

Flock / Herd medication - administration through drinking water or feed



Flock / herd medication is a way of administering treatment or prophylaxis to a large group of animals by adding medication to water or feed.

However, as with other ways of drug administration, this method has pros and cons:

Advantages:

- Low cost
- Low work load
- Ease of administration
- Medication for all sick animals as well as for animals with subclinical signs and animals still in the incubation period.

Disadvantages:

- Drug uptake can vary dramatically through for a number of reasons e.g.
 - Variation in water (feed) uptake by individuals
 - No water / feed uptake during night time
 - No or less water/feed uptake by very sick individuals
 - Unprofessional preparation & use of medication
 - Solubility, homogeneity & stability of the drug formulation mixed with water / feed
- Medication uptake by healthy animals

Administration through water is preferred since a sick animal will usually stop eating before it stops drinking.

Necessary knowledge to avoid over- or underdosage

- Dosage of the drug in mg/kg bodyweight (note: check if this is dose of active ingredient or dose of product used!)
- Average weight of animals in flock & size of the flock
- Water/Feed consumption/24 hours
- Factors influencing water/feed uptake:
Flock/herd size (access to water/feed) sex, age, weight, species, breed, sick / healthy

Factors influencing efficacy of medication:

- Drug formulation: sedimentation/mixing properties, palatability, stability in water/feed, pharmacokinetics.
- Water: temperature, pH, hardness, mineral content (can interfere with medication by causing precipitation, inactivation, complex formation), contamination, drinking water system in use.
- Feed: properties medication:
Premix - min 5 kg per ton feed necessary
Topdressing - need for homogeneous dispersion
- Environmental: lighting periods (no food & water uptake at 'night'), ambient temperature, type of diet (high fibre content = more water consumption) and energy density of the diet (higher energy diet = less water consumption)

Formula to Convert mg/kg bodyweight per day to mg/l water or mg/kg feed

$$\frac{W \times N \times D}{C} = \text{mg/litre drinking water (or mg/kg feed)}$$

W = Average weight animal

N = number of animals in flock (herd)

D = dose mg/kg bodyweight

C = Litres of drinking water or kg feed consumed by flock(herd) in 24 hours

Important notes:

- Prepare fresh medicated water / feed according to instructions but at least every 24 hours
- Treat for 72 hours to evaluate whether or not the medication is beneficial
- If improvement is noted: finish the course of treatment as prescribed by the veterinarian
- very sick animals need to be medicated individually as they will not eat or drink as they would normally do and will therefore be under-dosed more frequently

Last but not least, medication is never an alternative to good management and bio security!

BIBLIOGRAPHICAL REFERENCES

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