

On-farm Winter Canola Storage



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Canola Storage Concerns

- **Canola seed is very small**
 - 115,000 seeds per pound
- **High oil content: ~ 40%**
- **Debris – stems, leaves, pods**
- **“Sweat” or extended respiration producing heat and moisture for 6-8 weeks**



Storage Concerns

Why so dry?????????

Rancidity in Southern Great Plains heat

Oil content = microbial activity

Oil content = heat

Sweat period



KEY THOUGHTS...

- Monitor bins closely...weekly
- Temp control + MC control + insect control

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**SUCCESSFUL
OILSEED
STORAGE**



Prepare Bins for Storage

- Remove all old grain residue
- Seal all cracks and holes
 - caulk
 - closed cell foam
 - duct tape
 - replace missing bolts



Prepare Handling Equipment

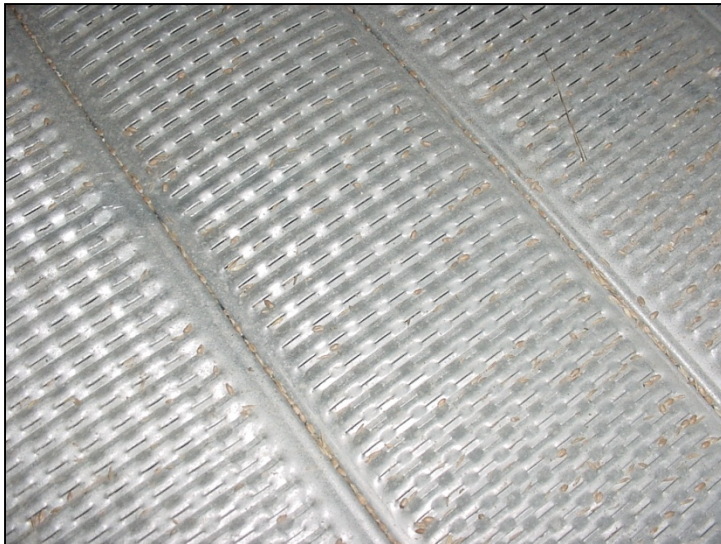
- Plug all holes....
- Tape all cracks....



- Foam sealant and caulking are your friends!
- Where water goes....so does canola!

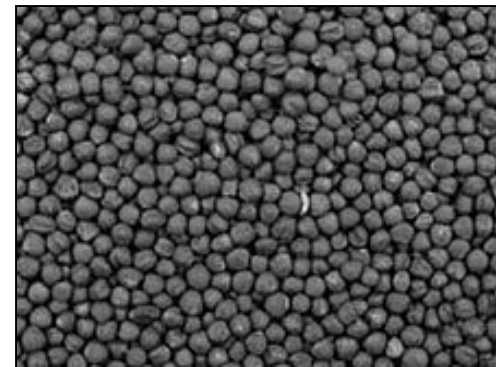
Prepare Bins for Storage

- **Floor perforations must be protected**
 - **Line bottom of bins**
 - **two layers of aluminum window screen**
 - **trampoline tarpaulin**
- **Leave opening for grain unloading**



Store Clean Canola

- **Debris can add moisture and attract insects**
- **Clean canola using**
 - scalper aspiration
 - indent cylinder cleaning
 - sieve screening
- **Clean to less than 2.3% foreign material**



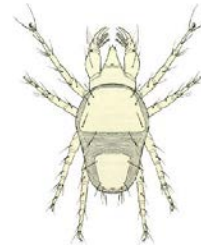
Aeration

- Bin must have aeration system
- Full floor perforation is best
- Positive pressure is preferred
- Grain surface should be leveled
- Airflow rates for temperature management
 - 0.08 – 0.15 cfm/bu
 - At 0.08 cfm, up to 150-200 hours for a 20° drop
- Airflow rates for natural air drying
 - 0.4 – 2.0 cfm/bu – increase static air pressure
 - run fans continuously until desired moisture
- Static pressure for canola is 2-3 times that of wheat



Insect Pests Found in Bins

- **Very few insects were found**
- **Those found included:**
 - **Rusty grain beetle**
 - **Red flour beetle**
 - **Lesser grain borer**
 - **Indianmeal moth**
 - **Booklice**
- **Predatory mites were also found**



Insecticides

- Few insecticides currently available
- In the U.S., no protectants are labeled and phosphine fumigation can only be conducted on canola that is destined for non-food use



Questions?

