"Drying and Storing Your Seed Crop"

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Choosing Your Crop and Maturity

- What will the weather be at harvest?*
- What equipment limitations are there?
- Combine type, cylinder, fingers, rasp bar or rotary (because – not all combines are created equal!)
Potential Crop Yield:

...What size is the seed?

- What are crop moisture parameters at harvest?*
- How long will harvest take?
- How long do I have to dry the crop?
- How clean will the crop be?
- What will air temp and humidity be?
How will the Crop be Stored and Dried?

- On the floor, or “open air dry” in thin layers.
- **NOT ON CONCRETE!**
- Low volume – it's both a good & bad thing.
Small Low Level Bin with Air Dry

- Low in capital cost; least energy.
- Good test weight; low shrinkage.
- Best for seed drying.
- Takes long time to dry.
- Must be stirred.
- Must be closely managed to prevent heat AND cold molds.
- Crop must be clean to allow good air flow.
Small Low Level Bin with Air Dry
Low Volume Batch Bin with Heat:

Batch or Continuous Flow Dryers

- Transfer to larger bin to dry cool.
- Possible long term storage.
- Moderate to high capital cost
- Can efficiently do large quantities.
- Uses a lot of fuel!
- Can easily ruin germination with excess heat.
- Can cause low test weight.
Large Bin with Aeration Floor
Large Bin with Aeration Floor

- Versatile and moderate in cost.
- Can air dry - or - Heat dry cool.
- Can only do one batch at a time.
- Can be long term storage.
- Needs large hp or multiple fans.
- Operating costs are variable.
- Must cool & warm to outside temp with limits.
- Can develop hot spots in grain.
- Can develop hot spots in grain.
- Condensation on sides.
Small Tools Needed

- Thermometer – and Probe.
- Grain Probe.
- Outside Humidistat.
- Small Scale Weather Station... ...to qualify the above.
Actual Grain Drying:
*The simple, but challenging facts & rules*

- At what % moisture is the crop stable for storage?
- What % moisture is needed for market or processing?
- At what % moisture and temp level does it reach equilibrium?
- All crops in storage need watchful management!
Rules for Drying

1. You can't dry a crop any lower than the equilibrium point of the drying air temperature and relative humidity - no matter how much air you use.

2. The drying static pressure has to be higher than the resistance of the crop being dried.

3. The smaller, heavier or dirtier the crop – the higher the static pressure needed to dry.

4. Hot spots and condensation don't just happen... they are caused by moisture, temperature differentials, fines and dirt.
Rules for Drying

5. The right air temp and relative humidity are your friend... *use them wisely!*
6. Keep your crop level, break-up and mix layers between each fill.
7. Don't cool your crop too much.
8. Check moisture drying line often, from the bottom on up, with thermometer and moisture probe.
9. Follow your nose; know what you smell.

...and...
10. Be resourceful: use toilet paper to check airflow!
Air In and Air Out
The Last Words:
“SAFETY FIRST”

**DRY SAFELY:** Don't EVER go into a bin that is being - or has been - partially unloaded, without taking the proper precautions!

- Don't go in alone!
- Probe grain before entering – to break bridging.
- Wear a safety line: Be tied or tethered to a secure point.
- Wear a dust/particulate mask or respirator.