

have the tubes properly bent down so that they will not clog with powder.

This powder, though efficacious in destroying the insects, is not dangerous in its effects upon the cabbage as food, as might be the case to some extent if Paris green and some other poisons were applied.

For the CANADIAN LIVE-STOCK AND FARM JOURNAL.

Weeds.

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VIII.

CLASSIFICATION OF WEEDS ACCORDING TO NATURE AND HABITS.

VERBENACEAE (VERVIAN FAMILY).

Verbena hastata (Blue Vervian) is the only species we shall notice in this family. It is not a very serious weed; it is frequently seen growing on flats near a stream. The plant is four to five feet high, leaves two to three inches, much longer than broad, and toothed along the edge. The small blue flowers, very irregular in appearance, grow upon spikes, that are very numerous. The stems have a purplish appearance.

LABIATAE (MINT FAMILY).

A very large family, chiefly herbs with square stems and generally aromatic. The flowers are irregular, mostly two-leaved in appearance. It is esteemed for its medicinal value. Here you find the mints, sage, horehound, etc.

Leonurus Cardiata (Motherwort), a comparatively common weed in waste places, and seldom if ever in cultivated fields. The leaves of the flower stem are quite unlike those which appear in the early part of the season. It is a difficult plant to describe so that the ordinary reader can identify it. The most striking character is in the leaves, the lower being large and palmately lobed, somewhat like the maple, and the upper three-cleft; the upper lip of the flower is bearded, and the plant is usually found near dwellings, and is about $\frac{1}{2}$ feet high.

Nepeta Cataria (Catnip). Though called a weed it is not a very obnoxious one, and seldom finds its way to the fields, but seems to linger about stone heaps or fence corners by the wayside. Cats are very fond of it, and will travel quite a distance in search of it. The whitish flowers appear in late summer in clusters or spikes at the end of the branches. The leaves are oblong, heart-shaped, and the plant is of a soft downy-like appearance.

Brunella Vulgaris (Self-heal). Very common in low fields, low and spreading, with oblong leaves and three flowers under each of the broad and round purplish bracts of the head; flower bluish-purple. Though all the species described in this family are perennial, yet none of them have become such troublesome weeds as to require a great effort to get rid of them. The self-heal is more common in grass fields than either of the preceding.

BORAGINACEAE (BORAGE FAMILY).

This might to some extent be termed the family of "tramps," as we find in it some weeds of a rough, uncouth, unpleasant appearance, their form, their smell, their feel, in some cases bring very unattractive; yet in this family there are some respectable members, that serve to give it some tone. Here we find the burrs, stickseed, beggars' lice, etc., the heliotrope and the lovely little forget-me-not. The members of this group are mostly rough, hairy plants, having hard seeds, usually four to a flower; flowers usually arranged on one side of the stem; juice commonly bitterish, sometimes mucilaginous, and the roots of some red.

Echium Vulgare (Blueweed). A very common biennial weed in the vicinity of Guelph, also in other parts of Ontario, especially the county of Glengarry. Few plants have more common names than this. In the Southern States it is called the Canadian thistle, thus showing how little dependence can be put in a common name. It has little or no resemblance to our thistle, but, nevertheless, it has received that name. *Viper's bugloss* is another name it is known by.



Echium Vulgare (Blueweed).

The plant is from one to three feet high and bears several stems. In spring the root leaves spread out close to the ground; they are covered with small tubercles. Soon a centric stem arises, and as development advances, others appear, all bearing about June to August a great number of beautiful blue flowers. Both leaves and stems are rough to handle, especially the latter. This plant is fond of lime, and spreads rapidly in soil containing plenty of this constituent. Being a biennial it cannot withstand thorough cultivation, but it takes its stand along the roadsides, fence corners, and neglected spots. Its seed often blows long distances on the snow-crust, collecting in quantities in the fence corners and around stone heaps. The following remedies, if adopted, will overcome it:

1. When it is in bloom take some convenient tool and cut it a few inches below the surface. If cut at the surface (a plan followed by some pathmasters) its growth will be aggravated, and where only one stem was, several will appear.

2. Summer fallowing readily gets rid of it, if the ploughing is done carefully and the large top roots well turned over. It seeds in the second year, and consequently if prevented, the plant must soon be extirpated.

3. Plants in the fence corners can be easily pulled up when the ground is soft. In stony pastures it is sometimes very bad; in such cases pulling and spudding must be resorted to.

Lithospermum arvense (Pigeon weed, Red-root, Gromwell). This weed is considered a great nuisance in some parts of the Province. Where fall wheat is largely grown, if it gets a foothold, it is

likely to spread. It succeeds best where it gets a start in the fall, consequently we find, where spring crops are principally grown, this weed is comparatively scarce. It is about one foot high, roughish stem, small white flowers, and a very red root; the seeds are hard and stone-like, and will last years before they lose their germinating power. Thorough cultivation must be followed where the weed is common, and if no fall wheat is sown the plant will soon disappear. Many resort to pulling it, but this entails much labor, and if not carefully done, many plants are left to supply seed, which will, as soon as a return of fall cultivation suitable to give them a start is made, appear again.

Cynoglossum officinale (common Hound's Tongue). Reddish purple flowers, large, rough, flat seeds. This is the common burr, by the wayside; grows about $1\frac{1}{2}$ to 2 feet high. It is a great nuisance on account of the seeds sticking to sheep and making the fleece more or less damaged. You seldom or never see this plant in cultivated fields, and if proper care was exercised it could soon be banished from the fence corners and wayside. As the taste, care and knowledge of our farmers improve, this plant will lessen in its distribution. Being a biennial, cutting it down, especially below the surface, will effectually kill it. Weed-destruction has been hitherto largely carried on only in the fields, but we must now extend the war to the fence corners, around stumps, stone-heaps and by the roadsides, if we wish to get rid of many weeds.

C. Morisoni (Beggars' Lice). This is another form of burr, in which the seeds are much smaller, and on that account much more troublesome by getting attached to the wool of sheep and sometimes to the clothes of man. The seed is covered with prickles and adheres with great tenacity whenever they become attached to woolly substances. It is often common in open woods and thickets, and in such places becomes a nuisance. It is a worse form than the preceding, and every effort should be made to destroy it. Like the former, it seldom invades the fields, and requires to be cut in the neglected places where it is usually found.

Slip-Shod Farming.

BY D. NICOL, CATARIQUI, ONT.

(Continued from June.)

It is said that "the homes of a nation form a true index to the character of the people." I trust the people of Canada are not to be judged generally by some homes that I have seen: barren and treeless, the wood pile at the front door, pig-pen and cesspool near the back door, filling the air with an unpleasant, disease-fostering odor. The well from which is drawn the water used for drinking and cooking purposes, so near the cesspool that it actually tastes of contaminating substances, doubtless containing the germs of typhoid and other devastating fevers. True, health-boards have been appointed in some districts, but they seem to be very negligent in the performance of their duties. Is it surprising that such homes should create in the rising generation an utter repugnance for the pursuit of farming?

This slip-shod method is not always the result of ignorance. I have known men of more than ordinary intelligence lose more time lifting up and down the bars in one season than would be required to make and hang a good swing gate for every field on the farm.

On many fields I have seen water standing in the furrows in June, so that the land could not be worked until too late in the season, while almost every one knows that a little expenditure of labor in drainage would have rendered it dry and pliable by the middle of April. I have seen large piles of manure that had been wasting in the barnyard for years, although the owner loafed many fine days in the village bar-room or corner-grocery. The want of success with many so-called farmers is, generally speaking, attrib-