

## **Watch Your Withdrawal Periods**

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Do you know what the withdrawal period is for the various animal health products that you administer to your livestock? For that matter, do you know what a withdrawal period is established for?

As livestock producers, we are the first line of defense in ensuring that the American meat supply is a quality, wholesome, and safe product. To help meet that goal, withdrawal periods have been established for many of the animal health products that are used in livestock production. This is a period of time beginning with the administration of a pharmaceutical product and lasting a set length that has been pre-determined by the Food and Drug Administration (FDA). The idea is that any pharmaceutical compound has a maximum allowable amount of residue that can be in the meat product or milk. The withdrawal period allows a period of time for the compound to be broken down within the animal following its administration. Neither meat tissue nor milk can be used from an animal that has a drug residue which exceeds the maximum residue limit (MRL) that has been set for that given compound. In other words, the withdrawal period is an opportunity for a treated animal to be in compliance with the MRL at the time of harvest or milking.

The FDA has established the MRL for the various medications based on several different locations within the animal. The residue source that is examined is dependent upon what medication is being monitored. As an example of the differences, Pfizer's Draxxin (active ingredient: tualthromycin -18 day withdrawal) has a MRL of 5.5 parts per million (PPM) in the liver; while Elanco's Tylan injection (active ingredient: tylosin - 21 day withdrawal) has a MRL of 0.2 ppm in fat, muscle, liver, and kidney. Pharmaceutical companies, under the FDA's guidance, have to conduct trials to determine how much time it takes for a given compound's residue to be at or below the assigned MRL following treatment of the animal. If the time needed ends in a fraction of a day, the withdrawal period is expanded to complete that day.

The label on the product is required by law to display the withdrawal period on it. Likewise, a producer who uses a product is required by law to follow the withdrawal period. So if you use a product that has a 28 day withdrawal period and you sell the treated animal to be harvested ten days after treatment you would be in violation of federal law. Should samples from your animal's carcass have residue levels greater than the MRL for the product that you used you can be held legally liable and can potentially face both criminal fines and a jail term.

If you are knowingly marketing livestock to an export meat market you may want to investigate the withdrawal period issue a little deeper. Not all countries use the same formulas and/or

methodology to determine what the withdrawal period should be for the various animal pharmaceuticals. As an example, many producers use Pfizer's Liumycin LA – 200 (active ingredient: oxytetracycline). In the US the FDA has established a 28 day withdrawal period for this product; however, in the Japanese market the withdrawal period is 62 days. This is because Japan requires a much lower MRL for the compound. So you could potentially be following all of the US guidelines but intentionally market an unacceptable export product.

Another residue issue that can arise is when a producer feeds a product and does not realize that it may contain something that is regulated. One common cause of this in recent times has been a result of feeding distiller's grain. Virginiamycin is allowed in ethanol production to control fermentation. The MRL for this compound is quite high with 30 ppm in muscle, 120 ppm in fat, 60 ppm in liver, and 90 ppm in kidney allowed. With these high MRL levels most cattle consuming distillers grains are not a problem in the US. However, the Japanese have established virginiamycin MRL's of 0.1 ppm in muscle and 0.2 ppm in fat, liver, and kidney. Also, it has been reported that some ethanol plants have on occasion substituted other products in the fermentation process; which later allegedly showed up as residue in the carcasses of animals that were supposedly on an all natural program.

Considering all of the various issues that can be associated with MRL's and withdrawal periods it is very important that the livestock producer carefully monitor and record any application of products with these classifications. If you wish to discuss this subject further, Michael Fisher can be reached through the Yuma County Extension office at 970-332-4151 or by e-mail at \n mj.fisher@colostate.edu.