Harvesting Better Barley
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H.C. Rather, Farm Crops; A. B. Love, Agricultural Economics
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HARVESTING BETTER BARLEY

H. C. RATHER, FARM CROPS
A. B. LOVE, AGRICULTURAL ECONOMICS

CHARACTERISTICS OF MALTING BARLEY

Barley of good quality suitable for malting purposes brings substantial premiums over barley which is suitable only for feed. Good malting barley is characterized by medium-sized but plump kernels high in test weight. The kernels are mellow and starchy in appearance rather than dark and steely. The grain should be free from disease, free from mixtures of other grains and of other types of barley. Climatic and soil conditions have much to do with producing grain of malting quality. Large areas of the better land in Michigan, especially in the Saginaw Valley and Thumb District are capable of producing malting barley. Considering the requirements of both the malting industry and Michigan growers, Wisconsin 38 is the preferred variety.

MALTING BARLEY MUST BE FULLY MATURE

Barley cut before it is mature is lower in test weight, gives a smaller percentage of malt extract, and carries green kernels which are undesirable for malting. Immature barley also yields less grain to the acre. No type of barley harvest should be started until the straw is fully yellowed and the kernels are hard.

DAMP, HEAT-DAMAGED BARLEY BRINGS DISCOUNTS

Barley threshed when it contains too much moisture heats in the bin. This discolors the grain, especially the hard, starchy part of the kernel under the hull. Prolonged heating injures germination. Since malting is a germinating process, grain of poor germination is worthless for this purpose. Heat-damaged, or musty barley can be used for feed only.

MICHIGAN STATE COLLEGE
EXTENSION DIVISION
East Lansing

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Binder Harvest. When barley which is fully ripened is cut with the binder, it should be allowed to cure and dry out in well made shocks. It is commonly threshed from the field but may be stacked or put in the mow. It should be threshed only when the grain is thoroughly dry.

Combine Harvest. Barley may be harvested successfully with a combine but mismanaged combine harvest is responsible for much of the damp, discolored, low-priced barley. The grower should insist on the careful carrying out of all harvest and threshing operations.

Mismanagement consists largely of:

1. The tendency of combine operators to start too early in the development of the crop. Grain should be down to 14% moisture before it is threshed or combined;
2. Starting harvest too early in the morning and keeping it up too late in the afternoon. In both cases the grain is frequently damp from dew.

Difficulties of harvesting standing barley with the combine are:

1. There is likely to be a loss in yield of 2 to 10 bushels an acre due to breaking off of heads and shattering of grain.
2. There may be a loss in test weight of 1 to 3 pounds a bushel, especially if the harvest season is rainy. Grain wet with rain or heavy dew swells and does not completely shrink back to normal size when it dries out.
3. Green sweet clover leaves or green weed seeds may cause heating and mustiness even though the grain itself is dry enough.

Barley may be prepared for combine harvest by windrowing the grain when it is fully ripe and ready to cut with a binder. Windrowing may be done with a regular windrowing machine or with a binder from which the tier has been removed. The barley will dry out thoroughly in the windrow resting on high stubble. Two or three days of good weather usually are sufficient.

If barley is windrowed—

1. There will be one extra harvest operation as compared with combining directly from the standing grain. The cost of windrowing is 75¢ to $1.00 an acre and this cost should be much more than returned in the saving of yield.
2. Sweet clover leaves, green weed seeds, and other moist foreign material dries out and will not provide the source of moisture for heat damage. Thus it is much easier to save quality.
3. Combines designed to handle a narrow swath must be operated more slowly if the windrower has cut a wider swath.

The windrowing of barley prior to combining is advantageous from the standpoint of yield and quality for all barley but is especially important in the case of lodged barley, barley of uneven maturity, barley in which there is a tall sweet clover seeding, and barley infested with green weeds.

SKINNED AND BROKEN KERNELS LOWER BARLEY QUALITY

Skinned and broken kernels do not germinate properly and, of course, are objectionable in malting barley. Skinned and broken kernels result from cutting immature barley, threshing while the grain is wet, improper adjustment and feeding of the machine, and rough treatment of the threshed grain.

HANDLING MOIST GRAIN

In wet seasons, it is almost impossible to get the grain dry enough before threshing. Damp threshed grain should be stored in shallow, well-ventilated bins and moved repeatedly until it is dry **enough to be safe from heating injury.**

In the interest of a prosperous Michigan barley industry, it is important that Michigan growers generally adopt good harvesting and threshing methods. Maltsters not only pay premiums for good barley but they discriminate against or refuse altogether to buy barley of inferior quality.

Local elevators must either apply these discounts to the lower grade barley as produced by individual growers, or buy it all without discount on the basis of the value of inferior barley. This results in lower prices to all growers, and tends to destroy the reputation of the community as a producer of high grade malting barley worth premium prices.

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