Response of the Antibiotic Resistance Steering Group to the report of the Antibiotic Resistance Expert Panel

At its meeting on 27 September 2005, the Antibiotic Resistance Steering Group considered the recommendations made in the report of the Antibiotic Resistance Expert Panel.

The Steering Group noted that the report is due to be released publicly at the NZFSA conference on 12 October, 2005 and a public consultation period, of several months, would follow. The report has been peer reviewed since it was completed and these reviews will be released with the report as background information.

The Steering Group also noted that a draft communications strategy had been developed by NZFSA to complement the report and that there would be an opportunity for Steering Group members to contribute to the strategy.

The Steering Group recommended that parties considering the report should be encouraged to take into account all the information provided and that no part(s) should be considered in isolation.

The Steering Group agreed in general with the recommendations of the report but felt that some required further clarification or comment. In light of this the Steering Group makes the following responses to the recommendations of the Expert Panel.

Report Recommendations

Use of Antimicrobials

1. *The development of animal disease management and good husbandry practices that minimise the routine prophylactic use of antimicrobials should be actively promoted by NZFSA, NZVA, animal industry organisations and the pharmaceutical industry.*

The Steering Group noted that disease management and good husbandry practices were already actively promoted by industry organisations, but agreed continued emphasis should be placed on these.

2. *The use of streptomycin in the pip fruit and summer fruit industries should continue to be permitted under present controls.*

The Steering Group supports recommendation 2 as it stands.

3. *The use of streptomycin for the treatment of tomato seedlings should be phased out.*
4. *The horticultural industries should be encouraged to continue to seek alternative strategies to control bacterial diseases so that the use of streptomycin can be phased out in the future.*
5. *Ongoing monitoring of resistance in the plant pathogens that are targets for streptomycin treatment should be undertaken.*

The Steering Group supported recommendations 3-5 with the further recommendation that NZFSA consults with industry by the end of 2006 to ascertain what steps have been taken or could be taken to give effect to these recommendations.

Regulation and Management of the Use of Antimicrobials

6. *The ACVM Act amendment to give statutory authority for applying conditions of registration to antimicrobial veterinary medicines in furtherance of public health objectives should be passed as soon as possible.*

7. *The ACVM Group should continue its present policy of classification of antimicrobial veterinary medicines for the purpose of registration (Stratification of Class I Prescription Animal Remedies, 2001), notwithstanding the potential non-compliance of the policy with the OIE Guideline (as presently drafted).*

The Steering Group supports recommendations 6 & 7 as they stand.

8. *A programme of surveillance and monitoring of antimicrobial resistance of animal bacteria as described in Chapter 7 should be implemented as soon as practical.*

The Steering Group strongly supports a programme of surveillance and monitoring, but feels that the programme outlined in the report is not detailed enough or entirely clear in its intention. It was explained that the programme was designed based on what testing was already undertaken and was a broad concept, it was not intended to be all-encompassing programme.

The Steering Group noted this and recommended that a combined working group be established to clearly define what the purpose of such a programme is; to clarify the desired outcome; its sustainability (e.g. availability of samples to allow an accurate representation of the situation) and the funding implications.

9. *The annual summary of statistics on sales of antimicrobial veterinary medicines should be accompanied by an analysis that shows how the medicines are used. Information on use should be obtained from industry sources and veterinarians who service the various industries. Consideration should be given to commissioning selected veterinarians to undertake periodic sentinel quantitative surveys of use within species/industries.*

The Steering Group supports recommendation 9 as it stands.

10. *The ACVM Group and MoH should commission the development and documentation of generic risk analyses of pathways by which humans are exposed to resistant zoonotic bacteria, and human pathogens may acquire resistance determinants of animal origin as a basis for future decisions on the registration and classification of antimicrobial veterinary medicines.*

The Steering Group noted that while the Expert Panel report did not provide any discussion on this issue, it supports the recommendation.

11. *The development and documentation of 'best practice' guidelines for veterinarians in the prudent use of antimicrobials drawing on the expertise within NZFSA, NZVA and its membership, the pharmaceutical industry and elsewhere should be given high priority.*

The Steering Group considered this to be a key recommendation. It was agreed that as the development of guidelines would provide veterinarians with a clear indication of the 'best practice' treatment options and drug hierarchy available to them, this in itself would contribute to preserving the efficacy of antimicrobial products and reduce the need for regulatory intervention. The Steering Group recommended that discussions commence as soon as practicable between NZFSA, the NZVA and associated industry groups to develop these guidelines.

12. *The proposed classification of antimicrobials used in New Zealand set out in Table 5.2 should be adopted as a resource.*

The Steering Group recommend that classification of antimicrobials should always be informed by the most recent and internationally recognised classification system, for example an updated classification system has been developed in Australia (EAGAR) which supercedes the JETACAR classification system which is the basis for Table 5.2.

Recommendations on Specific Antimicrobials

Aminoglycosides

13. *Evidence of synergistic effect and enhanced efficacy of mixtures of ß lactam and aminoglycoside should be required at the time of their next registration.*
14. *Oral aminoglycosides, alone or in combinations, should not be used to treat non-specific enteric infections in groups of food-producing animals. If used to treat gut infections, their selection should be confirmed by bacteriology and susceptibility tests.*

The Steering Group supports recommendations 13 & 14 as they stand.

Bacitracin

15. *Bacitracin resistance should be monitored as part of the surveillance system to investigate any correlation of bacitracin and vancomycin resistance trends. If no correlation is seen, this surveillance could safely be stopped.*

The Steering Group noted that while bacitracin is acknowledged as a D classified antibiotic of low concern, given there is also a question as to whether it may select for cross-resistance to vancomycin, consideration should be given to inclusion in the surveillance program. It was agreed that the working group being formed to develop the surveillance program should give special consideration to the status and inclusion of bacitracin in the program.

Cephalosporins

16. *Third and fourth generation cephalosporins should be registered for use in animals with a condition that they are for use only in life-threatening conditions in individual animals where culture and susceptibility testing (done prospectively or retrospectively) provides evidence of their unique clinical value.*
17. *Registration of current third and fourth generation cephalosporins for intramammary use and any new applications for registration should be reconsidered.*

The Steering Group supports recommendations 16 & 17 as they stand but notes that registration for cephalosporins are considered by the ACVM Group on a 3-5 year cycle and their reconsideration could be performed as part of this review process. It was also noted by the Steering Group that while there is one intramammary product registered, the conditions of registration for the product are in line with the recommendations. It is not for dry cow therapy or routine use during lactation.

18. *Conditions of the use of first and second generation cephalosporins in dry cow therapy should be that the criteria of Appendix 2 of the New Zealand Veterinary Code of Professional Conduct be applied and that they are the treatment of choice based on herd culture and susceptibility tests.*

The Steering Group supports recommendation 18 as it stands.

Fluoroquinolones

19. *The first two conditions applied to marbofloxacin boluses should be applied to all use of fluoroquinolones in food animals.*

The Steering Group noted that the conditions referred to in this recommendation are:

- "*Indiscriminate use of the product could contribute to the development of antibiotic resistance. The product should be used only in individual cases of serious infections that are not likely to respond to any other antibiotic.*

- *The product must not be used to treat groups of food-producing animals unless bacteriology has confirmed the diagnosis and sensitivities tests have shown that it is the only alternative that is likely to be effective.*"

The Steering Group supports recommendation 19 as it stands. It also noted that the development of guidelines as outlined in recommendation 11 will inform the most appropriate treatment options.

20. The first condition should be applied to all fluoroquinolone use in non-food animals, and any registered indication for use that does not meet this criterion should be reconsidered.

The Steering Group supports this recommendation as it stands but notes that registrations for fluoroquinolones are considered by the ACVM Group on a 3-5 year cycle and their reconsideration could be performed as part of this review process.

Macrolides

21. The use of macrolides and similar drugs in cattle should be discouraged.

The Steering Group noted the Expert Panels concern about the use of macrolides but felt that as there are occasions where the use of macrolides was the most clinically appropriate and immediately obvious drug of choice it was desirable to retain this option. It was further noted that the development of the guidelines and a hierarchy of drug choice as outlined in recommendation 11, and combined with current label directions, will ensure prudent use in cattle.

22. Macrolide resistance should be included in the surveillance system screens.

The Steering Group supports recommendation 22 as it stands.

Anti-mycobacterial drugs

23. None of these drugs should be registered for use in animals without a condition that they are for use only in life-threatening conditions where a culture and susceptibility has shown that no other drug is likely to work or where there are sound clinical grounds to believe they are the drug of choice.

The Steering Group supports recommendation 23 as it stands.

Streptogramins

24. Streptogramin resistance should be monitored as part of the surveillance system.

The Steering Group supports recommendation 24 as it stands.

Informing Regulatory Policy

25. The present policy settings are prudent and conservative. No further general restriction on the use of antimicrobials in animals seems justified. Some specific adjustments are proposed in Chapter 6.

26. Risk assessment protocols acceptable to both the ACVM Group and Medsafe should be developed hand in hand with the surveillance and monitoring programme proposed above. These protocols must reflect New Zealand practices because they differ from practices in other countries.

The Steering Group supports recommendations 25 & 26 as they stand.

A Surveillance Programme

27. *A surveillance programme, as outlined in Chapter 7, utilising existing/proposed microbiological sampling in the food animal industries and existing laboratory resources should be established forthwith.*
28. *The programme should be managed by an oversight committee made up of persons with the requisite expertise, nominated by the funding parties.*
29. *The pilot studies described in Chapter 7 should be initiated to run in parallel with the surveillance programme.*

The Steering Group supports the establishment of a surveillance programme. See comments detailed in recommendation 8.

Future Technical Advice

30. *The ACVM Group and Medsafe should appoint a standing advisory group comprising expertise in medical microbiology, epidemiology, veterinary pharmacology, animal nutrition and veterinary practice to advise them on any matters related to the use of antimicrobials in animals and plants that influence the evolution of antimicrobial resistance and on the design and interpretation of the surveillance programme.*

The Steering Group supports the formation of an on-going body to oversee the issues relating to the use of antimicrobials in animals and plants and antibiotic resistance and recommends that NZFSA commence discussions with relevant stakeholders with the view to establishing this body as soon as practicable.