



SEPTEMBER 2007

Sunflower harvest is fast approaching. Growing conditions for the most part have been favorable for sunflowers other than in a few areas with too much moisture, so a normal frost date should not cause significant problems for the majority of the crop.

Some growers chose to contract two or more different varietal types of sunflowers again this year (i.e. Extremes versus XL hybrids). **It is critical that these hybrid types are kept separate.** Mixing hybrids will cause problems when it comes to marketing your sunflowers this fall.

Desiccation

Many areas will have mature sunflowers before a killing frost occurs and fall harvest days will be at a premium with all the late crops to harvest. **Yields will decrease once physiological maturity is reached!** Blackbirds, sclerotinia head rot and wind all take a toll on a standing mature crop. Desiccation through chemical means can be a useful tool at times like this. *Important to remember:* 1. Maturity: Sunflower heads should be yellow on the backside of the head with the bracts turning brown. Seed moisture should be below 35 percent. 2. Warmer temperatures enhance the chemical's performance. 3. Labeled products include: Gramoxone Max at 1 to 1.3 pts. per acre; Drexel Defol at 1 to 2 gallons per acre. A minimum of five gallons of water per acre is required; 10 gallons per acre will work much better. These are contact-burn herbicides, so good coverage is important.

Roundup® herbicide is now available as a pre-harvest aid. An excellent article in the August/September 2007 issue of *Sunflower* magazine regarding Roundup® can be found online at www.sunflowernsa.com/magazine/details.asp?ID=480. Of course, consult with your aerial applicator, and always read and follow all label directions.

Seed Coat Scuffing

Scuffing occurs when sunflowers are harvested at higher moisture levels. **It is very important to keep scuffing to a minimum.** You can help prevent this by keeping cylinder speeds as slow as possible, maintaining a concave setting as wide as possible, and harvesting when moisture levels and conditions are conducive to a minimal amount of scuffing.

Insect Damage

Insect populations were quite high this season after several years of low to moderate levels. If you suspect you have excessive insect damage, it may be best to send in a sample prior to shipping your loads to avoid as many problems as possible. Field margins generally have higher insect damage and may need to be stored separately. The fields that have not been sprayed and have high levels of insect damage should be segregated from good quality seeds. Contract specifications will be in effect.

Dark Roast

Some areas may experience sclerotinia head rot (white mold) this year which can cause dark roast. The sunflower heads may even fall off before harvest and minimize dark count readings. If you have differences between hybrids or fields, consider segregating in order to avoid lowering the quality on your entire crop versus just a portion. Contract specifications will be in effect.

Soybeans and Corn

Each year some producers are surprised at our objection to soybeans and corn. Soybeans and corn are very difficult to remove from kernel products. Once roasted, they become very hard and break consumers' teeth, which often results in lawsuits. Please clean your harvesters as much as possible so that we do not have to reject your loads. Also, clean your trucks and make sure the semi which pulls into your yard is spotless before loading it. These suggestions apply to oil sunflowers as well. Corn and bean mixtures will limit your marketing options. Contract specifications only allow a maximum of four pieces of corn or soybeans per pound.

Cocklebur

Cockleburs are a perennial problem. Your contract allows four cockleburs per pound. If you have a cocklebur problem, please cut above the plants or cut around the patches and harvest them separately. **Samples exceeding four burrs per pound may be rejected.** Note weed problems on your field maps and address the cocklebur problem in your small grains rotation.

***PLEASE KEEP QUALITY IN MIND
WHEN HARVESTING YOUR SUNFLOWER!***

Moisture Content

Sunflowers delivered in excess of 10-percent moisture will be docked 0.2 percent for each 0.1 percent (or fraction thereof) moisture above 10. Sunflower delivered over 11 percent moisture will be accepted at the buyer's option and will be subject to drying charges in addition to the moisture dockage. Sunflowers may not be accepted over 18 percent moisture. The drying process for sunflower is extremely sensitive. High drying temperatures can cause kernels to become steamed, wrinkled or even scorched, contributing to a high dark-count percentage. And fire is a constant threat when such heat is used to dry sunflower seeds. Sunflowers should be kept moving, debris and fines prevented from accumulating, and the dryer should be drawing clean air constantly. That means sunflower seed drying is a full-time job.

According to Robert Durland, SDSU Extension Ag Engineer, sunflowers intended for long-term storage should be no higher than 8-10 percent moisture. With aeration, sunflowers can be held for short terms at 12 percent. Aeration fans should deliver from 1/20 to 1 cfm/CWT of sunflower. The peak should be flattened to avoid accumulation of heat and moisture. Bins should be checked every two weeks for moisture crusting and temperature changes which are indicators of insect or mold problems. Crusting or mold problems contribute significantly to high dark counts.

Harvest Losses

Harvest losses are always a concern and should be minimized. Growers should begin harvesting when the threshed sample is in the high teens. **Moisture contents of 14 to 15 percent are best to minimize shattering losses and maintain seed size. Seed loss usually occurs around the outside of the head thus reducing your large seed percentage.** Open market prices can reflect a premium for large size seed.

Check your operator's manual for the proper sunflower settings. Vern Hofman, NDSU Extension Ag Engineer, offers these general guidelines to keep in mind:

1. Keep ground travel at 3-5 mph. As the moisture goes down, so must the traveling speeds. Faster speeds work well only at higher moisture.
2. Cylinder speeds should be set at 300-325 rpm (20-22" diameter cylinder). When moisture is 10 percent or less, set concave wide open. Use narrower settings only when filled seeds are left in threshed heads. Higher cylinder speeds break up the seeds. Larger diameter cylinders will require even lower RPM settings.
3. Concave settings should start with the front as wide open as possible (1 inch) and the rear at about $\frac{3}{4}$ of an inch. The goal is to remove all of the seeds from the head without breaking the head up into several small pieces. Concave settings will need to be adjusted accordingly.
4. Fan settings should provide enough wind to keep the trash floating over the sieves. Sieve settings should start at about $\frac{1}{2}$ to $\frac{5}{8}$ of an inch on the top and a slightly smaller setting of $\frac{3}{8}$ of an inch on the bottom. Settings should be made to keep dockage at five percent or less. Empty seeds are dockage and should be left in the field.

The August/September issue of **Sunflower** magazine has even more detail for a successful sunflower harvest and can be found online at www.sunflowernsa.com/magazine/details.asp?ID=481.

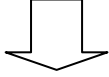
Combine Adjustment Indicators	
<u>Problems</u>	<u>Possible Causes</u>
• Partially threshed heads on ground	Concave spacing too wide
• Excessive tailings	Airflow too low, over-threshing at cylinder/rotor, or chaffer openings too narrow
• Trash in hopper bin	Over-threshing, cylinder/rotor speed too high, concave too tight, fan too low, or sieve too wide
• Broken or crushed heads spacing	High cylinder/rotor speeds or narrow concave spacing
• Crushed seed with hull intact	Concave spacing too tight
• Dehulled or broken seeds	High cylinder/rotor speeds or excessive returns
• Unthreshed heads on ground	Poor gathering at the header
• Seeds being thrown out back	Slow down the machine and air flow rate

Millet and Oil Sunflower

Please remember we also purchase oil sunflowers and white proso millet for our bird food and hulling operations. If you are marketing these products, give us a call for a bid.

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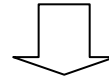
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