

# Harvest small grains carefully

By TOMOKO OGAWA

**W**HETHER you are growing small grains for seed, feed or food, it is integral to pay close attention to the handling of grains during and after harvest to maintain their quality. After all, you've put much labor into growing them. As barley, triticale, winter wheat and rye

## Key Points

- Be careful how you harvest and handle small-grain crops to maintain quality.
- Determining right time to harvest is critical, especially in a wet year.
- Mycotoxins produced by fungi can grow on crops in a field or grain in storage.

start to reach maturity, here are tips for postharvest handling of small grains to maintain their quality after leaving the field:

■ **Timing of harvest.** Determining the right timing of harvest is most critical. Especially in a wet year, it is very important to limit the time that a crop stays in the field after it reaches maturity. Begin harvest as soon as the grain is ready be-

cause the highest test weights and yield, as well as best grain quality, are seen right after a crop reaches maturity. Past that point, grain starts to lose yield and quality every day. If the grains are not drying out fast enough in the field, harvest early and dry them artificially. Many farmers are reluctant to spend extra for artificially drying grains, but the cost is a lot less than potential crop loss or decline in quality.

■ **At harvest.** You need to fine-tune your combine for maximum performance. A combine for harvesting grains must be thoroughly cleaned so it is free of old grain, which could potentially cause mold and insect damage to a new harvest. When harvesting wet grains, the machine must be in good repair. Cylinder bars need to be set to a uniform height to achieve improved threshing and separating by providing an even threshing edge. A rotary combine can be used for small-grain harvest, but doesn't work as well as a cylinder machine. Clean the grain thoroughly and blow out light kernels so lower-quality, small, damaged and lower-density grains are removed.

■ **Storage.** Even if you harvest the grain at its optimum quality, if you don't store it properly, it could cause quality damage and decline in germination ability and vigor for seed grains. Again, the keys to proper storage start with cleaning the bin thoroughly before storing newly harvested grain. It's good for a bin to have the capacity to put heat and air into it. Especially for a large bin, it's important to run fans to keep the moisture equilibrium. Moisture should be kept below 12%. At 14% to 16% moisture, fungi (mold) may grow and the risk of insect damage increases.

■ **Mycotoxins.** In a wet year, be cautious of mycotoxin contamination. Chances are highest when temperature at the blooming stage is cool and stays between 60 to 70 degrees F. Mycotoxins are toxic chemicals produced by fungi that grow on plants in the field or in storage. Mycotoxins are problematic because of their numerous negative effects on the health of animals and people when consumed. Chances for mycotoxin infection increase greatly when kernels are damaged by storms, hail, heat, drought or other extreme weather conditions, as well as attacks from insects, birds or mites.

There are different types of mycotoxins. Some mycotoxins such as ergot are visually moldy and easy to detect. However, not all grains that contain mycotoxins look moldy. Unapparent symptoms include a light test weight, off-color and damaged kernels. Or the grains may simply not look, smell or feel right. If the grain shows some symptoms that make you suspect the mycotoxin infection, send samples for testing. Testing can be costly. As an on-farm alternative, mycotoxin test kits can be bought.

*Ogawa is cover crop, grains and food coordinator for Practical Farmers of Iowa.*

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