

## Article

# Categorisation of Antimicrobial Use in Fijian Livestock Production Systems

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## Supplementary Materials

**Table S1.** Characteristics of 309 antimicrobials used in 236 livestock farms comprising of 276. enterprises located in Viti Levu, Fiji

| Factor                         | Sub-Categories                   | n (%)    |
|--------------------------------|----------------------------------|----------|
| Antimicrobial type             | Veterinary antimicrobial         | 306 (99) |
|                                | Human antimicrobial              | 3 (1)    |
| Veterinary antimicrobial class | Antibiotic                       | 170 (55) |
|                                | Anthelmintic                     | 139 (45) |
|                                | Oral solutions                   | 227 (73) |
|                                | Injections                       | 40 (13)  |
| Pharmaceutical form            | Long-acting injections           | 18 (6)   |
|                                | Intramammary lactating cow       | 17 (6)   |
|                                | Intramammary dry cow             | 7 (2)    |
|                                | One                              | 251 (81) |
| Number of API                  | Two                              | 32 (10)  |
|                                | Three or more                    | 26 (9)   |
|                                | Liquid                           | 247 (80) |
| Type of formulation            | Oral powder                      | 62 (20)  |
|                                | Group (flock/herd)               | 253 (82) |
| Administration type            | Single animal                    | 56 (18)  |
|                                | Self-prescribed                  | 268 (87) |
|                                | Para-veterinarian                | 30 (10)  |
| Prescriber                     | Veterinarian                     | 11 (4)   |
|                                | Para-veterinarians (vet clinics) | 263 (85) |
|                                | Veterinarian                     | 7 (2)    |
|                                | Over the Counter                 | 10 (3)   |
| Source                         | Veterinary Retail company        | 2 (1)    |
|                                | Other farmers                    | 1 (<1)   |
|                                | Contractor                       | 7 (2)    |
|                                | Dairy Cooperative                | 5 (2)    |
|                                | Farmers farm cabinet             | 2 (1)    |
|                                | Feed supplier                    | 9 (3)    |
|                                | Other sources+                   | 3 (1)    |
|                                | Anthelmintics                    |          |
| Antimicrobial class            | Benzimidazole derivatives        | 43 (14)  |

|                |                                        |         |
|----------------|----------------------------------------|---------|
|                | Imidazothiazole derivatives            | 96 (31) |
|                | <i>Antibiotics</i>                     |         |
|                | Aminoglycosides*                       | 26 (8)  |
|                | β-Lactams                              | 81 (26) |
|                | Tetracyclines                          | 58 (19) |
|                | Sulphonamides and Trimethoprim*        | 1 (<1)  |
|                | Macrolides                             | 4 (1)   |
|                | <i>Enterprise and production stage</i> |         |
|                | Beef- fattening cattle                 | 4 (1)   |
|                | Breeding cattle                        | 37 (12) |
|                | Calves                                 | 42 (14) |
|                | Dairy- lactating cow                   | 53 (17) |
|                | Dry cow                                | 14 (5)  |
|                | Heifers                                | 3 (1)   |
|                | Calves                                 | 82 (27) |
|                | Layer-breeding birds                   | 5 (2)   |
|                | Layer hens                             | 30 (10) |
|                | Broiler-breeding birds                 | 25 (8)  |
|                | Meat birds                             | 13 (4)  |
| Livestock type |                                        |         |

Note \* denotes formulation with a combination of different classes of antimicrobials, + denotes sourced online, - denotes no scores, n denotes frequency, % represents percentage, API means active pharmaceutical ingredient, all percentages were rounded off to the nearest decimal point, contractor – commercial poultry processor.