



# Spiny emex

Double gee, goathead or three cornered jack  
*Emex australis*



Photos: Crop weeds of northern Australia, Department of Primary Industries, Queensland.

## Description

Spiny emex (*Emex australis*) is a vigorous annual with a thick tap-root. Leaves form a rosette in early growth and branch later. Prostrate stems grow from the centre of the rosette. Flowers are not conspicuous.

Fruits are very distinctive, forming clusters of spiny butts in the forks of the leaves. Burrs are woody, about 7 mm long, triangular in cross section and bear three rigid spines.

## Habitat and distribution

Spiny emex is a native of South Africa, and is now a common weed from the southern border areas of the Moreton and Darling Downs districts to the Maranoa, Burnett and Liechhardt districts.

It occurs in disturbed sites such as cultivated paddocks, around buildings and along roadsides

and in waste places. It is also common in cereal and lucerne growing areas.

## The problem

The arrangement of the spines ensures that one spine is always pointing upward. This allows the burr to attach to most things that are placed on it – making it easily dispersed.

Also, the weed has high levels of oxalic acid, which can cause poisoning in sheep, but generally the incidence is low.

Spiny emex competes strongly with cereal crops and legumes in early growth stages and can cause significant reductions in yield.

Although spiny emex is not a declared plant, its control is recommended.

## Control

As spiny emex can produce seed at an early age, any control program must aim to kill all plants shortly after emergence.

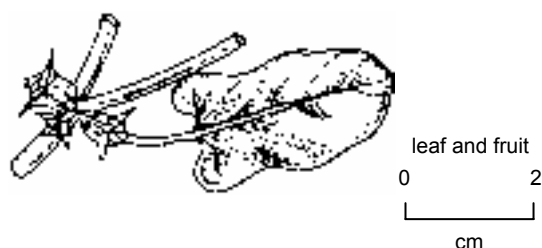
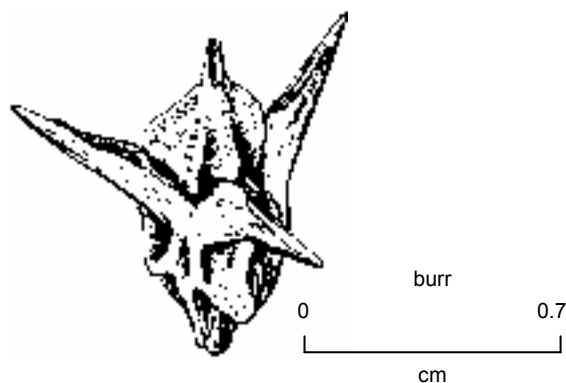
Cultivation will kill seedlings, however, due to their long germination period cultivation alone can be impractical and it is usually better to combine with chemical control.

### Herbicide control

Spiny emex is resistant to 2,4-D but can be controlled by spraying with the herbicides listed in the table below.

### Further information

Further information is available from the vegetation management/weed control/environmental staff at your local government.



**TABLE 1 – HERBICIDES REGISTERED FOR THE CONTROL OF SPINY EMEX**

| Situation  | Herbicide                                   | Rate  | Comments  |
|--|---|---|---|
| Winter cereals – wheat, barley, oats                         | Metsulfuron methyl 600 g/kg                 | 5 or 7 g/ha   | Apply to actively growing plants  |
|  | Picloram + 2,4-D amine (e.g. Tordon® 75D)   | 0.3 L/100 L water or 300 mL/ha                          | Spray actively growing plants. Wet plants thoroughly                    |
|  | MCPA + picloram (e.g. Tordon® 242)          | 1 L/ha  | Apply to actively growing weeds   |
|  | MCPA + dicamba                              | 1 L/ha  | Spray when weed is in the 2–4 leaf stage                                |
|  | Fluroxypyr (e.g. Starane® 200)              | 1.5 L/ha  |   |
|  | Dicamba 200 g/L                             | 0.7 L/ha  | Spray before runners form. Cereals should be stooling and 18–20 cm high |
| Summer cereals – maize, sorghum                              | Dicamba 200 g/L                             | 0.8–1.4 L/ha  | NOT applicable to Central Qld<br>Spray before runners form              |
| Non-agricultural land, rights of way, agricultural buildings | Glyphosate 360 g/L                          | 0.5–0.7 L/100 L water                                   | Spot spray only, non-selective herbicide                                |
|  | Picloram and 2,4-D (e.g. Tordon® 75D)       | 0.3 L/100 L water or 300 mL/ha                          | Spray actively growing plants. Wet plants thoroughly                    |
| Pasture  | Dicamba 500g/L                              | 280 ml – 1.1 L/ha or 40 ml–76 ml/100 L water hand spray | Don't apply to pastures with clover, lucerne or medics                  |
|  | Glyphosate 360 g/L                          | 0.5–0.7 L/100 L water                                   | Spot spray only, non-selective herbicide                                |
|  | Picloram and 2,4-D amine (e.g. Tordon® 75D) | 0.3 L/100 L water or 300 mL/ha                          | Spray actively growing plants. Wet plants thoroughly                    |
| Fallow   | Glyphosate 360 g/L                          | 2–3 L/ha or 0.5–0.7L/100L water hand spray              | Spray when actively growing   |
|  | Picloram and 2,4-D amine (e.g. Tordon® 75D) | 30 mL/10 L water  | Spray actively growing plants. Wet plants thoroughly                    |
|  | Fluroxypyr (e.g. Starane® 200)              | 1.5 L/ha  | Winter fallow only  |

Fact sheets are available from NRW service centres and the NRW Information Centre phone (07 3237 1435). Check our web site <[www.nrw.qld.gov.au](http://www.nrw.qld.gov.au)> to ensure you have the latest version of this fact sheet. The control methods referred to in this Pest Fact should be used in accordance with the restrictions (federal and state legislation and local government laws) directly or indirectly related to each control method. These restrictions may prevent the utilisation of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, the Department of Natural Resources and Water does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.