

The Curing of Hops.

A correspondent requests some information on the best method of curing hops. In reply we can only state briefly some of the more important general principles. The drying of hops is a practical art, and as its proper execution is of so much importance, we would strongly recommend persons intending to undertake it, to put themselves under the instruction of a competent person during the season of picking, in order to learn thoroughly the various details of perfectly curing hops, as they naturally arise in the course of daily practice.

Much depends upon the proper construction of the building, which should have ample space, both for drying and cooling. As hops are dried by the ascent through them of heated air, it is of primary importance to have sufficient space—say from sixteen to eighteen feet—between the fires and the drying floor; keeping up a constant ventilation by freely admitting the external atmosphere to the fires, and thence through the drying floor and the roof of the building. Begin with a moderate fire, and continue so as far as practicable, gradually lowering it as the hops get nearly cured. Hops are often irreparably injured by too hot or intermittent fires, but never by such as are slow and regular. Where two batches of hops are gathered daily, as nearly twelve hours as possible should be given to each in drying. Something will depend on each of such conditions as the state of ripeness, amount of moisture in the hops when gathered, arising from atmospheric causes, and especially the quantity placed on the drying floor, which is not unfrequently overloaded. Hops fully ripe and gathered dry, admit of curing in a thicker stratum than when obtained in opposite conditions. From eighteen inches to two feet thick, when first put on the floor, admit of being generally well managed. They should be thoroughly stirred by walking through them, taking care to keep the feet close on the drying cloth, or by a large wooden shovel, as soon as the surface begins to get dry. Some stir them again in a few hours, or, when time admits, throw them into a lump, allowing the fire to go down.

It is worthy of remark that when hops are gathered cleanly, that is without many leaves or twigs, the closer they go together on the drying floor, and the thinner they should be spread. Clean picking, and thorough, careful drying, provided the hops are sound and ripe, are the two essential conditions of success. Sulphur, in the shape of roll brimstone, is frequently used in England, at the commencement of the fires; it aids the progress of drying, and imparts a bright yellowish hue to the hops. Used in small quantities it does not injure the hops for brewing purposes; but when employed to excess its effects must be objectionable. Perhaps it would be safer not to employ it at all, as there is a prejudice against it, more

particularly by brewers on this side the Atlantic.

It is of the utmost importance that hops should be perfectly and uniformly dried, or they will not keep, especially when transported to the moist climate of Britain. If the leaf and stalk of the hop, when rubbed between the fingers, yields no moisture, the curing may be assumed as sufficient. We have frequently seen in our dry climate the centre of bales of hops mouldy, damp and clammy, solely in consequence of careless and insufficient curing, and such samples are mostly quite worthless, and not unfrequently the occasion of heavy losses to brewers.

Another very important condition is the packing. Hops may be healthily grown, cleanly picked when in full perfection, and properly cured, yet from imperfect packing and injurious subsequent exposure, their value will be greatly depreciated. Packing is now usually done by a powerful press, and the cloth of the bales should be close and strong. Hops not intended for early use should be compressed as tightly as possible, and kept in a dry place, and free from all currents of air. The pleasant characteristic aroma of the hop is exceedingly volatile, and by age and exposure its quality rapidly diminishes. More attention to the different conditions at which we have but briefly hinted, must be paid by Canadian hop growers ere they can do full justice to themselves and the trade, either at home or abroad.

Hilling Corn.

This practice, once so common, seems now to be considered of doubtful utility. Much discussion is now going on in the agricultural press as to whether the practice of hilling corn is advantageous or not. On the one side it is maintained that the roots of the corn spread out to a considerable distance near the surface, and that the operation of hilling corn, as generally performed with the plough, tends to cut off all these roots and leave the plant nothing to hold on by, but those close to the stalk or that have gone down and into the soil. On the other side it is said that the corn requires hilling to prop it up from becoming broken down near the crown of the root (its weakest part) by the wind, and that where this is neglected much loss will occur from the corn falling before the ears are fairly set.

There is doubtless truth on both sides. Something will depend on the kind of corn used. The large coarse yellow corn of the western prairie, would be much more likely to stand up fairly without hilling, than would the finer and more delicate varieties grown in the Eastern States and Canada. Our own practical observation tends to favour the practice of hilling the corn, provided the work is properly done and at the right time. It should be done early. We fancy if the hills could be formed first, and the corn

planted in them, it would be better than planting the seed on a level surface. The work of hilling ought to be done as soon as the corn is a foot high, and if properly managed, the roots will scarcely be touched. After that, the culture should consist only of stirring the surface to a depth of one or two inches, to keep the soil mellow and the weeds down. The old practice of ploughing and cross-ploughing between the rows of corn several times during the season was very well in its day, when we had not the advantage of the modern improved implements of culture—the horse-hoe and cultivator. If the operation of hilling is carefully managed by running the plough six or eight inches from the hills and throwing the earth towards them, then following with the hoe to draw the newly turned soil in amongst the cornstalks, and so turning the hills nice, level and compact, there can not be the least injury done to the roots. This is much better than depending upon hand hoeing alone. A man or boy with a sharp hoe in hand cuts away carelessly into the soil close around the stalks, cutting off the rootlets that are extending outwards near the surface.

The Hessian Fly.

This insect, *Cecidomyia destructor*, was at one time the most destructive enemy our crops of winter wheat had to contend with, though of late years, owing perhaps to the greater attention drawn towards a still more destructive enemy, the wheat midge, *Cecidomyia tritici*, it has remained comparatively unnoticed. As may be surmised from their generic names, both these insects belong to the same family, and the perfect insects are similar in outline and size, though not in colour; the Hessian fly being dark, brownish black, while the midge is orange coloured. Their habits and methods of destruction are, however, entirely different.

The flies themselves are not destructive, it being their larvæ that feed on the wheat plant. The female fly lays her eggs upon the under side of the young leaves of the wheat, near the base of the stalk, early in September. In a week, provided the weather is warm, these eggs hatch out into little white maggots, each of which makes its way to the first joint near the crown of the root; according to Harris it fixes itself and lives by suction on the juices of the young plants. This lasts until the maggot changes into a pupa or chrysalis, when it sometimes drops to the ground and buries itself in the soil; but more often still adheres to the wheat plant, ready to again appear in spring. A single maggot at one point would do but little injury; but as several—often as many as thirty—generally get together at one point, the stalk of the plant soon becomes weakened, turns yellow and bends to the ground, never again to rise; and the germ of the future wheat head, embraced in the crown of the plant, cannot become developed. If the