



Harvesting Hulless Barley

Hulless barley is a specialty crop that can generate price premiums when marketed, but to do so, it must be harvested properly. Little research information is available about harvesting hulless barley. What is known comes from several years of experience gained with the crop by farmers, researchers and agricultural engineers.

Quality standards

Hulless barley is used as both human food and animal feed, and this distinction is reflected in the grading system. Grain destined for human consumption should be:

- free of hulls (5 per cent or less)
60 lb/bu
- free of cracked and broken kernels (4 per cent or less)
- fully mature
- appear bright, clean and free of diseased, frosted, sprouted or stained kernels

Feed quality standards have greater tolerances:

- hull content less than 15 per cent (57.6 lb/bu)
- sprouted 10 per cent maximum
- broken 15 per cent maximum
- heated, rotted or mildewed 0.5 per cent maximum

Harvesting

As harvest approaches, growers should continuously check the stage of maturity of their hulless barley. Randomly sample plants through the field and use the thumbnail test to estimate the moisture level of the kernel. This approach will provide reasonable maturity estimates. A hulless barley moisture table for Model 919/3.5 moisture meters is available from the Canadian Grain Commission. A reading of 14.8 per cent or less is considered dry.

In fields where lodging may be a problem, swath the crop as soon as possible to reduce

field losses and reduce kernel staining. Where lodging will not be a problem, monitor the crop for neck breakage and shattering.

As with malt barley, the highest seed quality is achieved through straight combining or swathing just prior to combining.

Hulless barley must be dry when it is combined to successfully remove hulls. When grain is moist, the hull will adhere to the kernel. If the crop must be harvested when it is tough or damp, a large number of hulls will be retained. These can be removed through a gentle buffing operation at a seed cleaning plant.

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To minimize kernel damage and maximize hull removal, use a tight concave setting and as slow a cylinder speed as possible when combining. If hulls are not being removed, check the cylinder speed, concave clearance and use retarders if necessary.

Slightly higher air volumes may be necessary to separate the hulls. Keep the return to a minimum. If harvest conditions do not permit successful removal of hulls without cracking kernels, try a secondary buffing process after harvest.

The buffing process through a de-bearder at a seed cleaning plant does an excellent job of removing hulls. It is a quick and inexpensive way to vastly improve the chances of achieving the human consumption grade.

Post harvest handling

Hulless barley is a heavy product with a bushel weight similar to wheat. It will occupy one-third less space than regular barley. Keep this aspect in mind when filling trucks and bins.

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