Guidance to Idaho malting barley producers experiencing higher than acceptable sprout damage in their 2014 malting barley crop

Growers are urged to be patient and not panic as they try to complete their 2014 growing season.
We recommend producers follow these steps:

1. Follow best management harvesting practices, **particularly avoid harvesting lodged barley.** Beware that injured by sprout barley is more fragile and more susceptible to skinned and broken kernels.
2. Quickly harvest the remaining grain to prevent growth of molds. Sooty molds will increase off flavors in malt and reduce suitability for feed.
3. Store your barley with good aeration. Grain is stored best if it is cool, dry and clean. The recommended maximum moisture content for storage of clean sound barley during warm summer temperatures is 12%. Barley can be stored at slightly higher moisture content if it is kept cool.
4. Take a good bin sample as your put your barley into storage and work with your malting barley company to have the barley tested for injured by sprout.
5. Be patient and give your malting company time to determine what portion of your crop can be used as malting.
6. **Try to avoid dumping your barley as feed at harvest as the commercial feed barley prices have been dropping rapidly.**

Your malting companies are going to extraordinary lengths to test Idaho malting barley that has been injured by sprout and to determine how much can be used for malting. They are researching and micro malting samples to determine the highest limit of sprout damage they can take without compromising the malting and brewing process.

It is important to understand why sprout damage poses a risk in the brewing process. Pre-harvest sprouting (PHS) or pre-germination impacts the ability of barley to germinate. Problems can range from a slow loss of germinative energy or capacity over time in storage to the complete loss of germination at the time of harvest. Barley used for malting must exhibit vigorous and uniform germination. In malting, pre-harvest sprouted barley can lead to poorly modified malt that is unsuitable for the production of beer. Low extract yields, poor beer stability and off-flavors are just a few of the problems that can result from PHS damaged barley.

Barley kernels remain resistant to sprouting prior to physiological maturity. Some varieties maintain a level of resistance (dormancy) for a significant time after harvest. Certain conditions like heavy rainfall at maturity can reduce this level of resistance to germination.

The bottom line is that barley with sprout damage, even if it germinates well after harvest, can lose germination rapidly in storage. There are no tests that can predict when a sudden drop in germination will occur. Even if a relatively high degree of germination remains in a lot of barley, the germination may be uneven with some kernels germinating much slower than

others in that lot resulting in a malt that does not meet brewers minimum specifications for beer production.

For more information, please contact Kelly Olson, Idaho Barley Commission Boise office 208-334-2090, cell 208-409-9165 or our Idaho Falls satellite office, cell 208-569-6957. Dr. Juliet Marshall, University of Idaho, Idaho Falls, 208-529-8376, cell 208-390-4859.