

Drug Rules in Food Animals

What is considered a food animal?

Any animal who produces a product that can enter the food chain. Even if a food animal species is kept as a pet, we are by law required to treat them as food animals as far as use of drugs is concerned.

- ❖ Major food producing species are beef cattle, dairy cattle, swine and poultry
- ❖ Minor food producing species are goats, sheep, rabbits, honey bees and deer under some circumstances
- ❖ Camelids (llamas and alpacas) don't often enter the food chain but if there is a chance that they will, drug use should be appropriate

What is a drug?

A drug is any medication or chemical that is applied topically (on ears or skin), given by mouth or injected for the purpose of treatment or prevention of disease. This includes drugs that are available over the counter, or by prescription. This may apply to some herbal products also.

What is a withdrawal time?

A withdrawal time is the time between when a drug is administered to an animal and any of its products (milk, meat, eggs) enter the food chain (be consumed).

Why are there restrictions on which drugs we can use?

As producers, we have a responsibility to provide safe food for the public. Drug use may be restricted because the drug or its residues could be toxic when eaten, or the drug (usually an antibiotic) is used for difficult infections in humans and should be reserved for human use.

Which drugs are illegal to use?

These drugs SHOULD NEVER be used in ANY food animal species under any circumstance, even by veterinarians:

- ❖ Nitrofurazone (Furazone or Furacin topical medication)
- ❖ Gentian violet (topical fungal treatment for horses)
- ❖ Clenbuterol
- ❖ Diethylstilbesterol
- ❖ Chloramphenicol
- ❖ Metronidazole

Which drugs have restrictions on their use?

Extra-label use is restricted in the following drugs (see below for explanation of extra-label):

- ❖ Fluroquinolone antibiotics that include Baytril (enrofloxacin) or Advocin (danofloxacin). These drugs are labeled for respiratory disease in beef cattle and dairy calves less than 20 months old only.
- ❖ Cephalosporin antibiotics. Third generation ceftiofur (Naxcel, Excenel and Excede as well as intra-mammary preparations) should only be used at the labeled dose, route and frequency in cattle, swine and poultry. It can be used for other than labeled indications (labeled uses are respiratory disease, foot rot and metritis). These regulations do not apply to sheep and goats. The regulations also do not apply to cephalosporin intra-mammary products.
- ❖ Sulfa drugs should not be used in dairy cattle >20 months old except Albon (sulfadimethoxine)
- ❖ Phenylbutazone should not be used in dairy cattle >20 months old

The aminoglycoside antibiotics (gentamicin and amikacin) have a voluntary industry ban. This is because the drug residues remain for a long time.

The pasteurized milk ordinance regulations (PMO) also prohibits DMSO, colloidal silver and dipyrone on dairies.

If we need to use drugs which ones should we use first?

A labeled drug should be used first. Look on the bottle to see if it has the species name and the disease for which you want to use it written there. These drugs are FDA approved and have undergone safety and efficacy testing in that species for that condition. A withdrawal time for milk and/or meat will have been established and will be listed on the label.

What is extra-label use?

Extra-label use is use of a drug that does not have the species and indication (reason for treatment) that you want to use it on written on the label. It also includes changing the dose, route (e.g. from intravenously to oral), or frequency (e.g. giving twice a day instead of once a day).

The reason for the regulations and restrictions for extra-label use of drugs is because different animals process drugs differently and different doses or routes change the way the drug is eliminated from the body and therefore the withdrawal time will change. There are also some toxicity risks of using different drugs in different species.

How can we legally use extra-label drugs?

By law only a veterinarian can prescribe or use drugs in an extra-label fashion. This includes drugs that are available over the counter. Therefore, even though you can buy some antibiotics and anthelmintics (dewormers) over the counter without a prescription by law, your veterinarian should prescribe them to you, or give you the appropriate dosage and withdrawal time when they will be used in a way or in a species that is not on the label

Unfortunately in sheep and goats, there are very few drugs that are labeled. Therefore extra-label use is very common. There are no drugs labeled for alpacas/llamas.

In order to use a drug extra-label, the veterinarian must follow a set of rules:

- ❖ The veterinarian must have a valid client patient relationship with the animal(s). This means the veterinarian should have examined and diagnosed the animal or the veterinarian has knowledge of the herd/flock. The veterinarian should be able to follow up with the producer/animal regarding the outcome. Some practices stipulate a number of times a year the vet must see animals or visit the farm/ranch in order for that veterinarian to prescribe drugs. Understandably this is difficult in some areas of the country. However, having a veterinarian that is able to work with you has benefits beyond the ability to prescribe drugs including management of herd health, performing necropsies of dead animals, pregnancy diagnosis and emergencies.
- ❖ The vet must first use a drug that is labeled for another food animal. If there is not a drug available then a human or companion animal (dog, cat, horse) drug can be used. Compounded drugs from bulk drugs or non FDA approved drugs (e.g. drugs from foreign countries) should not be used. The only compounded drugs that can be legally used are antidotes.

An example of a non-FDA product that is compounded but available in the USA is Baycox (toltrazuril). Because there are other food animal and equine drugs available and labeled for use, this is an illegal use of this product in sheep and goats.

Changing the route of the medication (e.g. giving a drug that is labeled intravenously by mouth instead) is not an appropriate use of extra-label drugs.

- ❖ No extra-label use of medications in feed are allowed.
- ❖ The veterinarian must establish a withdrawal time for that medication. The veterinarian can obtain that information from www.farad.org.
- ❖ The drug that is dispensed should have a label with the animal(s) name and client name, drug name, dose, route, frequency and withdrawal time.