

Bathurst burr

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Common name

Bathurst burr

Botanical name

Xanthium spinosum Linnaeus

Status

Bathurst burr is a Regionally Prohibited Weed in the Port Phillip East Catchment and Land Protection Region, and a Regionally Controlled Weed elsewhere in Victoria except the Mallee CaLP Region. Land owners in areas where bathurst burr is Regionally Prohibited must eradicate or control it on their land. Landholders in areas where bathurst burr is Regionally Controlled must take all reasonable steps to control it and prevent its spread on their land and the roadsides which adjoin their land.

Origin and distribution

Bathurst burr originated in South America, probably Argentina, and is now a cosmopolitan weed in warm temperate and semi-arid regions of the world. It was introduced to Australia in the 19th century and has been declared a noxious weed in all states. Bathurst burr is found through most of Victoria but is most prevalent in the northern districts.

Description

An erect, much branched, mainly summer-growing annual herb commonly 30 to 60 cm high, occasionally to 1 m, reproducing by seed. Most germination occurs after rain or irrigation in late spring and summer. Older plants produce burrs in February while late germinating plants produce them when only a few weeks old. Plants generally die early in winter but mature plants may be found at any time of year.

Stems - Greenish yellow with fine short hairs, armed at the base of each leaf and stem node with one or two triple-pronged yellow spines which are 1.5 to 2.5 cm long.

Leaves - up to 7 cm long, alternate and divided into three lobes; dark green and shiny above with prominent pale veins, downy and pale green or whitish beneath.

Flowers - creamy green, small and inconspicuous, wind pollinated, appearing from February to July. Female

flowers occur beneath the leaf axils; male flowers at the ends of stems.

Fruit - an ovoid, straw-coloured, hairy burr, 1 to 1.5 cm long and 4 to 5 mm wide, covered with many yellow-orange hooked spines and sometimes with one or two straight terminal beaks. When ripe the burr is hard and woody. Other species of *Xanthium* found in Australia have burrs which are considerably larger.

Seeds - flat, brown or black, 1 cm long, two in each burr. Seed may remain dormant in the soil for three years.

Roots - branched taproot to over 3 m depth, often with extensive lateral roots.



Figure 1. *Bathurst burr*.

Properties

Bathurst burr is common in pastures, particularly around stock yards and watering points, and infestations occur frequently along water courses. It is rarely grazed by livestock because of the long spines. The burrs are one of the most important contaminants of wool. They become entangled in the neckline and belly wool requiring severe skirting and devalue the product. Burrs also cause irritation to shearers and damage shearing equipment. Spines on the burrs damage the feet of sheep and other animals.

Bathurst burr is an important weed of summer crops such as grapes, tomatoes and sunflowers where it can form dense stands, and may interfere with manual harvesting operations. It acts as a host for a number of fungal pathogens important in horticulture, and causes contact dermatitis in some people.

Hydroquinone is present in the seed and persists in the young plants, making the seedlings toxic to sheep, goats, cattle, horses, pigs and poultry. Poisoning may result in nausea, vomiting, depression and death, but is not a major problem in Australia.



Figure 2 Bathurst burr plant

Dispersal

The burrs attach to the coats of animals and to other fibrous material by their hooked spines. Dispersal in the fleece of sheep is common. The fruits float and are readily dispersed in water. Seed harvested from summer crops is sometimes contaminated with burrs and Bathurst burr may be spread in this way.

Control

Eradication of Bathurst burr requires the prevention of seeding for at least four to six years and the elimination of sources of reinfestation. Pasture improvement combined with herbicide treatment is the favoured method of control in grazing lands.

Manual Control

Seedlings and individual plants can often be pulled up by hand. Manual hoeing or slashing should occur before burr formation. Plants with burrs should be collected and burned.

Cultivation

Repeated cultivation of seedlings after each germination is effective on arable land. Mechanical slashing should be undertaken before the burrs have formed. Plants with burrs should be gathered and burned.

Chemical Control

Under Victorian legislation there are controls on various aspects of the uses of agricultural chemicals. Some particular uses are prohibited and some require permits. Users of certain agricultural chemicals are required to obtain an Agricultural Chemical User Permit (ACUP) or work under the direct supervision of an ACUP holder. Additional restrictions on the use of some herbicides apply to particular geographic areas known as Chemical Control Areas (CCA).

It is the responsibility of chemical users to familiarise themselves with these controls. See Agriculture Note: Agricultural chemical user permits (ACUP) and chemical control areas (CCA) for further information.

An ACUP is required for the use of prescribed chemicals containing the active constituents marked with an asterisk (*) in the following list. Records of the use of these chemicals must be made by the user and these records must be kept for 2 years. Restrictions on use in CCAs apply to the chemicals marked with a hatch (#).

Contact the Regional Chemical Standards Officer of the Department of Natural Resources and Environment if further advice is required.

You should read the product label and follow all label instructions carefully before using any herbicide.

Use a product containing one of the following active constituents or combinations of active constituents that is registered for use in Victoria to control Bathurst burr in the particular situation in which you need to use chemical control, eg. in pastures. Consult the product label for detailed information.

2,4-D DIMETHYLAMINE SALT#

2,4-D ETHYL ESTER*#

2,4-D ISO BUTYL ESTER*#

2,4-D ISOPROPYLAMINE SALT#

2,4-D ISOPROPYLAMINE SALT# + GLYPHOSATE
ISOPROPYLAMINE SALT#

2,4-D B DIMETHYLAMINE SALT#

2,4-D B POTASSIUM AND SODIUM SALTS
AMETRYN

AMITROLE + ATRAZINE*

BROMACIL

BROMACIL + DIURON

BROMACIL + TRICHLOROACETIC ACID

DICAMBA DIMETHYLAMINE SALT#

GLYPHOSATE TRIMESIUM#
IMAZETHAPYR AMMONIUM SALT
LINURON
MCPA 2-ETHYL HEXYL ESTER*#
MCPA DIMETHYLAMINE SALT#
MCPA DIMETHYLAMINE SALT# + DICAMBA
DIMETHYLAMINE SALT#
MCPA ISO-OCTYL ESTER*#
MCPA SODIUM SALT
METRIBUZIN
MONOSODIUM METHYLARSONATE* = MSMA
TERBACIL

This list of chemicals is based on information supplied to the Department of Natural Resources and Environment by the National Registration Authority for Agricultural and Veterinary Chemicals (NRA). The State of Victoria through the Department of Natural Resources and Environment has not assessed or checked the accuracy of the information supplied to it from the NRA as that responsibility rests with the NRA.

Biological control

An indigenous Australian blight fungus, *Colletotrichum orbiculare*, occurs on some infestations and is being developed by New South Wales Agriculture as a mycoherbicide. The accidentally introduced rust fungus, *Puccinia xanthii*, affects both Noogoora burr and Bathurst burr. The Bathurst burr seed fly, *Eurraresta bullans*, was introduced from South America in the 1920s and affects large areas of burr in NSW and Queensland but provides no long term control.

Reference

Parsons, W.T. and Cuthbertson, E.G. (1992) *Noxious Weeds of Australia*. Melbourne, Inkata Press Melbourne.

Acknowledgements

Prepared by Ian Faithfull 1997, revised April 1998. Active constituents information supplied by Chemical Standards Branch January 1998.

The advice provided in this publication is intended as a source of information only. Always read the label before using any of the products mentioned. The State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.