

Time of seeding, August to October.

Dispersal—Frequently as an impurity in clover and grass seed.

Remedy. Seldom troublesome in well cultivated fields. A short rotation of crops will soon cause it to disappear. Badly infested fields may be cleaned by deep, thorough fall cultivation, followed by a hoed crop the next season.

BARNARD'S THISTLE (*Centaurea solstitialis*, L.).

This plant is comparatively new to Ontario. Its home is in the Mediterranean region, but it has been introduced into most temperate climates with alfalfa, clover and other seeds. It has become scattered pretty well over Ontario as an impurity in alfalfa. It is a bushy-branched, annual weed from 1 to 2 feet high. The flowers are yellow and surrounded by conspicuous, stout, yellow spines about three-fourths of an inch long. The lower leaves are divided, the upper linear entire, and run along the stem at the base (decurrent). The plant being an annual and very conspicuous is not likely to become a bad weed.

FALL DANDELION (*Leontodon autumnalis*, L.).

An introduced perennial weed reported recently from several places in Ontario as occurring in hayfields. Leaves mostly basal, springing from a short, thick root-stock and resembling somewhat the leaves of the Common Dandelion. Stems branched, scaly and few flowered. Flowers about 1 inch across, bright yellow. Seed is $\frac{1}{4}$ inch long, brown, linear, ribbed lengthwise and bears a row of feathery bristles about its own length.

Time of flowering, July till frost; seeds ripe by August.

Dispersal—By seeds and by division of the crown.

Remedy. * "Badly infested fields should be brought under cultivation. Pasture lands that cannot be cultivated may be improved by severely raking the surface with a spring-tooth harrow and sowing the most vigorous grasses."

YELLOW GOAT'S BEARD, MEADOW OR WILD SALSIFY (*Tragopogon pratensis*, L.).

This is a weed common along roadsides, railway tracks, and in waste places in many parts of Ontario. No reports have been received of it persisting in cultivated fields. However, specimens are frequently sent into the Department of Botany for identification, as it is a very conspicuous plant both in flower and seed.

Yellow Goat's-beard is a perennial weed naturalized from Europe. It has a long slender tap root; an upright stem from 1 to 3 feet high; leaves keeled, long, narrow taper-pointed; large yellow flower heads, from 1 to $2\frac{1}{2}$ inches broad, which are succeeded by conspicuous spherical heads of downy seeds looking like very large dandelion seed-heads. The seeds are yellowish-brown, long and slender, somewhat spindle shaped, tapering to a slender beak which bears a tuft of hairy bristles; the surface is lined lengthwise and somewhat roughened with little projections. The whole plant is filled with a milky juice.

Time of flowering, from June to September.

Time of seeding, from July to September.

Remedy. This weed does not appear to stand cultivation, as it is seldom seen in fields which are under crop. If it becomes abundant in meadows or pastures, break

* "Farm Weeds." By G. H. Clark.