

assume a reddish cast and drops down upon the straw, the proper period of harvesting has arrived, and as after this the grain matures rapidly, it should at once be cared for. It may be mown or cradled, or cut with a reaper; if the straw is long it should be bound, though with proper forks for loading, it may be pitched from the swath without this additional labor. It need not stand long in the field, yet care should be taken that it is properly dry before storing in large mows, as it is more easily injured by heating than any other grain.

Barley straw well cured and not over ripe is readily eaten by all kinds of stock. It is worth more for fodder than wheat straw, and is equal, perhaps, to corn stalks or inferior hay. The chaff is much liked notwithstanding the strong beards with which it is filled.

Uses—Stock Feed—Malting, Etc.

The greatest use made of barley is in the production of fermented and alcoholic liquors; but this grain affords an excellent feed for horses and is equal to corn for fattening cattle and swine. For the latter purpose it should be cooked or soaked in the grain, or the meal may be wet and allowed to commence fermentation before using. This grain when boiled has long been employed in Europe as horse food, especially after a hard day's work or during illness. When fed to horses in a half malted state, it is said to be perfectly harmless, however heated they may be, or whatever quantity they may eat. To prepare it, soak it in water from twelve to twenty-four hours in the usual way.

In malting for manufacturing purposes the grain is soaked for several days in large vats filled with water, and then heaped upon floors to sprout, in which process *diastase* is formed, which has the property of converting the starch into sugar. The grain, when thus sprouted, is placed over a furnace and hot air passing through it checks the germination and drives off the moisture. When thoroughly dried it is ready for the use of the brewer, who steeps it in warm water, and in combination with hops and other substances produces ale, porter, beer, etc. For distilling it is first ground or crushed, and submitted to the usual process.

Diseases and Insects.

The diseases and insects injurious to barley are not numerous. A kind of smut called the barley brand, sometimes prevails in cold, wet seasons, and is its worst disease. It is a fungus parasite having its seat in the ear, and developing a sort of woody tissue between the layers of the fungus. The outer covering of the grain remains sound, but the internal structure is blackened and destroyed. In the Eastern States the "maggot" or worm in the straw sometimes injures barley, and the wheat midge has occasionally been found in it, in sections where it prevails.

Yield and Profit of the Crop.

The average yield and profit of barley compares favorably with other grains. It can be grown for fifty cents per bushel, and prices of late have averaged more than double that amount. The products ranges to ten or fifteen to fifty bushels per acre—the average may be put at twenty-five bushels in Western New York.

NEVER GIVE UP.—Who are our rich men?—our distinguished men?—our most useful men? Those who have been cast down, but not destroyed—who, when the breeze of adversity swept away their props, sought new standards—pushed on—looked up, and became what you behold them now. A glorious sentence and worthy to be inspired—*Never give up!* Men are not made—they make themselves. A steady perseverance—a determination never to sink, though millstones were hanged about their neck—is the true doctrine. It is this that has made the wilderness to blossom, that has given wings to the ocean, filled valley, levelled mountains, and built up the great cities of the world.

SODA CAKE.— $2\frac{1}{2}$ cups sugar, 3 eggs, 1 cup sweet milk, a piece of butter the size of a hen's egg, 1 heaping teaspoonful of cream of tartar, $\frac{2}{3}$ of a teaspoonful of soda and a little nutmeg.

CARROT PIES.—Take 2 good-sized carrots, clean and grate them; scald a quart of milk and pour on the carrots, and set it to cool. Take 3 eggs and 1 cup of sugar, beat well together and stir into the carrot; season with nutmeg or cinnamon.