Swath desiccation and harvest timing for higher yield

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The constant change in climatic conditions during the growing season, especially during the physiological ripeness stage and harvest, makes it difficult for producers to determine the correct swath and harvest timing. According to Australian research, incorrect swath timing (e.g. at 40% seed colour change) can result in a yield loss of approximately 11%. An 11% yield loss amounts to a loss of R927, the 2018 fixed minimum price per ton.

The following guidelines can assist producers in making informed decisions regarding correct harvest and swath timing to minimise yield losses.

Swathing canola

For maximum yield and quality, a swath timing of 60% seed colour change on the main stem must be targeted. Once the canola plant has been swathed, seed filling stops, resulting in potential yield loss if not executed at the right time. It is very important to make sure the field's seed colour change percentage is at least 60% (*Figure 2*) before swathing.

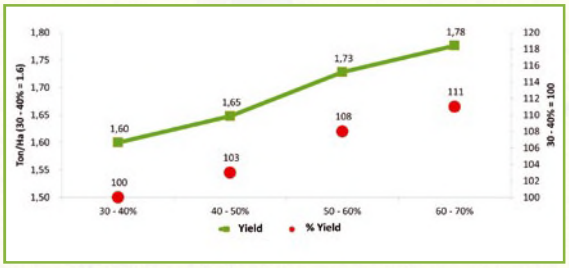
Determination of 60% seed colour change:

- Collect 100 pods on the top, middle and bottom part of the main stem as indicated in *Figure 1*. The pods must represent the 'average' ripening stage of the entire field.
- If more pods are present on the side branches, the seed colour change of the side branch pods must be determined accordingly.
- Do not hurry to swath if ripening is not uniform, and never swath before there is a 30% seed colour change. Swathing at a 30% seed colour change results in an 11% yield loss compared to swathing at a 60-70% seed colour change (*Figure 2*). By waiting three to four days, a seed colour change of 4-10% will occur, depending on climatic conditions, and the yield will increase.
- Never swath when temperatures are high. Swathing during high temperatures will result in the shrinking of seeds and the eventual capturing of chlorophyll in the seed, which will negatively affect oil quality.

Figure 1: Top, middle and bottom pod section on the main stem of canola.



Figure 2: Canola yield at different swath timings. (Source: Department of Agriculture, West Australia)



Desiccating canola

Up-to-date Reglone® is the only product registered for the desiccation of canola. Reglone® is an advanced formulation of the active ingredient diquat, a contact herbicide with quick leaf penetration.

The ideal time to desiccate canola is at an 85-90% seed colour change. For best results, the herbicide should be applied on an overcast day. During sunny weather, diquat will immediately activate the outside tissue of the plant and will not penetrate the plant effectively enough to allow proper desiccation. This will result in non-uniform ripening and chlorophyll percentages that are potentially too high (> 4%).

Harvesting canola

Most producers think canola requires high temperatures during curing, after swathing. This is, however, not the case since the enzyme responsible for clearing chlorophyll requires moisture. If moisture in the swath is optimal and temperatures are moderate, green seed may drop to an acceptable level for combining between ten to 14 days after swathing. Under dry or cool conditions, curing may take longer. It is also important to take the seed moisture content into consideration before combining.

Canola is considered harvest-ready at a seed moisture content of 8-10% with a chlorophyll percentage of < 4%. To check on harvest readiness, take regular samples to the laboratory for analysis.

Monitor for best results

Regular monitoring is required to minimise timing losses during harvest. Canola needs a month after full bloom to mature and it is very important to monitor fields on a regular basis during the third and fourth week after full bloom.

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