NORTHERN MUSTER Information for rural business in North Queensland FutureBeef



Invasive Navua sedge

Perennial weed in the Wet Tropics

AVUA sedge (Cyperus aromaticus) is a highly invasive perennial weed that has rapidly spread across the Northern Wet Tropics and now severely infests over 20,000 hectares of productive improved pastures.

It is unpalatable to stock, a prolific seeder and will severely reduce property productivity and profitability. Untreated, it will spread widely across your pastures and eventually take over completely.

The first step for all producers growing pastures in the wet tropics is to familiarise yourself with navua sedge and distinguish it from the many native sedges in our environment which aren't an issue in well managed pasture paddocks.

Stopping the spread

Navua sedge is easily spread by machinery, vehicles, animals and water.

Contractors using backhoes, bulldozers or excavators are very likely to have soil and weed seed contamination.

Visitor vehicles or your own are a risk if you have driven through seeding sedge on a roadside, park or infested paddock.

Bought cattle are another danger with the possibility of sedge seeds in their



Timing of herbicide application and grazing management is important and best spray results are achieved when it's hot and wet and sedge is actively growing.

gut making its way onto pastures.

Hold animals in yards or a small holding paddock for four to five days to empty out.

Fodder purchases like hay need to be from reputable operators with no sedge on their properties.

Roadway drains, water ways, creeks and rivers that direct water and flooding into your paddocks can also bring in more sedge seed.

Producers on the Atherton Tableland and Wet Coast with river flats along major waterways have an infestation every wet season.

Leading operators fence these areas so that the sedge can be sprayed later in the season prior to cattle grazing.

Control sedge infestations on your property as soon as

they are detected. Sempra is a selective herbicide and does not damage

pasture grasses or legumes. In bulky high yielding

pastures, producers have used what we call a double overlap spray technique to improve coverage which involves spraying up the paddock one way and turning around and coming back on the same tracks. The boom spray is

calibrated in this situation to apply the 100 grams per hectare after two passes.

Boom spraying with flat fan nozzles or a boomless nozzle is satisfactory but aim for a coarse droplet.

The registered selective herbicide Sempra can be used in conjunction with the wetting agent Banjo. This combination is

effective on juvenile plants,

but as sedge plants mature the underground rhizomes continue to grow and expand.

After several years of growth, navua sedge is very difficult to control with our present herbicides.

Keeping sedge out of pastures is key.

Good pasture management practices including correct stocking rates and fertiliser where needed to boost pasture growth are key to minimising sedge establishment and spread on your property.

Bare ground allows rapid establishment of all weeds.

Timing of herbicide application and grazing management is important and best spray results are achieved when it's hot and wet and sedge is actively growing.

Remove cattle from pasture, then allow up to two or three weeks for sedge to grow and bloom, apply spray and withhold livestock for at least 10 weeks.

Graze paddock again, remove cattle and allow several weeks before applying second boom spraying.

Using two boom sprayings in succession per wet season as explained above is important to achieve a good result.

Fine weather and a good sunny day is critical when spraying.

The Malanda Beef Plan group, a producer group on the Atherton Tablelands, in conjunction with the Department of Agriculture and Fisheries, has been active in sourcing state and federal funding to lead research and demonstrate methods of

navua sedge control in the Wet Tropics.

New avenues of control currently under investigation include identification of biological (e.g. fungal) diseases from Africa and Australia that will target the sedge.

A "smart boom" is being developed by AutoWeed, Townsville that has the ability to recognise green sedge in green grass and to spot apply herbicide to each sedge plant.

These control methods may offer more capacity for producers along the wet coast to control sedge in the future. In the meantime, prevention is the most effective control strategy.

Be vigilant about protecting clean paddocks.

For more information contact beef extension officer Bernie English at bernie.english@daf.qld. gov.au

Light infestation: 3-5 per cent pasture

- Spot spraying is an option. 50g Sempra + 1L Banjo per 100L water
- Re-treat after 10-12 weeks to control new
- germinations GPS on tractor or four-
- wheeler to ensure full coverage

Heavy infestation: 5 per cent pasture

- Boom spraying only control option.
- 65-100g Sempra + 1L of Banjo per 100L water
- Apply minimum 150-200L per ha to get adequate coverage
- GPS (avoid missing patches of the paddock) For further information contact DAF on 13 25 23.





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NORTHERN MUSTER Information for rural business in North Queensland **FutureBeef**



Grazier improo-ving her land

GRAZIER Kylie Stretton is in the process of converting 1600 hectares of unproductive land into pastures suitable for her cattle, and she's achieving this while also helping to improve the health of the Great Barrier Reef.

Ms Stretton owns Red Hill Station, a 4000 hectare property located two hours north of Charters Towers.

She applied for funding through the Grazing Resilience and Sustainable Solutions (GRASS) program which is designed to deliver support and a tailor-made action plan for land management to address land in a poor or degraded condition.

Ms Stretton said 1600 hectares of her land wasn't ideal for her cattle as it had little ground cover and was gullying.

"The funding will help to improve the condition of the land, improve the ground cover, and slow down the water to allow the grass to grow," she said.

"The impact and importance of slowing the water down is of utmost impor- the water ran across the top



Ms Stretton owns Red Hill Station, a 4000-hectare property located two hours north of Charters Towers.

it contributes to the growth of more grass which is key for the sustainability of my business and the environment.

"We found when it rained,

off the edges, resulting in extremely bad gullying and erosion in the lower country, as well as scalding the ground on top of the hill.

tance on a livestock farm as of the hill and cascaded GRASS program, we were ground and seep out down ground cover to grow on top

able to build a complex system of contour banks on the hill above the worst of the gullying to assist in slowing the water down, and allow-"With the support of the ing it to soak into the high

the edges slowly.

"We also ripped the bare ground to allow for more absorption and planted grass seed to aid the process.

"This allows for more

and down below and helps maintain our topsoil and improve infiltration of rainfall into the soil."

Ms Stretton said she was starting to see results with the contours slowing the water coming off the hill, allowing new growth to break through across the affected areas.

"It's great to see our hard work coming to fruition not only improving the productivity of Red Hill Station, but the added benefit of knowing we're reducing the impact of run off into the catchments which then flow into the Great Barrier Reef," she said.

GRASS PROGRAM FACTS

- The GRASS program is funded through the Queensland Government's **Reef Water Quality** Program and delivered by the Department of Agriculture and Fisheries (DAF), Burnett Mary Regional Group, Fitzroy Basin Association and NQ Dry Tropics.
- Contact DAF on 13 25 23, your local NRM group or extension officer to become involved.

MANAGING BREEDER BODY CONDITION CRITICAL FOR BEEF BUSINESS SUCCESS



BREEDERS require body condition reserves to handle the period from late pregnancy to the seasonal break. Feeding large amounts of energy for lengthy periods is uneconomical and dry season protein supplements only reduce weight loss.

Breeders in store condition or better (body condition score 3 plus) at calving will, in most situations, achieve good conception rates if the seasonal break

is not too late.

Stocking rate appropriate to available pasture must be the first consideration to improve body condition. Animals need to be able to consume their potential pasture intake and maximise diet quality by selection, rather than having to consume whatever is available. Weaning is the next consideration as it reduces breeders' energy requirements by around 50 per cent. Early weaning is

a proven strategy on light country and in dry years. In many situations, more timely weaning e.g. May versus July is all that is needed to maintain breeder body condition.

Controlled mating is valuable because it prevents cows calving too soon and enables calves to be weaned before feed quality declines too much. In yearround mated herds, the timing of musters is critical to reduce the number of

cows lactating for long periods in the dry season.

Segregating breeders into calving groups can assist weaning management and reduce supplement costs. Timely dung testing as the dry season progresses can help decide on an evidence-based course of action to ensure productivity is maintained.

Mick Sullivan, Principal beef extension officer, DAF Rockhampton, 0428 104 374.

BODY CONDITION

- For good conception rates breeders need to calve in store or better condition
- Stocking rate and weaning are key tools for managing body condition
- Controlled mating enables calving to be matched to the likely seasonal break
- Segregating out of season calvers enables
- better managed condition



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NORTHERN MUSTER Information for rural business in North Queensland



Land condition in focus

How many cattle can the country carry?

FutureBeef

VER recent years, ongoing drought has impacted large parts of the Northern Territory pastoral lands.

The extended dry conditions have contributed to widespread death of Mitchell grass in some regions, prompting concern about the ability of the pastures to recover to their former productivity.

Across the NT, pastures that have suffered a decline in land condition and lost much of their perennial grasses such as Mitchell grass, do not grow as much useful forage and cannot carry as many cattle throughout the year.

Land condition decline is slow and can be tricky to assess.

Luckily, there are some great resources available to help assess your current land condition and determine how this affects pasture growth and safe stocking rates on your property.

The NT land condition guides, written by Caroline Pettit, collate decades of pasture research from the Northern Territory government's Department of Industry, Tourism and Trade (DITT) into one useful resource.

The land condition guides include:

Faecal seeding

- How to recognise land condition change How land condition affects
- pasture growth and

carrying capacity How pasture growth and carrying capacity vary with rainfall in the region Maps of the land systems in each region with pastoral lease overlay

Management decisions

Understanding your pasture condition can assist day to day stocking rate management decisions, as well as enable managers to quantify how many extra cattle can be carried if land condition was improved.

The information contained in these guides can assist with decision making.

For example, will it pay to spell during the coming wet season to improve pasture condition? Or would it be wise to destock early in dry periods to preserve pasture condition over the long run?

Investment decisions

Assessing the carrying capacity of current land condition and the potential carrying capacity possible if land condition could be improved can also provide valuable information for those looking to invest in the northern beef industry.

Understanding the likely productivity gain from improving land condition and increasing carrying capacity can help provide better information when deciding on financial allocation to infrastructure development or pasture improvement practices.



The extended dry conditions have contributed to widespread death of Mitchell grass in some parts of the Northern Territory.

Understanding pasture condition can assist managers in making stocking rate decisions and quantifying how many extra cattle can be carried if land conditions were improved.

For smart investors looking to buy NT pastoral land, current land condition should be a primary consideration when purchasing. Should you be paying less for degraded country? YES!

Degraded country doesn't grow as much useful pasture as land in better condition.

The NT Land Condition Guides can help with assessing carrying capacity based on present land condition.

This will ensure land is valued on its current capacity to productively carry cattle.

By using the land condition guides, it is also possible to calculate potential pasture productivity once rehabilitation and appropriate grazing management practises are implemented and land condition is improved.

Historical stocking rates are not always indicative of future sustainable carrying capacity.

If the land isn't in great condition now, it is likely that stocking rates have been too high at some stage in the past.

Using the Land Condition Guides

The Creswell land type, on the northern Barkly Tablelands, has recently been the focus of much research and development in this space.

"When these pastures are in good condition they are dominated by palatable perennial grasses such as curly bluegrass and Mitchell grass and they have an average carrying capacity of 9 to 12 animal equivalents (AE) per km," Department of Industry, Tourism and Trade senior rangeland scientist Dr Robyn Cowley said.

"However, the loss of productive perennial grasses following recent drought may have reduced the stock carrying capacity to about half that and it could take quite a number of years for adequate recovery to occur.

"Wet season spelling and lighter stocking rates for the next few years may pay off in the longer term by restoring pasture condition and lifting livestock production."

Conclusion

The Rangelands and Extension teams at DITT are happy to provide experienced support to help people use the Land Condition Guides as well as provide further information to help make pasture management decisions.

To access the land condition guides go to the Northern Territory Government's website (nt. gov.au) and search for 'land condition guides', under the 'Managing Pastoral Land' link. Alternatively, contact Caroline Pettit or Dr. Robyn Cowley through the DITT customer service centre on (08) 8999 5511.



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