

Prudent use of antimicrobials crucial in livestock farming

The emergence of antimicrobial resistance is a global problem in both human and animal medicine. Veterinarian **Dr David Gerber**, the chief technical officer at South African animal health company V-Tech, explains the problem, and highlights the potential benefits of a surveillance programme.

The views expressed in our weekly opinion piece do not necessarily reflect those of *Farmer's Weekly*.

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This is an extract from a paper presented by Gerber at the Ruminant Veterinary Association's 2019 Congress, held in uMhlanga, KwaZulu-Natal, from 20 May to 22 May.

“Where a range of antimicrobials used to be effective to treat bacterial infections, there are increasing numbers of cases where none are effective anymore. In particular, multiresistant *Staphylococcus aureus* is an increasing, potentially life-threatening problem, and can often only be treated with last-resort antimicrobials like Colistin.

In the past, Colistin was considered too toxic to be used in humans, but it has been widely used in the livestock industry since the 1940s. It should now be reserved for last-resort human use where all other options fail. In animals, it should be reserved for specific cases under veterinary control where it is the only option remaining and where it would be cruel not to treat a sick animal.

For veterinarians involved in the intensive livestock production industry, it is vital that we are part of the solution rather than part of the problem. It is, therefore, essential that we use the One Health approach, which requires us to consider the effects of our actions on human and animal health, as well as on the environment.

In 2016, the World Health Organization (WHO) published the fifth revision of its report, 'Critically important antimicrobials for human medicine for the risk management of antimicrobial resistance'. In the broader framework of the One Health approach, South Africa has adopted international recommendations and formulated the South African Antimicrobial Resistance National Strategy Framework (SAAMRNSF), which clearly follows WHO recommendations, specifying that antimicrobials in food-producing animals should be used only under the supervision of veterinarians.

It is crucial that we develop a national antimicrobial resistance surveillance programme that allows us to recognise the emergence of resistance and to react fast if a critical change is occurring. Ideally, specimens from the various species should be routinely taken from animals at abattoirs spread over the entire country.

THE ROLE OF VETERINARIANS

The use of certain stock remedies containing antimicrobials that are important for human medicines, and that can be bought

over the counter (OTC) without any veterinary control, poses a risk to abuse and, consequently, to the emergence of resistance. Since bacteria selected in animal husbandry and found to be resistant to multiple antimicrobials pose a risk to human health, veterinarians must take responsibility for the antimicrobials used to avoid their abuse.

In the US, the usage of antimicrobials was very similarly regulated to usage in South Africa until 2015, after which the US implemented a new Veterinary Feed Directive (VFD).

THE USE OF ANTIMICROBIALS FOR LIVESTOCK SHOULD BE REGULATED

In 2017, all antimicrobials of human importance became VFD drugs there. All feed containing a VFD drug is now classed in the US as a VFD feed and can only be used upon a VFD order being issued and signed by a registered veterinarian. The US has three categories of VFD feeds:

- Type A medicated article. This is not a feed but rather a concentrate used in the manufacture of medicated feed of Type B or Type C;
- Type B medicated feed. Must be further diluted to become a Type C medicated feed;
- Type C medicated feed. The only feed that can be fed to animals.

US feed mills are only allowed to produce and deliver VFD feeds with a valid VFD order, and a farmer is only allowed to feed any VFD feed based on the same VFD order from his/her veterinarian. A veterinarian is only allowed to issue a VFD order to a bona fide client, namely where a valid veterinarian-client-patient relationship already exists.

SA NEEDS BETTER REGULATIONS

In South Africa, antimicrobials used in feed or water for livestock production should be treated similarly to those in the US, and should all be regulated under the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No. 36 of 1947).