

Staggers research to go ahead!

A new research proposal — A survey of the impact of some pasture-borne toxicoses in Australian alpaca herds

Mark Gishen, Shingleback Ridge, 23 April 2004.

In previous editions of both the South Australian region and the National newsletters [1,2], I described the preliminary research proposal (PRP) that was submitted to the Rural Industries Research and Development Corporation (RIRDC) for research funding in 2004-2005.

Whilst this proposal was unsuccessful, the Research and Development sub-committee of the Australian Alpaca Association has considered the matter further and decided that there is a need to obtain some more detailed background data on the impact of pasture-borne toxicoses, including perennial ryegrass staggers, on alpacas in Australia.

The R&D sub-committee are of the view that we do not know how widespread these problems are and would like to start by undertaking a survey on the prevalence of endophyte-related problems, including perennial ryegrass staggers and sporadesmin (facial eczema), throughout Australia. Accordingly, they have allocated some cash funds for this project. They have approached me to volunteer my time to take on the role of project manager. The project will additionally be used as a pilot trial to determine the effectiveness of undertaking research in this manner with a volunteer as project manager, as it may well become the model for future research projects commissioned by the AAA. One of the first tasks for me will be to prepare a research plan and timetable, together with a budget. My intention is to build on the existing knowledge and experience within the alpaca breeders' community, set clear objectives that are achievable within the constraints of the budget and time resources available, and then commence the survey as soon as possible. Most importantly, the outcomes will need to be practical.

Therefore, I am looking for input from anyone who is at all interested in these areas of alpaca animal health and pasture management. Now is your chance to have some input into research that might help you and the whole industry in the future.

At present I am working closely with the R&D sub-committee to refine the definition of the scope of the project. Set out below is the current thinking on the proposal so that interested members can consider the issues and provide me with any comments they wish to contribute.

Scope of project

- Conduct a survey, using appropriate techniques and procedures, to estimate the prevalence and severity of some pasture-borne toxicoses (fungal) in Australian alpaca herds.
- The toxicoses to be considered for inclusion are, in order of priority: perennial ryegrass, sporadesmin, fescue, phalaris, annual ryegrass, paspalum, kikuyu, zearalanone (*Fusarium*). Some of these are not well recognised by many alpaca breeders and will present a considerable challenge to the survey in obtaining accurate data. It is likely that the survey will need to be restricted to two or three conditions only, otherwise the task will not be manageable.
- The project will also act as a pilot study for the concept of project management by a volunteer from within the alpaca industry.

Proposed project staff and agencies

It is hoped that there will be several organisations directly involved with the project, and their respective contributions will vary depending on their individual resources and expertise. These include:

- AAA Research & Development sub-committee
- Project manager(s) — volunteer
- State departments of agriculture/primary industry
- AAA regions from all areas of Australia
- Survey staff — commercial contractors, or could be volunteers (e.g. alpaca breeders).

Proposed research methodology

This will be decided as part of the planning process now underway and members views are sought.

- The suggested model is of a census type survey conducted by telephone, mail, fax or email. It is likely that a telephone survey will be the most effective means of achieving this, but will require more resources than a simple mail out survey. Some state departments of agriculture have achieved cost effective results using this technique and their experience, and if possible their resources, will be called on in designing and undertaking the survey.
- The survey will build on the information gathered in a previous survey conducted on herds in southern Victoria. The previous work (April 2001) initiated by a dedicated group of breeders and veterinarians in Victoria in collaboration with Dr Kevin Reed of the Pasture and Veterinary Institute of the Victorian Department of Primary Industries at Hamilton, showed that nearly 75% of respondents reported ryegrass staggers clinically affecting between 5% and 10% of their alpaca [3]. This information must be extended to cover the whole of the Australian alpaca herd in order to evaluate the problem in a national context.

Expected outcomes

- An appreciation of the prevalence of toxicoses in alpacas Australia-wide. As already stated, this will help identify the most frequently encountered problems of these types facing the industry.
- Information to allow the evaluation of the impact of toxicoses on the viability of the alpaca industry. The real costs of many of these conditions are completely unknown — it is possible that some are having a seriously detrimental affect on the viability of many alpaca enterprises. In addition, lack of adequate treatment or appropriate management strategies might jeopardise long term sustainability.
- Recommendations for further research and extension needs for the alpaca industry.

Expected outputs

Some outputs expected from the survey that have been proposed include:

- Estimation of the prevalence of fungal toxicoses on the basis of:
 - Proportion of AAA regions affected
 - Proportion of affected herds within each region
 - Proportion of affected animals within each region
- Estimation of the severity of toxicoses on the same bases as above.
- Estimation of the cost to the alpaca industry of various toxicoses.
- Evaluate the appropriateness of current management strategies to deal with and overcome the various toxicoses.

Time frame

A reasonable preliminary estimate for the time frame of the project is 12 – 18 months following acceptance of project plan and budget by the R&D sub-committee.

It must be emphasised that this plan is a very preliminary draft that is presented for comment. I would be more than happy to hear views from anyone interested in any of the problems mentioned in the proposed scope. If you want more information, wish to participate, volunteer, or provide comment on this issue please feel free to contact me directly.

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References

1. Mark Gishen, A proposal for a new research project: A preliminary study of perennial ryegrass toxicosis (staggers) effects on alpacas. South Australian Region Newsletter, Australian Alpaca Association, Issue 40 (November), pp. 7–9, 14; 2003.
2. Mark Gishen, A proposal for a new research project: A preliminary study of perennial ryegrass toxicosis (staggers) effects on alpacas. Australian Alpaca Association Newsletter, No. 45 November, pp. 17–19; 2003.
3. Kevin Reed and Leo Cummins, Incidence of perennial ryegrass staggers among alpaca in Southern Victoria, Department of Primary Industries, Pastoral and Veterinary Institute, Hamilton, Victoria.

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