



THE PULSE AGRONOMY NETWORK  
PARTNERSHIP WITH INDUSTRY

## PAN ALL PULSE BULLETIN #25 – OCTOBER 6, 2005

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### What's in the PAN –

- • **PAN User Survey**
  - • **Pulse Crop Storage – what to watch for!**
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### PAN User Survey

The PAN Committee is meeting next week and we would appreciate it if you would take a couple minutes to complete an online survey. Your feedback will help provide direction on content and delivery of PAN for 2006 and beyond.

Thank you for your time and consideration,

Earl Greenhough - PAN Editor

PAN Survey link - <http://www.surveymonkey.com/s.asp?u=303891399165>

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### Pulse Crop Storage 2005

By Ray McVicar, Provincial Special Crops Specialist, SAF

Pulse crop production continues to increase in importance throughout the prairies. For the most part, crops progressed well especially those crops harvested before the wet fall weather. Exceptions are areas in southwest Saskatchewan which experienced drought and low yields and some areas in the southeast which experienced early excess rainfall and problems due to disease and flooding. Many areas have suffered from too much moisture at harvest time.

Monitoring stored grain during and after harvest is an important part of a producer's day to day activities. The safe storage of pulse crops is important every year, and the key to avoiding mould and other storage problems is the use of aeration to cool and dry the seed. Testing with a moisture meter should be carried out several times after the crop is binned.

Pulse producers who have harvested crops should take care not to lose what they have: they should monitor their stored crops immediately to prevent any losses due to spoilage. The risk of spoilage becomes more important if the crop was harvested following wet weather. This risk is greatly reduced if foreign material is removed.

Grasshoppers were much less of a threat this year; however, there were some hot spots where infestations were high. Grasshopper body parts within the sample can cause downgrading through staining, odour and exceeding foreign material tolerances. Grasshopper parts should be removed as soon as possible, and in extreme cases, should be removed before binning.

Because of their large seed, stored chickpea and pea need time for the moisture to equalize throughout the seed. If harvested at high temperatures, there is a strong possibility the seeds will “sweat” in the bin. This occurs as the moisture migrates within the bin.

For prolonged safe storage, pulse crops should be cooled to less than 15 degrees C and dried to less than 14 per cent moisture. Seed that is cooled to 10 degrees C will store well for long periods. The SPG Pulse Production Manual contains a table outlining the number of weeks for safe storage of peas at specified moisture content and temperature. For example peas stored at 14 per cent moisture and 10 degrees C can be safely stored for about 95 weeks. Peas stored at 18 per cent moisture and 20 degrees C has a safe storage limit of only 7 weeks. Other pulse crops will be similar.

With the increased interest in the production of red lentils, some different moisture content levels must be taken into consideration. Red lentil splitting factories can achieve higher processing yields with lentils at 13 per cent or lower moisture content. Growers should contact their buyers to determine if price premiums are available for delivering red lentils at 13 per cent moisture or lower.

Pulse crops at 12 per cent moisture or lower are much more prone to chipping and peeling during handling, especially when the temperature has dropped below minus 20 degrees C.

A bin equipped with an aeration fan can provide both cooling and drying. But, while cooling may be completed in one day, drying can take three to four weeks. To do this, the aeration fan must have adequate power to provide air flow through the grain: the recommended requirement for aeration drying of a pulse crop is about one to two cubic feet of air per minute per bushel; about 2,000 to 4,000 cubic feet per minute for a 2,000-bushel bin.

The cleanliness of a crop is another factor to be considered, as foreign material can greatly reduce airflow and channel air movement around wet spots.

If supplemental heat drying is required, air temperatures should not exceed 45°C to preserve germination, and the sample should not be dried more than 4-5 percentage points per pass through the drier. The product should be allowed to temper in an aeration bin between passes. Remember, the augers within a grain dryer can increase seed coat peeling and cracking.

Growers using long-term storage to help their pulse marketing plan can also make good use of a belt conveyor. Pulse crops often need to be given a rotation in the bin to prevent spoilage, and the use of a conveyor can accomplish this with very little seed damage. If you are in the need of a new auger, investigate the idea of moving to a belt system.

Pulse crops are important high-value crops, and their value should be maintained as much as possible to best meet market needs and return the highest price to the grower.

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