Windrowing of grain crops

G.L. Bishop

Department of Agriculture, Ballarat, Victoria.

The high rainfall districts of Victoria have the potential to increase grain production and crop yields if management techniques that minimize the environmental problems are adopted by farmers.

Common problems experienced near harvest time are uneven crop drying, green weeds or regrowth due to late rains, high moisture levels in the straw and grain and strong winds just before harvest which cause grain to shed from the head, or the whole head to snap off.

Windrowing or swathing the crop is a management technique that is becoming increasingly popular in the South-West region of Victoria because it helps to minimize these environmental risks in cropping.

Windrowing is the practice of cutting the crop and placing it in rows on the stubble that remains. After the crop ripens it is harvested using a normal grain header fitted with a windrow pickup attachment that is bolted on or replaces the conventional header front.

Farmers who have adopted windrowing list the main benefits of windrowing as being:-

- Reduced grain loss due to bad weather.
- Extended harvest period by about two weeks.
- More even crop drying, and the desiccation of green weeds in the crop.
- Crain moisture levels quickly reduced to acceptable delivery standards.
- Increased acceptability of syndication of headers or the use of a contractor because of safe grain storage in the windrow while waiting
- for the use of a header.
- Reduced machinery investment because of syndication. the use of contractors or the purchase of a smaller header made possible by the extended harvest period.

Crops that have been successfully windrowed are rapeseed, oats, wheat, barley, triticale and field peas. Not all crops are worth windrowing. As a rule of thumb, cereal crops that are shorter than about 50 cm or that are expected to yield less than about 1.4 tonnes per hectare are better direct- headed because of the poor windrow formed. Crops that have suffered storm damage and have been lodged and tangied prior to windrowing make a lumpy windrow and are slow to windrow and harvest, and are best harvested using crop lifters.

The earliest safe-time for windrowing has been determined experimentally for rapeseed (1), but not for cereal crops. Most farmers think that for wheat and barley the lower grains should be in the medium dough stage, fully filled and quite firm to squeeze (2). Some farmers think that oats can be windrowed slightly earlier when they are in the milky dough stage. Most cereal crops are windrowed about 7-14 days before the crop is normally ripe.

The height of cutting the straw varies between farms. Most cereal crops are windrowed at a height of 20-25 cm to allow air circulation under the windrow and more even drying. A minority prefer to windrow at about 15 cm high so that the windrow does not sag through the stubble. A useful rule of thumb is to leave one third of the straw and take two thirds with the windrower. Rapeseed crops are windrowed at about the height of the first branch, leaving 30-40 cm of stubble in which to anchor the windrow.

1. Banks, L.W. and Bernardi, A.L. (in preparation).

2. Doolette, J.B. (1963). J. Agric., S.A.