

Field Notes: October 4, 2009

Take care of grain in bins.

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Sometimes I probably try to wear too many different hats. There is almost certainly someone who can discuss many of these issues better; but by the time I find that person, contact and get him/her to provide or prepare the information the “moment” of greatest need may be passed. An issue currently in need of attention is that of caring for stored grain. There are volumes of information on this subject; but I want to cover a few basic things. Please consult other sources of information as well.

Crops are being damaged by bad weather in fields today; but there is very little we can do about that. A major portion of the corn and early soybeans had been harvested before rains returned. Much of the grain that has been harvested had not reached the correct moisture levels for storage; so now we must deal with keeping that grain in the best condition possible under these conditions. In many situations, moisture levels are from 2 to 4 points above what we consider as good storage levels.

Some of you may be aware of problems with your grain; but even though there may be concerns I feel we are better off with it in the bin. We need to get stored grain stabilized so that quality does not deteriorate further. This is a difficult task given the fact that outside air is often saturated with moisture. Moisture cannot be removed from grain very well with this air. The good thing about this air is that it is cooler. It can be used to head off heating within the grain; and during periods of clear weather some moisture may be removed. The first goal is to avoid heating which will result in rapid damage to grain.

Grain should be checked frequently. If you can't climb into bins, find someone you trust who can do this task. Always have a second person to watch and to go for help if needed. Telltale signs of worsening condition are smell and feel of the grain. The grain should not support you when you walk on it, and your feet should sink easily into it if it is good on the surface. When you open the door, get someone to turn on the fan and smell the first air that comes through. It should be cool and have no musty or foul smell. Push a length of metal rod or pipe deep into the grain both from the top and from the inspection hole in the door. Allow it to sit for a few minutes; then as you remove it feel the rod with your hands for the presence of heat and moisture. Even better, obtain a bin thermometer for this purpose. When you find warm or moist grain, pull at least a hundred or more bushels from the core (or until good grain

comes out) since this is the usual problem spot at this time. Check the moisture, re-level the grain, and continue to aerate. Just the act of moving the grain will help quite a bit. In situations where good aeration is not possible, moving the grain may be the only way to head off a hot spot problem. Without corrective action, the spot will grow larger every day. Spot aeration may be possible in flat storage facilities; but the equipment is expensive unless you build your own.

For those who are using artificial heat to dry grain, be careful to check the upper surface of the grain for wetness. If it begins to feel wet, turn off the heat for a while and let this clear out. You have passed the dewpoint, and if you continue the top will mold and seal over. This stuff can get complicated; so for now let's just say that you have to keep checking regularly; and that this is not something you can set and forget. Conditions vary with air humidity and temperature. Please contact us if you have further questions.

I can't end this without reminding you to avoid any unsafe situations around bins and grain handling equipment. A worst case scenario is when a bin crusts over and grain is removed from the bottom. A worker (or you) walking on the surface may break through and suffocate before a rescue can be done. This may sound unlikely, but farm workers lose their lives this way every year. If you must enter a bin use a safety line. Stay out of bins when grain is being moved. Do not work on machinery before securing all switches and controls. One push of the wrong button can cost a limb or a life. I know there are times when our working conditions are "less than ideal"; but at least keep inexperienced people and children away from these situations. Pray for our country, and good weather. Thanks for your time.