Weeds of Western Australia - Spear thistle (Cirsium lanceolatum (L.) Scop.)

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A number of thistles have become serious weeds in Western Australia. Some such as Canada and Berkheya thistles are perennials, others, including Saffron and Sheep thistles, are annuals, while Spear thistle is a biennial. During the first year a large basal rosette of leaves is formed followed by the flowering stem in the second year.
SPEAR THISTLE

(Cirsium lanceolatum (L.) Scop.)

A number of thistles, including Canada, Berkheya and saffron have been dealt with in previous articles. The first two are perennials, living for an indefinite period, while saffron thistle completes its life cycle in one year. Spear thistle, the subject of this article, is intermediate, usually being a biennial. During the first year it produces a rosette of large, very spiny leaves, the flowers and seeds being formed during the second season of growth.

Spear thistle is native to Europe and Asia but is now naturalised in most temperate countries. It is common in many wheat growing districts in Canada and the United States and occurs quite freely in Australia and New Zealand. In this State it is restricted to areas having a relatively long growing season, being found mainly in the higher rainfall belt of the South-West. It grows most vigorously and is most persistent on heavier soils but is not confined to them.

DESCRIPTION

Spear thistle is known as bull thistle in Canada. It is also referred to as Scotch thistle, a name applied from time to time to a number of plants other than that accepted as being the heraldic Scotch thistle. As already mentioned, it is a biennial, a large, flat rosette of leaves arising from a deep, fleshy taproot during the first year. These basal leaves are stalked and sometimes more than a foot in length. Each leaf is deeply lobed, the lobes ending in long, sharp spines. These along with further spines on the upper surface leave no doubt why the plant is known as spear thistle.

The stem, formed in the second year, is up to five feet in height and is usually branched. It is spiny-winged and slightly woolly and the leaves it bears are similar to those of the basal rosette but somewhat smaller. Each plant produces a number of large, purple flower heads, sometimes three inches across when mature. The seeds are quite large, being about one sixth inch long, smooth or slightly furrowed, blackish or black streaked on a yellowish background. The hairs of the parachute or pappus are long, white and feathery but do not remain attached to the seed for very long and are not a great help in its distribution by wind.

SIGNIFICANCE

About 20 years ago, spear thistle was blamed for the loss of horses in New South Wales but there has been no confirmation of toxic properties. If responsible for maladies, mechanical injury by the spines rather than any toxic content is likely to be the cause. Thistles in general have the well-earned reputation of being spiny, and spear thistle, as the name implies, is one of the worst in this respect. For this reason it is seldom eaten by stock although they show some liking for the near-ripe seed heads.

The main significance of spear thistle as a weed is the smothering effect of the
SPEAR THISTLE

A—Plant; B—Leaf showing the spiny surface; C—Seed and pappus

(Canadian Department of Agriculture.)
large basal rosettes on pasture species. Stock also tend to avoid grazing in their immediate vicinity, except, when the seeds are approaching maturity. Again hay or chaff containing spear thistle, besides being unattractive to stock, is uncomfortable to handle.

CONTROL

Spear thistle is seldom a problem on arable land as it does not persist under cultivation. Control measures, therefore, are usually directed against the weed growing in pastures or on waste land. Being a biennial, seed formation can be prevented by destroying the plant, even during the second season of growth. Fortunately the seeds do not have a long period of dormancy as is the case with weeds such as wild radish and doublegee. They are also comparatively heavy and, as the parachute falls off very readily, are seldom carried any distance by wind.

As already mentioned, ploughing is an effective means of control but is seldom desirable where pastures are concerned. Isolated plants can be handled by cutting the rosette well below the crown. Mowing can be very helpful but, in order to be effective, must be undertaken during a relative limited period. If carried out too late, seeds will be formed, while if too early, new shoots may mature, especially in moist places.

The hormone-like herbicides, particularly the ester of 2,4-D, are also effective against spear thistle. The plants are most susceptible when small and 1 lb. of acid equivalent per acre is usually sufficient. If the plants are scattered, they can be spot-sprayed with a knapsack or hand-wand from a power unit. A low-volume boom can be used for more general infestations but spear thistle is not one of our more widespread weeds and this method is seldom warranted in Western Australia.
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