

MLA project BERM 0089



Biological control of GRT with the fungus *N.Oryzae*



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A joint initiative of:



Queensland
Government



Northern Territory
Government



Department of Agriculture and Food



mla
MEAT & LIVESTOCK AUSTRALIA

1. Outcomes of the MLA project BERM-0089 Biological control of Giant Rat's Tail (*Sporobolous pyramidalis*) with the fungus *N. Oryzae*.
2. Identify the key recommendations of the report
3. What's happening now in terms of research development and extension of holistic GRT management

GIANT RAT'S TAIL IS A REALLY BAD WEED!

Why is Giant Rat's Tail grass sooo bad???









Question time....

“ Are you aware of any GRT growing in your region?”

“ Are you comfortable it is being controlled in that area effectively?”

The industry is becoming a little desperate...



December 2012

MLA funding secured for BERM0089

**Biological control of Giant Rat's Tail grass utilising
*Nigrospora oryzae***

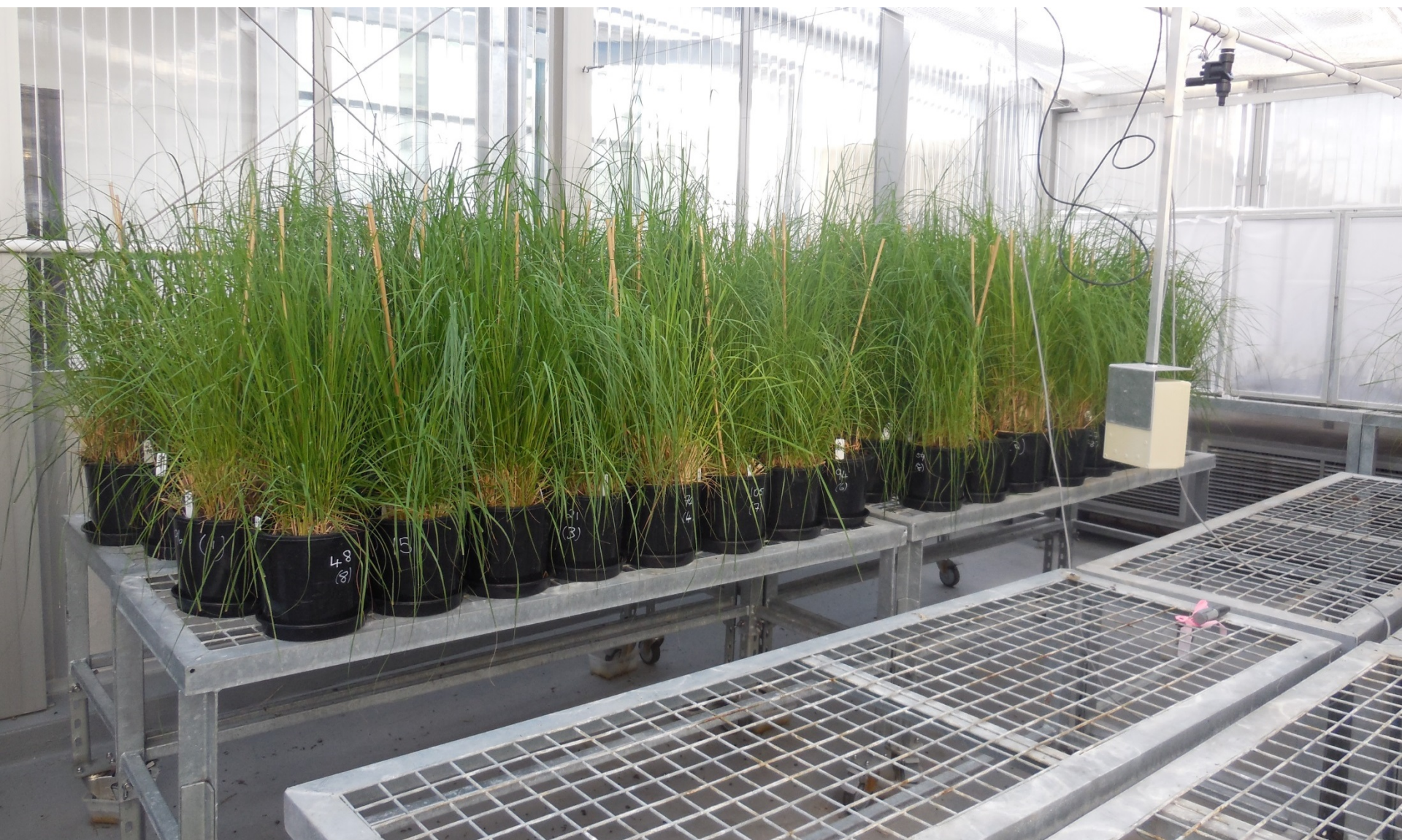


Project objectives



- Assessment of the potential of the fungus *Nigrospora oryzae* as a biological control agent for GRT.
- Investigate the relationship between pre-inoculation treatments (burning and slashing) and the rate of *N. oryzae* disease establishment and spread.
- Improved knowledge and understanding of grazing land management principles for control of GRT and promotion of productive pastures.
- Draft guidelines for use of *N. oryzae*, if it proves an effective and practical control option.

- 3 Trial sites
- Randomised block designs
- Incorporating pre-treatments of slash and Burn



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No pathogenic relationship observed between
N.Oryzae or either of the Fusaria and GRT.

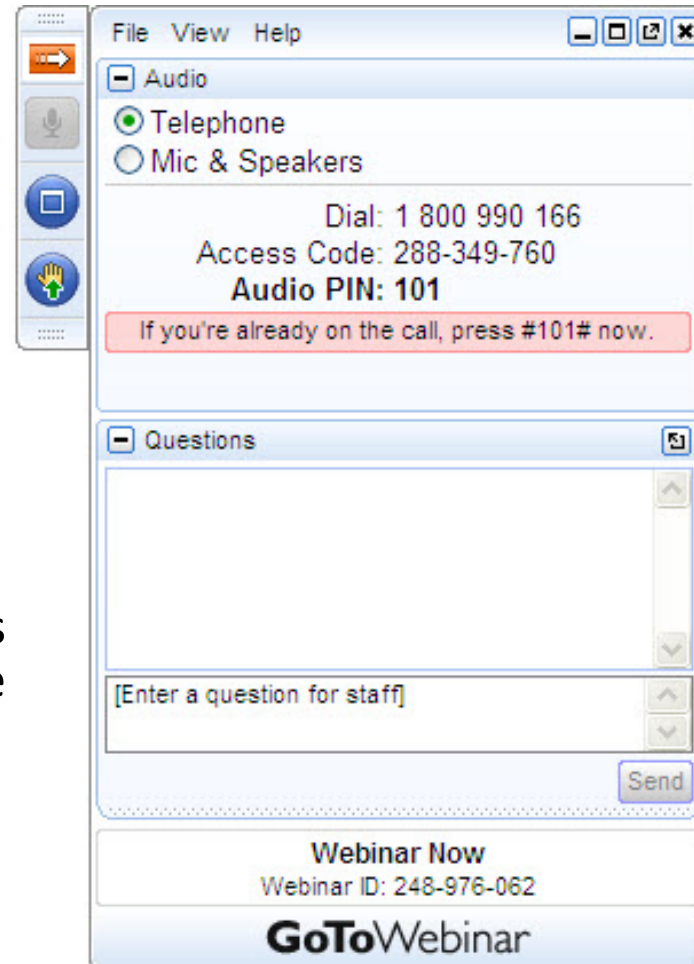


Questions, comments?



Raise your
virtual hand

Type your questions
here anytime



So did we achieve anything?



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19 individual recommendations for future work into GRT control.

- Current knowledge on GRT control
- Understanding the weed
- Improving preparedness
- Contributing to control

Current knowledge on GRT

- Currently there is a significant amount of research conducted into GRT.
- This research needs to be better amalgamated and more easily accessible.
- Identifying the work will stop replication.
- Help to skill government staff

Question time....

“ Do you think you have an adequate knowledge of GRT control to assist producers if they identify it on their properties? ”

Understanding the weed

- Demographic study – who is it effecting currently
- Understanding the genetic diversity, what forms of WSG are growing where?
- Biodiversity impacts?
- Sediment loss impacts?
- What's the financial cost of control?

Improving preparedness

- Improving management of biosecurity on property.
- Developing effective management plans to tackle significant infestations.

Contributing to control

- Improving knowledge on Fluproponate use
 - Timing , residual, application method, pasture screening, pH, OM, soil moisture.
- Revisiting Stem Wasp (*Tetramesa sp.*)
- Surveying GRT for die-backs
- Developing more holistic control

New projects

Biosecurity Queensland has submitted a proposal to the RIRDC (Rural Industries Research and Development Corporation), for a funded project on biological control.



There are currently 4 outcomes planned:

1. Lab rearing of Stem Wasp *Tetramesa* for use in controlled environment pot trial utilising WSG.
2. Use of Molecular work for identify potential biocontrol specifically and also identifying the genetic spectrum of WSG in Queensland.
3. Survey for endemic pathogens
4. Survey for addition biocontrol pathogens overseas.

New projects



Dr Wayne Vogler, Tropical Weeds Research Centre in Charters Towers has submitted a project proposal to MLA in the new round of funding call commencing the beginning of this year.

Objectives of the project are:

- Accelerate the adoption of farm biosecurity practices in particular in the control of GRT.
- Develop a number of producer demonstration sites in targeted areas to fill knowledge gaps
- Reviewing the economics of control methods.
- Collating all the research knowledge to date.

How are we going



There are currently some good projects up for funding that are exploring further into GRT control

There are other avenues of funding and collaboration yet to be developed

The funding environment for research at the moment is not great.

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