ADOPTION OF RISK MANAGEMENT AND GROWTH STRATEGIES TO ACHIEVE SHORT AND LONG TERM VIABILITY FOR THE FARMING FAMILY.

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ABSTRACT

Farm ownership for many young farmers worldwide not in a position to inherit land is often seen to be an elusive target. In the past, New Zealand has encouraged new entrants into farming through a variety of government subsidized schemes. The marketplace has also developed various stepping stone ownership structures, such as share farming, which enable new entrants to accumulate capital towards the eventual purchase of land. This paper takes a case study approach, based on the farming and forestry partnerships we manage, that has seen us grow through sharefarming to land ownership with equity partners. The requirement for us to manage risk, particularly since economic deregulation, by both controlling our exposure to risk and controlling the impact of risk on the business is discussed as is the need for us to be focused on growth to ensure long term viability.

INTRODUCTION

Westview Farming Partnership consists of five equal partners of whom we are one. The partnership began ten years ago as a sheep, beef cattle and deer farming business on a 991 hectare property north east of Palmerston North in New Zealand. The business has since expanded to include two neighbouring dairy farms, now run as one, and milking 320 cows. Other stock include 6000 sheep, 370 beef cattle and 380 red deer. The total area of the farm is now 1105 hectares and is used as follows:

Sheep & Beef Cattle unit	670 hectares
Deer unit	53 hectares
Dairy unit	135 hectares
Forest plantations	42 hectares
Native bush & waste	205 hectares.

The " volatile" environment in which we operate, partly due to climatic variation but more importantly due to our reliance on international commodity prices, has necessitated the development of a business structure that includes economies of scale, diversification, a commitment to growth and a sensible funding arrangement in which risks are shared between partners.

The success of the partnership both as an entity and as it fits within our goals of farm ownership will be discussed to highlight the points of most relevance to those seeking to successfully farm in a deregulated market economy and accumulate capital and wealth for the future.

SHAREFARMING

In 1981 we took our first step towards farm ownership. The government of the day had a variety of schemes available to encourage young people into farming. We targeted the ballot block scheme in which farm workers could put their names forward in the hope of drawing one of the farms being subdivided from the government estate for this purpose. To be eligible for the scheme you had to be working on a farm, and not working in a farm servicing role. Another options was the 85% loan scheme at preferential interest rates; to qualify, a track record with the then government-owned bank was required. We decided to enter into a five year share farming contract on a sheep & beef cattle farm near Christchurch. The equivalent of 3800 ewes and the plant and equipment needed to run a 480 hectare hill country farm were purchased with an in going equity ratio of 14% of which nearly half was borrowed from a great aunt. We had embarked on the hardest of the three ways to farm ownership, parsimony.

In that five years we experienced three crippling droughts, two floods and, in 1984, the government removed most subsidies to farming which not only reduced our income but also meant that the sheep we paid $20 a head for in 1981 were worth $11each in 1986 when our contract finished. However, we had paid back a significant amount of debt, our beef cattle values had increased and sufficient funds to purchase a small farm had been accumulated. The reduction in farm land prices, associated with the macro policy changes, made land ownership a distinct possibility.

One redeeming feature of sharefarming contracts are their ability to share risk between the people farming the land and those owning it. Although times were tight during our five years, the landowners also took their share of the pain. The benefits of this situation were not lost on us and we decided that our next step should not be a farm in which we had total ownership and a very large mortgage; we had also learned how inflexible debt providers were when your equity is minimal and product prices drop. Also the lack of management challenge of a small unit which would suffer from diseconomies of scale was not attractive. Instead we opted to attract equity partners who would mutually benefit from the good buying conditions for farm land in 1986. It was our stated intention that the farm would operate as a *bona fide* business venture from the outset producing a positive cash flow and realistic (for farming) return on capital. Potential for capital gain in the future from the right investment was expected. Our philosophy at the time was that successful farming involved a combination of stockmanship, a positive approach to physical work, sound financial management and the ability to respond to changes in market conditions. Thus, in April 1987 the Westview Farming Partnership was established with five equal partners, including ourselves as a managing partner

WESTVIEW FARM

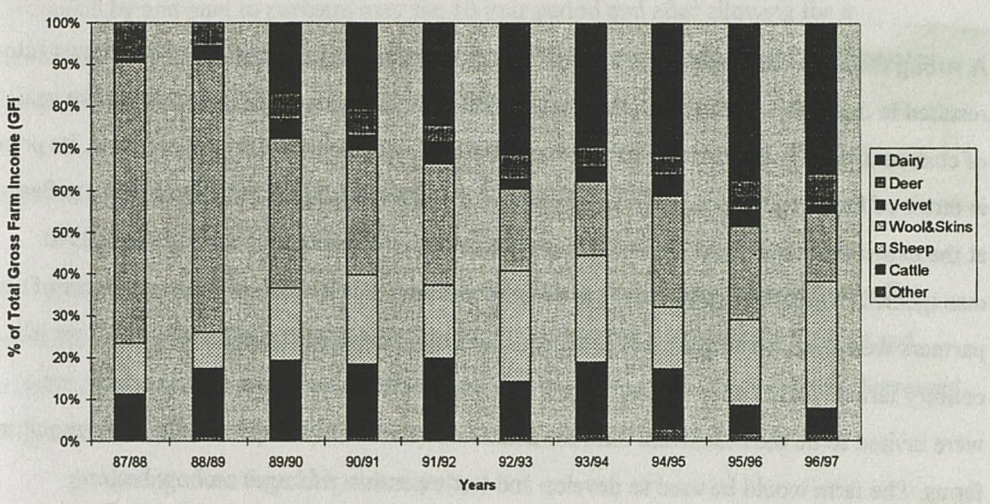
The Westview property encompasses a wide range of soil types and topography. Climate varies markedly from the front to the back of the property , due to increasing altitude. For example, annual rainfall varies from 1500mm at the front to 1800mm at the higher altitude. North-westerly and northerly winds are predominant and gales are relatively frequent. The lowland at 100m above sea level, includes recent alluvial river flats. This is followed by a series of successive river terraces which give way to the bulk of the farm at 200 to 700m asl which is made up of older hill soils derived from Greywacke rock. The hill soils are very prone to water logging which limits the type and number of stock that can be carried during the winter and early spring. They are also prone to accelerated sheet erosion, especially after periods of prolonged rain. The back of the Westview property, on the lower slopes of the Ruahine Ranges (up to 750m asl) is typified by very steep terrain and shallow soils over the parent rock. Erosion is less of a problem than on the lower hills but livestock production is limited by low pasture production, a harsh climate, and the steepness of the terrain.

The dairy unit is on the lower river terraces, the deer unit on some of the higher terraces , and the sheep and beef cattle are farmed on the remainder. Forest plantings are established on areas with limitations for pastoral farming , mainly because of terrain or a tendency to erode. Enterprises have been apportioned to land area in an attempt to match resources with the products that will give the best return on their use. Thus, the dairy operation is on the most productive area because of the high feed requirements of a dairy cow in an all pasture situation and the relatively greater returns from dairying than deer or sheep and beef cattle.. This area also needed to be free draining to reduce treading damage. The deer are located on the winter wet higher river terraces because do less damage to the soil structure than cattle. Fencing was also a deciding factor as deer require 2m high fences; these are easier to erect on gentler terrain. The sheep and cattle, run on the rest of the area are complimentary enterprises; the cattle better provide pasture control than sheep-only grazing , and the life cycles of internal parasites are broken by intermittent grazing with the two species.

Operational management is carried out by Shane Carroll with the help of a full-time shepherd. Contractors are employed for sheep shearing, drain and track maintenance and fencing. Some casual workers assist during busy periods. The dairy unit is run by a sharemilker on a 50:50 contract with Westview. He owns the dairy stock and sufficient plant and equipment to run the unit and meets some of the running costs of the farm. Income from the unit is split 50:50 between the sharemilker and Westview Farming Partnership.

The relative contributions of the products from each enterprise is shown in Figure 1. This expresses the adjusted GFI per product as a percentage of the total GFI for each year.

Figure 1: Adjusted Gross Farm Income per Product as a Percentage of Total GFI by Year



WESTVIEW FARMING PARTNERSHIP

The partnership began with just under 50% gearing. Within a year this proved to be a problem as interest rates nearly doubled, to 22%. As a result, 47% of the Gross Farm Income (GFI) in 1987 went in interest payments. However, in the same year record prices for wool were gained which enabled us to achieve the best Economic Farm Surplus, as a percentage of capital employed, of the last ten years.

Our partners have no farming knowledge or experience. They are share analysts, economists, share brokers and investment managers by occupation. They have brought skills and a focus on risk management, which is quite contrary to the "typical" farming approach.

This was made apparent at our first partners meeting when they expressed a concern at the business' exposure to wool which in that year made up 67% of our GFI (Figure 1). Instead of increasing the number of sheep farmed, the instinct among most farmers, they suggested other enterprises be considered in order to reduce risk. This led to the decision the following year to purchase a small neighbouring dairy farm. This was enlarged by adding some of our existing

adjacent paddocks to the unit. Dairy land was well priced for purchasers at the time and we were able to bring the unit price down by adding in the lower valued non-dairy land.

A strong focus on debt repayment over the first five years, coupled with reducing interest rates resulted in debt servicing declining to less than 20% of GFI by mid 1992. However, five years of cost control and chasing markets to extract the best possible price for our products, its price in terms of farm productivity. We had developed a system in which capital stock were suffering at the expense of short term income. A longer term view of the enterprises and changes to management were required to lift the productivity of our capital stock. With the support of our partners we called in a Registered Farm Management Consultant experienced with larger hill country farms. Within a few months of our using his services, and quite coincidentally, we were invited to be the Manawatu farm for a national network of sheep and beef cattle monitor farms. The farm would be used to develop and test extension packages on how better management planning and decision making could contribute to increased productivity and profit. On the strength of the improvements being made on the sheep and beef cattle unit we also employed a dairy consultant to work with us and the sharemilker on the dairy unit to improve its productivity.

The following three years were invaluable to the farm; systems were simplified and monitoring was implemented that enabled productivity to be improved quickly and, we hope, with some degree of repeatability. Throughout this time the partners backed any suggestion for expenditure that would improve GFI. Apart from a payment in some years to cover the tax due from their share of the profit split from the farm, cash payments have been made to partners only in two years. In every other year cash surpluses have been used to either pay back debt or expand and develop the business.

Productivity improvements have included an increase in lambing percentage (survival to sale or replacement) from an average of 74% before 1992 to 118% in 1996, in wool weights from an average of 4.7 kg per sheep stock unit to 6.2 kg per sheep stock unit and in milk production from 520 kg milksolids per hectare to 711 kg milksolids per hectare.

The average Economic Farm Surplus, a measure of farm profitability excluding interest, over the ten years has been 7% post-tax. The Internal Rate of Return calculated from all cash introduced by and paid to partners over the 10 year period and after allowing for a conservative increase in the value of the land is 10.6% post-tax. This investment compares favourably with others made by our partners within the same time period.

RISK MANAGEMENT & GROWTH

Real prices for a number of the international commodities we produce have been trending down for some years. Gains in productivity can offset declines in real revenue prices and inflation. A focus on growth is therefore essential to counter negative price trends. Increased productivity can be achieved by:

producing more from the same inputs
producing more or the same from less inputs
expanding the scale of the business.

One of the biggest inputs to New Zealand hill country farming is the land. The timing of land purchase for some young farmers may not always coincide with the best time to buy as it did with us. If land is purchased at high prices because the desire to own land and "get on" with farming without delay is not possible, equity levels must be higher and returns to equity lower than would be the case with a better purchase price. Unfortunately for many farmers the purchase of a farm is a once-only event, the timing of which is not always under their control.

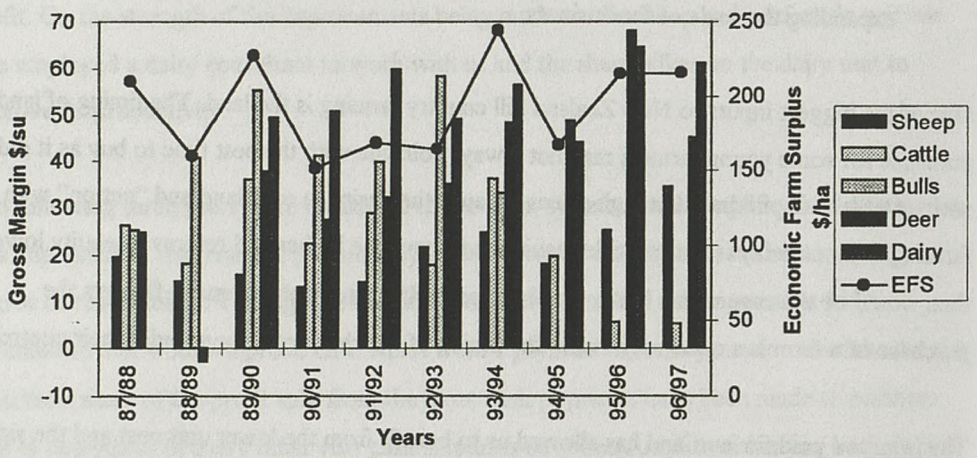
The price we paid for our land has allowed us to benefit from the lower unit cost and the size of the property has enabled us to benefit from economies of scale. Another advantage has been that none of the partners, including ourselves, have needed equity payments as cash from the business. Available surpluses have been able to be spent on debt reduction and, more recently, expansion and land development.

A growth strategy is essential not only to offset declines in real revenue prices and inflation but also to achieve improvements in equity. Growth can be achieved from both improved productivity and improved scale; buying land is not the only way to achieve growth. Improving

equity value meets our requirements to grow our assets, more capital must be accumulated to allow for not only the future possibility of farming without equity partners but also the costs of educating the children and, eventually, retirement. Equity can also be improved by the land value improving independently of its income earning ability. Apart from improving the ability of the business to borrow money, this gain is of no value until it is realized.

A well documented method of reducing exposure to risk in farming as in other investments is diversification, preferably in negatively correlated enterprises. The enterprise gross margins and the overall EFS per hectare for the farm for each of the last ten years are illustrated in Figure 2. Although over time extreme variability has occurred between enterprises, the overall farm result has been relatively steady due to the diversification.

Figure 2: Gross Margins per Enterprise (net of interest on livestock capital) and Economic Farm Surplus by Year



Scale is important to ensure diversification is successful. When enterprises are too small they become an annoying complication to management and are little more than nuisance value to the overall operation. We have run a small deer enterprise throughout the last ten years. It has never taken high priority over other enterprises due to its size and the relativity of its absolute worth compared with the other enterprises. As a result productivity has not been good. It has

now been decided to increase the area available for deer and to improve the handling facilities so that deer numbers can be expanded when a purchaser's market returns.

While our initial philosophy included being able to change as market forces require the method by which we read the market and the timing of when such changes are made has altered. Reacting to the market means buying when prices are right which is not always when returns are at their highest. This counter cyclical approach is of particular relevance for products sold as a commodity such as beef.

Complimentarity between enterprises is also important for diversification to work. At Westview pre-1992 we were running finishing enterprises that competed for feed with the breeding enterprises at critical times of the year, the result was that stock were finished at the expense of the productivity of the breeding animals. The decisions taken as a result of the monitor farm deliberations were to reduce the type and number of stock finished on the farm, sell more of the progeny as store stock and concentrate on giving the available feed to breeding stock and their replacements. The greater productivity of the breeding stock has more than compensated for selling more unfinished progeny.

A further source of diversification for all partners has been to have another source of income from the farm. While the farm provides us, as managing partners, with a house we have never relied on the business for our standard of living. During the sharefarming years we lived on a fraction of what came in, the balance was used to cashflow the farm and pay off debt. Since then the off farm income has increased significantly but so also has the cost of living, three children and their caregiver put paid to a large slice of what is earned each year. Any surplus each year is put into small, non-farm investments such as shares and managed funds. These may be called upon if sufficient capital cannot be raised to buy out departing partners in the future although our preference is not to reduce our non-farm investments.

Strategies to control the impact of risk by reducing the effect of the variations that occur include improving the capacity of the system to absorb downturns. This can be achieved by reducing debt levels and by raising yields and prices. Westview has reduced its debt significantly and has progressed towards increasing yields with a view towards continual

improvement in this area. While we are mostly price takers we are implementing quality assurance systems, specifically for our wool and venison, that may not earn us a premium immediately but might ensure we retain or gain access to key markets in the future.

ENVIRONMENTAL ISSUES & SUSTAINABLE FARMING

Westview became the subject of another research programme in 1996. This was designed to assess the main issues affecting the sustainability of hill country farming systems. In addition, to the increasing awareness of environmental issues, there had been a lot of emotive comment on the potential for farming to damage the environment. This programme would allow us to learn more about the resources that we were using in our farming operations and to obtain some scientific measurements on the effects this was having on the environment. This has helped us to identify areas for planting plantation forests, areas not suitable for wintering cattle and areas that would provide strategic advantage to the farm if the soils were better drained. Basically, it is hoped that it will show us the best long term use for the various different soil and terrain types that we farm, and give us the tools necessary to farm sustainably. This is important because we do not want environmental issues be used as non-tariff trade barriers against our products.

FORESTRY

While areas of Westview have been developed in plantation forest most of the planting has been in recent years. Although plantings will continue on suitable areas for some time which will give a steady income from forestry for future landowners we felt we were too exposed to the markets that will exist in 25-30 years time. With this problem in mind we sourced an area of land on which there were a number of plantations of varying ages, most older than the Westview plantings. The land under and around the trees was purchased by a neighbouring farmer and we purchased a forestry right on the trees. Two partnerships were established to do so as the cost was beyond our means. We manage the plantations for the two partnerships; the first harvest is in 2002. The input from partners in these partnerships is minimal; they all receive a yearly report to keep them up with progress in silviculture and maintenance.

CONCLUSION

Farm ownership through parsimony is possible in New Zealand; we do not know if it is any easier than gaining ownership through patrimony or matrimony. Our observations are that there are as many complications created out of those two options as there are created with equity partnerships. The difference with our venture, is that matters are, and have always been, on a strictly business footing. There are no broken promises or false expectations. However there is also no "fairy" godmother. All investors want to be certain they are achieving a return on their asset not too far from their expectations. Results must be reported in whatever format is requested and realistic forecasts need to be provided from which they can establish their expectations. There is always the risk that more partners will leave than we can replace or fund. We have to be constantly focused on business growth to ensure our equity in both the farm and non-farm investments is growing to enable us to cover this contingency. Off-farm income allows us to enjoy this experience without the usual pain associated with parsimony.

The challenge for the future is to continue to improve productivity and scale by focusing on growth and to improve risk management by proactively responding to changes in the market.