that can be gathered from just one cut.

DAIRYING

After looking at many dairy farms in the countries I have visited, I have no doubt that much of the farming areas in our area of South West Western Australia, which has traditionally been sheep and beef farming, could very successfully support dairying. We have a good climate with mild winters and moderate summers, we can grow good amounts of pasture quite cheaply and have the options of making not only pasture silage but cereal silage as well as growing grain if needed be. Our land is still cheap by world standards and we could run a grazing feed lot system with minimal infrastructure. Grain is cheap and we have few stock health problems.

Having mainly annual type pasture and no irrigation I envisage our system as being grazing for six months of the year with a grain supplement fed at milking. We then would run a Summer / Autumn feedlot with very little infrastructure. That being basically, a feed pad, water and shade. This is because we would not have rain, mud or cold to deal with. A lot of our silage could be self fed with an electric wire, directly from the stack. Hopefully we would be able to keep away from the high cost of a mixing wagon. With our cows grazing over a large area with a stocking rate of perhaps one cow per hectare, I see us best suited to a New Zealand type cow with moderate milk production, high milk solids, good walking ability and good fertility. This should enable us to run a very low cost dairy operation. Before embarking on my Nuffield Scholarship, I was excited at the prospect of a deregulated dairy industry here in W.A., giving us an opportunity to move into dairy production and have access to the high value liquid milk market without having to purchase quota. At this stage in W.A.

the milk price looks like dropping from the average price of 48c per litre for liquid milk and 22c per litre average for manufacturing milk, which are each around half of the market, giving a current average milk price of 35c per litre. Under deregulation the most consistent estimate for liquid milk is 35c per litre and the manufacturing price should stay the same at 22c per litre. This would mean an average price of 28.5 per litre. In other words the average W.A. farmer will be worse off by 6.5c per litre or \$422 per average cow. Further to this it is predicted, that after an initial exit of some smaller farmers, remaining herds will expand and new large herds start up, the consumption of liquid milk will not grow at the same pace. Therefore the manufacturing part of the state's milk will become a bigger part of the equation, eg. 65% manufacturing milk and 35% liquid milk on predicted deregulation prices would give an average milk price of only 26.5c per litre. This of course could be changed with some aggressive seeking of new export markets, but with world skim milk powder prices at record lows of around \$1300 U.S. per tonne, an established aggressive dairy exporter like New Zealand is only able to pay farmers the equivalent of 20c per litre for milk. It is hard to see any immediate bonanzas with export dairy products.

The other unknown of course with deregulation is to what extent supermarkets and processors will control the liquid milk market and what methods they will use to drive the price they pay for milk lower. It is hard to see W.A. dairy farmers being winners under deregulation as they lose the opportunity of controlling their own high value liquid milk market. Once again on the basis of what I saw in the partly deregulated U.K. dairy market, their milk price dropped by more than a third over three years even with quota restrictions on production. I would hate to think what their milk price might be under a totally free market as almost every dairy farmer I visited would increase cow numbers if it weren't for quota restrictions. Under this system the farmers were the obvious losers with any benefit to consumers looking short term and to the supermarkets advantage.

What pressures will be put on our milk processors by national supermarket chains and will Victoria really set our WA milk price even though it is three thousand kilometres away? We really only have two major milk company processors in WA and like any company their first priority is shareholder profits not supplier profits. Like in any business an easy way to increase profitability is to source cheaper inputs. I am not preaching for total regulation as the answer but at least some regulations on supply and processing is owned and most importantly, supported by the farmers. Cooperatives need to operate on good commercial principles aiming to return good dividends to the farmer share holders, who are hopefully smart enough to stand back and employ professional, lateral thinking management. Not only would the farmers profit in the value adding process but build another asset in the form of cooperative shares. The New Zealand dairy industry is a shining star in this regard. I don't think WA is ready for deregulation until we have some worth while farmer owned processing facilities.

We wait in anticipation, as deregulation looms, of what sort of milk contract we may be offered by a milk company before we commit ourselves to the dairy industry. So far negotiations have not been every encouraging with the milk companies claiming to have an oversupply of milk and 14 cents a litre being the going rate for surplus milk.

CONCLUSION

After five months and twelve countries I gained a good overview of agriculture and discovered that farmers in these countries are under similar pressures as ourselves. This is; to remain viable they have to produce more for less or value add. The vast majority has chosen to produce more for less in a time when the developed world has never had a greater supply of food, nor has the consumer been able to buy it so cheap in real terms. U.K. figures show that in 1973 consumers spent 23% of their income on household food and by 1997 this had dropped to 11%. I'm sure the trend would be similar in all developed countries. This is more than a 50% decrease in less than 25 years.