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A focus on the future of intensive sheep farming

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Abstract

Some of the problems for the New Zealand sheep industry over the next decade are outlined, as are the changes necessary to overcome them. The future for the next generation of intensive sheep farmers should be promising if they can co-operate to realise the potential of genetics for flock improvement, be adaptable, overcome the problems of drench resistance and chemical and drug residues, increase profitability. and grasp the fact that sheep farming may not mean land ownership, There will always be a sheep industry, but not necessarily as we know it now.

Keywords animal health, genetic improvement, profitability, sheep industry, sheep farming

Introduction

Commodity prices are cyclic, with the immediate prospect for improved meat and wool returns. But will these improvements be enough to sustain the viability of many of our intensive sheep farms as we know them?

The sheep industry has some large problems ahead which will dictate enormous change over the next decade. This paper will endeavour to outline some of the major forces of change and their possible effect on this valuable industry to New Zealand.

Animal health

An animal health crisis is looming, because of our sheep monoculture and total dependence on three families of drench drugs to control intestinal parasites. More than 50% of sheep farms are now estimated to have some degree of resistance to one of the three drench families. Some farms have dual resistance problems. Worms resistant to all chemicals have been found in New Zealand. Once resistant worms have appeared on a property then that drench family concerned is forever useless on that property or on any other which those sheep carrying such worms have grazed. Scientists suggest that nine years is the expected lifespan of any drench chemical on a farm. We are running out of time! The juggernaut of worm resistance to chemicals is bearing down upon us and many farms will be totally overrun without an effective drench alternative within 10 years. Breeding sheep that are resistant to worm infection will be our main alternative, along with alternative management systems to obtain a 'clean' grazing environment by using integrated grazing withcattle and forage crops for lambs over the high risk periods.

There will be no industry in the future if stock cannot tolerate an environmental constraint, be it facial eczema, worms or any other seriously limiting disease.

Behind this worm juggernaut looms its big brother • the green movement, whose influence is stirring the emotions of every market place. The attitude of the market place is always right as they pay for our product. If chemical-free food is demanded, that is what will be bought. Will we be capable of supplying it?

There are almost half a million stud ewes in New Zealand supplying rams to the industry. At present less than 30,000 ewes areinstudflocks inwhichthereiseven the smallest effort going into breeding for resistance to worms. The sheep industry gets its genes from breeders. Breeders either lead the industry out of this situation, or they *retain the status quo* and sign the death warrant of many sheep enterprises. In the next 10 years only a small proportion of rams which will breed improved resistance to worms will be available to the industry.

Genetic production improvements

Fewer than 50% of rams used in New Zealand were bred in flocks which used recording systems capable of assessing and ranking the genetic ability of individuals. Therefore, at least half of our breeders are guardians of *the status quo, offering* no more production to their clients than they already have. They do offer rams whose appearance suits the fashions of the day. These sheep are cosmetically acceptable but are genetically non-improvers for meat and wool production and thus the profitability of their clients.

When will we learn from the dairy industry? Their 25% improvement has occurred in only two decades. The chicken industry has reduced killable age, at the same weight, from 68 days to 38 days, mainly through breeding • genetic improvement! In 1954, 17,000 registered Turkey breeders existed in the USA. Today only two breeders service the whole of the North American continent. This is because their stock was selected using modem genetic methods and soon proved so superior

that turkey rearers were fools not to cash in on their increased feed conversion and meatiness.

I predict that many small New Zealand sheep studs will disappear as their product gets left behind by studs which are bigger, more progressive and have access to proven sires as identified by modem genetic recording systems, and which have workable programmes in place to achieve their objectives. Too many breeders merely pay lip service to important requirements of the industry*

Breeding or Feeding

This should no longer be a dilemma in the sheep industry. Sire referencing in all species is now very important. Sheep are no exception. Last year 575 stud Romney rams were compared among farms and ranked on their progeny's production of meat and wool (the real test of a ram). Breeders now have a tool to assess where their sires rank for most traits in the industry. Buyers have an opportunity to see which breeders are performing. Breeders also have access to semen from reference proven sires to get up to speed in any desired trait they wish to improve. This requires breeders to adopt a mode of co-operation and get away from a century of ardent competition. The sheep industry's competition is not from within, but from pork, poultry, beef. dairy products and fish. and also from all the other fibres we walk on, wear or sleep on.

Sheep breeders have another tool available now to aid their progress and hence that of the whole industry - an analysis package which measures the rate of genetic progress within a flock over time. This concept is called the measurement of genetic trends. and is already in use by our competitors. Genetic trends removes seasonal variations and quantifies the genetic merit of each generation born in a flock for any trait which can be measured and which has been recorded over a period of years.

The authors 'Awareka' Flock is the first large commercial ram breeding flock in New Zealand to be analysed.

Such analysis will prove which flocks are going forward. Breeders who do not adopt such aids to improvementmay have a limited future in the New Zealand sheep industry. The pork, poultry. dairy and to some extent the beef industries have gone down this path. Genetically our industry has been largely floundering. More than SO% of our ram breeders will be unable to measure genetic progress in their flock because insufficient performance records have been collected.

Profitability of sheep farming

Lack of profitability will be the main catalyst of change in the sheep industry. Many intensive sheep farms have been making poor profits for many years. The concurrent down-turn in meat and wool prices of late has only brought this situation to a head on many properties. Poor profits are largely the result of many farms having a lack of scale. They lack units of production under their existing cost structure and management system; they are too small, or over capitalised, or they are not cranked up enough to produce enough meat and wool per stock unit or hectare. This lack of scale will not go away; they will crash again in the next down turn. Their problem is simply structural and they will be locked into the 'reluctant peasant syndrome'. Structural problems should be the first to be addressed by financial advisers on such properties.

The land price increases predicted over the next year or so (largely due to the dairy drift southwards) will give many an opportunity to leave the industry with their capital intact. Such less productive units may be incorporated into leaner, larger enterprises or have improved management installed to become profitable.

I believe that the next generation of new farmers may have to forego the rationale that to farm you first have to buy some land.

The lack of profitability has also led to severe cash shortages on farms. This has hamstrung many operators from intensification, specialisation or expansion. The associated lack of appreciation and confidence in the sheep industry by financiers, who seem slow to grasp the cyclic nature of farm returns. has not helped farmers further develop their business enterprise. It has been another force causing industry retrenchment.

Lack of future management expertise may be a problem in the next generation of farmers who are already thin on the ground. The lack of profitability has discouraged new entrants into the sheep industry. Tertiary agricultural courses are at an all-time low. Diploma of Agriculture classes at Lincoln were 12 times bigger 20 years ago than the whole of the current agriculture and horticulture course enrolments this year.

Much of the comparative efficiency of the New Zealand sheep industry is due to the results of the research effort over the previous three decades. Research funds to the pastoral industry are now threatened to be cut to a third of recent levels. This may seriously affect the efficiency of the sheep industry for our next generation of farmers.

No longer does the Government see free advisory

services as a social obligation. User pays means user benefits, but first we must use it.

Lack of profitability on many farms will force change, especially in the concept of efficiency of production. We must remain ultra-efficient to survive and maintain, let alone develop, our market share. Overseas farmers will always be subsidised, if not on their produce, then on the land they hold at an environmental guardianship cost to their nation. Even this will affect the market price we receive for our produce.

My crystal ball gazing leads me to conclude that the future of the intensive sheep industry will:

* be lean, profit driven and more structured
* have to work under 'green rules' to reduce chemical and drug residues
* have land tenure be much more diverse than today
* have precise fertiliser applications according to soil tests
* base animal health programmes on tests and planning, not on crises
* have more diverse and strategically important pastures and forage crops for various classes of stock
* rely more on contractors to reduce on farm capital outlay
* have to have sheep that are much more triple purpose
  - more meat (including specialist breeds)
  - more wool (including specialist wool types)
  - at less cost (especially disease resistance)
* produce largely to order (contracted to supply specifications at a predetermined price)
* have a lot of land that may be retired from sheep to a more profitable end use.

There will always be a sheep industry but possibly not as we know it now. The future of the next generation of intensive sheep farmers should be promising as long as they farm smarter than we do.