

Sunflower Desiccation: Guidelines

WHY should I consider desiccating my sunflowers?

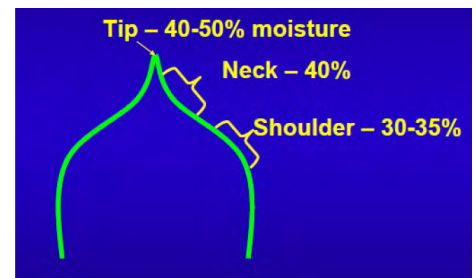
Natural desiccation can be slow and uneven. Poor weather can cause reduced quality and yield through stem breakage, shattering and predation by blackbirds. To speed up the natural desiccation process, it may be worthwhile to consider the use of a chemical desiccation. Chemical desiccants are generally 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.

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.



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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 is <35%.

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What products are registered as a Harvest Aid?

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 Application
Diquat	0.5l/ac to 0.7L/ac (use high rate for dense crop, heavy weed populations). Must be used with non ionic surfactant.	0.5l/ac to 0.7L/ac (use high rate for dense crop, heavy weed populations).
Heat	Heat WG at 21.1g/ac (40 ac/bottle) plus 0.4L ac Merge or MSO Concentrate	Heat WG at 21.1g/ac (40 ac/bottle) plus 0.4L ac Merge or MSO Concentrate
	Heat LQ at 43 mL/ac plus Merge (40 ac/case).	Heat LQ at 43 mL/ac plus Merge (40 ac/case).

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 on the herbicide label will achieve the required coverage for desiccation.

Application should not take place during high sun and heat, but rather later in the day. This enables the herbicide to enter the plant tissue rather than scorch the outer tissue. Dew accumulation overnight helps with coverage and absorption into the plants. This followed by heat the next day (20 – 25oC), causing the filled cells to expand and “explode”, spreading the herbicide solution to reach further areas of the plant and aiding in quick desiccation of the whole plant. These are ideal conditions for the desiccation process and for best results, application should take place during these environmental conditions. Rainfall following application, and the “explosion” of cells, will trap the rain in open or wounded cells and drastically increase the amount of time that full drydown will occur, delaying harvest.