NEW PRODUCTION TARGETS

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When deer farming profitability changes rapidly, as experienced with the better venison returns, many opportunities exist for farmers to modify their management practices and enhance profitability even further

Deer farmers must continually reassess the cost and extent of their input strategies to ensure that they take full advantage of the incredible production potential of deer

FEEDING IS the single most important factor controlling animal performance and profitability There isn't a property in New Zealand that couldn't improve it's performance in this area and thereby enhance animal productivity

So often I hear the following comments when a new and exciting farming option is outlined

"I couldn't do that."
"That's too expensive "
"My farm is totally different."
"Our climate wouldn't allow that."

This initial burst of negativity stems from uncertainty and vulnerability By nature, human beings resent change, don't want to be seen as "different" and they avoid areas perceived as "risky" Yet without risk there is no opportunity

Only by understanding your current position can you have the confidence to explore and evaluate new ways forward Without continuous improvement our international competitiveness will be lost!

THE DAIRY MODEL

By now the long tentacles of the dairy industry have penetrated all but the most remote regions of New Zealand Hopefully, even the most ardent dairy opponents will have noticed exciting new possibilities demonstrated by its skilled proponents

Take note

1 Dairy conversions grow more grass of better quality for more months of the year than was previously thought possible on the same land

2 Most dairy farmers feed-budget effectively, and continuously plug deficits by
   a) producing high quality supplements
   b) Growing specific crops
   c) Buying in supplements
   d) Grazing off
   They less commonly use the "wait and hope" theory!

3, Dairy performance is monitored, daily at the vat, monthly at the discussion group and frequently with the bank and accountant Now, I know deer farmers don't have a daily yardstick, but when did you last discuss production per hectare, effective farm surplus per hectare and so on, with your neighbour? I don't think discussion based around whose stag has the best antlers quite measures up!

MEASURE AND RECORD

The minimum information required is as below

1 Weaning weights -- plus the percentages below 40 kg and above 60 kg
2 Fawning percentage for 2-year hinds and MA hinds, separately, percentage wet/dry (Fawns weaned/hinds mated)
3 Hind weights pre-mating (or body condition score) -- a percentage of MA hinds, 27-month hinds, 15-month maiden hinds (true weights)
4 Weaner growth rates -- at strategic times to reflect management intervals (not at random)
   i weaning -- hind lactation and mating management
   ii pre winter (May 10th) -- autumn feeding
   iii post winter (Sep 20th) -- winter management
   iv yearling weights -- correlate with spike size and slaughter details
5 Match sire and dam to offspring Many farmers will spend tens of thousands of dollars on new sires, with little or no idea of dam performance Most stud operators will tell you that the vast majority of top animals come from distinct dam lines How can you select female replacements to optimise genetic gain without this information? How many farmers can tell me their top performing 40 hinds for
   i velvet production
   ii growth rates
   Which hind will the new stag mate most profitably?
6 Record spiker velvet My records indicate a high correlation between spike beam diameter and 2-year velvet production This is not a perfect method but allows initial selection at one year
7 Record velvet production Compare sires Record top dams
   This is the minimum information required to seriously extend performance

GROW MORE GRASS

More fertiliser equals more grass

As the returns of top deer farmers approach those of dairy farmers, there is no reason why we can't use similar fertiliser regimes on similar land

The response of previously considered "poorer" land to very heavy capital dressings and regrassing programmes in many areas has been staggering It's about time some deer farmers tried it

I apply 800-900 kg Superphosphate equivalent (80 units P) per ha annually, plus 1 50 units of N Nitrogen or blended fertilisers, for example DAP, are greatly under-used on deer farms as a management tool

My Olsen P levels are now between 40 and 50 Obviously, extensive properties can't do this, but areas of better land should be trialled with high fertiliser levels before developing a wider farm programme

If you want performance, P levels must increase

High fertility land grows more grass during
a summer dry
b late autumn
c winter
d early spring

These are the times critical to ensuring performance from deer Lower stocking rates and more land don't solve the problem They often make it worse!

QUALITY FEED

I can't emphasise the importance of this enough This is the major limiting factor on my farm

The point was underlined graphically this year when I separated out a small group of pet hinds for a new venture Despite fawning mid to late November, these animals weaned fawns up to 63 per cent of their own bodyweight, with a range of 57-63 per cent on March 1 Put another way, a 127 kg hind weaned an 80 kg fawn

They were allowed to graze randomly, often being shut in hay paddocks "out of the way" There was no pressure and they selected the most palatable species only

My other so-called "top hinds" which were shifted every 2-3 days with 1300 kg Dm/Ha residual grazing levels could only manage weaning weights of around 50 per cent maternal weight, with the best doing 55 per cent These animals clearly do not lactate well on the ryegrass clover mix I could offer

The summer reduction in the palatability and digestibility of traditional ryegrass pastures is the major limiting factor to improving weaning weights

This problem, which is minimal in Southland, becomes increasingly more important as we move north, and is exaggerated by the increasing percentages of Elk genes which find ryegrass even more unpalatable than Red deer

Deer are designed to both lactate and steadily increase body reserves over the summer period Unfortunately, many deer farms fail to provide pasture of sufficient quantity and quality to achieve these goals, and by weaning time, hinds are losing body condition

This results in a delay to onset of first heat and a later fawning date, with greater fawning spread, and poorer weaners next year I also believe this rapid loss in pasture quality over summer plays a major role in poor conception rates in maiden hinds Growth rates in these animals decline rapidly in January/February and early March, especially in summer dry regions In a natural environment rates would persist if not improve over the same period

If we draw parallels with sheep and cattle, feeding levels during the two months before mating have a major influence on first heat

This year, with better summer grass growth than normal, I was dismayed to see my yearling Elk cross cows "go back" despite standing amid what looked like "plenty" The digestibility of poor quality summer rye can drop by 40 per cent, and with this goes reduced palatability
Conserved silage is actually far better quality feed than much summer pasture, especially if seed-head formation is widespread To counter this problem, grain was fed to maintain weight gains up to mating

My recipe for successful mating of maiden hinds is

1 Select only hinds of weights appropriate for the breed Don't guess, weigh them!
2 Monitor weight gains approaching mating January, February and March
3 Feed supplements where summer grass quality declines
4 Mate with spikers (ratio one spiker to six to eight hinds)
5 Include a small number of older hinds in the mob -- say 5 to 10 per cent -- some carry-over empty first fawners from previous year, plus a few early fawning older hinds This brings on the pheromone effect for improved fawning
6 Join spikers early (60-70 maximum mob size)
7 Improve feeding immediately prior to mating

This should give 80 - 85 per cent calving in Elk cross first calvers

After experimenting with high quality pasture alternatives such as chicory, red clover and pasdure, I am totally convinced that these provide a real opportunity to improve lactation and growth rates over summer

Currently, 15 per cent of my farm is sown in these alternatives I should probably consider more Over-drilling with tama each autumn provides me with further high quality winter feed for weaners

This may shorten the life of the specialist pasture, but I can't do without this winter feed High quality summer feed crops have improved weaner weights by over 10 per cent

WEANER GROWTH RATES

Big weaners eat lots, little weaners never catch up In my experience, compensatory growth is minimal, and lost potential growth is gone forever

Many farmers boast they never have fawning problems To me, this indicates that fawn birth weights are sub-optimal, and hind body condition is lower than ideal at fawning To obtain maximum weaner weights, birth weights must be maximised, and for hinds to develop peak lactation yield, they must be able to supplement early lactation from maternal fat deposits

Therefore I balance the desire for larger weaners against an increasing incidence of assisted births In my situation I accept a 3 per cent dystocia incidence Some stud farms operate well beyond the 5 per cent assisted birth level Farmers must reach their own ideal level, but remember the costs inherent in the trade-off

On my farm, residual winter grazing levels seem to be the most important factor limiting winter growth rate For some reason, I can't achieve high growth rates when supplements form a major part of the diet

I use a frequent shift, full farm rotation, leaving greater than 1300 kg DM/ha (50 per cent utilisation) I use older stock to clean up behind I have managed to grow Elk cross weaner bulls at 245 gms/day for a 120 day winter

This is obviously not as feasible further south, but I think many options exist to markedly improve winter weaner growth rates Improvement in this area will have major flow-on effects on both reproductive performances and velvet production Achieving reasonable winter growth rates is the major factor involved in reaching slaughter weights pre-Christmas in yearlings

Poor winter growth rates and carrying stock over a second winter markedly reduces venison profitability As shown in Table 1, this is the one area where high fertility farms markedly out-perform others

TABLE 1.

A Growing Stag's Feed Requirements Kg/Dm					
Growth rate	**Body weight (kg)**				
(gm/day)	*50*	*60*	*70*	*80*	*90*
50	1 71	1 94	2 15	2 36	2 57
100	1 88	2 11	2 33	2 54	2 74
200	2 06	2 45	2 67	2 88	3 08
300	2 33	2 79	3 01	3 22	4 42

VELVET PRODUCTION

Antlers have evolved on male deer to enhance an individual's chance of breeding Bigger antlers increase the chance of mating, therefore it appears logical to me that antler size should reflect all the important events in an animal's life

Each negative episode from conception on detracts from a stag's ability to express its true genetic antler potential A hind that breeds a high birthweight fawn and lactates very successfully, should have her genetic material widely distributed through offspring with a high likelihood of breeding extensively

This process continues with animals that can forage and compete well, resulting in better growth rates through the spiker and 2-year stage being "rewarded" with enhanced antler growth

Stud breeders exploit this principle by ensuring that virtually all of a young animal's genetic potential for growth is achieved, thereby allowing the mature stag to come close to expressing its full genetic potential for antler growth

I believe a large part of the potential lifetime velvet production of many stags is irretrievably lost in the first few years of life by the cumulative effects of poor nutrition

No amount of improved feeding at a later date will recover the lost ability to grow antlers

Records maintained on my own property support these views

1 The heaviest velveting 2-year olds were virtually always in the top 5 per cent of weaners in body weight This ranking seldom changes up to two years
2 Young stags sold onto farms where nutrition levels were poorer often produced less velvet as 3-year olds than they did at two years, whereas cohorts remaining on the home farm improved by 700-800 gm between two and three years

3 Stags sold with high potential for velvet growth indicated by 2-year velvet weights were frequently surpassed by animals of lower potential but with better nutrition and social environments

The past two seasons have also strongly emphasised the importance of good nutrition during the winter and early spring period for spikers, and its resultant effect on two-year velvet

In the 1994 season my 60, 2-year old hybrid stags averaged 2 65 kg velvet with 17/60 (28 per cent) producing between 3-4 kg/hd, and 3/60 (5 per cent) producing less than 1 8 kg velvet

That year had good winter grass growth combined with maize, feed intake levels were between 3 5 to 4 kg DM/day Spring grazing during velvet growth was on chicory/red clover and tama pasture January body weights averaged 238 kg with the heaviest reaching 250 kg

Last season we had a hard cold winter and I was forced to graze the spikers on another property Fifteen-month weights and spiker development differed little, but winter feed intakes probably dropped below 3kg DM/day

Chicory growth was also slow in spring when the deer returned to the home farm, and because of lower residual grazing levels feed on offer was also reduced This resulted in a marked change in 2-year velvet production

The 50 animals averaged 2 3 kg/hd, with only three exceeding 3 kg velvet, but still only three below 1 8 kg The effect was to dampen the ability of genetically superior animals to fully express their true potential

The difference in velvet revenue alone would have allowed me to increase winter feeding levels by over 30 per cent and the resultant effect in lifetime production is yet to be gauged

It is only when stags achieve 90 per cent or better of their potential bodyweight growth that they come close to being able to express their genetic potential for antler growth Below these levels the decline in velvet growth is rapid Once stags are mature, the ability to influence velvet growth by feeding becomes more limited

I hope these comments have helped re-focus our attention on just how important good nutrition is to improved productivity

No other single area has the ability to dramatically improve returns Yet the field is infinitely complex and no one approach will suit all Only by keeping an open mind, trying new ideas and objectively measuring our performance can we continuously improve and meet other challenges ahead