NATIONAL SUNFLOWER ASSOCIATION OF CANADA

Special Bulletin—Desiccation

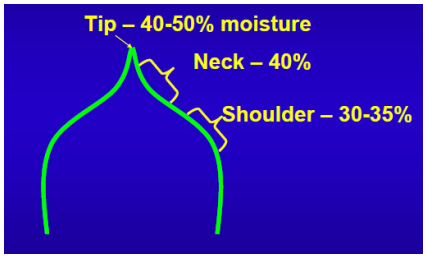
Are you thinking about desiccating your sunflowers?

WHY should I consider desiccating my sunflowers?

Natural desiccation can be slow and uneven. Poor weather can cause reduced quality and yield through stem breakage, shattering and predation by blackbirds. To speed up the natural desiccation process, it may be worthwhile to consider the use of a chemical desiccation. Chemical desiccants are generally typical herbicides that have achieved special registration to be used as a harvest aid.

WHAT is the right stage to desiccate?

Timing of desiccation is critical as application prior to physiological maturity can result in decreased quality, seed size and test weight.



Kirk Howatt + Rich Zollinger— NDSU

Sunflowers are physiologically mature at the stage R-9. At this stage, the seeds have reached maximum size and bushel weight. Visually, this is when the back of the head is yellow and the bracts are brown and seed moisture is between 30-35%.

The bract tip turns brown at 40-50%. At this stage, seed moisture is too high and the plant has not reached physiological maturity. The broadest part of the bract should be turning brown. It is at this stage that the seeds are between 30-35% moisture and desiccation can be performed.

Figure 1. The head has turned 'banana yellow' and the bracts are green. Continue to monitor.

Figure 2. The bracts have turned yellow and the tips are brown. Seed moisture is 40-50%. Too soon to spray.

Figure 3. Time to spray— the bracts are brown to the shoulder and seed moisture

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What products are registered as a Harvest Aid?

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The following products are registered as a Harvest Aid for sunflowers. All of these products can be applied by air. The application rates for the products are as follows;

	Ground Application	Aerial Applications
Reglone	0.5 L/ac to 0.7 L/ac (use high rate for dense crop, heavy weed population). Must be used with non ionic surfactant.	0.7 L/ac to 0.9 L/ac (use high rate for dense crop, heavy weed population)
Reglone Ion	0.6L/ac to 0.8L/ac (use high rate for dense crop, heavy weed population)	0.8 L/ac to 1.0 L/ac (use high rate for dense crop, heavy weed population)
Desica	0.5 L/ac to 0.7 L/ac (use high rate for dense crop, heavy weed populations). Must be used with non ionic surfactant.	0.7 L/ac to 0.9 L/ac (use high rate for dense crop, heavy weed populations). Must be used with non ionic surfactant.
Heat	Apply Heat WG up to 28.4 g/ac or Heat LQ up to 59 ml/ac with Merge adjuvant at 0.4 L/ac.	Apply Heat WG up to 28.4 g/ac or Heat LQ up to 59 ml/ac with Merge adjuvant at 0.4 L/ac.

***NOTE:** This is a reference guide, please consult the product label, chemical representative or the Guide to Crop Protection for full application details.*

HOW to increase efficacy?

Coverage is critical when desiccating sunflower. This is because the back of the head is so pulpy that improved coverage will increase the rate of dry-down. Applying at the water volume suggested by the chemical companies will achieve the required coverage for desiccation. However, water volumes may be lower than desirable during application, if the application is timed when there is “free-water” or dew on the plants. The products will ‘spread’ on the dew, resulting in a better desiccation. If activity in the plant (so after application) occurs when temperatures are above 20-25^{o}C, this will also aid in faster and more efficient desiccation and dry-down.