NEWS RELEASE

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Immediate Release

Canola Council funding summer grain storage research

HUMBOLDT, SK – The Canola Council of Canada, Manitoba Canola Growers, Alberta Canola Producers Commission, the Saskatchewan Canola Development Commission, and the Prairie Agricultural Machinery Institute (PAMI) are joining forces to answer questions about how to store canola over the summer months.

Last year's record harvest combined with nationwide grain transportation issues have resulted in more grain being stored far longer than usual in western Canada. This situation has led to a lot of producer questions about what to do to keep their grain from spoiling in the bin once warmer weather hits.

Just how best to manage grain in this situation is something Dr. Joy Agnew and her team at the Prairie Agricultural Machinery Institute (PAMI) have been charged to do by the Canola Council of Canada and the provincial canola growers commissions. The goal of the project is to collect information in order to determine best practices for summer storage of canola in western Canada.

Earlier this spring, Agnew advised farmers to slowly warm grain that was cooled last fall to reduce the temperature difference between the grain and the ambient air. Warming the grain (to 10°C or 15°C) should be done gradually by blowing air through it starting in early spring, while the difference in air temperature and grain temperature is far less than it is in the middle of July or August. The theory is that if you wait until summer to start warming the grain, the hot air hitting cold grain in the bin could result in large amounts of condensation which could freeze, restrict airflow, and possibly create large pockets of spoilage.

The PAMI team also noted that another management option is to turn the grain – remove it from the bin and put it back in in order to even-out the temperature and moisture variations, redistribute cold and warm spots, and help warm the grain.

All of Agnew's recommendations were based on knowledge she and others at PAMI have gained over their years of studying how grain behaves at different temperatures. They did not have the opportunity to conduct trials on summer storage of grain, until now.

The Canola Council of Canada says canola producers are interested in minimizing the risk of spoilage in canola that must be stored for extended periods of time, especially when the weather warms up. According to the Council, there has not been enough practical information to answer the question of how warm summer air will affect the temperature, moisture, and potential spoilage of cooled canola. And, they noted, there was also no way to validate the recommendation that cooled canola should be warmed slowly to reduce the risk of spoilage during summer storage, nor was there any evidence that turning a bin will help even out the temperature distribution in the grain.

"A lot of questions arise when canola is stored for a longer term, especially if it will be stored over the warm summer months," said Agnew. "Our team at PAMI has suggested that cooled seed should be warmed slowly in the spring. But specific guidelines on the length of time required to warm canola and the ideal ambient conditions for warming were not available due to a lack of research."

This joint project with the Canola Council of Canada will change that.

The research being conducted by PAMI researchers will involve both bin testing and bench-scale testing to try and answer some fundamental questions related to warming stored canola.

The bin testing involves three bins (approximately 3,500 bushels each) of cooled canola that will be stored until at least the end of June. Temperature and relative humidity sensors were installed in the bins in early June. In all bins, the canola was frozen over the winter.

One bin was turned before the sensors were installed. Approximately 700 bushels of canola were pulled out of the bin and augered back in. All of the grain on the top surface was removed, ensuring the entire top layer of grain and any moisture that had migrated to the top was disturbed.

Another bin will be aerated, with the fan operated at night to slowly warm the grain. The third bin will be left alone for the duration of the trial to provide baseline information.

The sensors located in each bin are already sending back data to researchers; data that can be viewed in real-time through a link on the PAMI website at www.pami.ca. Additional information and results from the project will be posted on the Canola Council's blog called "Canola Watch" at www.canolawatch.org/2014/06/13/blog-canola-bin-watch/.

PAMI is also conducting smaller bench-scale bin trials using different starting grain temperatures and different airflow rates to help assess warming rates and conditions that result in condensation in the grain.

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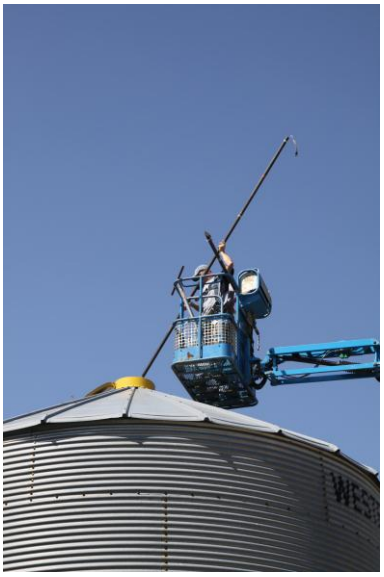

Photo caption: PAMI staff insert the probes into one of the bins set aside for the study of the summer storage of canola at a farm in the Lake Lenore, Saskatchewan area.

Full size jpeg available upon request. Contact Keri Dalman.

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