

## **Veterinary drugs: uses, mis-uses and abuses**

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Today we want to talk about something that can really be problematic for farmers: working with drugs on the farm. I have seen some comical mistakes happening around the use and misuse of drugs. irrespective of weight

Dosage:- The dosage is the quantity of drug that you should administer to the animal. Some really serious mistakes are being made here: I have known farmers who claim to inject a herd of 20 grown cattle with 1 x 100 ml bottle of oxytetracycline! That is patently impossible and serves to highlight what I am saying.

Calculating dosage: The correct dosage is calculated based on the dose rate written on the **manufacturer's instructions**. For common injectables, that is 1ml: 10kg body weight. Now, taking that dose rate, your big cow weighing 600 kg would require 60 ml of the drug, not 5 ml!

**Drugs versus vaccine:-** Drugs are used to treat sick animals. They can only be used rarely for animals that are not sick. On the other hand, vaccines are not drugs in the sense of chemicals used to kill microbes, no. Vaccines are weakened **antigen** (disease-causing organisms) that are introduced into the body to **stimulate** the immune system to start producing antibodies against a specific disease. The key difference then is that vaccines are used before an animal gets ill: a drug is used when animal gets ill.

Another important difference to note is that a vaccine is a **protein**(whether dead or live), and as such it can denature or lose its viability if exposed to certain temperatures. That is why it is critical to store vaccines in the fridge or to maintain a **cold chain**. Drugs are not that sensitive, and can be stored in any cool place, not necessarily in the fridge.

Finally, we get to the use of drugs before an animal gets ill: prophylaxis or prophylactic treatment. This is done when we know that our animals are moving into an area with certain diseases for which the animal does not have immunity. In humans, this happens when people

go into malaria areas and they take anti-malaria drugs to protect them before their systems acquire the necessary antibodies.

Misuse of drugs is dangerous because it can result in antibiotic resistance. This means certain disease-causing organisms are no longer sensitive or can now resist certain antibiotics because of prolonged misuse or under-dosage.

I know this is a technical area, but its important to grasp the big points because farmers treat most of their animals by themselves.

Till next time, let us know whether we are giving you useful information.