

Cutting failed crops for hay or silage

September 2018

Crops that fail due to frost, moisture stress or other limiting factors may be cut for silage or hay as an economically viable option. The following key points should be considered as part of your decision-making process.

Crop growth stage

- The optimal balance between yield and quality comes when cutting a cereal crop at the boot stage or canola at late flowering.
- Feed quality declines after plants become reproductive and produce more head and stem material, which is less digestible. Metabolisable energy (ME) and protein generally decline after flowering, although ME can rise slightly in canola after flowering.
- Often moisture-stressed crops have insufficient dry matter before flowering to cut for hay.
- The quantity of feed increases until early grain fill. Cereals retain leaves better than canola later in the season.
- Canola can produce higher quality feed but produces lower hay yield after flowering compared with cereals. Canola can lose leaf and pod material faster than cereals.
- Cereals tend to produce higher hay yields, particularly after flowering.

Soil moisture levels

- Determine soil moisture levels to estimate grain yield potential in line with long and short term weather forecasts. This will allow you to compare likely gross margins from hay or grain and help you decide if you are comfortable cutting a grain crop for hay.

CHECK FOR WITHHOLDING PERIODS AND APPROVAL FOR USE

Before cutting or grazing a failed crop, check chemical labels to ensure any applicable withholding periods have expired.

Ensure the crop has not been sprayed with a chemical carrying a label warning or prohibitive statement that treated crops are not to be grazed or fed to livestock.

Record information and be prepared for requests or declarations about chemical history to prospective buyers.

- If you need additional support in making the decision, consult with your agronomist or a suitably qualified person.

Grazing instead of cutting

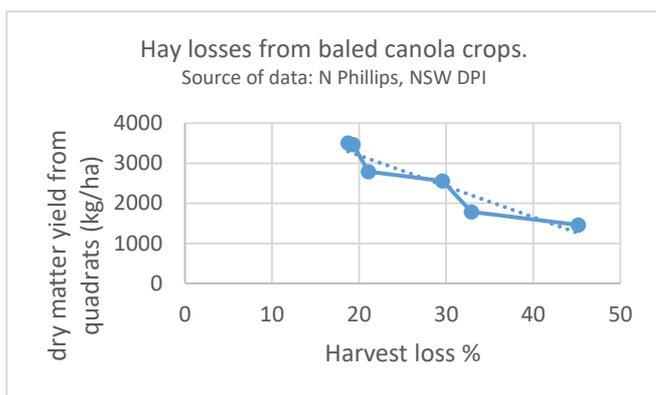
- If you have livestock, it is more cost effective to directly graze the crop in a targeted and planned way, rather than cut it for hay. Refer to the Drought Feeding Guides for Sheep and Cattle for nutritional requirements and further information. <http://agriculture.vic.gov.au/agriculture/farm-management/drought/managing-resources-in-drought>

Soil protection

- The risk of soil loss from erosion increases when ground cover falls below 50 per cent. Grazing can also increase the risk of erosion.
- If more than 50 per cent of the paddock has ground cover, ensure at least one-third of the crop or stubble stays anchored to stabilise the topsoil.

Estimating hay yield

- Ideally, hay crops need at least 2.5 tonnes per hectare (t/ha) of dry matter (DM) to avoid excessive hay harvest losses. This is the measurement is for dry matter at ground level, not cutting height.
- The less dry matter, the more hay is lost during baling. For example, a NSW study showed 45 per cent of canola hay was lost during harvest at 1.5 t/ha of DM but this dropped to 19 per cent lost at 3.5 t/ha of DM (see graph below). Hay baling losses will also vary with machinery and experience.



- If a crop is unsuitable for baling, it can still provide a high quality grazing opportunity, as livestock will selectively graze the high quality parts of the plant.
- To estimate hay yield, refer to the factsheet on the Feed Central website:
www.feedcentral.com.au/comparing-hay-grain/
- A simple hay yield calculator can be found at on the Agriculture Victoria website here:
<http://agriculture.vic.gov.au/agriculture/grains-and-other-crops/grains-calculators/hay-vs-grain-calculator>

Marketing opportunities

- Research the markets and end-users.
- If selling the hay, you may be asked to supply feed test results and vendor declarations. A Fodder Vendor Declaration can be found on the Australian Fodder Industry Association website. See: www.afia.org.au/index.php/resources/vendor-declaration-form
- Livestock producers may request a Commodity Vendor Declaration (CVD) to guarantee that the feed is safe from chemical contamination. These

are found on the Meat and Livestock Australia website. See: www.mla.com.au

- To ensure you observe farm biosecurity requirements when buying or selling feed, see: www.farmbiosecurity.com.au

Engaging with contractors

- Communicate with a contractor before deciding to cut a crop for hay.
- Secure a contractor after careful consideration of the contract and contracting rates.
- Ensure you have chosen a reliable contractor who will be available to complete the hay making operations in a timely manner.
- Establish a timeline for baling and determine a cutting date from that.
- Be aware that appropriate curing is critical for quality and to reduce the risk of combustion.
- Test cereal heads for moisture before baling, as heads can have higher moisture content than other parts of the plant. For further information refer to the Australian Fodder Industry Association resources on their website:

www.afia.org.au/index.php/resources/hayfactsheets/making-quality-hay

ACKNOWLEDGEMENTS

Dale Boyd, Agriculture Victoria, Damian Jones, Irrigated Cropping Council, Nigel Phillips, NSW DPI, Neil Harrison, Agriculture Victoria.

REFERENCES

K Penfold (2008) Hay rewards a matter of timing. Ground Cover Issue 72, <https://grdc.com.au/resources-and-publications/groundcover/ground-cover-issue-72-january-february-2008/hay-rewards-a-matter-of-timing>

F Pritchard (2010) Canola hay and silage. GRDC Fact Sheet. <https://grdc.com.au/resources-and-publications/all-publications/factsheets/2010/09/canola-hay-and-silage-factsheet>

Australian Fodder Industry Association (undated)
Knowledge, patience and experience the cure for
quality hay,
[www.afia.org.au/index.php/resources/hayfactsheets/
making-quality-hay](http://www.afia.org.au/index.php/resources/hayfactsheets/making-quality-hay)

K Motley and J Edwards (2009) Salvaging crops for
fodder, grain or grazing - costs and income calculator,
NSW DPI,
[www.dpi.nsw.gov.au/agriculture/broadacre-
crops/crop-salvage-calculator](http://www.dpi.nsw.gov.au/agriculture/broadacre-crops/crop-salvage-calculator)

N Phillips and G McMullen (2007) Drought affected
canola & wheat – feed quantity and quality decline in
standing crops, NSW DPI fact sheet.

G Shea (2017) Making tough decisions about failed
crops, WA Department of Primary Industries and
Development, [www.agric.wa.gov.au/grains/making-
tough-decisions-about-failed-crops](http://www.agric.wa.gov.au/grains/making-tough-decisions-about-failed-crops)

Published and Authorised by:

Department of Economic Development, Jobs, Transport and Resources
1 Spring Street
Melbourne, Victoria

© The State of Victoria Department of Economic Development, Jobs,
Transport and Resources 2018



This work is licensed under a Creative Commons Attribution 3.0 Australia licence. You are free to re-use the work under that licence, on the condition that you credit the State of Victoria as author. The licence does not apply to any images, photographs or branding, including the Victorian Coat of Arms, the Victorian Government logo and the Department of Economic Development, Jobs, Transport & Resources logo. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Accessibility

If you would like to receive this publication in an alternative format, please telephone the DEDJTR Customer Service Centre on 136186, email customer.service@ecodev.vic.gov.au or via the National Relay Service on 133 677 www.relayservice.com.au.

This document is also available at www.agriculture.vic.gov.au

Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.