Buffel Distribution

History

Think "introduced species" and most of us would think about animals like rabbits, cats, foxes, camels, or even more recently, pigeons that cause a problem in Central Australia. Think again, there are also other types of introduced species such as Buffel Grass, which has invaded areas around Alice Springs and is causing a dilemma.

Buffel Grass is not a plant that is native to Australia; it is native to North Africa and the Middle East. It was introduced here about a hundred years ago. In the last thirty years or so it has increased along roadsides and floodplains so that it now densely covers very large areas around Alice Springs. The problem is that it is starting to replace a lot of the native plants that used to grow here.

Studies have even shown that in some areas Buffel Grass has completely taken over from native plants. Big stretches of Buffel Grass can also be a bushfire risk. Buffel Grass was first grown in Australia in the 1860's. At first it was carried in by accident, as was Ruby Dock, by camel trains as they made their way across the outback. Floods have also helped to spread Buffel Grass seeds. It can now be found across Australia in every mainland state except Victoria.

Graziers like Buffel Grass because it can provide good feed for their cattle. It also controls dust and erosion. In fact after the 1950's and 60's drought it was actively planted to stop the soil from blowing away. It was also planted around the Alice Springs airport to minimise dust storms.

Buffel grass can have an impact on the environment. In Central Australia Buffel Grass grows best along creeks and embankments, affecting River Red Gums, because they may not be able to survive the very hot fires which can be caused by burning Buffel Grass. This grass will also survive and produce new growth after burning.

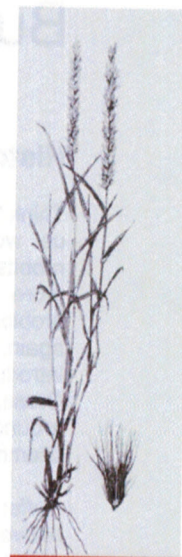
Many groups in Central Australia are working out ways to stop it spreading on our sandier soils, which are an ideal habitat for Buffel Grass. One of the most effective and environmentally friendly ways to control the weed is to get in and dig it out. This often allows a lot of the native plants that used to grow there to come back. It is hoped that in time, as more areas around Alice Springs are cleared of Buffel, native grasses will again cover the area.

The satellite image below was acquired on February 25, 2001 after the best rainfall in Central Australia for 25 years.

The image clearly shows the MacDonnell Ranges and the main creek lines, Roe Creek and Laura Creek. The areas in red, show vegetation which is actively growing as a result of a summer rainfall of around 360mm. The assumption is that the red areas along drainage lines are mostly introduced buffel and couch grass.

Buffel Grass

Scientific Name: Cenchrus ciliaris
Family: Poaceae



Buffel Grass
Cenchrus ciliaris

Description: A perennial tussock grass, leaves are bluish green, flat, and taper to a fine point. The seed becomes dormant for a period before reaching maturity. The seed heads can vary in colour from white to shades of purple, depending on the variety. Can grow up to 60cm in diameter and grow to a height of 90cm. The seeds are in a cluster of bristles and some 440,000 seeds can be found per kilogram.

Habitat: An introduced species from tropical and sub-tropical Africa, India and Indonesia. Widespread throughout the Northern Territory due to record rains in Central Australia. Buffel prefers sandier and sandy loam soils. It doesn't like frost, but recovers when the warm weather starts. It is drought resistant but does not like being flooded or being waterlogged. Buffel is spread by its seed. Buffel Grass will survive burning and produce new growth.

Feed: Depending on the variety of Buffel Grass, it can be used as a nutritious feed for cattle. Buffel Grass can withstand relatively heavy grazing. The nutritional value of Buffel Grass is not high compared with other pasture grasses, but it can provide useful fodder if well managed. There are several different varieties of Buffel the shorter grasses are the more palatable to cattle. Most of the Buffel types around Alice Springs are the taller unpalatable varieties. If fed to horses Buffel Grass may lead to "Big Head". This is an induced calcium deficiency caused by oxalates in the grass, and can be avoided by mixing it with other grasses and forage feed.

Management: Buffel tolerates heavy grazing. It grows well in heavily rabbit populated areas. It withstands fires during winter and spring to bring on new green growth. In Central Australia, Buffel Grass grows along creeks and levees; fires in these habitats can affect the regeneration of Red River Gums.

References: Pasture legumes and grasses: a guide to the identification of selected species used in pasture improvement. Sydney, Bank of New South Wales, 1961.

Smith, N.M. Weeds of natural ecosystems: a field guide to environmental weeds of the Northern Territory, Australia.

Darwin, Environment Centre NT Inc, 1995.

Implications for Biodiversity

By replacing native grasses, buffel and Couch grass may reduce species diversity particularly along creek lines. Buffel grass is invading areas previously occupied by native grasses, wildflowers and small plants around Alice Springs and already dominates large parts of the landscape around Alice Springs.

Fire

Following good rains, buffel grass can spread rapidly, particularly on disturbed alluvial soils. When it dries off, it produces a far greater fuel load than the native plants it has replaced. Its high fuel load will make wildfires more frequent, reducing mulga and witchetty shrubs. They will start to disappear in just decades.

Long term Prospects.

While buffel can be controlled over small areas, eradication of the weed on a broad scale seems unlikely. On the contrary, the local environment and climate combined with human related activities create ideal conditions for the spread of buffel.

Major river systems in Central Australia are now also furthering the spread of buffel. World-wide river systems are a major conduit for the spread of weeds. Roadworks throughout the Centre are having a similar effect. Even in areas where buffel is unlikely to get a strong foothold it is established along the roads

Buffel grass paddock, Alice Springs

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