



Submission in relation to Giant Rats Tail Grass (GRT) Control

Context / Background

My wife and I live in Upper Kandanga Qld, and have a Droughtmaster Beef Cattle Stud – we have lived on this property for 12 years and spend all our time, when not doing cattle work, working off farm to support our efforts, controlling a heavy infestation of Giant Rats Tail Grass on our very hilly to steep scrub and forest country.

The story that we have been told from other locals is that the Shire Council introduced the GRT onto our property many years ago when they took gravel from a quarry on our property for the local road which traversed GRT infestations. This is difficult to substantiate, but does make sense. The previous owner let regrowth cover the property to disguise the problem before he sold it. Whilst we saw some GRT we were told that you “just spray it” to get rid of it.

Thus far we have spent over 200K and countless hours controlling the GRT and are only now starting to see significant results, we have had a real Estate Agent advise us that the property is currently worth less than the value of the improvements that we have made to it due to the infestation of GRT.

We have found the best way to control this weed is to kill the plant and remove the seed, whilst encouraging competing useful grasses to flourish. But it is our opinion that the only way to control this weed is biological, as to control it with existing methods is too costly and time consuming to be viable.

Many people in our area use the head in the sand approach to GRT and whilst we can understand their fear, it is not helping to control this weed – we have had conversations with people who swear they do not have GRT, in sight of large tussocks, and others mow every week to maintain the illusion.

Below is a summary of our experiences and findings to date.

Government Interaction

DAF

Thus far we have found their advice to be outdated and worse than useless for our circumstance.

We were even told just to leave the GRT on our place as it was too steep to control. I now no longer go to Field days because I find difficulty in not speaking up when spurious advice is progressed. To be fair, a lot of the advice may be relevant to very small outbreaks of GRT, but in no way covers our situation where we have large infestations.

Local Government

Similar to the above advice, but with a punitive twist, the local shire council provides the same sort of advice as the DPI, but with the addition of notices to fix infestations with the threat of fines being applied for non-compliance. The Shire staff seem to drive our roads looking for infestations and

serving notice on those properties where they can see GRT from the road, without any discussion with the landholders as to the efforts made to control the weed. They spray and slash the GRT on the roadsides which actually worsens the infestations.

Assistance Schemes

The problem with existing assistance schemes, is that one of the conditions is that the applicants have to derive their primary source of income from Primary Industry. The problem with this condition for us is that the weed burden that we have prevents us from giving up work. Everything we earn goes back into the property and we get no assistance though we see “retired” people in the area getting tens of thousands of dollars of grants every year.

We work 7 days per week to try to run our property and support ourselves and we see others work “part time” and get assistance for doing so.

Spraying Contractors

Thus far we have found them to be hardworking, but lacking in knowledge about the sprays that they are using and are happy to experiment with different spray combinations on our country to our detriment.

We have had two spraying contractors, both now out of business, the first used round up as a “marker” so that they could see where they had sprayed the taskforce. This killed everything and we had to spend many thousand to reseed the areas that they had sprayed but the GRT returned, with a heavier seed population and stronger than ever.

The second contractor returned over three years to spray taskforce, but did not calibrate the spray rate to our country. As our country is very steep the rate of spray will vary depending on the speed of the tractor used for spraying. Thus we got very patchy results from no impact through to country where nothing would grow for two to three years. In the last year (we never asked him back) he included a wetting agent with the taskforce which literally killed everything and again we had boom spray lines where nothing grew for three years after he sprayed – we did not know about the wetting agent at the time and would have advised against using it with taskforce.

Control Methods

Roundup (Glyphosphate)

Boom Spray

We have done this successfully over very small areas of heavy infestation but this is not viable for larger areas.

It requires subsequent ploughing and heavy seeding together with favourable rainfall and intense retreatment (spot spraying). It kills all the good native grasses, and if left alone provides exactly the seedbed required by the GRT to come back to become the predominant grass.

Spot Spray

This can be used for areas for relatively sparse tussocks of GRT, but where there is a good coverage of surrounding grasses – the idea is to keep the spray footprint as small as possible, if sprayed incorrectly this can provide the GRT with a clear seedbed to take over. Best used in conjunction with cutting off the seed heads to limit the competition for the bare patches left behind after the tussock dies and using fertiliser and soil conditioners to promote competition with the GRT.

Taskforce

The basic problem with Taskforce (tetrafluoropropanate) is its sensitivity to weather and application rates, it is best sprayed in winter to ensure that it does not receive too much rain too quickly.

It does not address the issue of still viable seed falling to the ground once the parent plant is dead, it also takes a long time to be effective and by the time it

1. kills the plant
2. doesn't kill the plant or
3. kills every plant and sterilises the soil

the season is over.

Taskforce Liquid

Boom spray

This is a very costly exercise on steep slopes, with specialised equipment required to traverse the country. If carried out with the correct calibration and with favourable weather conditions then it can be a part of an effective control method, but is not by itself an effective GRT control.

Spot Spray

With spot spraying, the intent is to spray a very wide footprint that will envelope the tussock and also the area where the seed will fall, so normally a 2m diameter spot spray, with the tussock in the middle of the area. This is best done where there are isolated tussocks with good surrounding grasses. This does not kill the seed and again it is very difficult to determine the correct amount of spray to use per tussock to get the correct kill – it is also very dependent on getting the correct amount of rainfall subsequent to spraying.

With luck and as part of a larger control program it can be quite effective.

Task force pellets

We have found the pellets to be difficult to use effectively. Often these are spread by helicopter, but the companies that run these helicopters have never answered their phones or rung us back. We have heard of neighbours, however, that have used them and have effectively sterilised their country – we questioned the company rep at a field day who advised that it was because of a calibration problem in steep country. Meanwhile the grazier has 500 acres of unusable country where the GRT will thrive due to a lack of competition.

We have used the pellets on small areas, using a garden type fertilizer spinner, but have only succeeded in killing everything – we have been told that our application rates have been too heavy.

Successful Control Methodology

Our greatest success has been where we have killed the plant with roundup and cut the heads off to ensure that the seed is not dispersed. We then drop a soil conditioner such as lime and an organic fertiliser, such as baked pelletised chook manure, this encourages the surrounding grasses to take over.

Seed Harvester

After removing the seed by hand we realised that we could not cover enough country with a pair of shears, so we invested in a Grass grabber - an Australian made small native grass harvester. We attached it to our UTV with a good level of success. It removed the seed, but the GRT stems kept getting caught in and clogging the roller mechanism. Using a revolving brush to remove the seed works, however, as the GRT plant does not regrow another seed head once the seed has been removed. After laboriously using this machine for 12 months we saw about a 60-70% reduction in the infestation level.

We found a fabricator who manufactures a tractor based grass seed harvester in Southern Queensland but this person was very aggressive and refused to help us when we mentioned that we wanted to harvest GRT.

So we did some research and found a manufacturer in Canada where they harvest a weed grass on the Canadian Prairies. We purchased and imported a machine and have fitted it to our FEL, with some modification, we are now harvesting the GRT. We have trenches dug around the property where we deposit and burn the seed.

Wick Wiper usage

We attach a Wick wiper to the rear of the tractor, filled with roundup, with the harvester on the front end loader, we have found difficulties with applying enough roundup to kill the GRT, but now use a very strong mix in the wick wiper.

For the wick wiper to be effective we graze the country quite heavily, so that only the GRT is upstanding, then we harvest the seed apply the round up and then follow up with fertiliser and soil conditioners.

We now plant more spreading type grasses such as creeping blue grass, rather than the more upstanding Rhodes grasses, so that the grazing level can be reduced before running the wick wiper over the country.

Fertiliser Application

We have tried various fertilisers from chelated chemicals to mineral based soil conditioners and have found the best to be organic pelletised baked chook manure as it both adds to the organic components of the soil, but also lasts between rains. The harsher chemicals have to be applied just before rain or they can burn off and the mineral type soil conditioners take too long to be effective against GRT. The way that the fertiliser works is to generate competition from the good grasses which respond better than the GRT. We also spread Calcipril to assist in neutralising the soil PH. We have found that using a fertiliser spinner is the best way to spread fertiliser on our property as other spreaders we have tried have been too heavy on our slopes. At about \$400.00 per tonne and a heavy application rate, this is our most expensive operation, but we are finding that the country is responding well and we are starting to beat the GRT at last (weather permitting).

All the above is very time consuming and very expensive, it is also very nerve wracking and mildly dangerous on our slopes. The best way to assist us in the short term is to subsidise the cost of organic fertilisers so that we can bring our country back from a very depleted state.

Conclusion

In my opinion to advise people that spraying of any herbicide will end the GRT problem is very misleading, the plant competes by overwhelming the good grasses with a huge amount of seed production.

This seed load needs to be removed before the other grasses can compete. We are using a seed harvester with quite good success, but the seed harvester is only an element in GRT control. The seed numbers have to be controlled and in my opinion the only way to do this is via biological means of killing the seeds or the juvenile plants. In conjunction with this, we need to improve the soil itself to support the better grasses that we need to establish, for many years the economics of Primary Production has meant that many people cannot viably use their soil without destroying it through overuse or flogging it.

These invasive species, including GRT , are the consequence of us flogging our country. In the longer term, the only way to stop the GRT is via Biological means as the GRT is now into all the gullies and rugged country, both privately owned and State Government owned, and it cannot be eradicated via spraying or other manual means.

The above is a short summary of our experiences and our attempts to control an invasive and costly weed that is seriously threatening to turn our beautiful farm into a green desert.