Residues: Regulatory Issues

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Introduction

A national programme covering food production animal species monitors compliance with New Zealand tolerance limits for chemical residues This programme includes all the major food species including deer Samples of relevant tissues are taken at licensed slaughter premises throughout the country and sent to various laboratories for analysis

Where chemical residues above the New Zealand tolerance are identified, a trace-back investigation is initiated These investigations are normally done by the Ministry of Agriculture and Forestry Verification Agency (MAF VA) veterinarian at the slaughter premise from which the sample was taken. The veterinarian drafts a report based on the investigation and interview with the owner of the animal(s) involved. It may also involve contacting the consulting veterinarian where necessary.

The owner of the animal(s) is required to develop a management plan for preventing a recurrence of the violation and the name and address of the owner is placed on a Suspect list to monitor ongoing compliance.

The national residue testing programme is only one small part of the overall legislative controls in place to ensure a high level of compliance nationally with New Zealand tolerance levels This high level of compliance is an important requirement for market access of New Zealand animal products into our major export markets

Veterinarians have an extremely important role to play in maintaining this situation and as a result on-going access of New Zealand product to export markets This paper discusses the legislative framework in New Zealand, the level of compliance of deer with New Zealand residue tolerances and the role of veterinarians in food safety and maintaining market access

The National Residue Testing Programme

The Ministry of Agriculture and Forestry has operated a National Residue Testing programme since the 1960's. This programme has been developed and improved as domestic and export markets have increased expectations and as test methodologies have been developed to detect new chemicals.

The objectives of today's programme include

- assess the effectiveness of New Zealand regulatory controls and agricultural practices
- monitor compliance of animal populations with New Zealand Maximum Residue Limits (tolerances)
- identify instances of non compliance or illegal use of chemicals
- implement trace back and corrective procedures.
- ability to prosecute offenders where necessary

MAF Food Assurance Authority manages the programme. This involves determining each year

- which animal groups and products are to be tested
- which chemicals each animal group will be tested for
- how many samples will be taken for each animal group and each chemical nationally
- negotiating with each of the industry groups a budget for financing the programme

The principles used to develop the programme include

- consistency with *Codex Alimentarius*
- the programme is scientifically and statistically based, ie the chemicals targeted are of significant food safety risk and that level of testing of the animal population provides statistically sound information about the level of residue compliance of the national animal population

The Residue Programme consists of.

1 **Chemical Residue Monitoring Programme** This involves random sampling of animals within the national population A statistically based sampling programme has been developed for each animal species targeting appropriate chemical groups, with relevant tissues being sampled for laboratory analysis

The results of these programmes give statistically significant information about the residue status of the national animal population Under this programme samples are taken and the product released

The criteria used for developing the monitoring programme include

- toxicity of the chemical compounds
- risk prone species
- extent and pattern of use of the chemical compounds
- persistence in the environment
- previous monitoring frequencies and results
- availability of analytical methods
- international concerns

Where samples taken under the programme are found with residue levels above New Zealand Maximum Residue Limits (MRL's), MAF Verification Agency veterinarians conduct trace-back investigations to establish the cause of the cause of the violation.

The owner is required to develop a management plan to provide assurances that there will not be a recurrence of the violation In addition the owner of the stock concerned is placed on a Suspect List and further surveillance of animals submitted for slaughter by the owner are tested to verify the effectiveness of the management plan The owner remains on the Suspect list until MAF is satisfied that issue has been satisfactorily resolved.

2. **Chemical Residue Surveillance Programme** This involves targeted sampling of specific owners/farms/animals where information indicates that specific samples should be taken

Under this programme samples are taken and product is held pending laboratory analysis

Reasons for surveillance samples being taken include

- owners name on the Suspect list
- ante mortem or post mortem assessment indicates possible residue eg Injection Site Lesions
- information made available to the MAF VA vet indicates testing is appropriate
- declaration made by the vendor that indicates testing is necessary

3 **Surveys.** In addition to the monitoring and surveillance programmes, surveys may be carried out to determine the presence, distribution, prevalence or significance of particular contaminants.

National Residue Programme results For Cervine (Farmed)

The results of the national programme over the past few years have shown a high level of compliance with New Zealand tolerance limits

For the past 2 years there have been no positive analyses above the New Zealand tolerance for any chemical tested under the national programme

There have, however, been a significant number of detections of certain chemicals, in particular organochlorine and anthelmintic residues These detections and their significance will be discussed

The role of veterinarians in prudent use of drugs in food producing animals

Prescribing veterinarians have an extremely important role to play in preventing chemical residues in food producing animals This role is recognised in both the Veterinarians Act 1994 and the Animal Remedies Act 1967 The latter is soon to be replaced by the Agricultural Compounds and Veterinary Medicines Act 1997

The legislation (old and new) is designed to control risks to animal welfare, agricultural security, trade and the meeting of food standards The risks with respect to chemical residue detections in overseas markets are not well appreciated The potential is there for such detections to have a major impact and disrupt trade with sensitive markets. The Australian meat industry was significantly affected in the late 1980's by import residue testing in the US and Japan when residues of organochlorines, sulphonamides and tetracyclines were detected above tolerance. These detections had a major impact on trade for a period of time and cost the industry millions of dollars to resolve.

Prescribing veterinarians need to be highly aware of their responsibilities and influence in ensuring the ongoing viability of New Zealand access to our major markets

As highlighted in the April 2001 Veterinary Council of New Zealand Newsbrief.

"The ARB is in the process of reviewing a number of the conditions of currently licensed products with a view to limiting use in line with importing country requirements.

The ARB licensing system provides the assurance that the use of these chemicals is controlled by those qualified to assess the risks of use Failure to maintain the essential link between animal/herd health veterinary consultation and the prescription of the most appropriate product under the particular circumstance jeopardises the effectiveness of that risk management.

The Code of Professional Conduct clearly states the expectation that veterinarians will use their privilege to prescribe drugs in full cognisance of their ethical and professional responsibilities Every veterinarian has a responsibility to carry out his or her prescribing function with due diligence"

The article goes on to highlight that veterinarians are expected to provide written prescriptions whether or not the owner of the animal chooses to purchase the drugs from the prescribing veterinarian The performance of our profession in this area could I suggest improve, given the privileges that have been bestowed upon us

Discussion on this matter has recently been initiated by the NZVA office in regard to prescriptions for animal remedies in feed stuffs I have seen numerous examples of prescriptions issued by prescribing veterinarians that I would suggest do not meet the expectations of the Code of Professional Conduct (Section 4) Nor do they meet the requirements of the ACVM Act in regard to providing sufficient information to prevent the occurrence of residues in primary produce from animals treated with an animal remedy.

Through NZVA, work has been initiated to develop a standard format for prescription pads for in-feed medication to be considered as an industry standard I would suggest that this initiative is relevant not only to prescriptions for animal remedies in feed stuffs but for prescriptions generally for food producing animals.

Veterinarians as a link in the "paddock to plate" continuum

Quality assurance systems which to date have focused largely on the processing and downstream sectors of the food industry are becoming more common as part of the on farm procurement process. Many meat processing companies now require on farm QA programmes to be in place as part of their supplier agreements with overseas customers

Regulatory requirements are also beginning to focus on farm supplier assurances as to the food safety attributes of the animals being presented for slaughter MAF implemented Animal Status Declarations for the Export of Animal Products from December 2000 In addition, MAF initiated

Movement Control of Animal Material for overseas market access in late 2000 as a result of Eurpoean Commission concerns This programme relates to the movement control of animal material considered to present a risk to trade, or human or animal health

Expectations regarding on-farm QA systems for chemical residues will increase with these regulatory requirements in place and farmers will be expected to have robust documented systems that support vendor declarations. For example the sort of documentation that should be considered include.

- feed supplier specifications in purchase contracts
- sources of animal remedies and control over use
- records of animal treatments
- identification and/or separation of treated animals
- records of compliance with withholding periods
- inventory control of animal treatments
- records of any off label use and consideration of tissue half lives

Obviously prescribing veterinarians have an important role in advising owners/farmers on many of these aspects. Additionally the expectations and requirements of prescribing veterinarians in regard to maintenance of documented quality systems will also continue to grow

Conclusion

Veterinarians have a highly important and responsible role in the production of safe food We need to be aware of the privileges we posess to prescribe drugs in food producing animals and always keep in mind the possible impact of our decisions and actions in the production of food for human consumption.