

Biosecurity Attitudinal Research Report

July 2022

AT A GLANCE



Biosecurity Attitudinal Research Report

July 2022

Why we undertake social research on biosecurity attitudes

The New South Wales Department of Primary Industries (NSW DPI) purpose is to maximise outcomes for NSW primary industries, the communities they support and the resources they rely on, both today and for the future. Given the implications biosecurity has for the health of humans and animals, as well as productivity, NSW DPI has an important responsibility in protecting and enhancing the biosecurity of NSW. The Biosecurity and Food Safety branch of NSW DPI fulfils a strategic and operational leadership role within the NSW Government, to protect primary industries, the environment, and the community from the increasing threat of pests, weeds, disease and contaminants; to ensure markets and consumers are confident that industries and business meet high standards of food safety and animal welfare; and that the impact of adverse events is minimised and rapid recovery, with increasing resilience over time, is supported.

The overarching purpose of the NSW Biosecurity Attitudinal Research Program is to assess community and stakeholder awareness, attitudes, understanding and behaviours of biosecurity across NSW, provide a longitudinal assessment of biosecurity awareness, attitudes, understanding and behaviours among the NSW population; and to inform development and delivery of biosecurity policy, education and communication materials, and future focus of priority research. In general, the study consists of a large scale statistically valid survey of NSW primary producers and residents, as well as a number of key qualitative case studies. The 2022 Biosecurity Attitudinal Research Report is the first report to provide a longitudinal survey against baseline research conducted in 2017. A total of 5 qualitative studies of primary producers and residents were conducted: metropolitan, regional, peri-urban, Aboriginal and Torres Strait Islander, and commercial aquatic operators/enterprises.

Who participated in the survey

- Online survey of 1,163 NSW residents aged 18+. Inclusive of 148 interviews with Aboriginal and Torres Strait Islander people.
- Telephone survey of 549 NSW primary producers.
- 1 group discussion with people living in Sydney.
- 1 group discussion with people living in Tamworth.
- 18 interviews with metro and 3 interviews with regional stakeholders.
- 2 interviews with indigenous primary producers.
- 1 group discussion with farmers from Tamworth.
- 12 interviews with peri-urban stakeholders
- 13 interviews with Aquatic stakeholders
- 1 group discussion with indigenous residents

Source:

Biosecurity Attitudinal Research Report
July 2022

For more information please refer to the NSW DPI website (www.dpi.nsw.gov.au) or contact:

Biosecurity and Food Safety
Strategic Programs and Partnerships
NSW Department of Primary Industries
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Primary producer results

Primary Producers consider NSW DPI, LLS and primary producers highly responsible for biosecurity. Fewer consider the general public to be highly responsible



At an overall level, eight in ten (**82%**) primary producers rated biosecurity as highly important



Primary Producers Want



90%

Increased biosecurity surveillance at international borders

85%

Increased understanding of biosecurity among hobby farmers, backyard operators, recreational fishers

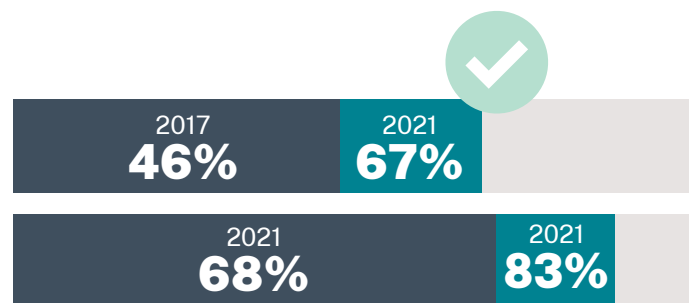
84%

More government resources to support primary industry in managing biosecurity

Gains Since 2017

A large increase in primary producers with a **biosecurity plan** or **industry accreditation** in place

A significant increase in primary producers **strongly agreeing** they practice biosecurity measures to **protect the environment**



Percent of primary producers who feel each entity is highly responsible for biosecurity;

DPI **84%**

LLS **82%**

Primary Producers **80%**

Local Council **58%**

General Public **39%**

Most Practiced Best Practice

99%



Take steps to eradicate known disease, weeds or pests

97%



Regularly monitor plants, livestock and waterways for disease, weeds and pests

96%



Use all chemicals in accordance with APVMA or manufacturer guidelines

Least Practiced Best Practice

42%



Have biosecurity signage at all entry points to premises

36%

Quarantine new plant matter

27%



Maintain a cash reserve specifically for management of emergency biosecurity issues

Telephone survey of 549 NSW primary producers. 18 interviews with metro and 3 interviews with regional stakeholders. 2 interviews with indigenous primary producers. 1 group discussion with farmers from Tamworth.

Source: Biosecurity Attitudinal Research Report - July 2022. For further information please contact: NSW Department of Primary Industries - Biosecurity and Food Safety team.

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General population results

The **general population** considers Government and Industry primarily responsible for biosecurity.



Consumer Behaviours of Concern



Gains Since 2017

In 2021, almost twice as many people are **highly confident** they could act on biosecurity compared to 2017



The proportion of people with a **high understanding** of biosecurity increased by one third from 2017 to 2021



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Source: Biosecurity Attitudinal Research Report - July 2022. For further information please contact: NSW Department of Primary Industries - Biosecurity and Food Safety team.

Percent of consumers who feel each entity is highly responsible for biosecurity;

NSW Government
76%

Federal Government
74%

Government and Industry
73%

Individual
59%

General Public
58%

Most Practiced Best Practice



87%
Overseas travelers usually or always vigilant about quarantine requirements



82%
Gardeners usually or always keeping weeds under control

Least Practiced Best Practice



41%
People usually or always cleaning shoes and clothes between visits to natural environments



23%
People usually or always reporting unusual animal or plant sightings

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Peri-urban case study results

Peri-urban primary producers and stakeholders understand biosecurity to refer to the actions taken to prevent or manage pest, weed and disease incursions

“What you do to prevent disease or weeds taking over”
Peri-urban producer

“They always spend a few weeks in a separate paddock when they get here”
Peri-urban producer



Level of focus upon, and compliance with, biosecurity behaviours and actions was found to vary by producer type

Livestock producers tended to primarily focus on proactive behaviours aimed at prevention of tracked incursions onto property.

Horticulture producers tended to primarily focus on reactive behaviours (such as spraying) aimed at management of pests and weeds.

“I have pair of boots in the truck that I put on when at the abattoirs and then take them off when I leave”
Peri-urban producer

“We have a pretty strict spraying rotation, and always chat to the guys as to what’s new on the market”
Peri-urban producer



Peri-urban producer understanding of responsibility



NSW Department of Primary Industries
Primarily seen as having a regulatory and/or oversight role

Local Land Services
Responsible for skills-based training and surveillance and enforcement of mandated biosecurity behaviours



Industry or peak body organisations
Key source of targeted and industry specific information and resources



Vets and Horticulturists
Trusted advisors for business specific advice and preventive strategies



Concerns and perceived risks among peri-urban communities

- Lack of collaboration and knowledge sharing across producer types
- Urban sprawl
- Non receipt of official communications (i.e. information going to absentee owner)
- Lack of facilities to wash vehicles
- Reporting of issues to relevant authorities can be difficult
- Lack of compliance among hobby farmers
- Impacts of floods and fires in recent years on Hawkesbury basin

8 in-depth interviews with peri-urban producers (mix of producer types)
4 in-depth interviews with peri urban stakeholders

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For further information please contact: NSW Department of Primary Industries – Biosecurity and Food Safety team.

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Regional case study results

NSW regional residents tended to have a greater awareness of risks within NSW and their local area compared to metro residents

"I think of biosecurity as looking at all the biological things that are not in the area but may get into the area. So, you are looking at viruses, bacteria, soil, weeds all sorts of things. The concern is that once they get in – they take over the area because they don't have their normal controls."

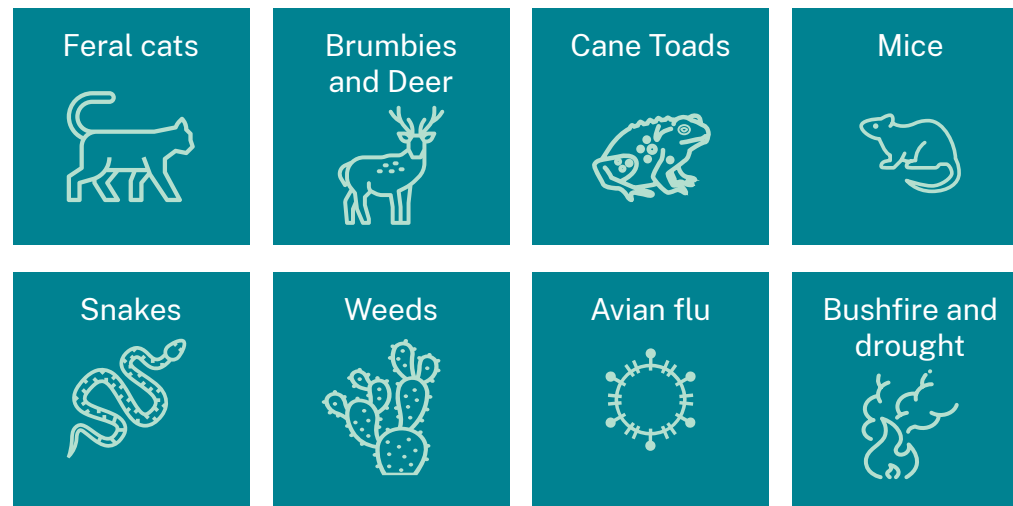
Plant society representative.

Need to wash own vehicle and footwear when moving through different properties (i.e. hunting) or visiting any rural property was well known

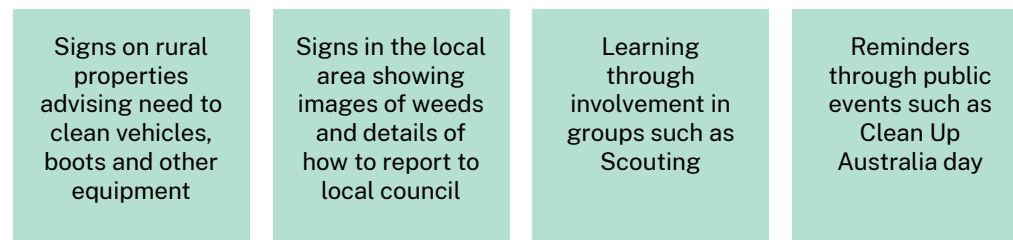


1 x group discussion with people living in Tamworth
 1 x group with farmers from Tamworth area
 3 in-depth interviews with stakeholders

Known, local risks include...



Resources currently used...



Additional resources wanted...



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 For further information please contact: NSW Department of Primary Industries – Biosecurity and Food Safety team.

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Aquatic primary producer case study results

Aquaculture businesses and commercial divers had a better awareness and understanding of the term biosecurity compared to wild catch fisheries

“To be honest, it’s not something I ever thought about before... saltwater kills everything here, that’s the way we look at it, yeah.”

Wild catch fishery

“Biosecurity is the most important issue for the business, you make plans but then need to reinvent the wheel as issues occur or change.”

Aquaculture business

Current risks



White Spot Disease (prawns)



AVG – Abalone Viral Ganglioneuritis (abalone)



QX Disease (oysters)



POMS – Pacific Oyster Mortality Syndrome (oysters)

Other concerns...



- Water contamination and pollution
- Lack of regulation and lack of knowledge among recreational fishers
- Lack of knowledge among other users of the marine environment
- Lack of adequate restrictions on importation of bait
- Lack of Indigenous engagement
- Introduction of alien or hybrid species
- Balancing commercial (trade) expectations with biosecurity risks
- Inability to trace fittings (bins, crates, dividers)
- Lack of regulation of the aquarium industry

Level of focus upon, and compliance with, biosecurity behaviours and actions was found to vary by producer type



Aquaculture and Farmed Fisheries

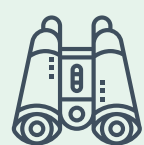
Are aware of and practice a wide range of preventative measures in relation to biosecurity

Aquaculture and farmed fisheries examples

Water testing



Visual checks



Quarantine new stock



Wild Catch Fisheries/Commercial Divers

Are concerned with the environment that supports their livelihood and will report any issues they observe

Wild catch fishery and commercial diver examples

Local bait



Tracking devices



Equipment cleaning



7 in-depth interviews with commercial aquatic operators / enterprises (broad mix of aquatic types and locations required)
6 in-depth interviews with stakeholders

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Aboriginal and Torres Strait Islander case study results

Indigenous **primary producers** describe biosecurity similarly to non-indigenous primary producers and are familiar with the term. Also view it as about things they do as a matter of course

“Biosecurity is about a bunch of stuff that we’ve done all our lives without calling it biosecurity.”

Primary producer

Indigenous **residents and LALCs** have seen interest in caring for the land and the need to care for the land increase in recent years. Responsibility seen as shared

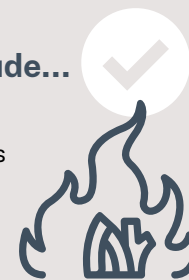
“I’ve grown up being taught by my family that I am responsible for the land, and I accept and want to take on that responsibility, but care of the entire land should not be allocated to First Nations people.”

Indigenous resident

1 x group with Indigenous residents of NSW who live in town
2 x interviews with Indigenous primary producers
8 x interviews with stakeholders

Activities and programs undertaken by LALCs include...

- Ranger programs (cultural burns and weed control)
- Training community members in cultural burning practices
- Working with local farmers to assist with weed control through cultural burns (of increasing interest to farmers since increased back burning restrictions - not applied to cultural burns)
- Educating broader community about Indigenous approaches to looking after Country (keeping things in balance)
- Educating local Indigenous community as to cultural land management practices
- Working with other organisations such as National Parks to agree on standard methods of managing particular issues (e.g. regeneration programs, possum boxes and control of introduced species such as hares)



“There’s a couple of weeds that I need to get identified I haven’t seen before. I generally take a photo of them and take it to the weed officer at Local Land Services.” LALC CEO



Source: Biosecurity Attitudinal Research Report - July 2022.
For further information please contact: NSW Department of Primary Industries – Biosecurity and Food Safety team.

Biosecurity resources...

NSW DPI, through Local Land Services, local councils and SES



Want more local signage of local issues



Agronomists, rural producers’ co-ops, and rural supply stores



Greater opportunity to educate next generation through schools



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Metro case study results

Metro residents tend to at least recognise the term biosecurity and have some understanding of what it encompasses.

Current Issues

Penalties for biosecurity breaches too light



International customs are underfunded / under resourced



State border restrictions appear to have relaxed in recent years (e.g. fruit)



Greatest risks seen to come from overseas (e.g. cargo ships, freight)



While COVID has made people more conscious of hygiene, it hasn't bought biosecurity to the fore being seen as somewhat separate to biosecurity.

For example in 2021,

55% of people considered biosecurity highly important compared to

48% in 2017



1 x group discussion with general population people living in Sydney
18 in-depth interviews with stakeholders

Primary producer industry associations and R&D organizations see biosecurity as their core business

Current issues (produce)

Panama Disease
(bananas from Asia)

Water contamination
(cyclones)

Pests
(e.g. fruit fly, moths)

Cane Toads
(from QLD)

Transportation sector
failings/lack of understanding

Lack of traceability

Current issues (meat and livestock)

Foot and Mouth Disease

Lumpy Skin Disease

African Horse Sickness

African Swine Fever

Need for improvement in traceability of livestock and products



Animal Welfare Organisations

Roles

- Education/ disseminator of information to industry.
- Reporting invasive species kept as pets to RSPCA.
- Ensuring rescued invasive species are euthanized.
- Surveillance and reporting of notifiable diseases (opportunity to do more).

Current Risks

- Hendra virus.
- Invasive species such as corn snakes, slider turtles, deer.
- Feral foxes and cats.



"We're always at risk but we don't know what the next risk will be. Some sectors have never experienced a major event so it's harder for them to understand the possibilities."
Primary producer industry association







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LLS region compared to NSW overall: Primary producer biosecurity behaviours, preferred information sources		NSW Overall	Central Tablelands	Central West	Greater Sydney	Hunter	Murray	North Coast	North West	Northern Tablelands	Riverina	South East	Western
Most commonly practiced Best Practice behaviours													
	Take steps to eradicate known disease, weeds or pests	99%	94%	100%	98%	100%	100%	100%	99%	100%	100%	100%	100%
	Regularly monitor plants, livestock and/or waterways for disease, weeds pests	97%	96%	96%	97%	98%	96%	98%	98%	99%	96%	97%	93%
	Use all chemicals in accordance with APVMA and manufacturer guidelines	96%	94%	99%	84%	98%	100%	95%	98%	100%	97%	95%	96%
	Recording movement of livestock (e.g. NLIS / PigPass)	95%	96%	97%	87%	97%	95%	98%	96%	99%	92%	92%	98%
	Ensure feed stored in optimal environment	95%	100%	97%	93%	92%	92%	91%	93%	99%	94%	96%	96%
Least commonly practiced Best Practice behaviours													
	Belong to industry certification / registration scheme	65%	62%	62%	58%	72%	65%	73%	59%	71%	67%	64%	62%
	Only purchase feed from certified providers	64%	64%	57%	80%	74%	57%	84%	52%	73%	52%	60%	63%
	Have biosecurity signage at all entry points to premises	42%	38%	34%	26%	44%	42%	58%	45%	49%	48%	52%	30%
	Quarantine new plant matter	36%	30%	34%	51%	45%	30%	56%	26%	32%	29%	44%	37%
	Maintain cash reserve only for management of emergency biosecurity issues	27%	33%	19%	23%	30%	31%	30%	16%	37%	29%	27%	20%
What primary producers want prioritised													
	Increased biosecurity surveillance at international borders	90%	92%	95%	82%	95%	85%	92%	92%	94%	89%	81%	89%
	Increased understanding of biosecurity among hobby farmers, backyard operators, recreational fishers	85%	77%	91%	81%	95%	82%	83%	85%	94%	78%	87%	91%
	Increased government resources to help primary industry manage biosecurity	84%	75%	88%	85%	93%	81%	85%	77%	87%	81%	89%	81%
	Increased focus on reducing contamination/pollution of waterways and oceans	78%	83%	68%	76%	79%	73%	85%	83%	78%	77%	87%	66%
	Greater education of primary producers about best practice behaviours	76%	77%	74%	77%	86%	79%	82%	67%	80%	67%	78%	69%
Who primary producers see as responsible for biosecurity													
	NSW Department of Primary Industries	84%	90%	92%	82%	77%	79%	91%	80%	83%	85%	83%	82%
	Individual primary producers	80%	90%	83%	68%	72%	84%	88%	74%	83%	78%	88%	70%
	Shared responsibility between government and industry	80%	83%	90%	77%	81%	73%	86%	79%	81%	72%	75%	79%
	Local Land Services	82%	88%	95%	69%	86%	84%	79%	75%	79%	81%	82%	83%
	Federal Government	76%	84%	79%	71%	65%	75%	79%	81%	74%	76%	63%	83%
Things primary producers are most likely to Do or Use													
	Biosecurity alerts	80%	66%	83%	85%	84%	77%	86%	79%	87%	75%	78%	81%
	Obtain industry certification for biosecurity compliant produce / livestock if it would attract a higher price	68%	58%	76%	68%	74%	71%	64%	57%	78%	71%	63%	66%
	Fact sheets about pest and disease types, their symptoms and prevalence	63%	60%	57%	79%	72%	51%	77%	49%	78%	59%	66%	54%
	Fact sheets or checklists about best practice biosecurity measures	62%	62%	65%	69%	63%	63%	66%	52%	68%	59%	64%	48%
	Regular biosecurity newsletters	57%	50%	67%	69%	56%	51%	59%	51%	60%	52%	63%	54%
Things primary producers are least likely to Do or Use													
	A template to inform development of a biosecurity plan for their business	57%	50%	59%	63%	58%	55%	65%	42%	66%	65%	50%	52%
	An app that allows for easier identification biosecurity risks	52%	45%	54%	56%	51%	46%	69%	47%	48%	60%	49%	41%
	Face to face training session, seminar, workshop on biosecurity as it applies to their business / industry	49%	48%	44%	58%	60%	46%	49%	29%	57%	45%	62%	51%
	An app that allows for easier reporting of biosecurity risks	49%	37%	53%	60%	56%	44%	56%	46%	39%	61%	50%	38%
	Online training session, seminar, workshop on biosecurity as it applies to their business / industry	40%	29%	44%	48%	56%	35%	41%	43%	38%	31%	52%	22%

Telephone survey of 549 NSW primary producers. 18 interviews with metro and 3 interviews with regional stakeholders. 2 interviews with indigenous primary producers and 1 group discussion with farmers from Tamworth.

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LLS region compared to NSW overall: General population biosecurity behaviours, preferred information sources		NSW Overall	Central Tablelands	Central West	Greater Sydney	Hunter	Murray	North Coast	North West	Northern Tablelands	Riverina	South East	Western
Most commonly practiced Best Practice behaviours													
	Keep garden weeds under control	97%	98%	97%	97%	98%	100%	98%	100%	97%	99%	98%	92%
	Ensure all fruit is picked / not left to rot	96%	91%	94%	97%	100%	100%	86%	93%	97%	97%	91%	97%
	Be vigilant about meeting all quarantine requirements at the airport	96%	100%	96%	95%	94%	100%	100%	97%	82%	98%	98%	90%
	Monitor hives for pests and/or unusual bee activity	94%	100%	100%	97%	100%	84%	91%	52%	100%	100%	80%	76%
	Dispose of garden weeds through council approved / kerb side collections	92%	83%	87%	94%	87%	92%	87%	95%	87%	95%	91%	83%
Least commonly practiced Best Practice behaviours													
	Dispose of unwanted aquarium fish and weeds into general waste	70%	54%	51%	79%	74%	30%	70%	58%	66%	77%	48%	44%
	Check no pests or weeds are trapped in packaging of any goods you buy	70%	85%	64%	71%	64%	76%	67%	82%	68%	69%	66%	71%
	Wash/clean shoes and clothes between visiting different natural environments	67%	77%	60%	68%	56%	74%	67%	81%	66%	67%	68%	83%
	Registered your property for a Property Identification Code (PIC)?	65%	57%	56%	69%	53%	45%	47%	58%	57%	77%	67%	59%
	Report unusual/strange animal or plant sightings to appropriate authority	43%	58%	47%	42%	40%	50%	49%	59%	42%	47%	40%	58%
Most commonly practiced Behaviours of concern													
	Feed chickens / other poultry' food scraps	87%	66%	90%	85%	100%	100%	68%	100%	94%	98%	87%	73%
	Feed pig(s) food that contains meat or meat products	84%	47%	49%	91%	65%	0%	79%	75%	0%	95%	88%	44%
	Obtain pig(s) from someone other than a registered breeder	84%	62%	43%	86%	82%	37%	88%	75%	100%	95%	100%	44%
	Obtain animals from someone other than a registered breeder	75%	53%	47%	79%	80%	67%	60%	88%	71%	75%	67%	57%
	Buy pig(s) online	73%	47%	33%	77%	65%	37%	88%	61%	0%	90%	70%	36%
Who/where residents want to receive biosecurity information from													
	Local Council	54%	56%	58%	55%	45%	70%	53%	52%	55%	40%	55%	51%
	From NSW Department of Primary Industries	54%	56%	56%	56%	48%	58%	50%	49%	55%	47%	44%	43%
	From plant retailers / nurseries	51%	51%	51%	51%	56%	65%	43%	56%	42%	41%	47%	47%
	Mainstream media (TV, radio, state / national newspapers)	50%	44%	45%	54%	39%	50%	44%	51%	36%	32%	46%	56%
	From experts such as Vets or Horticulturalists	49%	50%	60%	51%	39%	60%	49%	51%	46%	38%	45%	46%
Things residents are most likely to Do or Use													
	Purchase plants that are industry certified as being biosecurity compliant	54%	73%	79%	71%	67%	85%	74%	85%	69%	69%	74%	73%
	Purchase grocery items industry certified as being biosecurity compliant	54%	54%	59%	50%	49%	80%	53%	70%	47%	44%	48%	47%
	Fact sheets about pest and disease types, their symptoms and prevalence	51%	50%	61%	50%	46%	78%	48%	62%	52%	45%	47%	41%
	Biosecurity alerts	50%	57%	50%	45%	48%	71%	50%	63%	54%	37%	46%	38%
	Do business with companies that have biosecurity plans in place	49%	47%	46%	46%	39%	60%	46%	56%	44%	35%	45%	41%
Things residents are least likely to Do or Use													
	An app that allows for easier identification biosecurity risks	43%	52%	53%	42%	39%	54%	46%	63%	46%	38%	38%	46%
	An app that allows for easier reporting of biosecurity risks	42%	48%	53%	41%	36%	52%	46%	62%	47%	39%	41%	53%
	Biosecurity newsletters	37%	43%	35%	39%	31%	52%	35%	48%	37%	30%	31%	24%
	Attend community/small farm network seminar/workshop/training online	26%	28%	27%	26%	21%	39%	28%	44%	18%	20%	24%	35%
	Attend community/small farm network seminar/workshop/training in person	26%	32%	30%	26%	17%	34%	26%	37%	21%	18%	25%	27%

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