

Scabby Wheat and Beef Cattle

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Vomitoxin or Deoxynivalenol (DON) is a mycotoxin. The occurrence of scabs does not automatically mean that vomitoxin is present, but a high level of scabby kernels increases the chances that vomitoxin is present.

FDA Guidelines for Using Wheat Infected with the Mycotoxin, Vomitoxin

Species	Maximum ppm in Diet Dry Matter
Beef Cattle > 4 months of age	5 (i.e. 10 ppm wheat at a maximum of 50% of diet)
Beef Cattle < 4 months of age	2
Chickens	5
Dairy Cattle	2
Swine	1
<i>Horses: No research: My opinion, don't do it</i>	

*Check with your local OSU Extension office on sampling techniques

The chance of grain deterioration increases if the kernels are damaged. Damaged wheat should be stored at or below 12 percent moisture. The storage time for scabby wheat is slightly less than for normal wheat. Airflow rates should be slightly increased compared to normal situations.

Processing Wheat: Although the kernel must be cracked or broken, over processing will result in the production of many fines that are undesirable since the rate of wheat starch digestion in the rumen is very rapid. Therefore, an excessive amount of fine particles will cause generally low and erratic intakes, digestive upsets and poor performance. If wheat is dry-rolled, it should be rolled or ground as coarsely as possible while still breaking all the kernels. Rolling rather than grinding generally results in fewer fines. Steam flaking wheat can improve animal performance. A more accurate term would be steam rolling since less pressure and steaming time with wheat. Mixing grains should occur after grain processing rather than before. Wheat could more likely be processed with barley or oats than with corn.

General Recommendations for feeding Wheat: As a general rule, limit wheat to 40% of the grain portion in finishing diets. This can be stretched to 50% with steam flaking/rolling. Novices to feeding wheat may want to stay below 40% of the diet level. You can start with 10% wheat and gradually increase the level. As grain becomes a lower portion of the diet, such as in cow diets, wheat may become the sole grain source. Wheat is not recommended for self feeders or creep diets.

Once on full feed, feed should be kept before the cattle at all times. It is not advisable to change back and forth from wheat to other feed grains when feeding high concentrate rations. Wheat is a fast fermenting grain in the rumen. Problems of depressed feed intake, acidosis and abscessed livers have been reported. They are the basis for recommendations on limiting the amount of wheat in the ration, mixing it with other grains, and for feeding at least 15% roughage. The addition of ionophores has made it possible to reduce some of these digestive problems and feed

higher levels of wheat. Wheat is higher in protein than corn so you should be able to reduce the amount of protein supplement in the diet.

The combination of wheat or barley and alfalfa has been known to cause bloat. Farmers thinking of using wheat for livestock feed should also note the labels on any fungicides, insecticides or herbicides that were applied to see if there are any limitations.

General Management for Feeding Moldy Feed

Ideally we do not want to use moldy feed with our livestock. Moldy feeds may mean trouble, but sometimes we may have to consider its use. If moldy hay, grain, or concentrate is to be fed, observe the following precautions:

1. Send a representative sample of feed to a laboratory.
2. Introduce moldy feeds into the ration gradually. It takes cattle a few days to adjust to the poor taste and dust; some cattle never adjust.
3. Balance moldy feeds with good quality feed.
4. If problems are encountered, stop using the moldy feed.
5. Do not cover the taste with molasses. Do not force them to clean-up moldy feed.
6. If possible, avoid feeding moldy feed to young, milking or gestating animals. These classes of animal are all more susceptible to problems caused by mold.
7. Feed moldy feed outside so as to reduce the effects of dust and spores on the respiratory system
8. Producers should be aware of the health hazards involved in working with moldy feeds and take every precaution to decrease personal exposure via a mask with filters.
9. Screenings from moldy grain can be even higher in contamination due to concentrating the mold (Don't feed screenings from moldy feed).