

Spiny burrgrass

Spiny burrgrass *Longispinus* (*Cenchrus longispinus*) also known as Sand Burr, Innocent Weed or Gentle Annie, is an invasive weed that causes injury and agricultural damage.

WHAT IS SPINY BURRGRASS?

Spiny burrgrass (*Cenchrus* species) is a summer growing grass mainly found throughout the drier areas of south-east Australia, often on disturbed soils.

The major spread of this weed is by seed. The seed is well equipped for spread because of the barbed spines on the 'burr', which detach easily from the mature plant. Spiny burrgrass forms large clumps and generally grows to 30cm but can reach 60cm or more across agricultural areas. It can either grow on an annual or perennial basis depending on the environment. In many areas of NSW, the grass is usually killed by frosts and therefore acts as an annual weed.

IMPACTS TO THE REGION

Spiny burrgrass is a weed because of its sharp and clingy burr, ability to spread rapidly and tendency to develop into dense infestations in favourable conditions. It is also difficult and costly to manage, especially in marginal rainfall areas.

Mature burrs cause a range of problems such as:

- injury to stock causing swellings and ulcers in the mouth
- injury to people and dogs
- in clinging to wool and penetrating the skin of stock, reducing the value of both
- contaminated wool, which requires leather gloves and/or aprons during shearing, often leading to increased wage costs
- inconvenience and discomfort to workers in irrigated crops such as vegetables, vines and citrus, and
- contamination of dried fruit and hay

DISTRIBUTION

Spiny burrgrass is commonly found in drier regions of south-east Australia with an average rainfall of 250 to 600 mm. The weed prefers sandy to light soils and is generally

not found on heavy clay soils. It readily establishes on disturbed sites such as roadsides, creeks and riverbanks.

Spiny burrgrass has spread extensively throughout NSW because of:

- large numbers of travelling stock, foxes and kangaroos
- movement of fodder
- an increase in areas of stubble from cereal crops that provide little competition and an ideal situation for the rapid build-up of the weed
- lack of pasture competition in low rainfall areas due to variable seasons
- road graders, slashers and vehicle tyres
- the use of contaminated sand for building roads, amenity and construction purposes
- irrigation water

HOW TO IDENTIFY

For each plant, several stems grow from the base and can be either erect or spreading. The leaves can be up to 20cm long and are smooth but sometimes twisted and finely serrated. The roots are fibrous and usually shallow but can be more than 30cm deep in some soils.

The flowers are a spike-like panicle, 3–8mm long and consisting of up to 40 'burrs'. The burrs are straw-coloured, sharply pointed, rigid, with finely barbed spines up to 7mm long and are purple tinged in colour.



EACH PLANT CONSISTS OF UP TO 40 FINELY BARBED BURRS

LIFECYCLE





Seeds are normally produced from late spring to late autumn depending on available soil moisture. There are up to three seeds produced by each 'burr' resulting in each plant producing up to 1000 seeds. The primary seed, is the largest and is capable of germinating within a few months of maturity. The other seeds, or secondary seeds, are usually dormant for up to three years.

Germination generally occurs in spring allowing seedlings to establish during a period favourable for growth but it can occur at any time of the year provided soil temperature and moisture are suitable.

Slow growth (dormancy) of secondary seeds is prolonged by exposure to light on the soil surface or by burial under dense vegetation. Exposure of seed to high or low temperatures will also induce dormancy with the optimum temperature range for germination being 10°C to 20°C. Both primary and secondary seeds have the ability to establish from depths of up to 20cm below the soil surface. In NSW, most spiny burrgrass dies in autumn or early winter, although in mild winters some plants can survive and produce burrs early in the following spring.

Life Cycle

Time of Year

	Germination	Spring to early summer
	Active growth	Late spring to early summer
	Development of burrs and seed set	Late spring to late autumn
	Death of plant	Autumn to early winter



BURRS ARE SHARPLY POINTED, PURPLE-TINTED AND VERY STICKY

CONTROL AND MANAGEMENT

Integrated weeds management

The key to effective control is to prevent seeding and exhaust any reserves of seed in the soil. This can be achieved through integrating cultivation, herbicide application, increasing competition through good pasture establishment and management and cropping.



Preventing spread

Exclude livestock from infested areas especially when burrs are likely to adhere to livestock. Thoroughly clean any vehicles or machinery used on site and notify anyone who may be accessing the infested area to practise good hygiene.



Pasture management

Maintaining vigorous long-lasting pastures is critical to prevent spiny burrgrass from becoming dominant on the land. Spiny burrgrass does not establish readily in situations where there is competition from other vegetation. Good ground cover in spring and summer will prevent germination.



Grazing management

In paddocks dominated by spiny burrgrass heavy grazing may be used to suppress growth and production of burrs as a short term management strategy.



Chemical control

Herbicides can play an integral role in the control of this weed but are best used in a strategy incorporating cultivation, crop rotation and pasture improvement.



FOR MORE INFORMATION

Visit Council's website midwestern.nsw.gov.au, or the Department of Primary Industries website www.dpi.nsw.gov.au and search 'weeds'. Council's Weeds Team are available to assist on 6378 2939 or at weeds.admin@midwestern.nsw.gov.au.

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