Afghan thistle (Solanum hystrix R. Br.)

G R W Meadly
Afghan Thistle is one of the few native plants to become troublesome weeds. It is not a true thistle but belongs to the potato family, which, besides cultivated plants such as the potato and tomato, includes thornapple, black nightshade and a number of other weeds.
DURING the summer months it is usual to receive many specimens of a prickly plant with blue flowers similar to those of a potato. It is commonly known as Afghan Thistle or Prickly Potato Weed. This plant is not a thistle, although it has the prickly foliage characteristic of many members of that group. The botanical name is Solanum hystrix which places it in the same family as the tomato, potato and tobacco. Relatives also include weeds such as the thornapples, black nightshade and apple of Sodom. The name Prickly Potato Weed, although somewhat unwieldy is therefore more appropriate than Afghan Thistle.

We look to some other country for the origin of most of our weeds. Local conditions have proved favourable for many plants from overseas, South Africa and the Mediterranean region having supplied a large number of pests. Very few native plants have displayed weed characteristics and most of them do not persist for any length of time following clearing, ploughing and cropping. There are of course, mallee suckers, sarsaparilla and some of our poison plants. To these must be added Afghan Thistle although native species are certainly in the minority when listing our weed problems.

DESCRIPTION
Afghan Thistle is a perennial which forms colonies. Plants which appear to be separate are in fact joined together by horizontal stems at varying distances below the surface. The plants rarely exceed 6 to 8 in. in height and the lobed yellowish green leaves 4 to 6 in. long are heavily armed with yellow spines. The blue bell-shaped flowers seldom reach one inch across and have a prickly calyx at the base. This calyx remains to enclose the green berry, about one half-inch in diameter, which becomes yellow as it matures. Flowering occurs in the spring and early summer.

SIGNIFICANCE
Afghan Thistle has been recorded from most centres in the wheatbelt extending from Geraldton and Mullewa to Borden and eastwards beyond Merredin. It favours lighter soils and grows quite vigorously in sand, especially on fallowed land, and has obviously been stimulated by clearing followed by spasmodic cultivation. Besides being widespread, Afghan Thistle is firmly established in some districts. In the eastern wheatbelt in particular it occurs over many hundreds of acres. Further west the areas are generally smaller and the weed less aggressive but, even in such localities, farmers are justified in regarding it as a nuisance and a potential problem.

The green berries of some species of Solanum are toxic and it is possible that this applies to Afghan Thistle although no cases of stock poisoning attributed to it have been recorded. The prickly nature of the plant makes it unattractive to stock, but growth along railway lines suggests...
that the ripe fruits are eaten and the weed spread by means of animals. During the summer months a green bite is at a premium in the wheatbelt.

**CONTROL**

The habit of the plant gives a warning that eradication is difficult. Deep-rooted perennials having a tendency to sucker always present a problem.

One farmer in the Midlands is satisfied that he can control Afghan Thistle on light land by cultivation. He uses a scarifier with 8 in. points to a depth of 4 to 5 in. in late October or November when the plants are commencing to make new growth. The cultivation is repeated when necessary and no flowering is permitted. Spectacular results cannot be expected and operations extending over several years may be necessary. It is advisable not to plough through an infested area but to treat it as a unit, as the implements can drag cuttings to clean parts of the paddock.

From the soil erosion viewpoint, summer cultivation is often undesirable, and a chemical method of control would have many advantages. Unfortunately Afghan Thistle is relatively resistant to the hormone-like herbicides but some useful results have been obtained with 2 lb. acid equivalent of 2, 4-D ester per acre applied in the spring when the plants are commencing to flower. In most cases the treatment must be repeated for several years, however, and would be scarcely practicable for other than restricted areas. It has been used to advantage for preventing isolated patches from developing into larger infestations and is the most satisfactory method for attacking plants growing on roadsides and railway tracks. Small areas can be destroyed by careful grubbing which should be repeated if new shoots appear.

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**NEW BOOK ON WEEDS**

We have received a book entitled “Weeds” compiled by J. N. Whittet, former Principal Agronomist (Pastures) of New South Wales Department of Agriculture. It is a volume in the Farmers’ Handbook Series and was published with assistance from the Commonwealth Extension Services Grant.

It deals with various aspects of weeds including botanical characteristics, methods of distribution, undesirable features, legislation and methods of control. There are many illustrations, a number being in colour.

The work is concerned primarily with weed problems of agricultural and pastoral areas of New South Wales but a number of the species dealt with also occur in Western Australia. Control measures, including cultural, chemical, ecological and biological, are reviewed in general terms.

Although not dealing specifically with some of our local weed problems, it is a very useful reference book for both farmers and students in Western Australia. Published by the Government Printer, Sydney, it is available from the Department of Agriculture, Sydney, N.S.W., at £2 2s. (plus 2s. 5d. postage).
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Pastry case...
1 egg.
2-oz. sugar.
3-oz. shortening.
5-oz. flour.
¼ teaspoon baking powder.
Pinch salt.

Raisin cream...
2 eggs (yolks and whites separated).
¼ cup brown sugar.
1 tablespoon melted butter.
1 cup chopped seeded raisins.
¼ cup cream.
1 teaspoon vinegar.
Little cinnamon.
Salt to taste.

To make pastry shell: Beat 1 egg and sugar together. Cut shortening into egg mixture. Sift flour, baking powder and pinch salt and work into creamed mixture. Turn on to floured board, roll out, spread on to pie plate. Leave a little pastry to make strips across plate.

Raisin cream filling: Combine yolks of eggs with brown sugar, melted butter. Add raisins, cream, vinegar, cinnamon and salt to taste. Mix well. Beat egg whites until stiff, fold into mixture. Pour into the uncooked pie shell and lattice across with strips of pastry. Bake in a hot oven for 10 minutes, reduce heat and cook for another 15 minutes. Serve with whipped cream.