Buffel grass *(Cenchrus ciliaris and C. pennisetiformis)*

Factsheet | February 2024

Left: Buffel grass in optimum conditions in full flower. Middle: 'Fluffy' seed head showing burrs with bristles. Right: Buffel grass spreads via road and rail corridors. Photos: Monica Seiler.

Buffel grass is a drought resistant, perennial tussock (long lived clumping) grass which poses a significant threat to native vegetation and increases fire risk and intensity.

Description

The species of buffel grass *(Cenchrus ciliaris* and *Cenchrus pennisetiformis)* are similar in habit but with subtle differences. *C. ciliaris* is the most common species found in the Green Adelaide region.

Growing between 0.2 to 1 m high, buffel grass is an erect, tussock forming, summer active perennial grass with a deep and extensive fibrous root system. The tussock formation of *C. ciliaris* is likely to be denser than *C. pennisetiformis*. During active growing periods, buffel grass will produce bright green leaves with a prominent vertical centre vein. It is rough in texture due to small stiff hairs. Leaves will curl and dry to form a straw-coloured clump during dormancy.

Buffel grass reproduces by prolific seed production or by rhizome or root offshoots. Flowering can occur throughout the year, but usually from November to May, and after rain. Seed heads are white to purple in colour, however, a key difference between *C. ciliaris* and *C. pennisetiformis* is the dark purple to black appearance of *C. pennisetiformis* seed heads.

Seed heads grow as a cylindrical spike up to 15 cm long containing bristly burrs borne on a zigzag central axis, each burr contains 1 to 3 seeds. The cluster of bristles give the seed head a fluffy appearance. Seeds are viable for up to 5 years and are easily germinated after fire and in disturbed soil. A seed can germinate in 3 to 6 days and a plant can set seed within 3 to 6 weeks.

Impacts

Buffel grass is an aggressive coloniser. Plants can quickly overtake an area, outcompeting other desired plants. The dense cover of tussocks can increase fire risk and intensity. Ecosystems are altered, negatively impacting on native flora and fauna as seen in central Australia where it has invaded most areas.

Distribution

Buffel grass is native to tropical areas of Africa, India and Asia, and was introduced to central Australia for dust control and stock feed. It can grow in a broad range of soils and landscapes.

Due to its ability to withstand heavy grazing and tolerance to drought and fire, buffel grass has spread quickly across much of the northern and inland Australian landscape. It has now spread south across the northern rangelands of South Australia.

Infestations in the Green Adelaide region are predominantly found along major transport routes in the

north including the Port Wakefield Highway and the Northern Expressway. Incursions also occur in the Pt Adelaide and Outer Harbour areas.

Buffel grass is spread along road and rail corridors by vehicle draughts and slashing, with movement of seed in soil by graders and other machinery.

Birds and other wild animals, wind and water also assist in the spread of buffel grass.

Management

Buffel grass *(Cenchrus ciliaris* and *Cenchrus pennisetiformis)* is a declared, notifiable weed under the *Landscape South Australia Act 2019*. Sightings of this weed must be reported to Green Adelaide.

To prevent the spread in the Green Adelaide region, the sale of this plant or contaminated goods is prohibited and the movement of either on a public road is restricted. Land owners must destroy plants on their property and prevent their spread.

We encourage control of plants where there is a risk to human health, agriculture, and biodiversity. Undertaking weed control needs to be done carefully to prevent damage to native vegetation.

Control methods

Hygiene

Prevent the introduction of buffel grass by cleaning down vehicles, footwear and caravans that have visited infested areas and do not move contaminated produce, animals, soil, and machinery into clean areas. Keep vigilant for new infestations along traffic corridors and waterways.

Mechanical control

Grubbing or digging out can be done any time of year and is effective for small isolated populations.

For larger infestations mowing can be used to reduce biomass and prevent prolific seed set. Heavy controlled grazing also reduces plant biomass and seed formation. Reduced growth also reduces the soil seed bank and risk of increased fire intensity/frequency.

These options are best done in conjunction with other control methods.

Chemical control

Foliar sprays are effective when applied during active growing stages, have minimal off-target disturbance, and is cost effective on large and dense infestations. However, 2 or 3 applications may be required throughout the growing season to control subsequent germinations. Sites should be monitored following summer rains.

Left: Buffel grass reproduction by rhizome offshoots. Right: Flower stem showing zig zag feature. Photos: Monica Seiler.

Residual sprays are effective when applied prior to or during active growth and can significantly reduce follow-up control due to seedling suppression. Sufficient rain is required to wash the herbicide into the root zone but not too much as to wash it away.

For advice on chemical options refer to *Controlling declared weeds in SA* at: www.pir.sa.gov.au/biosecurity/weeds

Fire

The combination of fire and timely follow up of herbicide spraying is useful as burning reduces the plant's mass and seedbank, which reduces the amount of herbicide required to treat new growth. Fire also stimulates new growth and promotes new germinations, optimising chemical application.

More information

South Australia Buffel Grass Strategic Plan 2019–2024: SA_Buffel_Grass_Strategic_Plan_20192024.pdf (pir.sa.gov.au)

PIRSA factsheet buffel grass identification: PIRSA_factsheet_Buffel_Grass_Identification_FA2_CJ.pdf

Contact us

Green Adelaide
T: 08 7424 5760
E: DEW.Greenadelaide@sa.gov.au

greenadelaide.sa.gov.au

Observations of weeds can be entered into ***iNaturalist***, an app which can assist with identification. https://www.inaturalist.org/