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# Drug Use in Food Animals

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*Food  
Safety*



*Fact  
Sheet*

## **Drug Use in Food Animals**

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Producers should be aware that there are only three ways to legally obtain and use antibiotics and other drugs in food animals. The first, and most common source, is over the counter drugs, labeled for specific uses. In using these products the producer is limited strictly to the dosage, routes, animal and disease condition listed on the label. He cannot legally use it in any other way.

These same guidelines must be applied to all feed additive medications as well. Even your veterinarian cannot prescribe feed additives to be used in any way other than that listed on the label.

The second method of obtaining drugs is as an “Extra Label Use Drug.” Your veterinarian must be involved with this process and know your animals and situation and prepare a specific label to direct you in the use of the drug, including a withdrawal time. This use only applies when other approved (labeled) drugs are not available for the diagnosed condition or where they are found ineffective.

The third route for obtaining drugs is on a prescription basis from your veterinarian. These drugs are approved for use in the class of animal being treated, but your veterinarian must give you further directions and instructions on the specific use of the product.

An excellent reference resource is available to both veterinarians and producers and is called the Food Animal Residue Avoidance Databank (FARAD). There are three regional offices that can be contacted by telephone for information on drugs available, approved uses and withdrawal times. The locations and telephone numbers are:

- Florida                    904-392-4085
- Illinois                    217-333-3611
- California                916-752-7507

Publications are also available from this same source, which lists all of the drugs approved for a specific class of food animal or a combined volume which covers all food animals.

A number of commercial kits are not available for use in testing of milk or urine for drug residues. Some of these can be used on the farm to determine the status of an individual animal that has been treated to be sure the food product is free of any residues prior to marketing. Some are screening tests and will detect a broad range of drugs, while others are very specific and would only detect one or a few drugs. The sensitivity of the tests also varies. Producers using these tests must understand the specific limitations of each test product and use it accordingly. Otherwise, the producer may test an animal at the farm and determine that all residues have disappeared only to later have the milk or carcass condemned at the processor or packing plant.

The term withdrawal is used to refer to milk and the time from last drug use in the lactating dairy cow until marketing of the milk from that individual cow.

The term withholding is associated with drug use in relation to animals marketed for slaughter and meat use. The withdrawal (milk) or withholding (meat) periods are established, based on the half life of the drug in a specific class of animal. A half-life is the time required to reduce by one-half the residues of the drug present. In 10 half-life periods, 99.9% of the drug residue will have been eliminated from the animal.

If the half-life of a particular drug is 3 hours, almost all of the drug will have been eliminated by 30 hours after administration.

If the half-life is 3 days, then it will take 30 days for a similar reduction. Thus, doubling the dose of drug given should only extend the time by one half-life to achieve near complete removal from the body.

If the half-life itself is extended, because the illness being treated slows down the normal body processes, then the retention time of drug residues could be greatly extended. For instance, if the length of half-life were doubled in the examples listed above, the time required for withdrawal or withholding would be extended from 30 to 60 hours and from 30 to 60 days.

When using any drugs in food producing animals, follow these precautionary management steps to avoid residues.

1. Establish a quality assurance program related to the food animals you produce.
2. Use only FDA approved products.
3. Store and administer all drugs properly.
4. Identify treated animals.
5. Keep adequate records of treatment.
6. Observe label withdrawal times and recognize that a severely ill animal may require an extended withdrawal period.
7. Test for residues if there is any question.
8. Educate employees on drug administration practices and the importance of preventing drug residues.

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