



Department of
Primary Industries and
Regional Development

Protect
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Managing snails in Western Australia

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Introducing the speakers

Svetlana Micic

DPIRD Reseach scientist



Alaina Smith

Grower at South Stirlings



Best practice snail management

Overview

- Introduction to the issues.
- Best time to bait before egg laying.
- Mortality and baits.
- Implications of liming.
- Effects of sprays on snails.
- Control measures that haven't worked on small pointed snails.

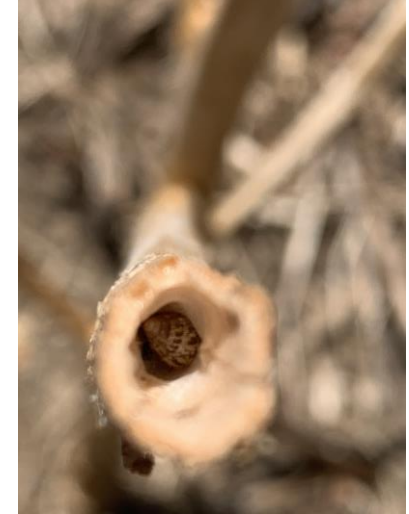


Small pointed snail

The chronicles of the small conical snail

An introduction

- Each mating pair produce 400 eggs per season.
- Eggs hatch 2-4 weeks after laying.
- Juveniles are sexually mature the following autumn.



Snails in WA



Vineyard snail



White Italian snail



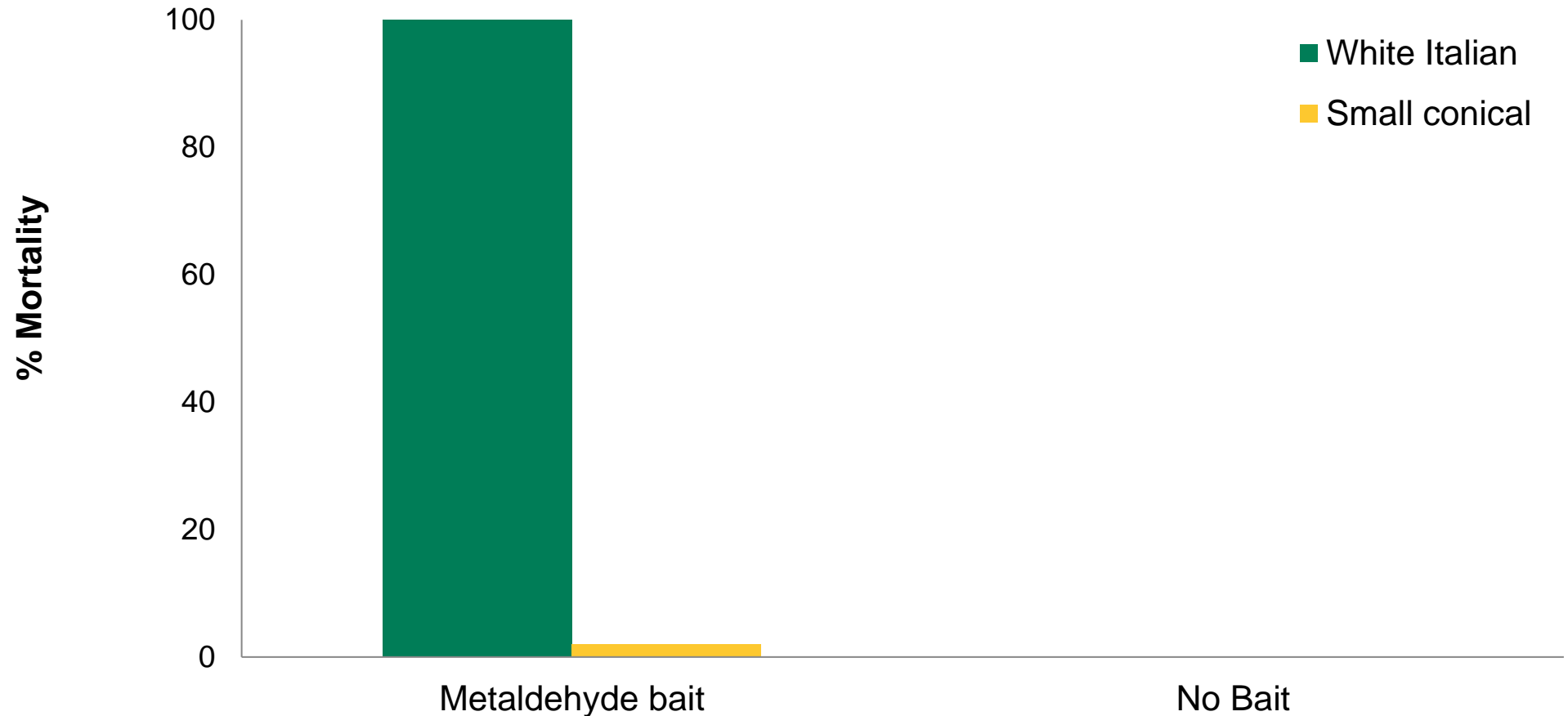
Small conical snail



Pointed snail (L); Small conical snail (R)

Mortality of snails \pm baits

Baiting can be very effective on round snails



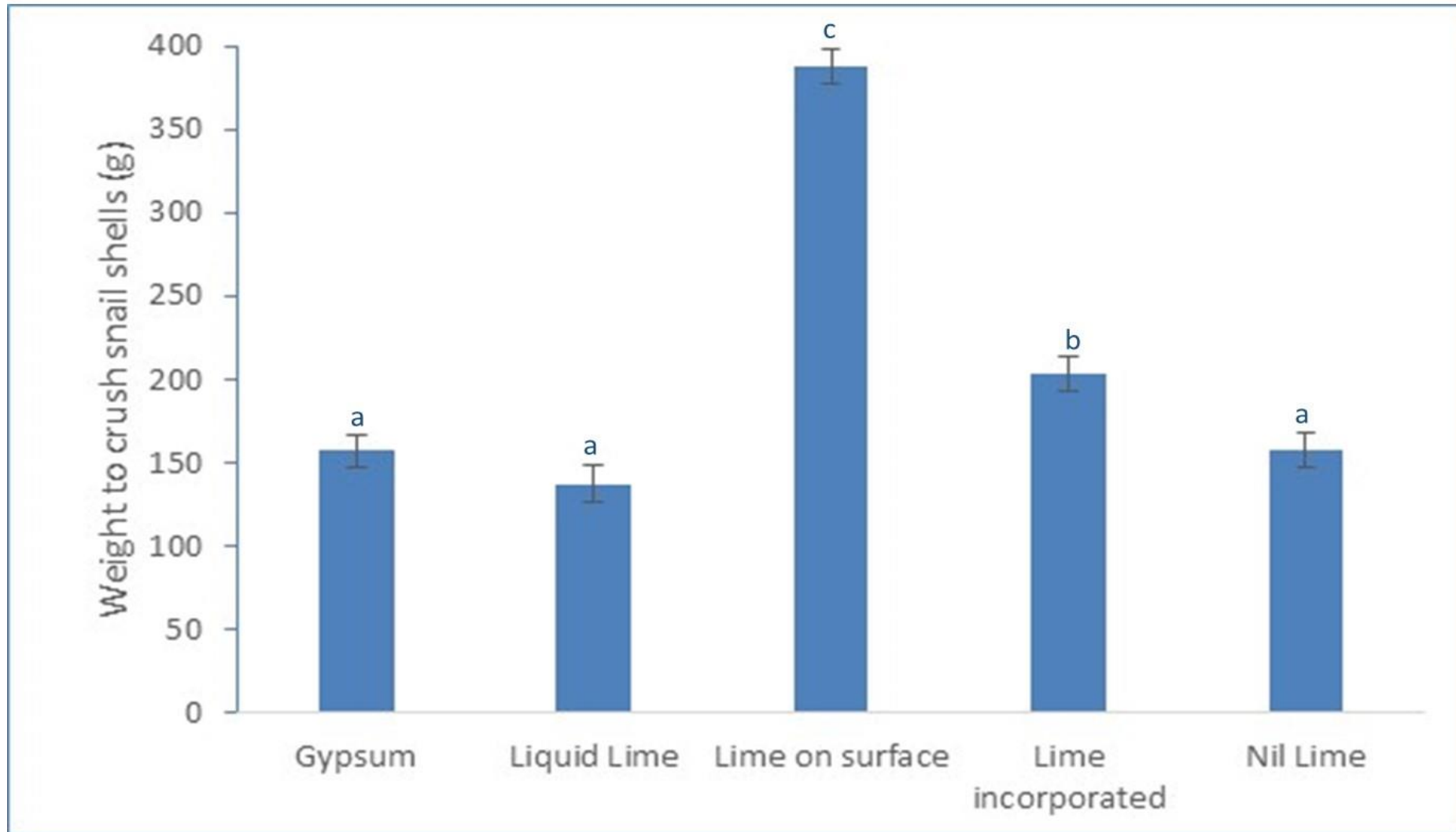
Background to the problem

Alaina Smith, grower at South Stirlings.

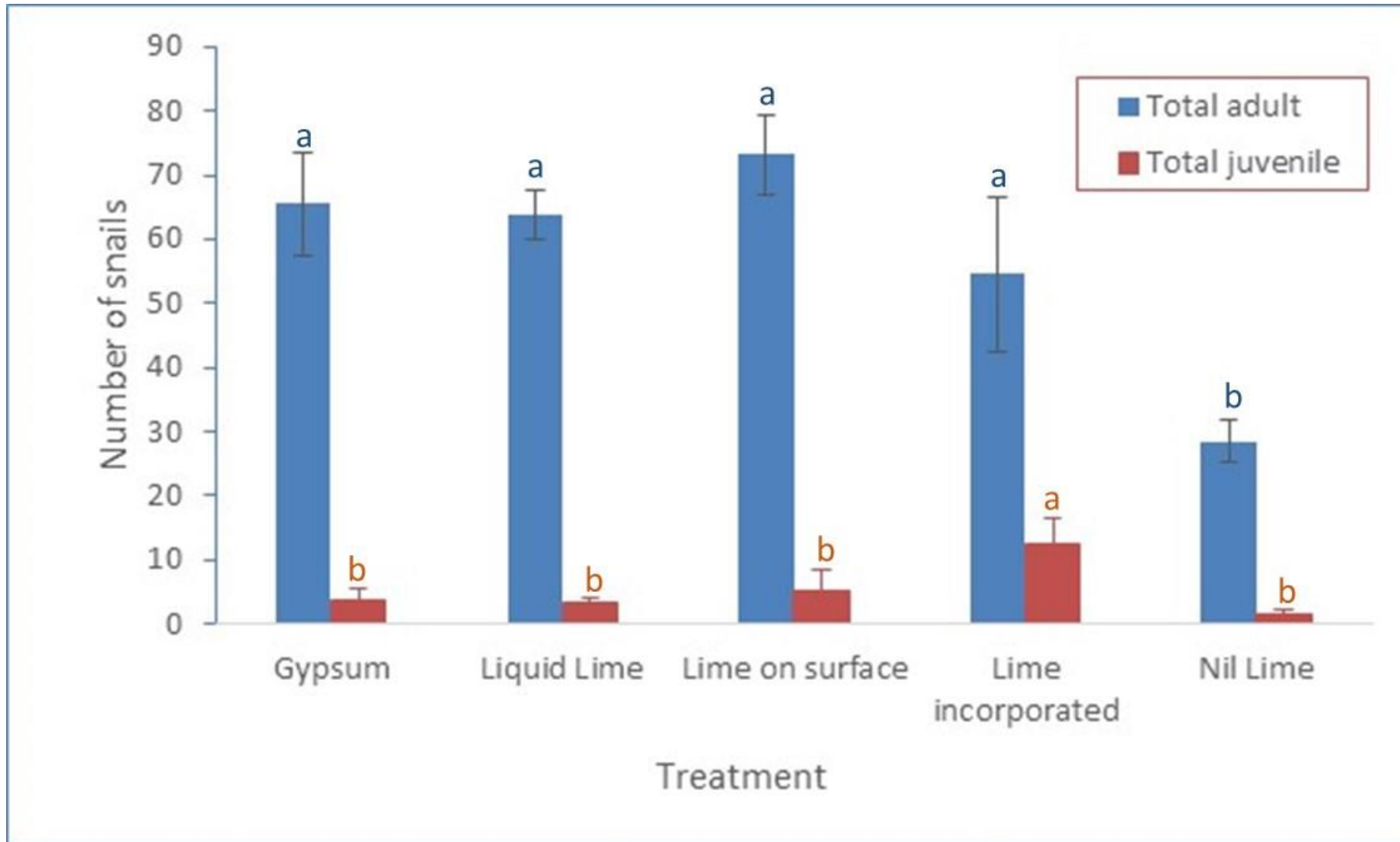
- Snails present on farm for 30 years before causing damage.
- 15 years ago noticed increase in snail numbers.
- This coincided with:
 - Increase liming
 - Increase stubble
 - Decrease in sheep
 - Cattle numbers stayed same
 - More summer rainfall?
 - Earlier sowing of canola.



Increased liming led to increased snail shell strength



After liming bait



Management options for snails

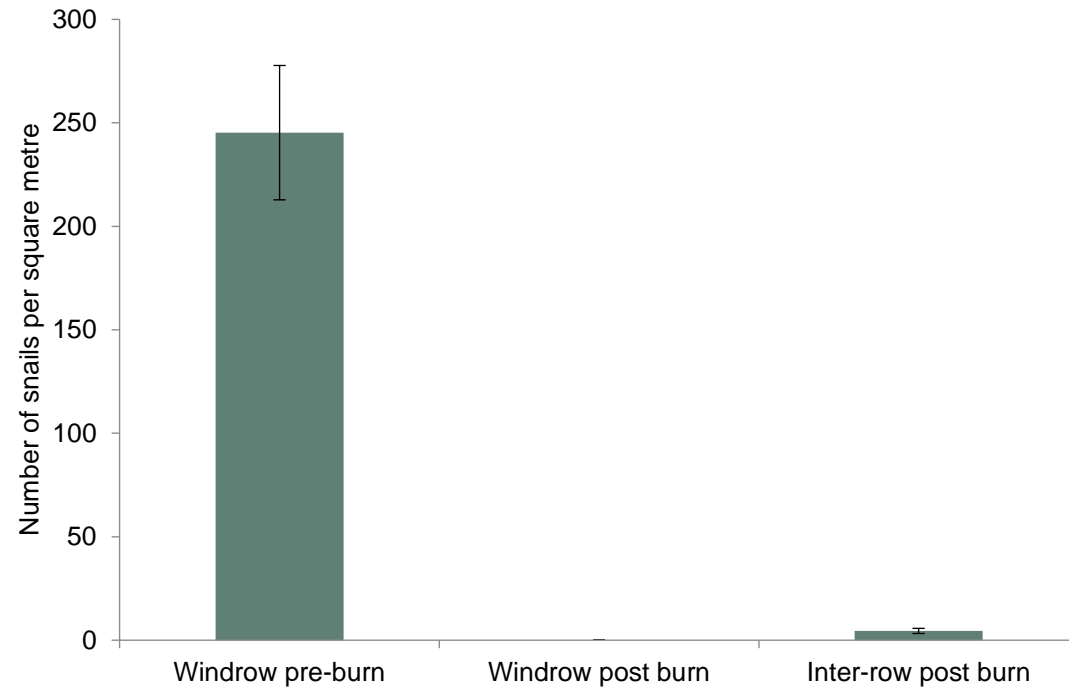
No silver bullet

Spray out paddocks that will be cropped over summer, before baiting, so no green plants to eat.

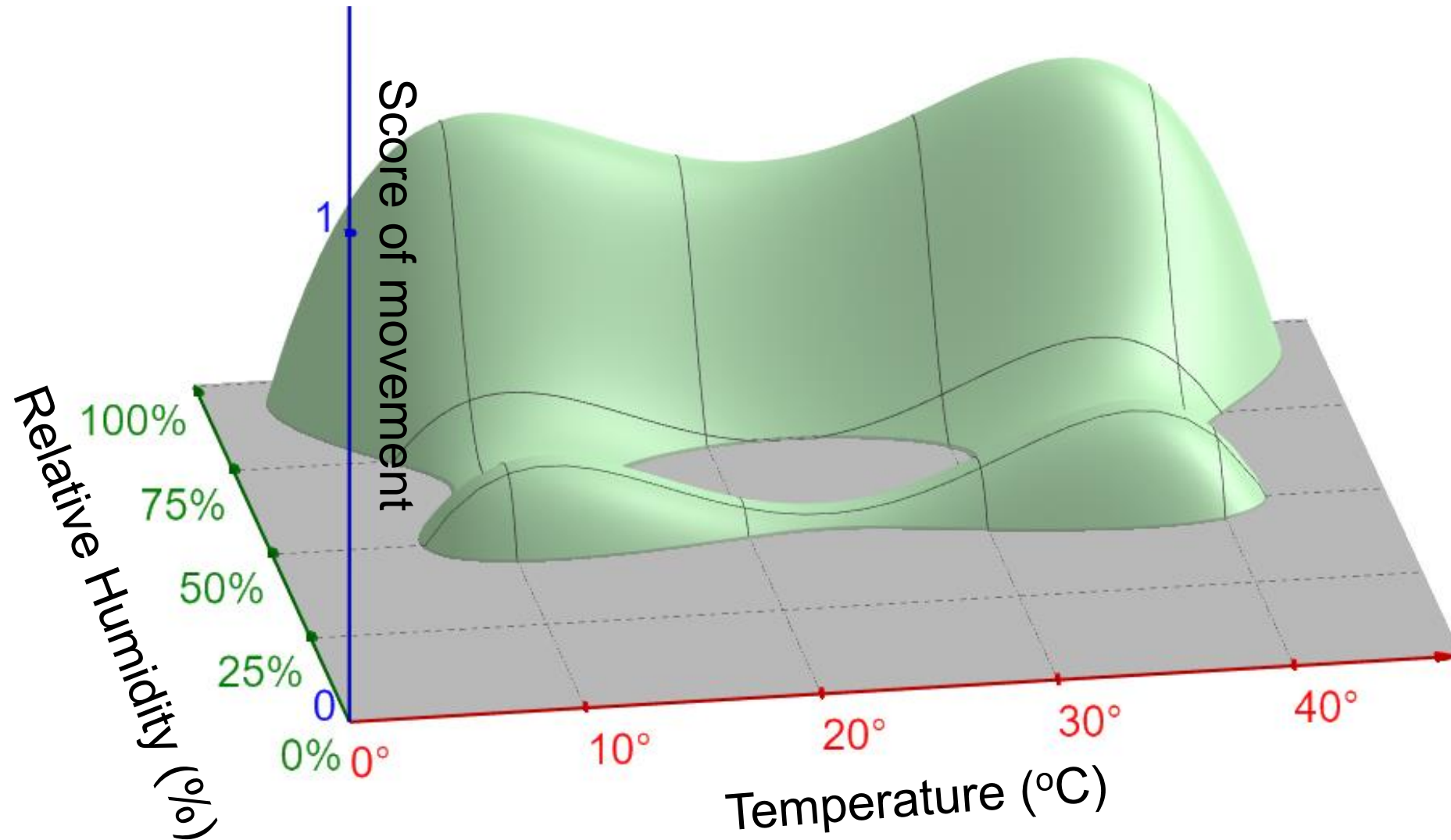


Windrow burning

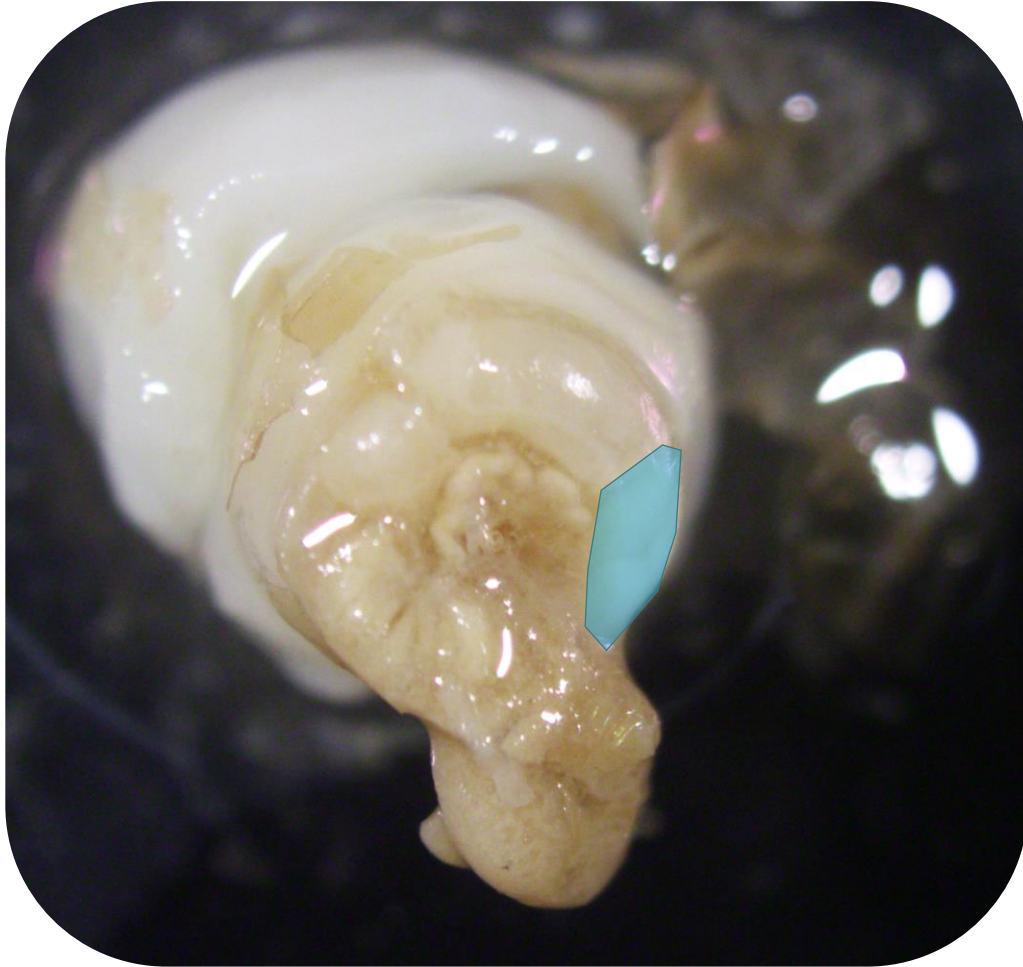
Number of small pointed snails in
canola swaths and inter-rows



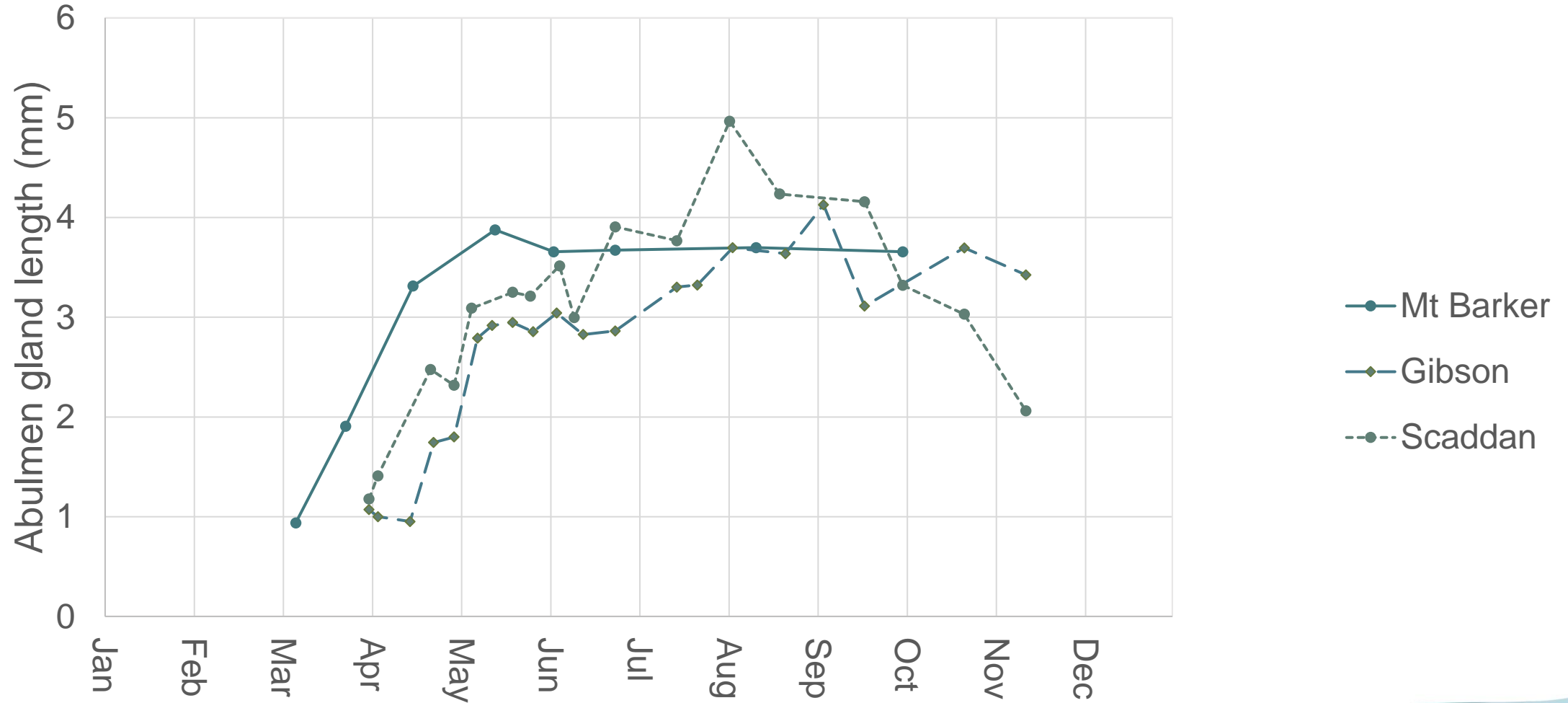
Movement of snails on the ground



Are baits being applied at the right time to stop the next generation?

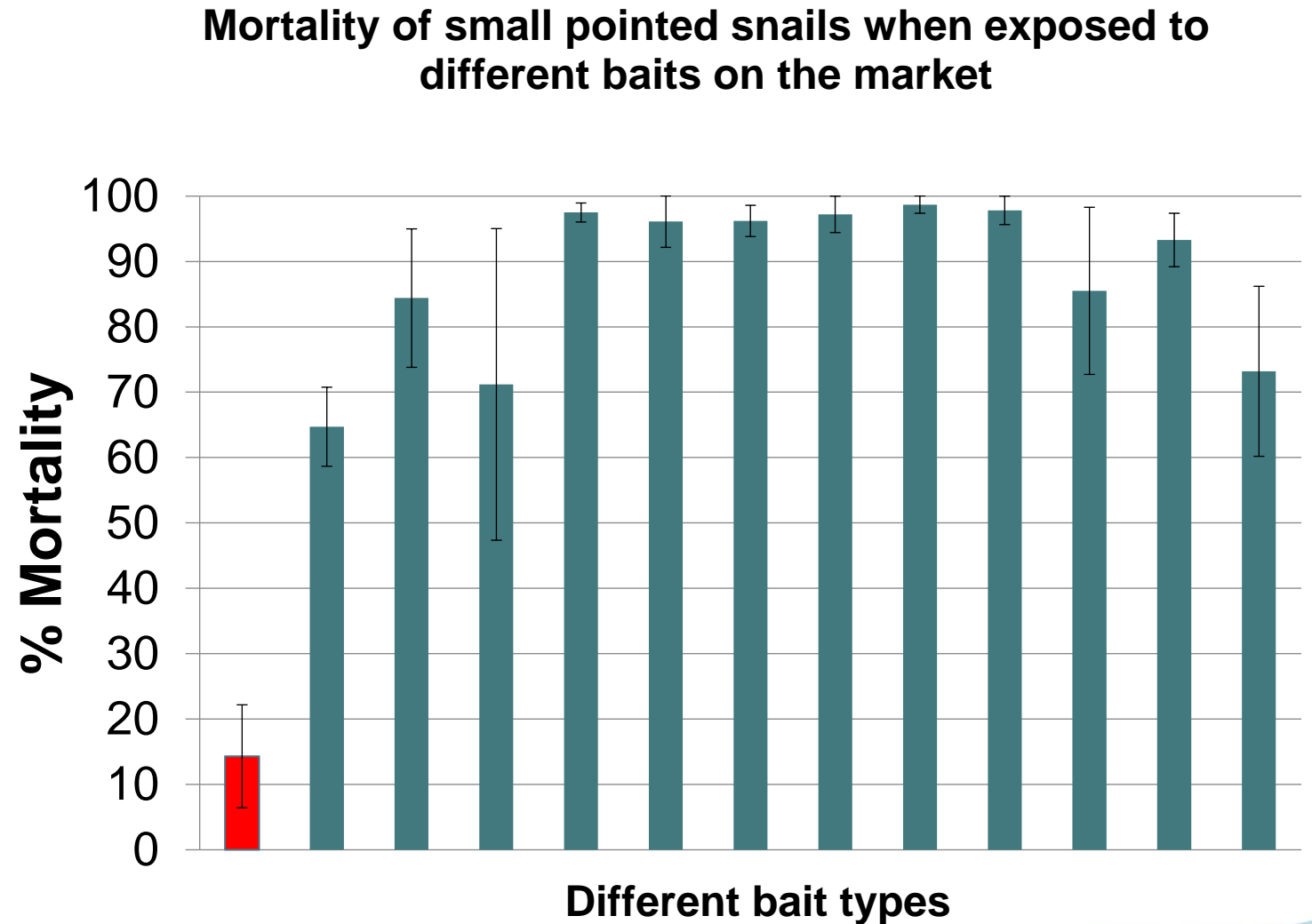


Formation of albumen gland



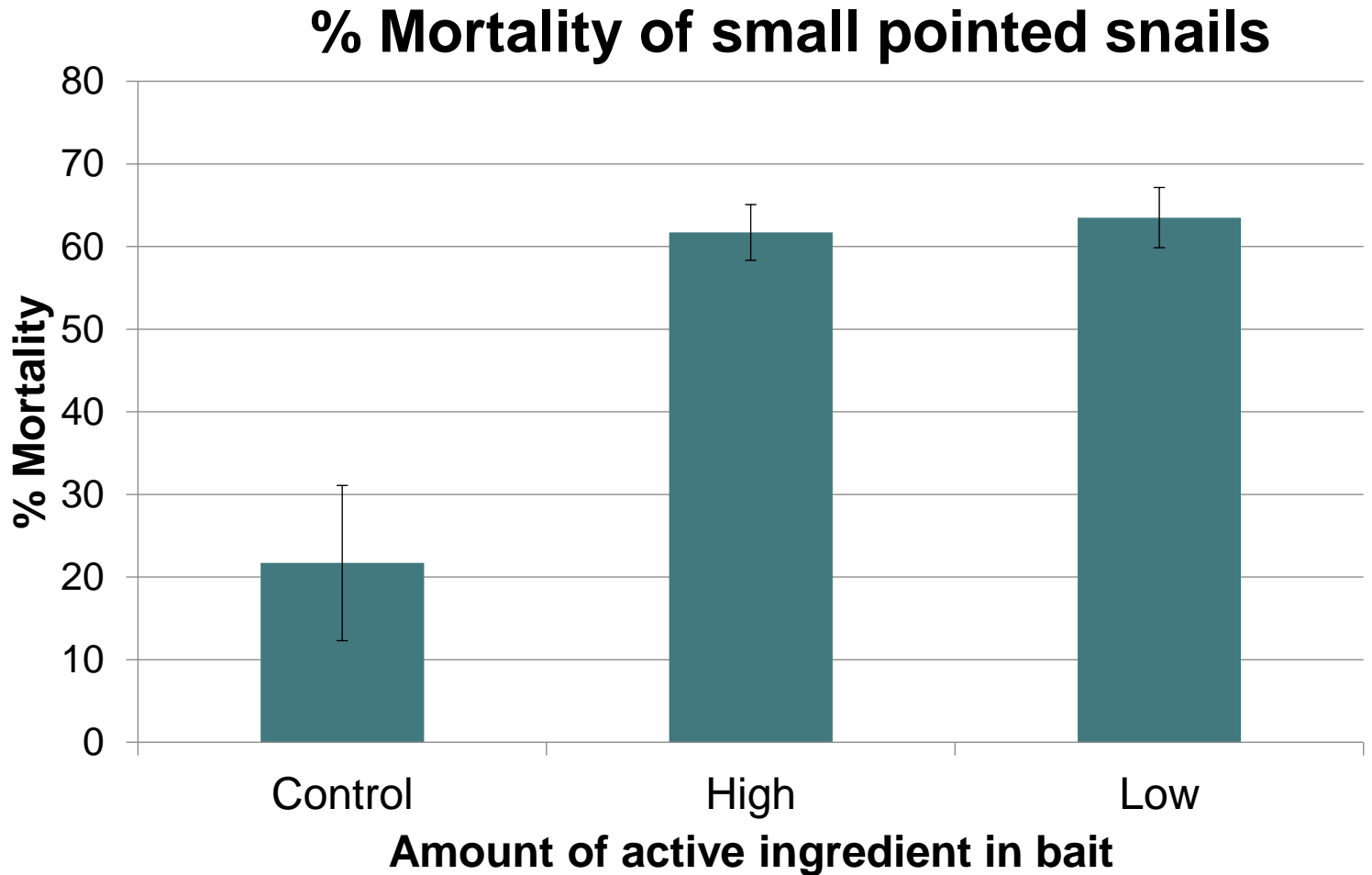
Bait choice

- Bait choice comes down to money.
- Lab study showed all baits are equal.



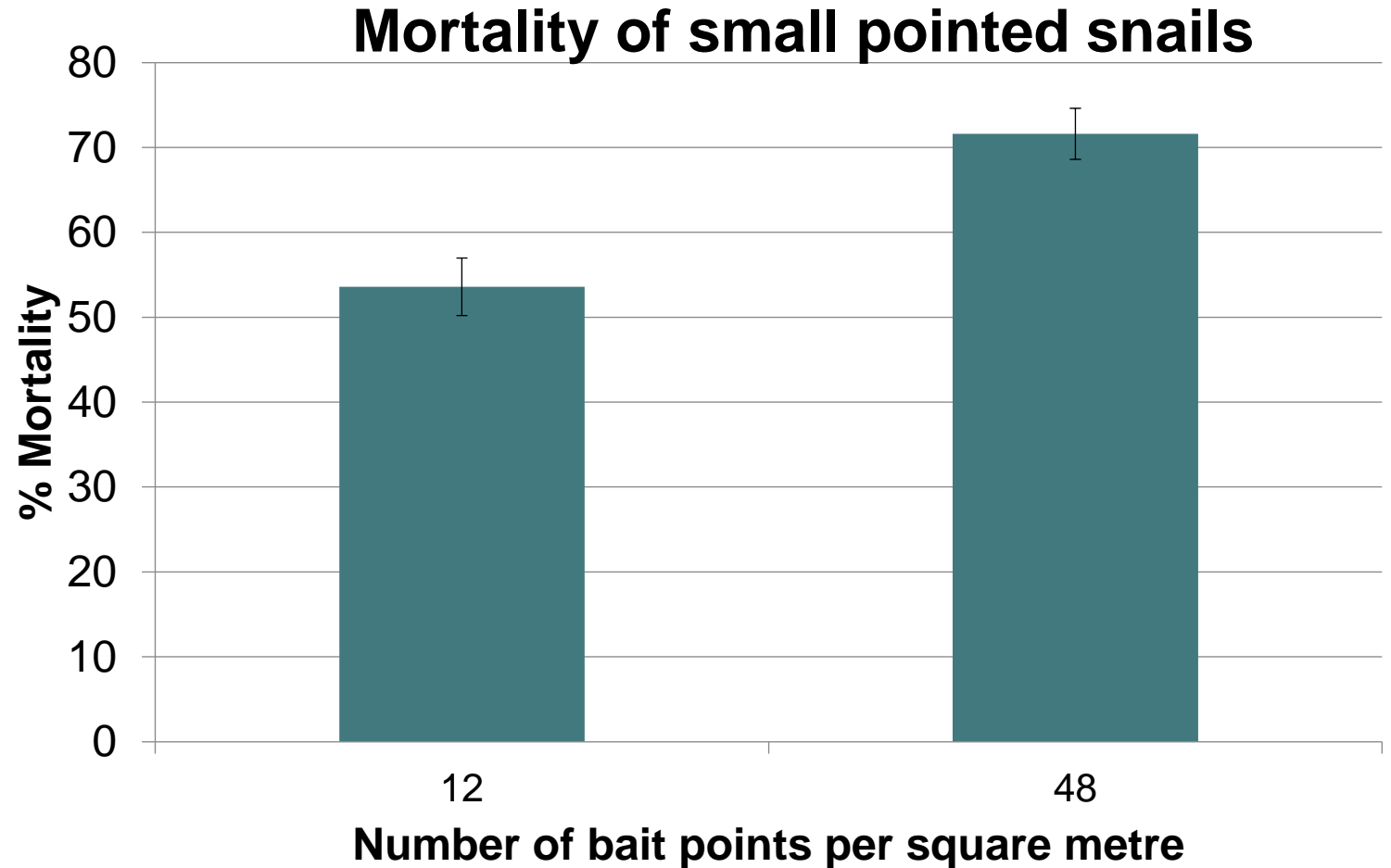
Does the amount of active ingredient matter?

- Low = 15 and 18 g.a.i./kg metaldehyde.
- High = 30 and 50 g.a.i./kg metaldehyde.
- Results from caged experiment.



Does the amount of active ingredient matter?

Results from caged experiment

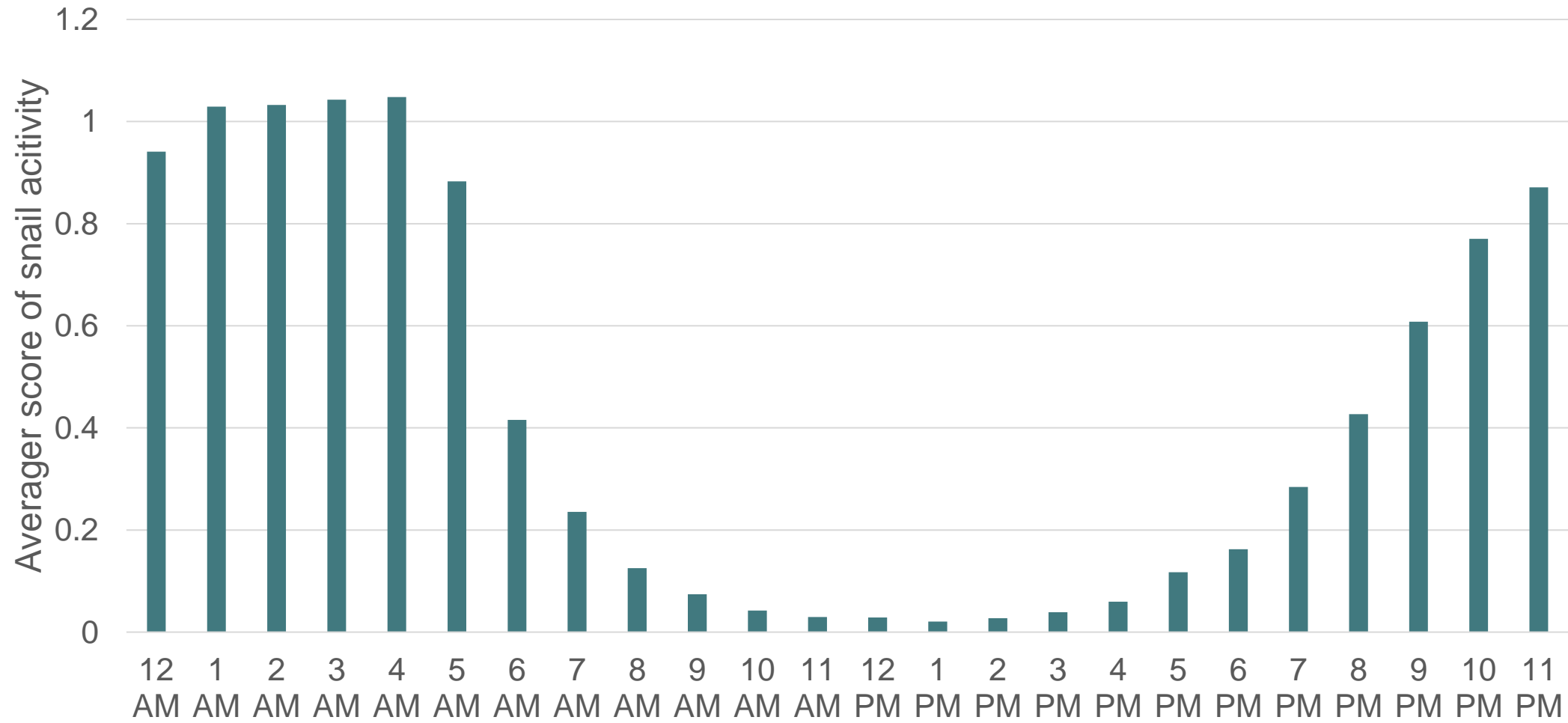


Contamination in grain

- Depends on when snails are active and time of harvest.
- Doesn't happen every year.
- First sign of snails is when you find them in the grain.



Snail activity during harvest



Snail contamination in grain



Other methods for removing snails in grain

- Snail roller?



Changing harvester fronts?

Stripper front

vs

conventional front

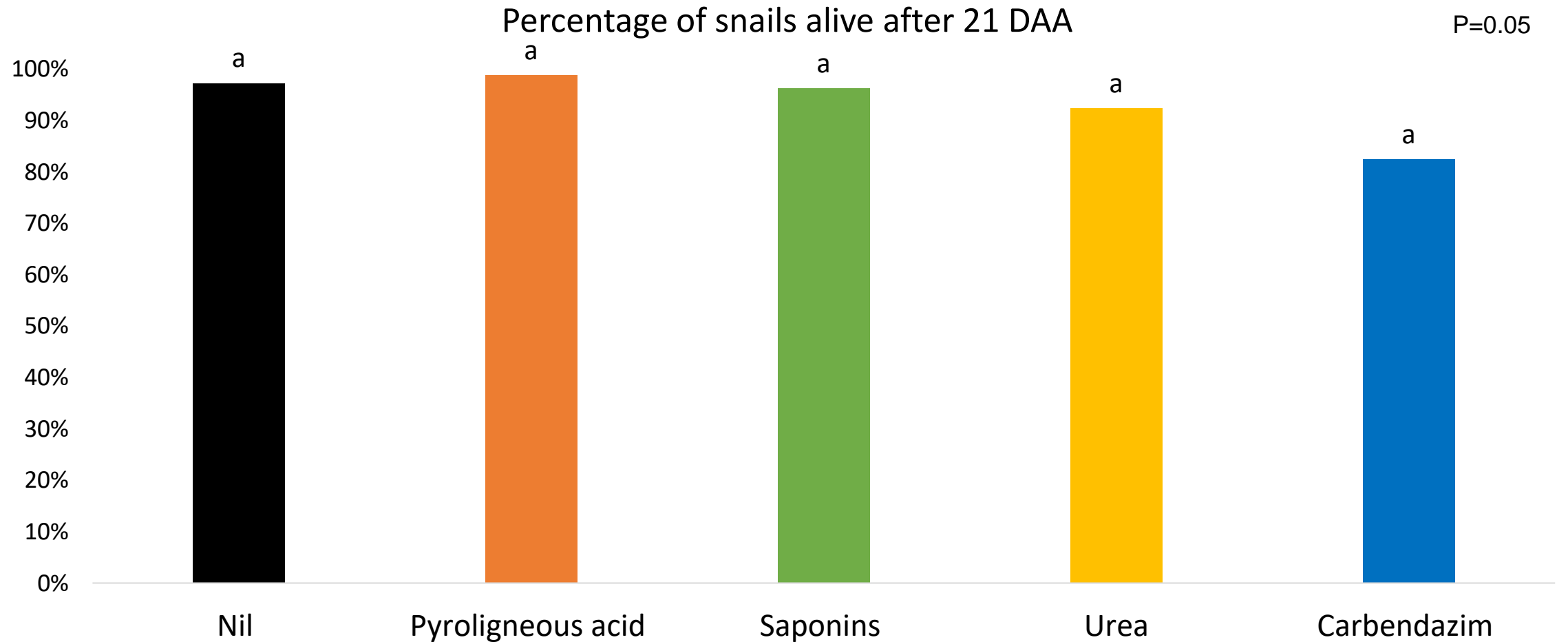


Stopping the spread of snails?



Percentage of live snails 21 days after spraying

Small pointed snails were sprayed while actively moving




Know your snails. Not all controls are equal.


Mechanical control measures such as cabling, speed tillering and stubble crunching control round snails, not small pointed snails.



Take home messages

- Snails in the paddock are easy to miss unless they are doing damage.
 - Need to do more than one control measure to stop them.
 - Long term it's management, not eradication.
 - Don't have snails? Good farm biosecurity!
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Project Acknowledgement

- Stirlings to Coast Farmers.
 - COGGO.
 - GRDC.
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- A decorative graphic in the bottom right corner consisting of several overlapping, wavy lines in shades of teal and blue, creating a sense of movement or a stylized landscape.

Question and Answers session

- Type them in the “Q&A” tool.
- Webinar recording will be put on DPIRD’s YouTube channel.
- PowerPoint slides will be published on www.agric.wa.gov.au/crop-diseases/about-pestfacts-wa

Presenter contact details

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Thank you

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