



Agriculture and Environment Committee

Inquiry into the impacts of invasive plants (weeds) and their control in Queensland

Summary of issues raised by submitters - Giant Rat's Tail Grass Case Study

This paper gives a summary of the points raised by submitters about the impacts of Giant Rat's Tail (GRT) grass and its control in Queensland. The committee's secretariat prepared the paper to assist discussions during the roundtable meeting and public hearings in Gladstone on 27 April 2017.

Infestations

The Gympie Regional Council described GRT as the greatest pest facing landholders in the eastern half of Queensland (sub 22). Agforce noted that GRT has the potential to invade 60 per cent of Queensland with annual rainfall greater than 500mm (sub 33).

The Southern Downs Regional Council noted that GRT is in the early stages of invasion of its region (sub 11). Other submitters noted infestations in Beaudesert (sub 4) and the Scenic Rim Council area (sub 17), Noosa (Sub 30), the Burnett (sub 46), the Wide Bay (sub 22) and Fitzroy Basin (sub 40) Regions and the entire Mary River Catchment (sub 50).

One submitter is battling simultaneous infestations of GRT and fireweed on his property (sub 17).

Impacts

GRT infestations reduce property values. One landholder stated that, because of GRT infestations, his property is worth less than the value of improvements (sub 26). The same landholder described having spent over \$200,000 and countless hours controlling G (sub 26).

Factors contributing to the spread of GRTG

Agforce submitted that the sticky seeds of GRT are readily spread by livestock, native animals, vehicles, machinery and water movements (sub 33).

The Noosa Shire Council noted that GRT produces large volumes of viable seeds continually throughout the year, and the importance of preventing GRT from actually reaching seeding maturity (sub 30).

Submitters believe that state and local governments have contributed to the GRT problem through:

- spraying and slashing GRT on roadsides which makes it worse (sub 26, sub 42)
- the actions of Energex personnel and contractors who access properties without following protocols for reducing the spread of seeds caused by vehicles, including cleaning down vehicles before they enter other properties (sub 42)
- failure to properly manage Crown lands, including properties resumed for the Glendower dam (sub 5), the cancelled Traveston dam project (sub 3) and easements for water pipelines (sub 42)
- taking gravel from a property (sub 26), and
- failure to establish controls on the movements of cattle from GRT infested areas (sub 42).

Other contributors to the spread of GRT raised by submitters are:

- failure by slashing contractors, earthmoving equipment operators etc to implement biosecurity protocols or procedures to reduce the risk of seeds being spread (sub 42)
- spread of GRT from forestry areas to firebreaks and other areas by motorbikes and 4WD vehicles (including National Parks vehicles) (sub 42)
- spread of GRT by hay runners (sub 28).

Strategy

Agforce noted the benefits to be gained by focusing on the early detection and control of GRT to reduce long term costs (sub 33).

The CSIRO submission noted that there is insufficient quantitative information on triple bottom line impacts to effectively guide investments, and that this information is vital to guide decisions on the value or otherwise of different management approaches (sub 48).

The Moreton Bay Regional Council has commented that the failure to list Paramatta Grass in the same category as GRT in the Biosecurity Act has made effective management of GRT contentious, due to the difficulty of distinguishing between the two grasses (sub 34).

Eradication and control programs

Submitters commented extensively on the programs operated by councils. Comments included:

- calls for more action by some councils (Scenic Rim Council) (sub 18)
- councils failing to differentiate between native and noxious GRT grasses (sub 19)
- criticisms of timeframes for compliance and remedy notices issued by councils (eg Gladstone Regional Council) that do not allow for weather (timed to coincide with a heatwave) (sub 19)
- inconsistent approaches to compliance adopted by neighbouring councils
- Agforce commented on the value of property buffers, noting that Gympie Regional Council are increasing buffer widths annually depending on property size, and that Livingstone Shire Council has undertaken to increase roadside buffers through unfenced roads across properties that are heavily infested with GRT (sub 33).

The Gympie Regional Council submission outlined a wide range of activities by Council aimed at controlling GRT through:

- inspection, compliance and enforcement programs
- subsidise for herbicides
- providing landholders with extension advice such as property pest planning, field days & workshops, and research projects looking at alternative control options
- ongoing maintenance program, surveying & monitoring & compliance
- education and awareness, development of individual sustainable land management plans for landholders
- funding for treatment when available
- providing access to weed treatment equipment (quick spray units) at no cost, and
- reduced contractor rates through Council's pest management contractors (sub 22).

Techniques

The Southern Downs Regional Council noted that efforts to control GRT may be confounded by the terrain (sub 11).

One submitter noted that the best control is to kill the plant and remove the seeds, whilst encouraging competing useful grasses to flourish (sub 26).

Submitters praised the effectiveness of herbicides:

- Spot-spraying and wick wiping with glyphosate, and broadcasting of granular flupropanate (sub 30)
- pre-emergent herbicides (sub 39)

Some submitters raised concerns about the use of herbicides to control GRT, citing concerns that:

- chemical control is a constant expense as reinfestation is almost inevitable with weeds constantly being spread by water, native animals and wind (sub 17)
- glyphosate used in conjunction with flupropanate creates an area for GRT and other weeds to proliferate without competition (sub 3)
- residual herbicides containing Flupropanate have limited effectiveness due to leaching from the roots of GRT plants by high rainfall, particularly during warmer months. This leads to glyphosate being used which is non-selective, non-residual and requires frequent retreatments (sub 30).

Submitters reported successes managing GRT infestations by other means using fertilizer and better grazing practices and through grubbing and bagging the weeds:

- good outcomes using fertilizer on pastures to assist good grasses better compete with GRTG (sub 26, sub 50). Agforce mentioned trials being conducted of fertilizer use along power utility corridors in the Cardwell district (sub 33)
- better grazing techniques - one submitter suggested that GRTG is an indicator species for low silica levels, and that improving soil through better grazing techniques or some other means is the best way to properly lessen infestation levels (sub 3)
- the Mary River Catchment Coordinating Committee noted that GRT grubbing and bagging of individual plants is recommended for low populations, though was not discussed in the committee's information paper (sub 50)

Other suggestions include [vehicular] wash down facilities, possibly provided on a user-pays basis (sub 6).

Biocontrols and other research

Gympie Regional Council noted that biological controls seem to be the only way to prevent the spread as current controls are not working sufficiently well, there are too many vectors for GRT and given the resilience of the seeds (sub 22). Similarly, the NSW Department of Primary Industries noted that the prospect of sustained control using biocontrols offers the most cost-effective long-term solution to the impacts of GRT (sub 55).

Other submitters commented similarly on the need for research to identify effective biocontrols (sub 17, sub 33). Comments by submitters about biocontrols included:

- GRT is a difficult target for biocontrols because it is closely related to native species (Invasive Species Council (sub 37)
- the crown rot fungus (*Nigrospora oryzae* available commercially as 'Parra Trooper' from Beechwood Biological Solutions) is being trialled again in Queensland (sub 33), and the State Government should fund more research (sub 18), though, it may not be an effective biocontrol (sub 18), particularly on its own (sub 46)
- extensive integrated management trials are underway to improve efficacy of granular flupropanate herbicide and residual control of seedlings (sub 33), and
- the need for research into grazing withholding periods for herbicides (sub 33).

Agforce noted new research into bioagents previously examined, including a stem gall wasp from Africa and other diseases and fungus attacking some of the native *Sporobolus* grasses that are closely related to GRT (sub 33).

Agforce also noted integrated trials conducted near Gladstone by the Gladstone Regional Council, Economic Development Queensland and Biosecurity Queensland to improve control options. (sub 33).

The invasive species Council noted that community groups may need funding to support their work to propagate biocontrols. (sub 37).

Other areas for research highlighted by submitters include:

- integrated management using crash grazing¹, herbicide and fertilizer regimes across a range of soil types and rainfalls (Agforce sub 33, sub 11)
- control methods for dam catchments, irrigation channels, grazed utility corridors and other areas herbicides cannot be used (Sub 33)
- cost-effective fertilizer rates for managing GRT (sub 33)
- the GRT invasion of natural areas, and links to fire management practices (sub 46), and
- the need to look at using beneficial grass species to compete with GRT (sub 3).

One submitter questioned the value of some ongoing weed research investments (sub 40).

Encouraging landowners to take action

Two submitters proposed actions to encourage landholders to take action through:

- incentives and the development of effective, low-cost treatment techniques for large infestations (sub 22) and
- subsidies for the costs of organic fertilizer to assist landholders (sub 26).

Agforce noted that Gladstone and Bundaberg councils already offer incentives to landholders (sub 33).

¹ 'Crash grazing' otherwise known as 'planned grazing' involves exposing paddocks to intensive grazing for short periods followed by spelling, rather than allowing constant low intensity grazing to occur

Education

Agforce noted its work with Weedspotters Network Queensland to raise awareness about the risks that GRT may be spread through the movement of drought fodder (sub 33).

A number of submitters commented on the extent and currency of information and advice provided by DAF and others:

- Agforce stated DAF's Weedy Sporobolus Grass BMP fact sheet has been available for ten years, has been widely used and is updated regularly (sub 33)
- Agforce also proposed that the existing best practice manual for weedy Sporobolus grass be urgently revised, noting the last revision was in 2007 (sub 33), and
- one submitter described information from DAF as 'outdated and worse than useless for their circumstance', noting that a lot of the advice may be relevant to very small outbreaks but not situations with very large infestations (sub 26).

Proposals from submitters for providing new or better information include:

- road signage with information on how to prevent the spread of GRT (sub 6)
- develop and circulate a pictorial guide and key to identify the weedy Sporobolus grass (Agforce sub 33)
- more awareness and weed control days across affected areas (Agforce sub 33)
- best practice protocols for contractors and machinery operators (for recognising weeds and taking appropriate control measures), backed by training and licensing (sub 42)
- DAF to send quarterly email updates to property holders using PIC and RBE to advise about weeds of concern and diseases, who to contact for advice and what basic steps can be taken for their control (sub 42), and
- that government officers be required to attach photographs of the weeds requiring attention to letters of demand as a check against vexatious complaints (sub 19).

Funding

Many submission to the inquiry have called for additional funding and other resources for weeds research and control. Agforce have, in particular, noted the need for additional resources to support 'the extension and compliance work of councils, and for implementing management strategies such as the Good Neighbours Program² (sub 33). The Fitzroy Basin Association has sought further funding with CPMG, under the feral pest initiative, to conduct a GRT trial at sites across the Fitzroy region (sub 40).

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² Good Neighbour Programs seek to reduce the spread of pest plants from one property onto neighbouring properties. This may be achieved by encouraging landholders to maintain weed-free boundaries and the establishment of weed-free buffer zones.