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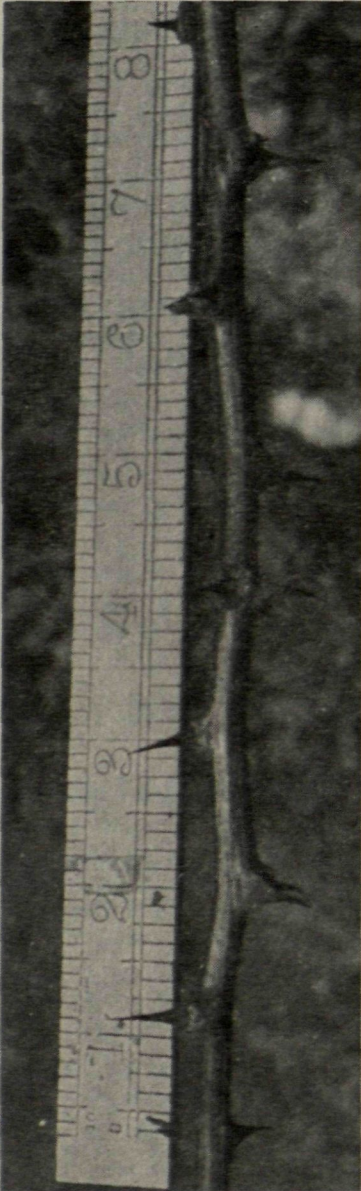
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ROBINIA—the false acacia

By R. D. ROYCE, Officer in Charge, Botany Branch

ROBINIA, the false acacia, is a tree up to 60 feet high, and is native to the eastern United States. There it develops a trunk 3 or 4 feet in diameter and produces a hard close grained and durable timber. In America it is known as black locust or simply as locust.



A stem of Robinia showing the thorns. The rule is $\frac{1}{4}$ in. wide

This plant was introduced into Europe as early as 1636 and it has been widely cultivated in many countries since then. It was introduced into Australia in the early years of settlement, and has been grown in all States, under the name of false acacia.

It is a deciduous tree, and has the branches and branchlets armed with rigid spines one on either side of the leaf scars from which the leaves have fallen. In the summer the plant is an attractive sight with its long graceful compound leaves bearing from nine to 17 bright green oblong leaflets, and its large fragrant pink or white pea-shaped flowers borne in long pendulous clusters somewhat reminiscent of *Laburnum*.

In Western Australia the false acacia has long been cultivated in the Metropolitan Area as well as in country districts, but its objectionable characteristics have become so obvious that it is now rarely planted, and is not now recommended as a useful species. Although undisturbed plants make attractive specimen trees in parks or gardens, as soon as there is any disturbance to the roots, and sometimes even without

this disturbance, it will suddenly develop sucker growth from its larger roots. In this respect it is as bad as such notorious plants as the tree of heaven, *Tecoma*, and the several species of poplar. Furthermore, as the suckers have stout spines, they are particularly objectionable whether in the home garden, on the farm or in public areas.

In one of the popular metropolitan river bathing spots, a rather large specimen of *Robinia* was knocked down by a truck some years ago and the roots are still making vigorous sucker growth in the parking area and along the river bank. Not far away a specimen of *Robinia* growing as a street tree was removed by the Shire Council and considerable trouble has been caused by the crop of suckers which has been produced each year from the roots left in the ground. In another suburb a water pipe was renewed outside a house where a number of specimens of *Robinia* were growing and the excavation severed some of the roots from these trees; there is now a row of suckers following the line of this root damage.

A Menace On The Farm

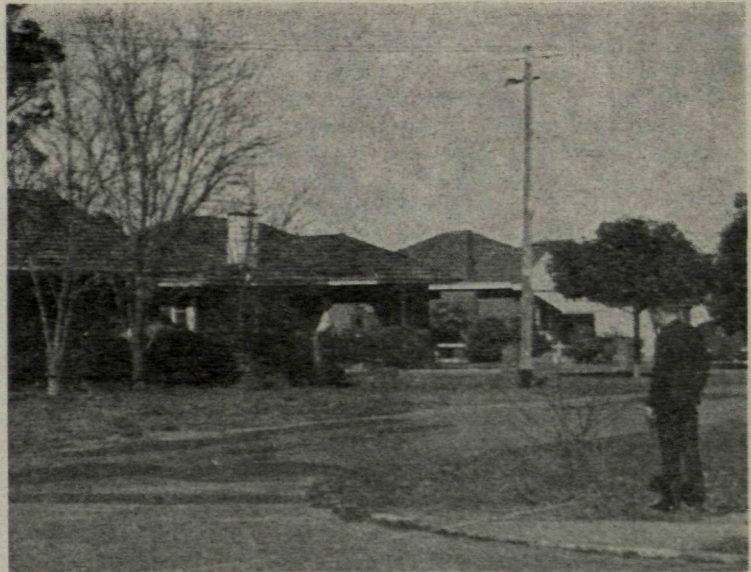
It is disconcerting that despite these and many similar experiences, attempts have recently been made to popularise *Robinia* as a useful species for farm woodlots and shelter belts. A Perth firm is offering to establish and supervise farm plantings of this tree, which it describes in glowing terms as a useful quick-growing tree—

“These trees grow to farm fencepost thickness in five or six years. Its timber is harder than jarrah and is used for building and other uses around the farm. They are also used for wind-breaks and to stop soil erosion. Sometimes one tree will give you two or three fenceposts, they grow very straight. They love sandy soil, but grow anywhere in W.A. where wheat grows. These trees have never before been grown commercially in Australia. This is a must for every farmer. This is a deciduous tree (loses its leaves in May)”.

However, the tree is not only objectionable from the suckering point of view, but it is also highly toxic and has been responsible for serious illnesses in humans as well as for death amongst stock. The poisonous principle contained in the plant is very powerful, and when sufficient plant material is eaten by stock, death usually results within a few hours.

Poisoning

As early as 1892 the plant was reported as possessing a toxic principle. In that year Watt found a poisonous sub-



When a trench was dug for laying a new water pipe the *Robinia* roots took advantage of the disturbance and the new tree where the man is standing developed by suckering. The parent trees are the bare trees on the left on the other side of the road

stance in the roots, and in 1911 Pammell recorded several cases of children being poisoned by both the roots and the bark. The bark has a pleasant licorice-like taste and this probably accounts for the frequency with which it causes trouble. In one well-known case quoted from the U.S.A., 32 boys were poisoned, but not fatally, as a result of chewing the bark of this tree; in another instance, three children were similarly affected. Adults are just as susceptible as children, but few cases involving adults are on record.

Horses appear to be more subject to poisoning than other farm animals, and cases are on record of animals being poisoned through eating the bark and twigs of trees to which they have been tied. Losses of this sort have been reported from Victoria and New Zealand, as

well as from America. Poisoning has also occurred among cattle and sheep, while experiments have shown that the plant is toxic to cats and dogs. Losses of fowls have been noted following the eating of leaves from the lower branches and twigs.

All parts of the plant, roots, stems, leaves and pods are toxic, but experience over the years has shown that the succulent sucker shoots which develop after the main stem is cut down, or from the roots when these have been disturbed, are most to be feared. It is these shoots which have caused a large percentage of the stock losses, particularly of cattle and sheep, since they are both more attractive and more accessible than mature leaves. When mashed up in water false acacia leaves have been used to poison insects but

they are also used in human medicine as tonics and cathartics.

Symptoms of *Robinia* poisoning resemble those of bella donna. In children the symptoms usually observed are vomiting, sleepiness, stupor, feeble pulse, dilation of the pupil and convulsions. In cattle, paralysis of the hind-quarters is a prominent

feature, while colicky pains are usually present. In horses the symptoms are stated to be abdominal pains followed by nervous depression and collapse. In fowls the leaves produce total paralysis, a deep and heavy respiration, and excessively red combs.

Obviously *Robinia*, the false acacia or black locust is an objectionable

tree, and one which combines some of the worst features which in the past have prevented other trees from becoming popular horticultural subjects. Despite the recent propaganda regarding its use for farm woodlots and shelter belts, it is a tree which should not be planted either in the home garden or on a farming property.

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