



DEERMASTER – What Is It?

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Background

Deer Master is a research and technology transfer project belonging to the South Canterbury/North Otago Deer farmers Association. The origins of this project were concerns over poor weaning percentage of hinds.

Initially the local NZDFA Branch began raising funds to research this issue. The NZDFA President at that time Mr Andrew Orbell introduced the local branch to the funding available through the FORST technology for business growth programme (TBG). This resulted in an application being lodged with FORST in 1995 for a project that embraced many issues apart from just the poor hind weaning rate. Support funding was also sought from the local DFA branch, NZGIB, prospective participant deer farmers, NZDFA Research Trust, AGMART and commercial sources.

Structure

On confirmation of funding the programme commenced with the selection of 16 farmer members who were willing to contribute to the rigours of an extensive research and development programme.

The challenge for the farmer members is the discipline required to fulfil the requirements of specific activities and reporting.

A structure for the running of the project was developed with the formation of Management and Technical Committees, a Project Coordinator and secretarial/office support.

Management requirements are invariably planned to be minimal to stop a top-heavy structure. However, an efficient and functional management structure is the only way that these projects can continue. The challenge for the Management Committee is to generate a minimalistic structure that is capable of delivering the Project.

The role of the Technical Committee is to examine the individual projects carried out by DeerMaster and to recommend modifications, continuation or even cessation of those.

Veterinarians that serviced the properties involved were also brought into the programme. Technical support for project design and data analysis was sourced from both Massey University and AgResearch Invermay. Since then roles which carry out the following functions have been created; an Assistant Coordinator, Financial Controller, and a Data Quality Examiner.

Objectives

- Project objectives were defined. To encapsulate all of the objectives, procedures and details, a manual was produced. This manual has stood the test of time and is the guiding force behind on going project decisions.

In broad terms the project sought to:

- Increase fawning percentages.
- Increase weaning weights.
- Improve venison and velvet performance.

Analysis of the data will be based on *summaries* and *comparisons* of information as well as relationships between two or more factors and various production outcomes.

Data has been collected for almost two years. To date the emphasis of the project has been the collection and inputting of a vast amount of data. Real effort is about to be expended on the analysis. Massey University specialist epidemiologists will have the primary role in doing this.

Initial summaries of information are at present just coming on stream and will be presented by Dr Noel Beatson in the following paper.

Due to the nature of the project therefore no significant results through statistical analysis are available yet.

The project has clear priorities for the dissemination of information on outcomes. Farmer members rank first, then the local Branch members and then lastly but as a definite requirement to do so to the wider deer farming fraternity.

Areas of Investigation

The project activities are best discussed under three categories as reflected in the manual. These are; *Research Initiatives*, *Technology Transfer* and other *Associated Activities*. Some areas are listed:

1. Research Initiatives

The objective here was to measure various parameters and through statistical analysis demonstrate linkages to;

- a. *Reproduction*
 - conception date
 - conception percentage
 - calving percentage
 - weaning percentage

- b. *Production*
 - body weight
 - velvet antler production

The parameters to be measured include:

- General haematology and biochemistry values
- Specific trace elements
- Specific serology values
- Other parameters including fusarium levels

Throughout the project all of the above parameters will be measured as well as the production and reproduction data. At appropriate intervals statistical analysis of relationships between these will be calculated.

Superimposed on this will be the farm profiles that are being recorded from the outset of the programme as well as being constantly updated. Nutritional data is being compiled on a number of monitor properties to be linked into the final analysis of results.

2. Technology Transfer Activities

Body Condition Scoring -

Massey University produced a laminated colour chart from which farmers could score their hinds at specific times of the year.

CIDR Implantation -

This was done to evaluate extension of the size of mating mobs per stag to a high number while maintaining conception rates.

Melatonin Implants -

These implants were evaluated as a potential means of improving yearling hind performance.

Routine foetal aging at time of pregnancy testing.-

Aging of the foetus to give an indication of mating and calving spread was introduced as opposed to the simple yes/ no pregnancy scanning to provide more refined measures of reproductive efficiency.

3. Other associated activities

- DSP examination of dry hinds. Dry hinds will be examined at DSPs to confirm whether pathology or anoestrus is responsible for hinds not conceiving.
- Death records and where possible cause of death are to be compiled over the course of the project.
- Routine soil and pasture analysis will be undertaken as regularly as twice per year

Other specific projects will be initiated as the need arises. To date these include a trial on Vitamin B12 to investigate the highly variable levels of B12 seen. Winter parasitism of hinds as reflected by winter pepsinogen peaks will be examined. The possibility of inadequate spring nutrition for stags growing antler will be assessed. The loss of foetus precalving due to various abortive causes will be measured and if significant investigated.

Summary

The DeerMaster Programme is currently in data collection mode. Much energy is being expended in handling this data. The volume of data being generated is phenomenal creating a real challenge to keep the data "clean". To date analysis, summaries and reporting of comparisons have been sidelined. This however is about to occur

Projects such as DeerMaster are excellent for researching specific issues that farmers believe are of relevance. These projects are also an excellent way of transferring useful on farm technology. The climate in which an on-farm project such as DeerMaster is run can and does compromise the exact scientific environment in which Research Institutes operate. However the results and relative value of those results in comparison to pure scientific research should not be underestimated.

Funding in this case has been adequate and envied by other competitors for research grants. With the scale of funding that this project has, (\$800,000) financial management skills must be on tap.