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Weeds of Western Australia - Stinkwort (*Inula graveolens* Desf.)

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STINKWORT

(*Inula graveolens* Desf.)

The characteristic smell of Stinkwort, due to a volatile oil, is evident in many parts of the State during the summer months. The barbed hairs attached to the seeds can penetrate the stomach lining of animals, causing conditions favourable for enterotoxaemia.

WEEDS of Western Australia

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STINKWORT (*Inula graveolens* Desf.)

THE original home of Stinkwort is the Mediterranean region, including northern France. Apparently the first Australian record was at Onkaparinga in South Australia about 90 years ago. Efforts were made to keep it in bounds during the years immediately following introduction, but it continued to spread and is now firmly established in all agricultural districts of South Australia. It also covers large tracts of land in New South Wales and Victoria and occurs in most districts of Western Australia.

During the summer months Stinkwort is green when much of the other vegetation is dry and straw-coloured. From a distance it often gives the impression of a succulent summer crop but has a low nutritive value, and is not relished by stock.

DESCRIPTION

Stinkwort owes its popular name to the presence of a volatile oil having a strong and characteristic odour. This is secreted by the small glandular hairs present in all parts of the plant. Dust and other light particles adhere readily to the sticky surface of the leaves.

It is a herbaceous annual 1-2 feet in height. The stem is erect, with many spreading leafy branches. The lower leaves are oblong lance-shaped with small teeth, the upper ones narrow and entire. The flowering heads are small and very numerous, in long, loose pyramid-like panicles. The yellow flowers are surrounded by narrow sticky bracts. The achenes ("seeds") are almost cylindrical, downy, narrowed into a neck at the summit, the

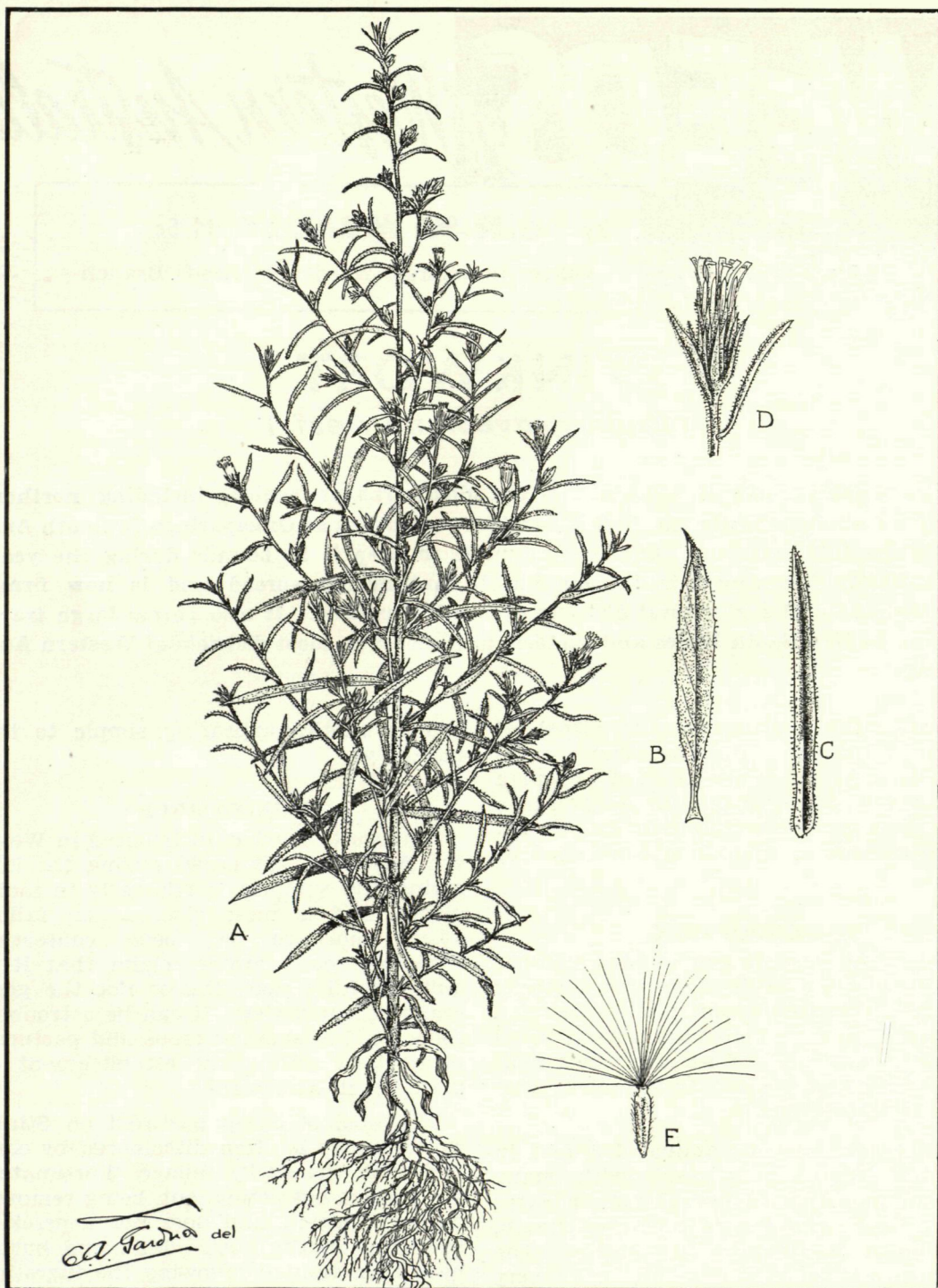
pappus bristles appearing simple to the naked eye.

SIGNIFICANCE

Stinkwort is widely distributed in Western Australia. It grows during the late spring and summer, particularly in moist places, and is most vigorous on fallow where moisture has been conserved. Although some farmers claim that it is quite useful forage, this is not the generally accepted view. It can be a troublesome weed of summer crops and pastures, particularly during the establishment of plants such as lucerne.

The wool of sheep pastured on Stinkwort country is often discoloured by contact with the sticky foliage. Fortunately the stain is not permanent, being removed during scouring, and does not depreciate the value of the wool. Milk and butter have been tainted following the ingestion of Stinkwort by dairy cows and it is also claimed that the flavour of mutton can be affected if the weed is grazed by sheep.

The possible toxicity of Stinkwort remained a puzzle for many years. Losses



STINKWORT

(*Inula graveolens* Desf.)

A.—Plant showing abundant flower heads and fine rooting system. B. and C.—Leaves. D.—Flower heads.
E.—Achene (seed)

(From a pen-drawing by the Government Botanist, Mr. C. A. Gardner)

of stock were often associated with grazing in paddocks containing quantities of the weed, but analyses of the plant failed to disclose the presence of any toxic principle, and both feeding and drenching tests with sheep gave negative results.

Most of the trouble has been experienced during the latter parts of the summer when the plants are seeding freely and other feed is often scarce. The serious effects have now been shown to be due to the irritation and penetration of the bowel lining by the barbed pappus hairs attached to the seed. These often remain embedded and the resultant injury provides conditions which are favourable for the rapid multiplication and toxin production of the enterotoxaemia or "braxy-like disease" bacterium. The absorption of this bacterial toxin can cause death, and Stinkwort, therefore, although not toxic in itself, may cause a condition which predisposes the disease.

A form of dermatitis has been attributed to handling Stinkwort particularly when in flower, and the effects have lasted for weeks or even months.

CONTROL

Small infestations can be handled by pulling or hoeing but in most localities Stinkwort is too widespread for this method to be practicable. Some degree of control results from heavy grazing when the plants are small. Cultivation to prevent seed formation is also carried out but often, during the summer, soils are too hard to plough and furthermore, workings increase erosion hazards. Mowing at the early flowering stage is helpful but cannot be expected to prevent all plants from seeding.

Stinkwort is not highly susceptible to the hormone-like herbicides but can be controlled by spraying with 2,4-D ester at the rate of 1-2 lb. acid equivalent per acre. The lower rate is effective when the plants are small but when larger, 2 lb. is recommended. Patches can be spot-sprayed using a knapsack or hand lead from a power unit. With this method 100 gallons of solution per acre is convenient. For more extensive infestations a low volume boom unit is desirable, applying the solution at 6-10 gallons per acre.

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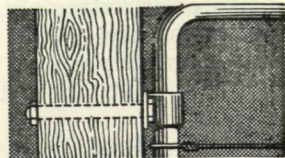
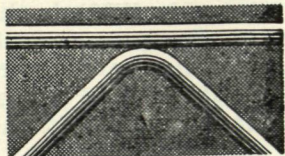
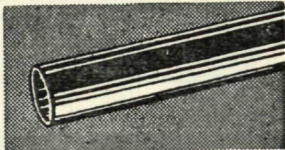


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