



Goathead burr

August, 2021

The plant

Goathead burr (*Sclerolaena bicornis*) is a perennial shrub native to inland Australia. It is a complex branched shrub, growing up to 50cm in height. The branches are white and woolly with widely spaced slender leaves. The fruits can be distinguished from other burrs by the two horned appearance with two long spines, with one of the two varieties having a slightly smaller fruiting body (burr) with shorter spines.

Plants often appear in spring as the soil warms and in late summer will produce the sharp seed head however, the species is known to germinate and grow at other times of year depending on rainfall and seasonal conditions.

Goathead burr has a widespread distribution and the influence of historic grazing management may also be reflected in where it tends to grow more prolifically, as well as other factors, including the soil and landscape characteristics of a particular area, seasonal conditions, and sometimes more recent grazing management. There is at least one anecdotal report of a related species in central Australia growing prolifically over periods of several years in response to seasonal conditions in areas with no history of livestock grazing.

The issue

Reports from landholders in the west of our region indicate that this plant has become a lot more prominent in recent years, particularly post drought, and has in certain areas become the most prevalent plant species present in the native pastures.

Goathead burr is often one of the first plants to germinate and grow following on from rainfall events. Adequate rainfall in winter can result in high germination rates of burrs, when this is followed by rainfall in spring or early summer, dense stands of burr may result.

The goathead burr seeds are also slower to break down than other species – given their hardness, leading to large numbers of viable seeds in the seedbank (soil).

Native pasture monitoring records show that the relative percentage biomass of species such as goathead burr can fluctuate over time, with influencing factors such as soil and landscape characteristics, seasonal conditions and livestock grazing history resulting in periods where goathead burr grows densely, but then thins out. In addition to feed value, the groundcover it provides can also have value, such as during drought.

Management and control options

In some circumstances, grazing management may be key to reducing the likely germination and colonisation of areas. Where there is a good groundcover and competition for light and moisture, burr seeds are less likely to germinate



Local Land Services

Image: Denielle Smith. North West Plains Sustainability Group

Goathead burr

or persist. Landholders are encouraged to implement good grazing management practices to help maintain their pasture species mix and groundcover levels.

Allowing pastures to set seed periodically is important in maintaining the seedbed for desirable species – it is particularly important to have this seedbed available for drier years where there may not be a good pasture germination.

For areas of bare ground where the burr is not producing dense cover, then another option is to wait until spring/summer before doing anything and allowing natural regeneration of native pastures to occur. Where there is sunlight to the soil surface then native pastures should be able to germinate and persist. The key here is then to allow these pastures to persist and dominate – they will out compete the burr through shading and use of moisture – causing the burr to become less abundant.

For stands that have been persistent for some time, and where grazing management and/or seasonal conditions have not resulted in a reduction in coverage, then there are other options which can be explored. In the first instance, landholders are encouraged to contact LLS to seek advice specific to their situation, as certain management options may be better suited to some than others.

Mechanical cultivation is one potential option. Seedlings are unlikely to establish from seed buried to a depth of 40 mm or more. Ploughing arable areas with an implement that inverts the soil will reduce the size of the viable seed bank in heavily infested areas. It is important to note, that this level of disturbance is likely to require approval under the *Land Management (Native Vegetation) Code 2018*. Landholders should contact their local LLS Land Management Officer for more information.



With these considerations in mind, while dense stands of goathead burr present mustering challenges and may be less productive than a more diverse native pasture, giving stands of goathead burr time to thin out (e.g. with the influence of seasonal conditions on pasture composition) would avoid unnecessary and possibly unauthorised disturbance to the soil and groundcover, and reduce potential for weed incursions and associated treatment costs.



Goathead burr as a feed source

Goathead burr is palatable to livestock and can, at certain growth stages contain a reasonable level of nutrition for animal production, however it is not recommended that it be the only feed source available to the animals.

Need more information?

We encourage landholders to monitor areas where goathead burr is present to determine whether there are any changes.

For information relating to approval to the *Land Management (Native Vegetation) Code 2018* options, contact your local Land Management officer via:

Ph: 1300 795 299

E: lm.info@lls.nsw.gov.au

W: www.lls.nsw.gov.au/help-and-advice/land-management-in-nsw

For more information relating to pasture management contact:

Kate Pearce, Land Services Officer – Mixed Farming

M: 0429 900 329

E: kate.pearce@lls.nsw.gov.au

For information relating to pasture management in the Western LLS region, contact:

Gemma Turnbull - Ag Advisory Team Leader

P: (02) 6870 8632

E: gemma.turnbull@lls.nsw.gov.au



**Local Land
Services**