

# GRDC

**Grains  
Research &  
Development  
Corporation**

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## SENATE ESTIMATES BRIEF

"Snails in Grain"

11<sup>th</sup> February 2013

### Q and A

***In light of funding from GRDC, Yorke Peninsular Alkaline Soils Group, SARDI. How much funding was given by the Federal Government into support of snail research?***

A current project, run by SARDI and funded by the GRDC, involves a \$130,000 investment for the 2012/2013 financial year. This project has been developed in consultation with the Yorke Peninsular Alkaline Soils Group. The government is making its contribution to this project through its ongoing funding to GRDC.

***Which parts of South Australia are affected by snail related problems? What are the most affected parts?***

Snail infestation is a problem that affects a large number of agricultural regions. GRDC is aware that the Yorke Peninsular has been significantly affected by this issue, however, there is no detailed data available in relation to the infestation and impact of snails for individual areas. GRDC has approved funding to conduct a field survey to determine regional impact and specific species for completion at the end of June 2014

***How much money is being lost in South Australia as a result of snail related issues?***

Specific data is not available for South Australia. Current analysis estimates the total cost to the Australian grains industry from snails to be \$17.678 million. The annual average loss in the southern **region** is estimated to be \$11.79 million and \$5.882 million in the western region.

***What specific initiatives did the money go towards?***

Since June 2003, GRDC has committed \$1.95 million to research, development and extension projects to reduce the impact of snails on Australian grain crops. The table below provides a summary of all research and development activity, funded by GRDC.

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## SENATE ESTIMATES BRIEF

"Snails in Grain"

11<sup>th</sup> February 2013

*NB: Investment figures were current as at November 2012 (previously provided as a question on notice).*

<b>Project Title</b>	<b>Completion Date</b>
1. Optimising on farm snail management (\$82,500.00)	30/12/2003
2. The application of novel genetic approaches to pest land snails — a feasibility study (\$89,600.00)	31/12/2008
3. Snail communication strategy (\$5000)	30/6/2003
4. Snail market survey (\$36,100)	30/6/2003
5. Design and printing of snail grower fact sheet (\$2980)	31/7/2007
6. Integrated snail management in the Southern Region (\$581,813.00)	30/6/2005
7. Assessment of the biological control potential <i>Sarcophaja penicillata</i> (\$147,641.00)	31/07/2010
8. Establishment survey of the biological control agent <i>Sarcophaja</i> (\$10,000.00)	1/05/2008
9. Biological control of pest snails in Australia using native nematodes (\$872,194.00) — GRDC is in the commercial development phase to determine whether an endemic nematode can be delivered commercially.	Current to be completed by 30/06/2013
10. Snail and slug control scoping study (\$130,000.00)	Current to be completed by 30/06/2013

***What positive outcomes were received from the research?***

- GRDC funded research has delivered a series of practice management options which have been widely communicated to growers via fact sheets and extension activities.
- A Biological control option has been identified in recent research but is still being field evaluated for potential commercialisation.

***Does the Federal government intend to fund more research into snails***

Page 2 of 6

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## SENATE ESTIMATES BRIEF

### "Snails in Grain"

11<sup>th</sup> February 2013

As outlined, the federal government contributes to snail research through its ongoing funding agreement with GRDC. GRDC is currently funding two projects:

- |   |
|---|
| 1. Biological control of pest snails in Australia using native nematodes (\$872,194.00) — GRDC is in the commercial development phase to determine whether an endemic nematode can be delivered commercially. |
| 2. Snail and slug control scoping study (\$130,000.00)  |

Ongoing research priorities, identified by the recent National Snail and Slug Management and Research Workshop include:

- Surveying snail and slug populations on a national scale
- Strategic and tactical strategies to control snail and slug pests
- Increasing grower awareness of snail and slug lifecycles to target optimum baiting times
- Improved Chemical control options, particularly focusing on juvenile snails
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These research initiatives are currently being negotiated with research partners, including SARDI

#### ***What is the Government's estimate of snail infestations for 2013?***

Snail populations are seasonal dependent, with rainfall being a key contributor to population build up. There is no current survey information available for the four snail species.

#### **What has been learnt from the research into bait performance on juvenile snails?**

A range of bait modes of action, formulations, sizes and timings have been evaluated. However, no effective control solutions for juvenile snails have been identified to date. A limited number of new options are currently being evaluated.

**SENATE ESTIMATES BRIEF****“Snails in Grain”****11<sup>th</sup> February 2013**

**With regards to senate question nop.2113 part3 - How much is the additional funding for the biological control of snails using native nematodes?**

**\$872,194**

**What is the funding for?**

Outputs include;

- Obtain data in laboratory trials
- Obtain data in field trials
- Commercialisation of Nematodes as bio control agents

**What does the department intend to achieve from this funding?**

The current project is designed to control pest snails with an environment-friendly method (nematode-based biocontrol agent). During the progress of the project, a commercialisation plan will be developed by the applicant in conjunction with GRDC. If it is successful, the project will bring huge benefits to the whole grain industry of Australia given the fact that snails have caused serious damage to the grain industry over the last decades.

**With regard to part 6 of the same question - There were only 21 attendees at the National Snail and Slug Management Workshop. This included GRDC panel members and staff**

**How many GRDC staff were in attendance?**

Two GRDC staff and four southern panel members attended the workshop

**Why was the Workshop not held in SA?**

Attendees were from all states in the southern region. Adelaide was selected as the venue due to its central location and options to facilitate travel.

**How were local framers contacted or informed about the Workshop?**

Selected growers were identified by GRDC to attend for their expert knowledge and experience with this issue. They were invited individually.

**Are there any future strategies in place for providing solutions to combat snail infestations?**

GRDC held a national snail and slug management and research workshop in Adelaide in January 2012 to identify research gaps, particularly focusing on the control of juvenile snails.

During the workshop, industry representatives and scientists identified a number of key priorities. These were:

- Improving metaldehyde bait use, including rates and bait size
- Improved control methods for juvenile snails
- Border control and fence lines
- Update data on snail and slug populations in Australia
- Genetic variation and identification, biological control – looking for other biotypes of parasitoid fly
- Improving management thresholds to increase update of control measures
- Plant host resistance as a possible solution
- Grower awareness and communication
- Further review and publication of current control recommendations
- Control of snails pre-harvest (especially for peas, faba beans and canola)

Workshop outcomes have been developed into an investment that GRDC is currently negotiating for commencement in 2013/14. This will include the following outcomes:

- Surveying snail and slug populations on a national scale
- Strategic and tactical strategies to control snail and slug pests
- Increasing grower awareness of snail and slug lifecycles to target optimum baiting times
- Improved Chemical control options, particularly focusing on juvenile snails

**Does the Government have a strategy for supporting farmers to minimise damage from snail related issues**

The federal government invests in reducing the impact of snails through its ongoing funding to GRDC.

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## SENATE ESTIMATES BRIEF

“Snails in Grain”

11<sup>th</sup> February 2013

The relevant GRDC intermediate strategy is the effective management of vertebrate and invertebrate pests. This will be achieved through grain growers using a combination of new genetic, biological cultural and chemical tools that reduce losses and minimise control costs of vertebrate and invertebrate pests.

Practice changes include:

- More grain growers and their advisers monitoring crops. This will be demonstrated by:
- Increased proportion of grain growers and their advisers monitoring crops for vertebrate and invertebrate pest damage.
- Increased proportion of grain growers and advisers able to accurately identify common invertebrate pest and beneficial species.
- Increased proportion of grain growers adopting a management plan.
- Increased proportion of grain growers and their advisers able to accurately identify common vertebrate and invertebrate pests and their density.
- Increased proportion of grain growers and their advisers monitoring the impact of beneficial species.
- Increased proportion of grain growers access and using new registered chemistries and formulations
- Increased proportion of grain growers and their advisers using new registered chemistry uses, formulations and biological controls for host and vector management