Veterinary Feed Directive (VFD)
What Does It Mean to Sheep and Goat Producers?

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VFD stands for Veterinary Feed Directive. It became law on January 1, 2017. It regulates how medically-important antibiotics (antibiotics that are used to treat humans) are administered to animals in the feed or water. Veterinary oversight is now required to administer some antibiotics to animals. Farmers can no longer go to a feed store and buy certain medicated feeds or water-soluble antibiotics. Some antibiotics in the feed require a VFD. Some antibiotics in the water require a veterinary prescription (Rx).

VFD Drugs
Cephalosporins
Glycopeptides
Fluoroquinolones
Macrolides
Penicillins
Quinolones
Tetracyclines
Sulfas
Others

Who does it affect?
The Veterinary Feed Directive (VFD) applies to all animal farms, regardless of species or size of operation. A 4-H or FFA member with two market lambs is subject to the same regulations as a feed lot that finishes 100,000 cattle and has a full-time veterinarian on staff. Even beekeepers are affected by the new regulations.

What is it?
VFD is the name of both the regulation and the written order required to put an antibiotic in the feed. Antibiotics affected by the new regulations are called VFD drugs. In order to feed a VFD drug, a producer needs to get a VFD (written order) from a licensed veterinarian. A VFD permits a feed manufacturer to possess and distribute VFD drugs. It also permits a producer to mix a VFD drug into his or her own feed. To include antibiotics in the drinking water, a producer needs to get a prescription (Rx) from a licensed veterinarian. VFD and Rx are different documents, but both must be issued by a licensed veterinarian.

There are six steps to obtaining a VFD:

1) Contact a veterinarian with whom you have a veterinarian-client-patient relationship (VCPR);
2) The veterinarian will determine if the situation warrants use of a VFD drug or feed;
3) The veterinarian issues a written and signed VFD order;
4) The veterinarian retains a copy of the order and gives the original signed document and a copy to the client;
5) The client keeps the copy and gives the original document to the feed distributor who releases the feed to the client;
6) Separate orders are required for different groups of livestock and/or to extend the treatment duration.

VFD forms can be pre-printed. They can be paper or electronic. They must contain the following information:

1) Drug name
2) Drug amount
3) Indications of use
4) Location
5) Number and kind of animals
6) Amount of feed to be mixed
7) Name, address, and phone number of vet
8) Treatment date
9) VFD date
10) Feeding instructions
11) Withdrawal time, warning, or cautionary statements
12) Vet's license number and state

Copies of VFD forms need to be kept for at least two years.

What about extra label use of VFD drugs?
The VFD does not allow extra-label drug use (ELDU), except for antibiotics administered in the water. Drugs can only be used in accordance with their labels: species, treatment regime, use, etc. For example, drugs labeled for cattle cannot be fed to sheep or goats. A drug labeled for treatment of respiratory disease cannot be fed to treat pinkeye or foot rot. Producers are not allowed to feed a drug at a higher dosage than is indicated on the label. It is not legal to feed a drug for longer than is specified on the label.

The inability to use VFD drugs extra-label poses problems for sheep and goat producers, as few drugs are FDA-approved for minor species, such as sheep and goats. Recognizing the significance of this issue, the FDA revised its Policy Compliance Guide (CPG 615.115) to give

its staff “regulatory discretion” with regards to the extra-label use of medicated feeds in minor species:

> “Under the CPG, when there are no approved treatment options available, the health of animals is threatened, and failure to treat affected animals would result in suffering or death, the extra-label use of medicated feeds may be considered for treatment of minor species as long as the conditions and procedures described in the CPG are followed.” [December 2, 2016]

In other words, while extra-label use of medicated feed is still illegal, the law is not likely to be enforced, if policy guidelines are followed. For use in sheep and goats, the medicated feed must be approved in a mammalian species, and the concentration of the drug in the feed cannot be changed.

Prescription (Rx) drugs

VFD changed the marketing status of some drugs. Antibiotics administered in the drinking water changed from over-the-counter (OTC) to prescription (Rx). Producers need to get a prescription (Rx; different from a VFD) in order to use these drugs. Unlike VFD drugs, extra-label use of these drugs is allowed. Of particular interest to sheep and goat producers are sulfa drugs (e.g. sulfadimethoxine; tradename Di-Methox®) which are commonly used to prevent and/or treat coccidiosis in lambs and kids. Producers now need to get a prescription (Rx) from their veterinarian to use sulfa drugs in the drinking water. Furthermore, they may have to buy these drugs from their veterinarian, as farm stores may no longer carry drugs that require a prescription. A retail establishment must be licensed in order to carry prescription drugs. To feed sulfa antibiotics, a VFD is required.

Not all drugs are affected

VFD does not all affect all antibiotics (or drugs). Only certain antibiotics that are administered in feed or water are affected by the new regulations. Antibiotics that are given via injection, bolus, oblet, or drench are not affected. For example, tetracyclines mixed in the feed (e.g. Aureomycin®, CTC crumbles) are affected by the VFD, but tetracyclines given by injection (e.g. LA-200®, Biomycin®) are not (at least not yet). Injectable antibiotics like penicillin are not affected by the new law.

Feed additives, such as ionophores (Bovatec®, Rumensin®) and coccidiostats (Corid®, Deccox®) are also not affected, as they are either not antibiotics or are antibiotics that are not considered medically-important (to people). They do not fall under the new regulations unless they are used in combination with a VFD drug. For example, sometimes antibiotics and coccidiostats are included in the same feed. Anthelmintics (dewormers; e.g. Cydectin® and Ivomec®) and vaccines (e.g. Bar Vac® CDT and Covexin®-8) are also not affected. They are not antibiotics.

Why do we have new regulations?
The driving force behind the Veterinary Feed Directive is the concern for antibiotic resistance and the role animal agriculture may play in the development of antibiotic-resistant bacteria. Antibiotic resistance is a growing problem. It is complicated. For a while now, there has been growing opposition to the (extended) use of antibiotics in feed to improve performance of animals. Over 10 years ago, the decision was made to work towards removing all (human) medically-important antibiotics from being used in animals for purpose of improving performance. It was decided that all medically-important antibiotics be under veterinary control and that antibiotic use in animals be restricted to prevention, treatment, and control of specific bacterial diseases. Non-therapeutic uses should be prohibited. The new VFD reflects these beliefs.

Lack of Veterinarians
Greater veterinarian involvement in animal health decisions is mostly a good thing. The problem is the general lack of large (or food) animal veterinarians, especially for producers in rural areas and those who raise minor species, such as sheep and goats. It should prove easy for big animal industries (beef, dairy, poultry, and swine) to comply with the new regulations, as they generally have veterinarians on staff and/or or ready access to veterinary expertise. But what about sheep and goat producers and other livestock producers in areas poorly served by veterinarians?

According to USDA (2010), only about 8% of veterinarians practice exclusively or predominantly on food animals. Another 7% have mixed animal practices. A recent CattleFax survey showed that only 20% of US beef producers claim to have a stable relationship with a veterinarian. The last NAHMS Sheep Health Study showed that veterinarians only visited 24% of sheep operations in the US during the survey year. About one-third of goat operations (2009) consulted a veterinarian in the 12 months documented in the survey. What is USDA and/or FDA going to do to address this problem? USDA is directing some support towards the problem, but will it be enough? And will they continue to make regulations that require veterinarian involvement without considering the lack of veterinary expertise?

Pros and cons of VFD
As with all regulations, there are pros and cons, winners and losers, and unintended consequences. Whether the regulation (and any future regulation) will have any impact on the development of antibiotic-resistant bacteria remains to be seen. This does not seem to be the situation in other countries.

The sheep and goat industry is not the primary target of the regulations. Like most regulations, the VFD will favor larger, industrial-type farms, as they often have full-time veterinarians on staff. They also often manufacture their own feeds. It may be difficult for

small and medium size farms to comply with the new regulations. The added costs may be the final straw in their profit-loss scenario.

Animal welfare could suffer as a result of the new regulations. Treatment may be delayed or omitted completely. Disease incidence may increase, requiring more animals to receive individual treatment. Instead of feeding an antibiotic or putting it in the drinking water, it may be necessary to catch and give individual treatments, via injection or drench, to every animal in a flock or herd. This may need to be done multiple times. Non-antibiotic treatments may be ineffective at alleviating symptoms and disease.

On the plus side, the new regulations should give consumers more confidence in meat, milk, honey, eggs, fiber, and other products that animals produce. It will show that animal industries are not improperly using antibiotics, which is often assumed by consumer advocates. It will put more emphasis on animal management. For some producers, drugs have supplanted good management. They've become a crutch. The new regulations may lead to new and less expensive alternatives to antibiotics. The regulations may improve and expand relationships between animal producers and veterinarians.

Is this just the first phase?

Many people believe this is only the first phase of regulations governing the use of antibiotics in animal agriculture. For example, livestock producers in California now need a prescription from a veterinarian to purchase injectable antibiotics (e.g. Penicillin and LA-200®) and other medically-important antibiotics. Some antibiotics are still available for purchase at retail establishments, and a prescription is not needed each time the antibiotic is used. As with the VFD, ionophores are not affected, as they are not medically-important. Will this landmark legislation eventually serve as the model for federal law?

Antibiotic use in sheep and goats

The sheep and goat industries aren't large users of antibiotics. In 2010, sixty-nine percent of sheep operations reported using oral, injectable, or topical antibiotics. Antibiotic treatments were given mostly to ewes and nursing lambs, and the primary reason for treatment was respiratory distress. Similar figures are not available for goats. In 2010, 7.3 percent of sheep operations administered sulfa drugs in the feed or water to prevent coccidiosis. Non-VFD drugs were used by far more operations. 12.5 percent of sheep operations used aureomycin premix or soluble powder in the feed as a growth promotant. A lesser percent (4.8) used tetracycline in the feed. No data is available on the use of aureomycin to prevent vibrionic abortion in sheep. In 2009, 43.4 percent of goat operations fed medicated feed to kids to prevent coccidia, but it is not known if any of the feed contained a VFD drug.

There are only a few antibiotics currently approved to feed to sheep. The most common is tetracyclines. No antibiotics are currently approved (by FDA) to feed to goats. Tetracyclines

(Aureomycin®, CTC crumbles) have been fed to ewes to reduce the incidence of vibrionic abortions and to lambs to increase rate-of-gain and improve feed efficacy. It is no longer legal to feed tetracyclines to promote growth. Growth claims were removed from product labels of feed-grade antibiotics. A VFD is now required to feed tetracyclines to pregnant ewes.

All sheep and goat producers need to be aware of the regulations and take steps (if necessary) to establish a relationship with a veterinarian. The Veterinarian-Patient-Client-Patient Relationship (VCPR) is at the core of VFD.

Veterinarian-Patient-Client-Relationship (VCPR)

At the core of the Veterinary Feed Directive is the Veterinarian-Patient-Client Relationship (VCPR). A VCPR is the interaction between the animal owner and his/her veterinarian. It is defined by the state regulatory board and federal law. A valid VCPR exists when:

1) A veterinarian has assumed the responsibility for making medical judgments regarding the health of (an) animal(s) and the need for medical treatment, and the client (the owner of the animal or animals or other caretaker) has agreed to follow the instructions of the veterinarian;

2) There is sufficient knowledge of the animal(s) by the veterinarian to initiate at least a general or preliminary diagnosis of the medical condition of the animal(s); and

3) The practicing veterinarian is readily available for follow-up in case of adverse reactions or failure of the regimen of therapy. Such a relationship can exist only when the veterinarian has recently seen and is personally acquainted with the keeping and care of the animal(s) by virtue of examination of the animal(s), and/or by medically appropriate and timely visits to the premises where the animal(s) are kept.

<u>Selected references</u>

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How Did We Get There and What Do We Do Now?