

Compliance with residue requirements in velvet antler

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Abstract

The New Zealand Food Safety Authority (NZFSA) has conducted a limited survey for residues of xylazine and lignocaine in velvet. 100% compliance with the residue requirements for xylazine, but only about 50% compliance was recorded for lignocaine residues. Knowledge of the Develvetting Code of Practice was high amongst deer farmers and veterinarians who supplied the samples. Sample trace-back and telephone interview of the velvetters from whose farms the samples were sourced has elaborated some possible reasons for the non-compliance with the lignocaine residue standard.

KEY WORDS: *Deer, velvet antler, lignocaine, xylazine, residues*

Introduction

The New Zealand Food Safety Authority (NZFSA) has conducted a limited survey for residues of xylazine and lignocaine in velvet sampled from 3 velvet pools. The survey was initiated following the recent gazetting of new Maximum Permissible Levels (MPLs) for lignocaine and xylazine under the Food Standard and new MPLS under the Animal Products Act 1999 (APA) and were gazetted in November 2004. The residue standards of 0.5 mg/kg for xylazine and 0.1 mg/kg are different to the MPLs issued in July 2004 under in the Animal Products (Residue Specifications) Notice 2004 although the xylazine Maximum Residue Level (MRL) was 0.1 mg/kg (default) under the Food Standard. The very low MPLs that were specified prior to 18th November 2004 arose from a lack of scientific information about the residue status of velvet harvested using veterinary medicines although the belief was that the MPLs could not be complied with using the de-velvetting practices specified at the time.

The current MPLs are based on a specification of good agricultural practice (GAP) which, if followed, should give xylazine and lignocaine MPL compliant product. This practice was determined after extensive research into suitable de-velvetting practices and the residue outcomes from those practices. These practices were embodied in a Code of Practice (COP) that has been adopted by Deer Industry New Zealand (DINZ) and the National Velvet Standards Body.

The APA provides for Regulated Control Schemes (RCS) under Part 3 of the Act. The Animal Products (Regulated Control Scheme- Contaminant Monitoring and Surveillance) Notice 2004 provides for surveys and/or monitoring for contaminants where:

- It is inappropriate to manage risk under risk management programmes
- Risks may need to be addressed in relation to the production of animal material or the processing of animal product that is not required by this Act to be covered by a risk management programme
- Special provision is required for the purposes of overseas market access programmes

The contaminant monitoring RCS as it is called is very comprehensive and covers live animals, and farmed or wild mammals, birds, and fish.

Deer Velvet is an animal product and as such is covered by the regulations. There has been a historic perception that the residues thresholds were not met but as no assessment for these compounds for the practice of de-velvetting had been completed a programme of study was initiated by DINZ.

NZFSA survey

This survey by NZFSA was predicated in part to determine whether the above practices were understood by veterinarians and de-velvetters and were being followed and also whether in-field use would give residue compliant velvet.

While the RCS allows for both surveys and for monitoring, a pragmatic practice of doing a survey for a presumptive residue risk is done prior to any decision about introducing a monitoring programme except where there is a clear and evident problem or market access requires require a monitoring programme.

Monitoring programmes are managed by specifications issued under the RCS and tend to be prescriptive, onerous, time-consuming and relatively expensive and more to the point entirely funded by the affected industry sector. Once monitoring programmes are put in place the evidence required to stop a programme is such that programmes tend to stay for many years.

Sampling for the survey commenced in January 2005 and 50 samples were collected with approximately 2/3 coming from the South Island pools.

Results from the survey can be summarized as:

- Xylazine MPL compliance was 100 %
- Lignocaine compliance was about 50 %
- Non-complying lignocaine residues ranged from 0.12-18mg/kg
- Of the 27 non-complying lignocaine samples only 16 have been traced
- Non-complying lignocaine samples were taken in the proportion 10 for farmers and 6 by veterinarians.
- Knowledge of the Code of Practice and the requirements was very high amongst all respondents.

Trace-back and enquiry by one of the authors (SMM) indicated that some aspects of the de-velvetting require further work: These can be summarized as:

- Variation in the type of tourniquet used.
- Difficulty in getting the required tension- more especially by women particularly when working above shoulder level.
- Recession of the pedicle into the head for older stags leaves restricted space for access for lignocaine infiltration particularly for ring blocks. This was more pronounced with some tourniquet bands.
- Regression to previous habits of de-velvetting particularly with tourniquet application

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- Varying dosages of xylazine were successfully used to sedate animals yet MPL compliance was achieved.
- Higher dosages of lignocaine were used in some case but it was not possible to correlate this practice with higher residue levels.
- De-velvetters commented that the practice of using lignocaine prior to applying the tourniquet was done.

Conclusions

The observations noted are to be referred to DINZ for investigation and resolution. Surveys must be carried out on an agreed and

clearly stated best practice. NZFSA will continue to work with DINZ and the veterinary profession to resolve the outstanding issues and then carry out one more survey. If resolution is not achieved as shown by that survey an RCS monitoring programme is highly likely to follow. A monitoring programme allows for:

- non-compliant product to be condemned
- regulatory intervention to be taken against the supplier
- costs to be entirely borne by the industry