

Usage of the FeralScan platform by communities and pest controllers in NSW

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Department of Primary Industries
and Regional Development



CENTRE FOR
INVASIVE SPECIES SOLUTIONS



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Acknowledgments



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Department of Primary Industries
and Regional Development



Local Land
Services

Good Neighbours
Program



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awi Australian Wool
Innovation Limited



Australian Government
Department of Agriculture,
Fisheries and Forestry

Objectives



1. Provide an accessible free resource to help anyone monitor and document introduced pest animals, pest damage and control activities, to inform local management.
2. Promote farmers, landholder groups, pest controllers and biosecurity stakeholders to collaborate with monitoring and control of pests.
3. Share data with relevant biosecurity groups to guide management.
4. **Connect people to control programs, resources, best practice toolkits, services, support, & RDE innovations.**



pestSMART

Optimal benefit from RHDV-K5



Introduction

This document presents the how and why of getting the best results from a release of RHDV-K5. As a rule of thumb, RHDV-K5 should be released when:

- RHDV is NOT active (RHDV is more effective), or
- When rabbits are NOT breeding (if rabbits have their litters, old and young rabbits are present and develop long immunity to RHDV). Rabbit breeding is stimulated by plenty of green grass and shelterage, so rabbits can be expected to be breeding if there is actively growing forage available to them.

RHDV-K5 can be used as part of integrated rabbit control that should be used in conjunction with warren destruction and other targeted control options for long-term rabbit control.

RHDV and rabbits

Strains of RHDV

The original form of the calicivirus (Rabbit Haemorrhagic Disease Virus - RHDV) introduced to Australia in 1996 was the RHDV1. CATCH V31 virus, RHDV-K5 was introduced in 2017. RHDV1 first emerged around 2014 and is now widespread across Australia. Unlike RHDV1, RHDV-K5 can affect both rabbits and hares.

Immunity and resistance

Immunity and resistance can arise from:

- **Genetic resistance.** Rabbits and hares are constantly evolving so rabbits may become more resistant to specific diseases. Levels of genetic resistance are dynamic and vary around Australia.
- **Age protection.** Young rabbits are resistant to RHDV1 (including V31) until three weeks of age. Rabbits are fully resistant to the effects of RHDV1. This resistance wanes until about 9-12 weeks of age when some rabbits are fully susceptible. Young rabbits are susceptible to infection with RHDV1, unless protected by maternal antibodies.
- **Prior exposure.** Animals that survive an infection produce antibodies that can quickly recognise the infectious virus if subsequently re-exposed to it. These antibodies will neutralise the infection and prevent the rabbit from becoming sick. The acquired immunity usually lasts for life.
- **Maternal antibodies.** A female rabbit that survives a calicivirus infection may pass antibodies on to her young while they are embryos and through milk until they are weaned, giving them temporary protection for up to 12 weeks from birth. Young rabbits exposed to RHDV while protected by maternal antibodies can generate their own immunity, lasting for life. Rabbits visibly affected by, or surviving, myxomatosis will have a weakened immune system and be more susceptible and vulnerable to RHDV.

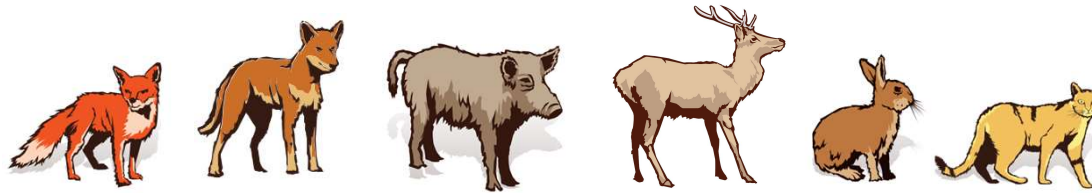
Immunity Terminology

Antigen: Any substance that triggers an immune response, e.g. toxins, viruses and bacteria.

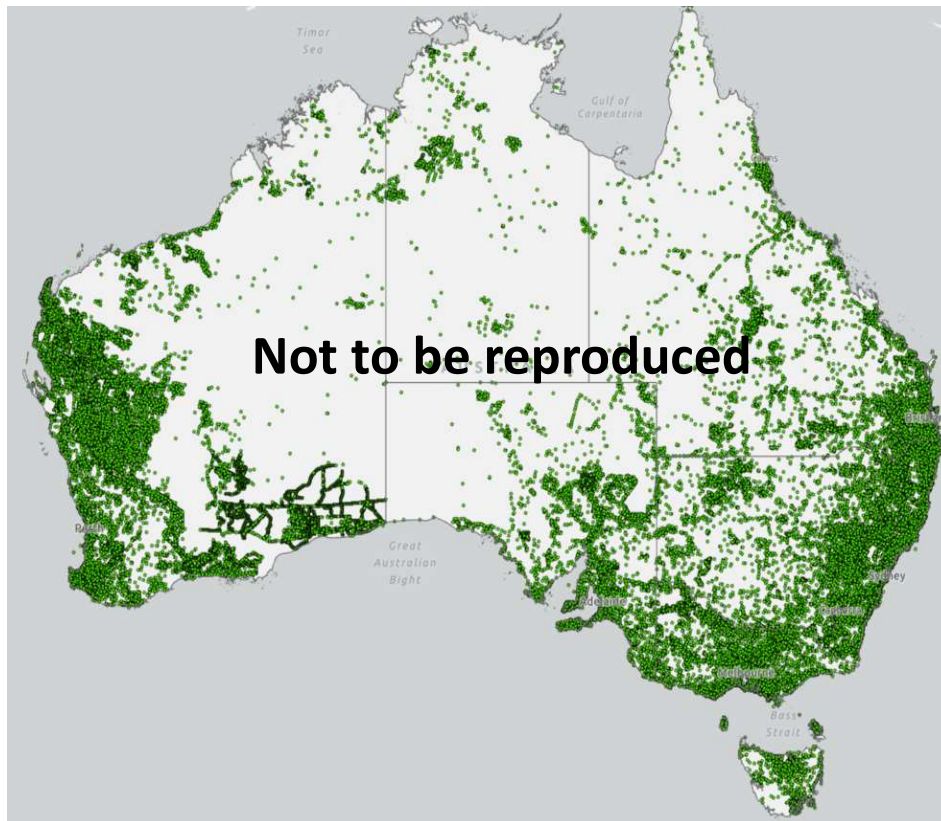
Antibodies: Proteins created by the immune system to bind to antigens.



Overview:



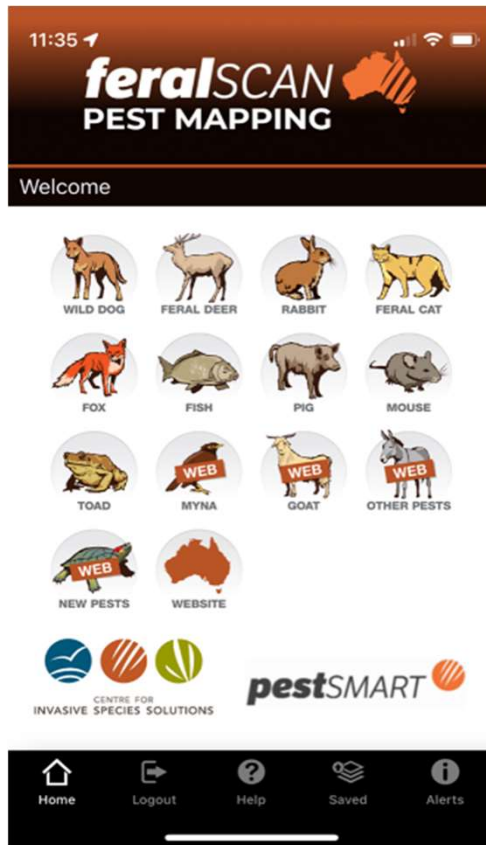
feralSCAN 



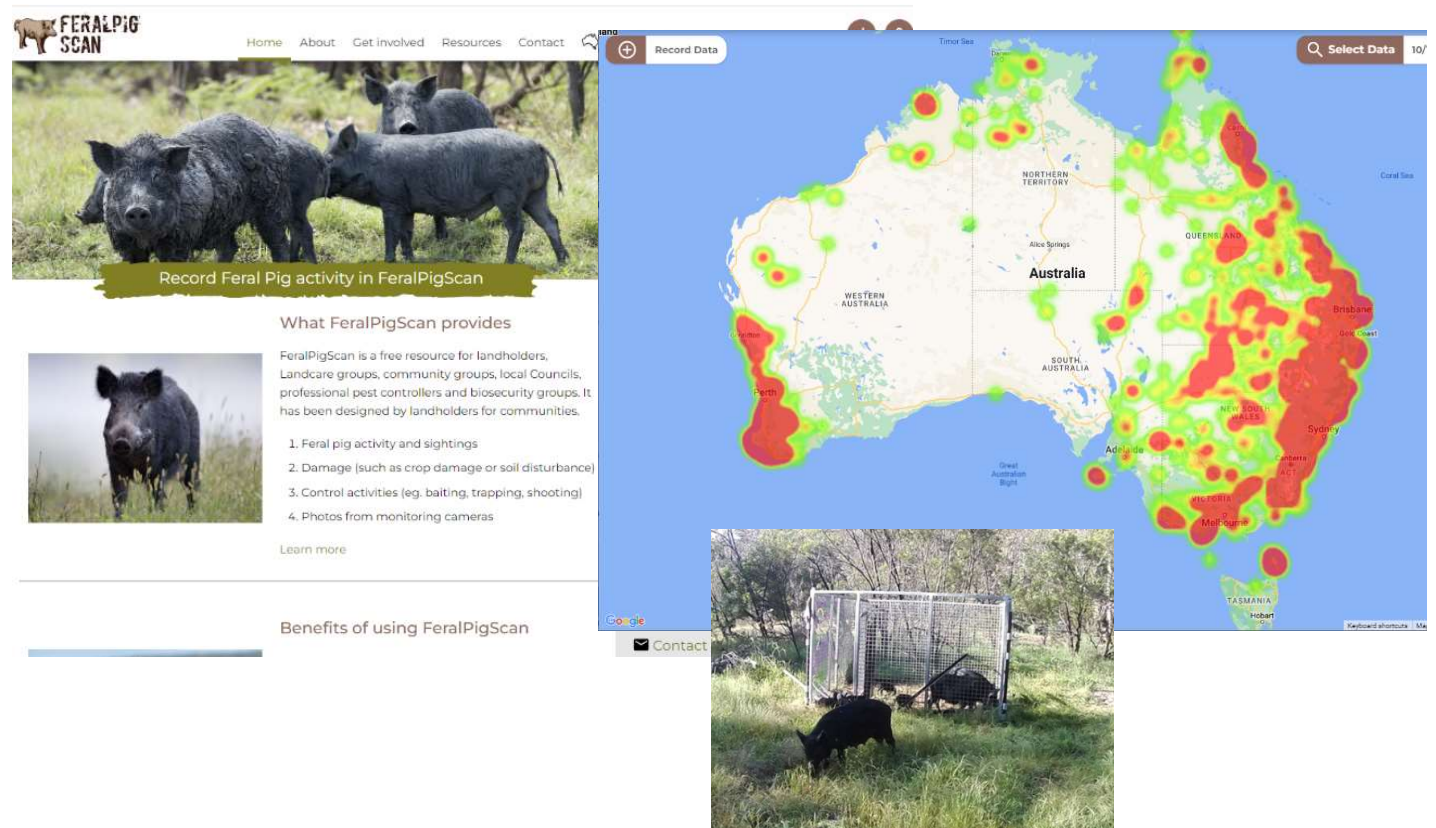
- National resource, managed by DPIRD & CISS.
- Designed by community & pest managers.
- Data is managed securely (privately)
- Covers 20+ species.
- Contains 490K reports, 90K photos.
- 54,000 users, approx. 4,500 in private groups
- 350 active private groups
- 3,500 Govt users (Aust)

www.feralscan.org.au

Mobile App



Interactive website and maps



We manage all data carefully and responsibly (esp. sensitive data)

Information people are recording:

All sensitive species data is managed privately, securely, confidentially.



Sightings



Damage



Control

Community work together to make decisions based on their own observations to control pests.



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Collaboration:

What is required?

Who to involve?

Where and when?

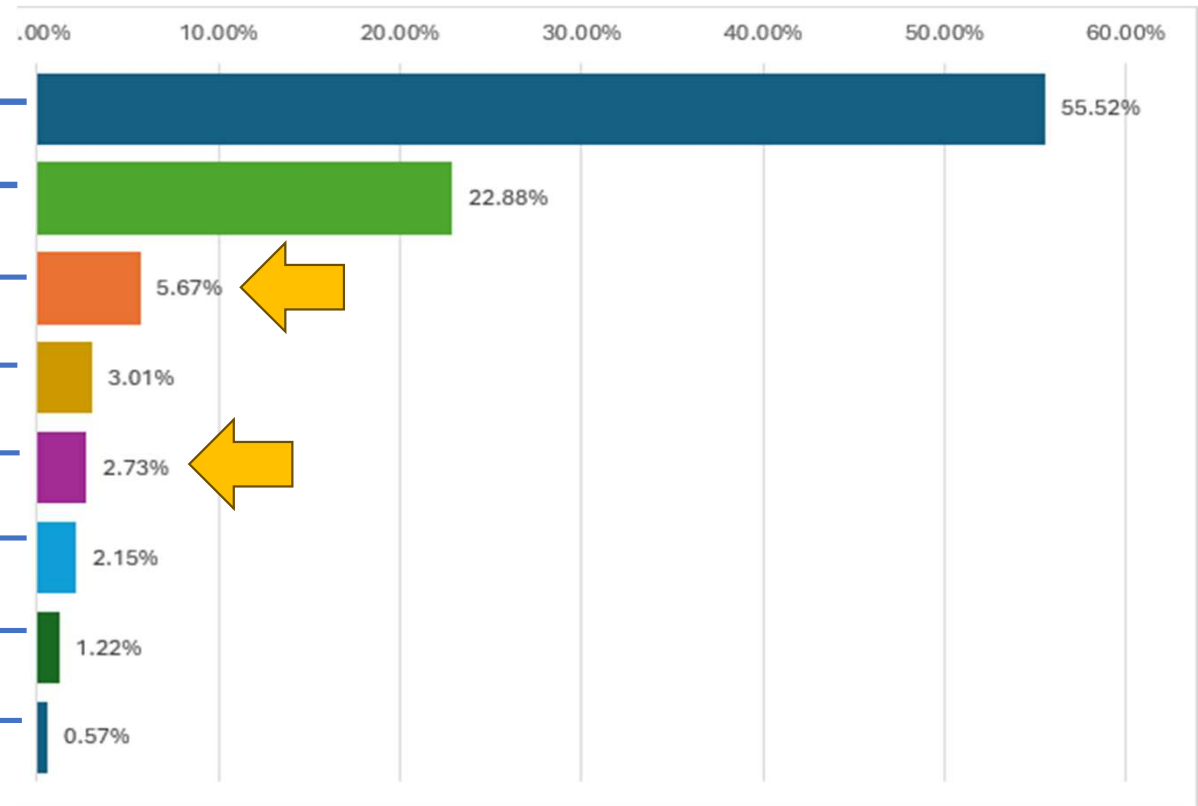
How much?

What does success look like?



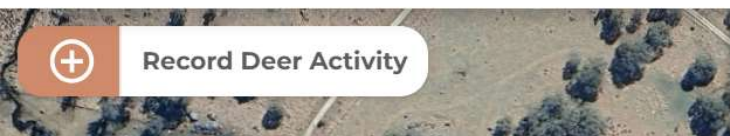
Stakeholder categories - Who is recording information (user survey)

- Landholders/land managers
- Community members
- Government agencies
- Landcare / conservation groups
- Professional controllers
- Special interest groups
- NRM groups
- Indigenous groups
- Others





Individual landholder recording observations locally



Deer species: Fallow Deer
Number seen: 2
Sighting type: Live deer observed
Age: Juvenile
Sex: Unknown



Individual landholder

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Central Tablelands LLS **Freemantle pest animal group**

Wild dogs, plus feral pigs and deer

45 landholders working together to monitor & control

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North West LLS – Burindi (31 landholders and LLS monitoring and trapping feral pigs)



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Communication between many people quickly - Alert Notifications help to keep everyone informed about pest activity



Data managed securely

Inform the landholder group, Agencies, PAC (defined by group)



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Data managed securely



Receive advice & support

All records in NSW

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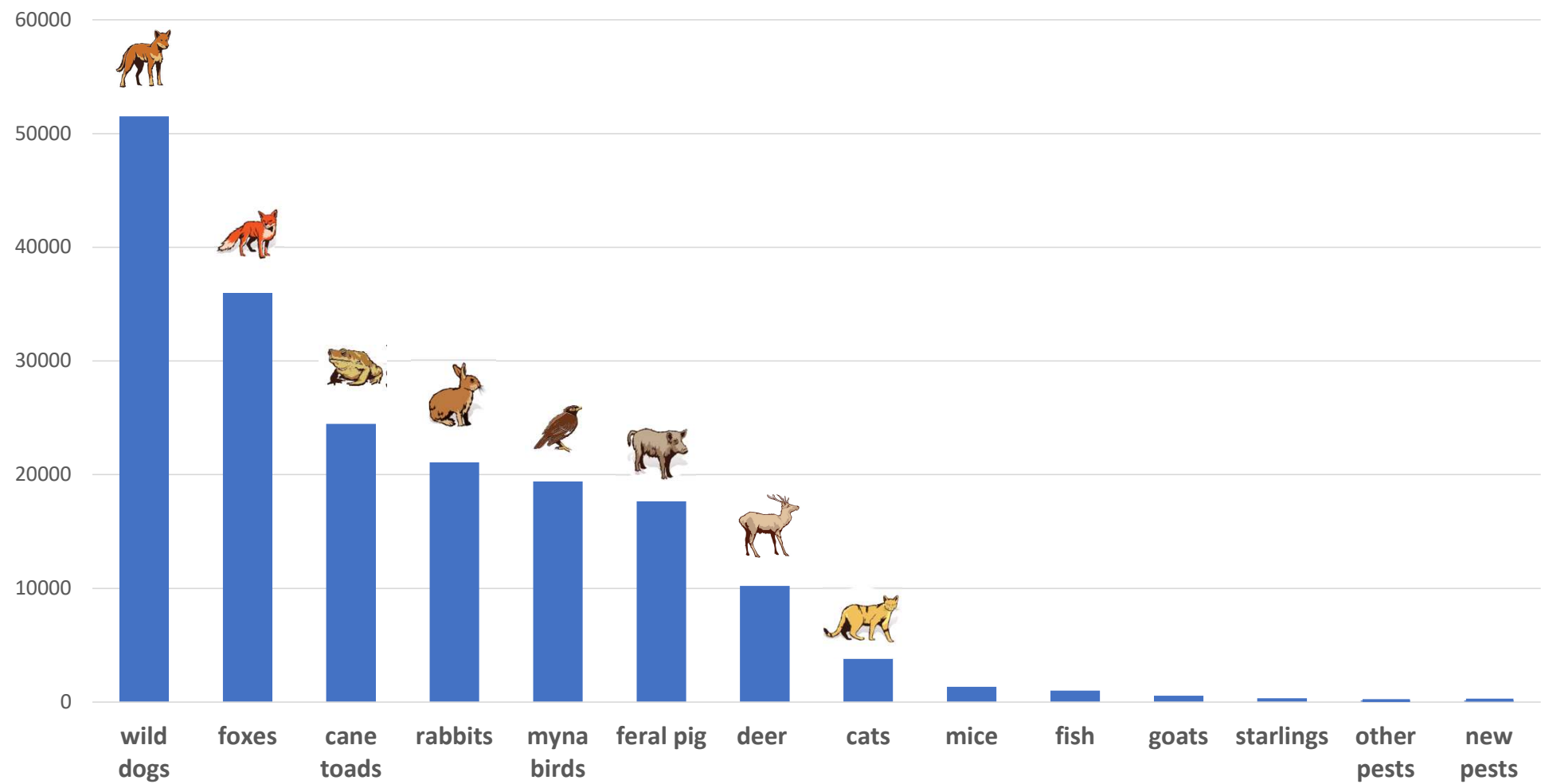
NSW Records
187,694

- 14,498 registered users
- 7,883 casual users

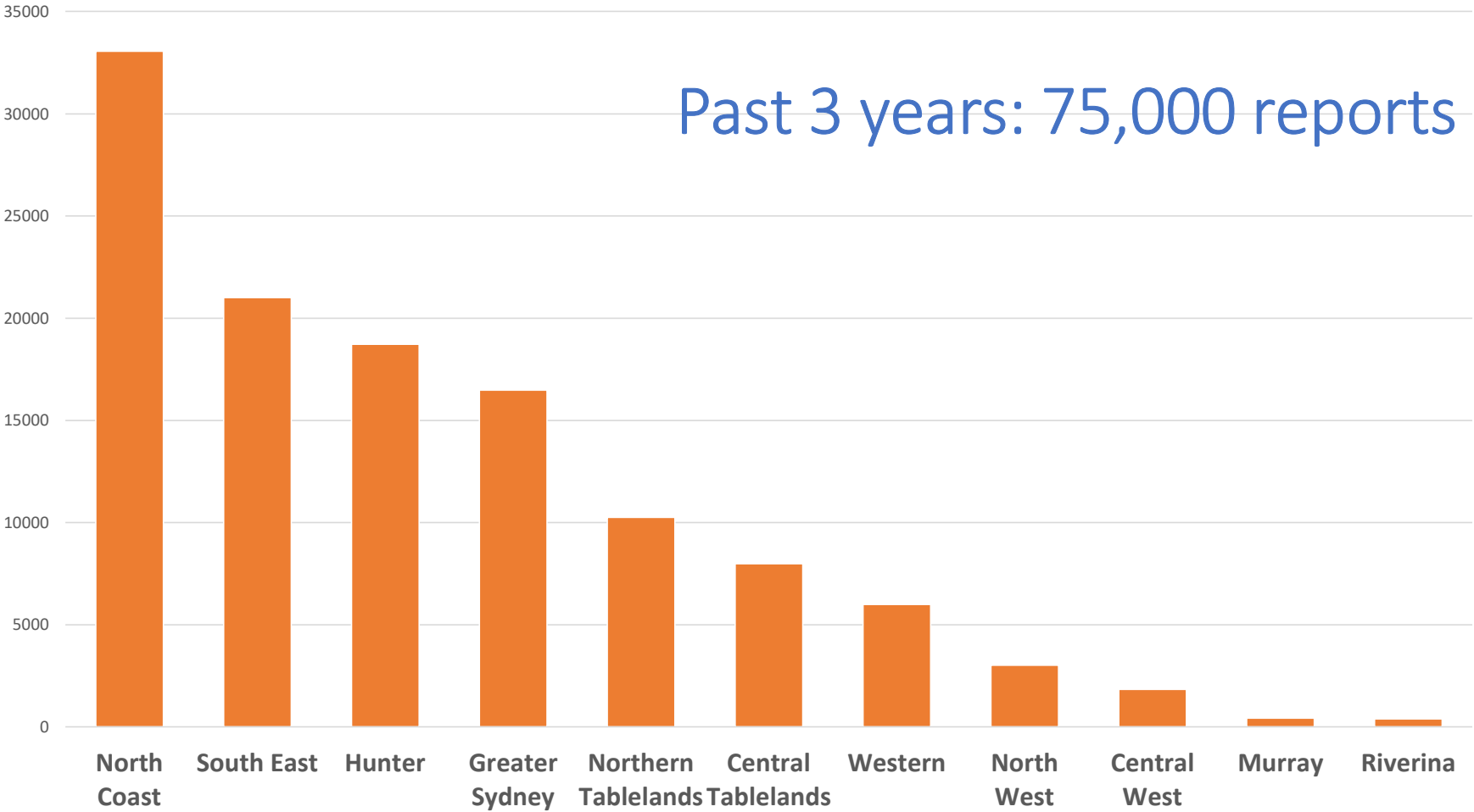
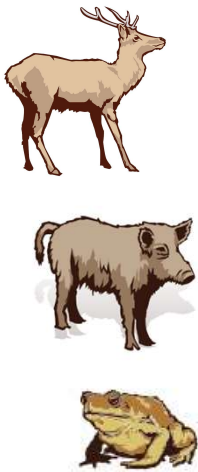
In the past 3 years:

- 6,833 new accounts
- 7,450 recorded data.

NSW Records – 187,694 (species)



NSW Records – 187,694 (LLS regions)

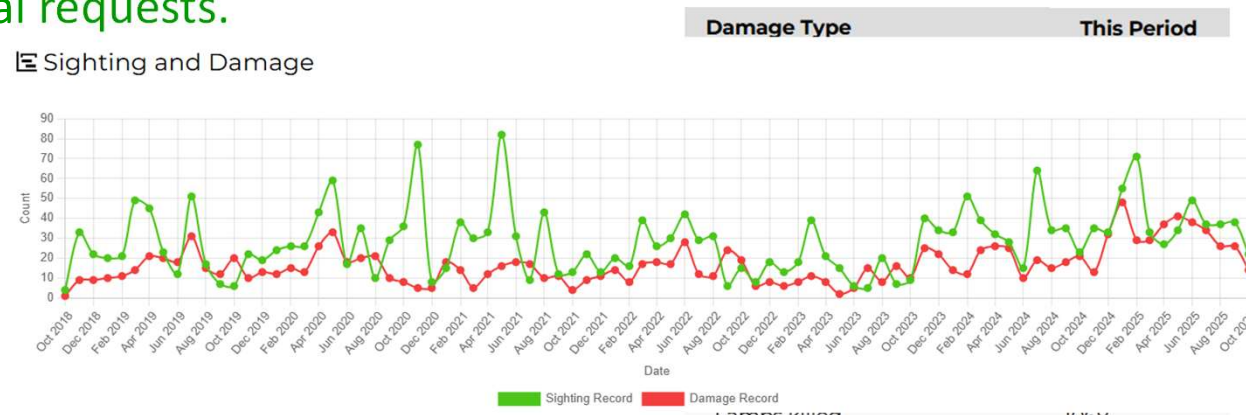


Northern Tablelands LLS – Case study (Mark Tarrant)

- ✓ Essential platform for landholder engagement
- ✓ Focus is Wild Dogs > Feral Pigs > Feral Deer, and Cane Toads (alert species).
- ✓ 40+ private groups (WDCA, feral pig groups, etc).
- ✓ Community reports shared with LLS staff - trigger a response.
- ✓ PAC's use it, and Staff enter reports for landholders when required.
- ✓ Pest control activities communicated back to community.
- ✓ Assists with annual reporting, debrief meetings, responding to Ministerial requests.



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Hunter LLS – Case study - Wild dog and feral pig management programs

- ✓ Fundamental to wild dog and pig programs
- ✓ PACs record all data about their activities – All visible to Manager/Staff
- ✓ Community reports shared with LLS staff and PAC, to help identify and target problem areas
- ✓ Collect data across tenures (multiple stakeholders)
- ✓ Used for reporting on pest programs
- ✓ Multiple community-driven and mining groups.



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Sighting and Damage



Control Type	This Period
Number of control records	1810
Number of feral pigs removed	8377
Ground baiting	166
Ground baiting - hoggone	6
Trapping	6805
Ground shooting	1262

Damage Type	This Period
Number of damage records	526
Number of animals killed	1820
Cattle killed	21
Calves killed	148
Farm Dogs killed	3
Domestic animals killed	87
Goat killed	49
Goat kids killed	10
Lambs killed	326

Greater Sydney LLS – Case study (Annaliese Geddes)

- ✓ **Strategic planning and prioritisation**
 - Identify emerging hotspots for control programs
- ✓ **Collaboration and engagement**
 - Share information & coordinate control with stakeholders
 - Demonstrate benefits from community surveillance
- ✓ **Evaluation and refinement**
 - Measure trends in pest reporting, and improve programs
- ✓ **Communication, awareness-raising, education**
- ✓ **Reporting** - Support applications to fund essential control

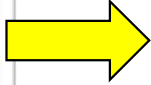


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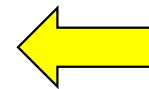
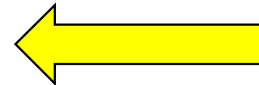
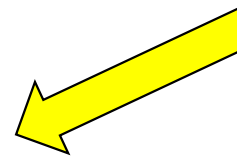
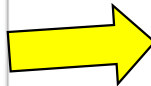


Greater Sydney LLS – Case study (Annaliese Geddes)

- Megalong feral pig control program

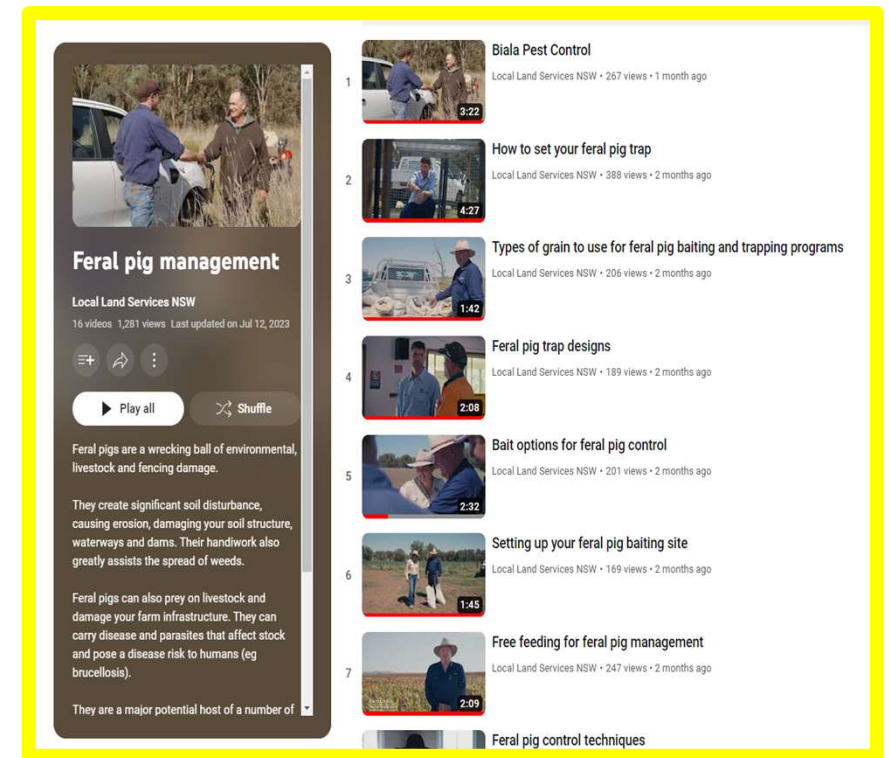


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Connect people to practical resources, new products, research outputs, innovations, agencies

New LLS feral pig videos



Support we provide

- Workshops and field days
- Assist people use platform, and private groups
- Setup and manage alerts for users/groups
- Data Access and Notifications for Govt staff
- Provide dashboards for groups (incl. LLS)
- Connect people to groups and programs.

Next steps

- ✓ 3-4 year collaboration with CISS – Platform upgrade
- ✓ **Good Neighbours Program** support – Data sharing
- ✓ Continue to support users and groups to join pest control programs, access resources, adopt innovations.

