

Northern Australian aquaculture industry biosecurity

October 2018

Prepared for:

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Consultants:

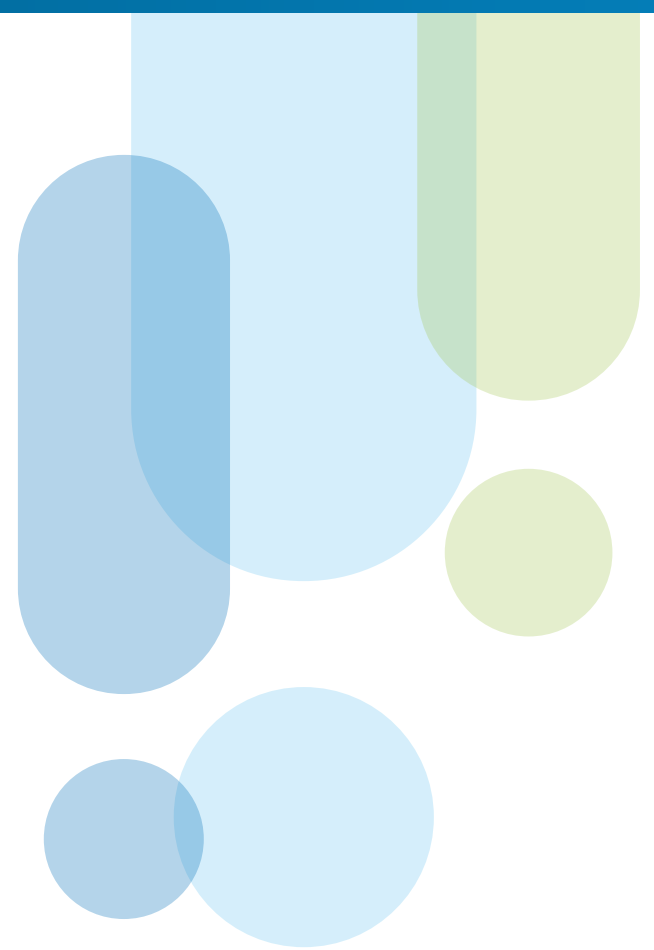
Rob Mercer, Fiona McLean, Eric Wu

Reference:

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Executive summary

Overview and recommendations

Summary

Awareness of biosecurity has grown but there is room for further growth

Perceived benefits of biosecurity are personal, industry or business related and environmental

Two-thirds of farms anticipate a major outbreak within next 12 months

Around two-thirds of farms and stakeholders consider their awareness of biosecurity to be good or very good, and only 3% of farms considered it poor. Knowledge of surveillance on farms was at a similar level (67%).

Around 85% of farms and stakeholders believe their awareness of biosecurity has increased over the last three years, primarily as a result of disease incursions and their involvement in the industry.

Interestingly, while 58% of stakeholders believe everyone has a role to play in biosecurity only 33% of farms believe this to be the case. In contrast, 51% of farms believed the Federal Government was responsible and 41% believed state biosecurity agencies were.

Half of the respondents saw being free from disease and pests as the main benefit of biosecurity, and while farms agreed with this (51%), stakeholders saw protecting marine life and waterways as the most important benefit (58%, whereas only 23% of farmers rated this). Protecting their livelihood was mentioned by 38% of farms, and supporting their industry by 26%.

The likelihood of a major outbreak in the next year was rated as likely or very likely by 64% of farms and 57% of other stakeholders. Viruses, diseases, pathogens and bacteria were seen as the major threat by 38% of farms and 33% of other stakeholders, followed by contamination via new stock by 31% of farms and 22% of other stakeholders.

Summary

Attitudes towards biosecurity are mixed

Only 2% of respondents thought disease risks were exaggerated however respondents were not overly positive about what was being done. Only one-third thought Australia was performing well in the area, (particularly relating to imports) and only 39% thought they had been properly informed of biosecurity requirements.

On a positive note, 70% of respondents were aware of recent legislative changes regarding biosecurity and 85% believed it was worth investing in biosecurity measures.

Passive surveillance measures are taken by most

Around three-quarters of farms carry out visual checks of stock at least daily. Checks are primarily undertaken during feeding (79%), mortality checks or water quality tests (both 74%). Mortality rates were considered the most important trigger for investigation (67%).

Laboratories are generally first port of call

Most farms rely on their own experience when deciding how to act (67%). Just over one-third (36%) contact a laboratory for tests or health consultant (31%), and 31% check water quality.

Just over one quarter (28%) could not cite a notifiable disease in their industry. For those who could, 78% would immediately notify their state/territory department.

Summary

Most will notify immediately

Just over two-thirds of farms would notify immediately although 8% would wait for a bit to see what happened and another 8% would do some research first.

More would be encouraged to report via a no-blame advisory and reporting service (82%), knowing who to report to (82%), and if there was an easy reference to identifying diseases (82%).

Record keeping and management tools are commonly used

At least 85% of farms keep comprehensive records, almost all (97%) have standard operating procedures, 88% keep a map of all land and water bases, 91% provide hand and foot washing facilities, 94% consider disease risks when moving stock and appropriately dispose of sick or dead animals, and 85% clean and disinfect vehicles.

Most have biosecurity plans and review them regularly. Slightly fewer have them audited.

Most farms have biosecurity plans (79%) and 73% of these review them at least once a year. Only 32% have their plans audited at least once a year and 27% have them audited less often than every other year.

The disadvantages of having a biosecurity plan were seen as primarily cost in terms of time and resources. It was suggested by a couple of respondents that they didn't need a plan because they had other plans or procedures in place that made it unnecessary.

Generic biosecurity plans, help writing a plan, help reviewing a current plan and help from an extension officer were seen as the most valuable forms of assistance, along with a range of other support.

Recommendations

Increase education about responsibility for biosecurity

The concept of shared responsibility for biosecurity is relatively unknown in the aquatic environment compared with the terrestrial environment. Education about Australia's approach to biosecurity needs to be increased and farms need to better accept their role in this area.

Key messages

With two-thirds of farms anticipating a major outbreak within the next 12 months, the time is ideal to push messages about the importance of biosecurity and responsibilities. Education might best be approached through messages about securing the future and prosperity of the farm. Education messages should also address what has been done in the past, what is being done now and what is being done to improve biosecurity in the future, and most importantly what help is available.

Other marketing products

The research produced mixed messages around whether or not people knew who to call to report a notifiable disease. Consider producing a simple marketing product (calendar, bookmark etc) with relevant government contacts.

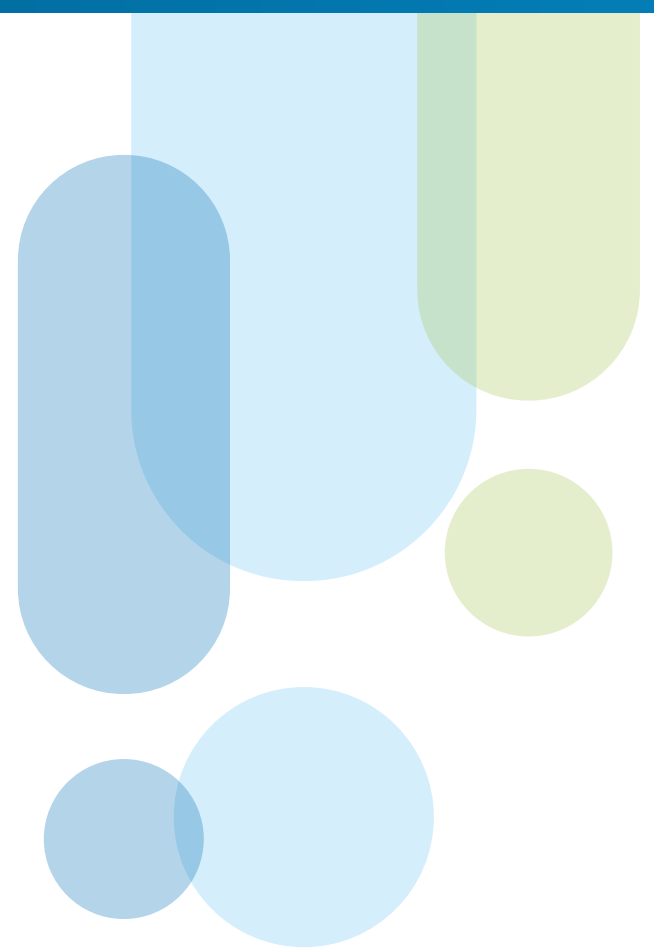
Consider an easy reference to diseases, especially notifiable disease, listing symptoms and action to be taken.

Pursue the development of generic biosecurity plans, and ways to provide help writing and reviewing plans and many of the other support.



Background, objectives and methodology

Additional info



Background and business objectives

The reasons for the survey

- Animal Health Australia wished to have a survey undertaken to determine whether biosecurity is very well understood as a shared responsibility in the aquaculture industry.
- In addition Animal Health Australia has completed a northern Australia biosecurity awareness roadshow in the last year and wished to understand it's impact.
- The overall aim of the survey was to provide an evidence base for the northern aquatic industry attitudes and behaviours towards biosecurity to inform planning, decision making, communication and engagement

Survey objectives

1. Stakeholders' understanding of the biosecurity system in terms of what shared responsibility means, their role in managing biosecurity, the barriers to understanding and what would help them better understand

2. Stakeholders' understanding of and attitudes and behaviours (practices) towards biosecurity, including identifying...

3. Differentiating identified stakeholder groups where possible

- Industries' perspectives on biosecurity risks including current and emerging risks and risks relating to market access.
- What is being done about these risks (including preparedness activities)
- Where and from whom they get their information on biosecurity risk and best practices and why they are used (and what could be used and be most effective)
- What science, research and tools are available and used and considered credible
- Industries' reporting behaviour of outbreaks, the barriers and what would encourage reporting

Methodology

Stage 1 – Project plan existing knowledge, lists and survey design

- Agreed on research design, timings, project management and communication
- AHA provided their industry contact list and information to be used for the survey
- Instinct and Reason refined the draft AHA questionnaire in coordination with two separate national studies on biosecurity and passive surveillance.

Stage 2 – Survey cognitive testing and qualitative insight

- The survey was internally tested and **ten live cognitive tests** (with five for the national survey testing) were also undertaken which also gave the opportunity to gain some qualitative insights
- The final programmed **survey was 20 minutes long** (compared to the planned 15)

Stage 3 – Sample and phone and online survey fieldwork



- **The target sample included those in Northern Australia** (NT and Northern Queensland and Western Australia from Tropic of Capricorn and above) **involved in aquaculture farming** (for prawns, barramundi, other finfish, pearl oysters, bech de mer, redclaw and crocodile) **and other non-farming stakeholders** (e.g. government agencies, vets/ consultants/ scientific providers, port authorities, Indigenous ranger groups, land/sea care management group, wild catch fishery and recreational fishing).
- The target was for a mix of 75 completed survey responses across the different broad stakeholder types and locations — **a total sample of 103 was achieved using a mix of 101 phone interviews and 2 online responses**

Analysis and data handling

The survey data was checked and cleaned and coded and statistical analysis was performed and the results charted, interpreted and provided in this report. The following outlines data handling approach used.

Weighting – The data is unweighted and therefore as captured through the survey.

Statistical significance – 5% at 95 per cent level of confidence – All tests for statistical significance have been undertaken at the 95 per cent level of confidence, and unless otherwise noted, any notation of a ‘difference’ between subgroups means that the difference discussed is significant at the 95 per cent level of confidence. When reporting significant differences in segments, (+x%; x%) represents the difference in % above total sample, and % of total sample respectively.

A red circle or green square around a value denotes that the result is significantly lower or greater (respectively) than that of the total sample for that question — e.g.  

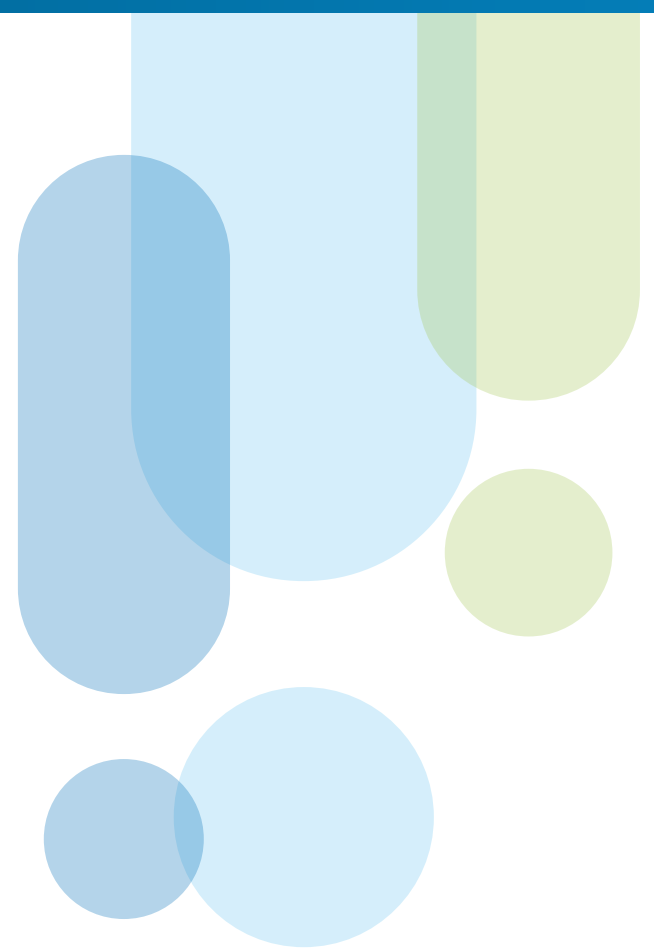
Treatment of means – Where responses are scale variables, for example 1 to 5 where 1 is disagree strongly and 5 is agree strongly, the mean is also calculated with the removal of don’t know.

Rounding of figures – may result in anomalies of +/- 1% - All results have been rounded to the nearest whole percentage figure and anomalies of about +/- 1% may occur in charts i.e. total percentages for each bar add to 99%, or 100% or 101% due to rounding error.

Nett figures are also rounded – which may also result in anomalies – Nett results are also rounded after summing the separate proportions rather than simply summing two rounded figures (e.g. ‘% total agree’). For this reason, anomalies of about 1% sometimes occur between net results and rounded results shown in charts. For example, a proportion of 33.3% ‘agree’ rounds to 33%, and a proportion of 12.4% ‘strongly agree’ rounds to 12%. However, when combined to derive the total agree (i.e. agree plus strongly agree), 33.3% plus 12.4% equals 45.7%, which would be rounded to 46%. In this case, the results would be shown in a chart as 33% agree and 12% strongly agree, but the proportion reported as ‘total agree’ would be 46%.



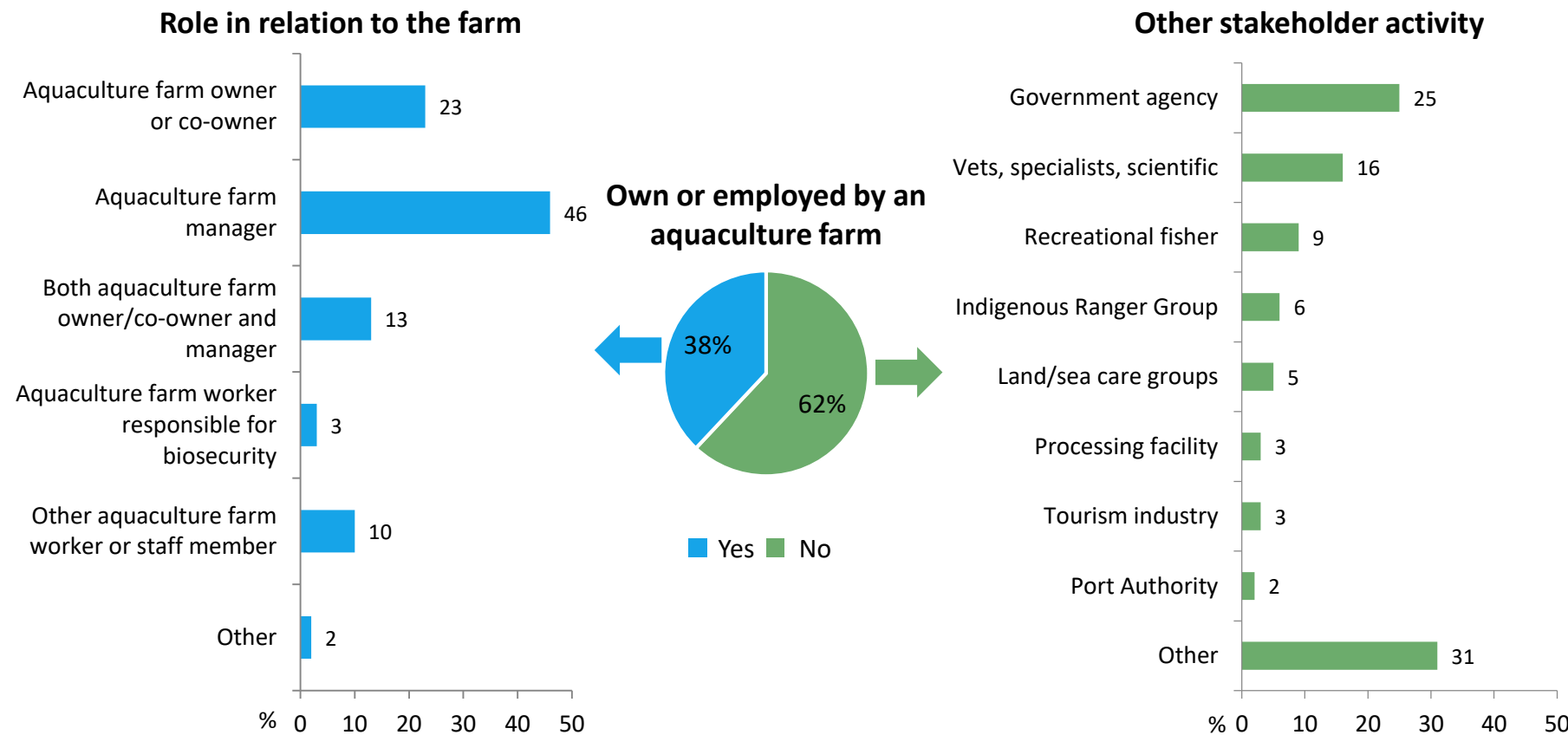
Sample profile



How many, where they are and their role

Total sample **n=103** (which includes all northern Australia locations they work at or the organisation operates in)

NT: They work–25%, Organisation–35% **North QLD:** They work–53%, Organisation–69% **North WA:** They work–18%, Organisation–36%



QS2. Can you please confirm all state or territory locations that (a) you work in; (b) the business or organisation you own or work for operates *Base: Total sample n=103*

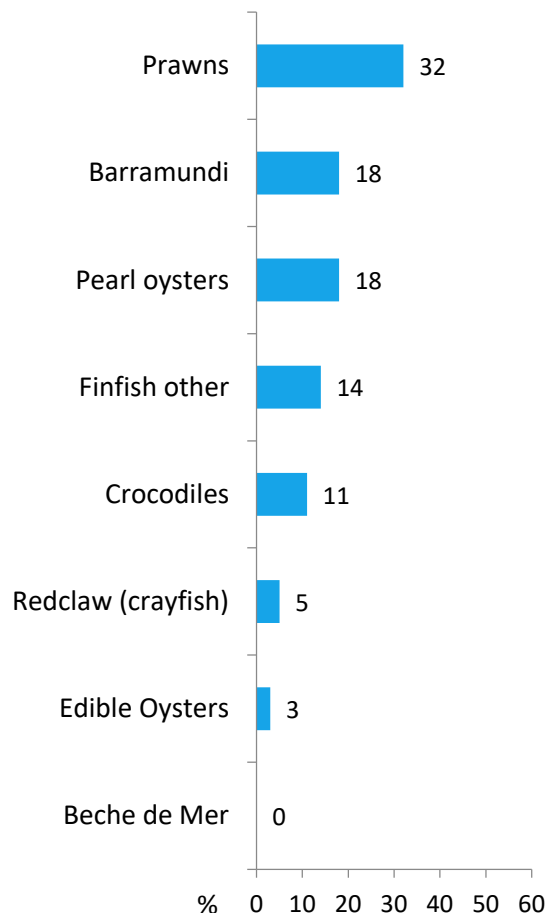
QS3a. Do you own or are you employed by an aquaculture farm? *Base: Total sample n=103*

QS3b. What best describes your role in relation to the farm? *Base: Farm sample n=39*

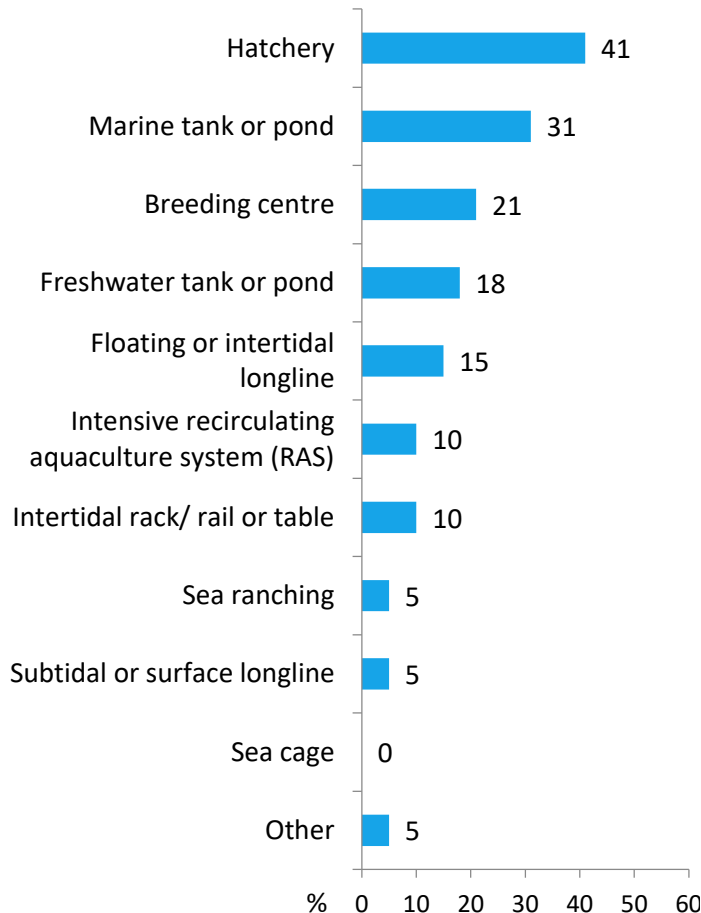
QS3c. What best describes your activity or your business activity in the aquaculture or fishing industry? *Base: Non-farm n=64*

Their industry, production systems and water sources

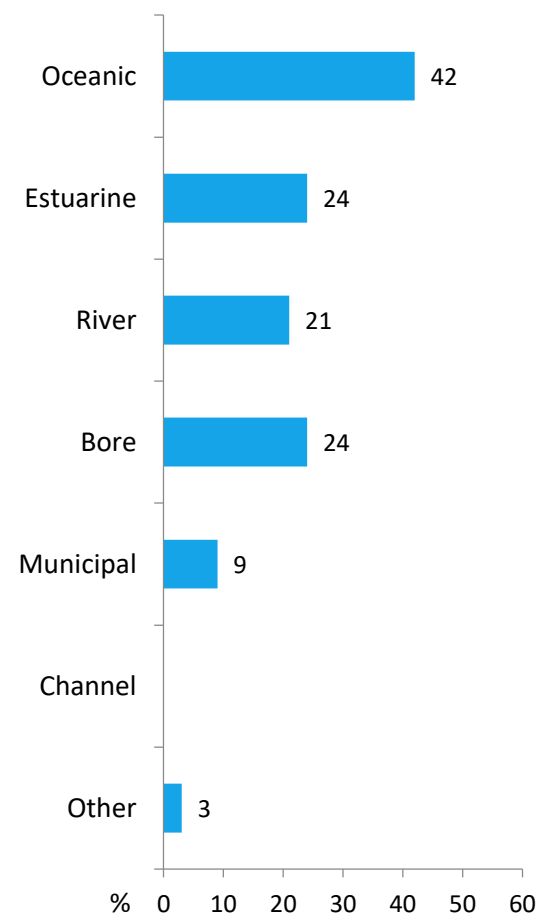
Primary aquaculture Industry they are in
(only single answer allowed)



Their production systems
(more than one answer allowed)



Water sources
(more than one answer allowed)



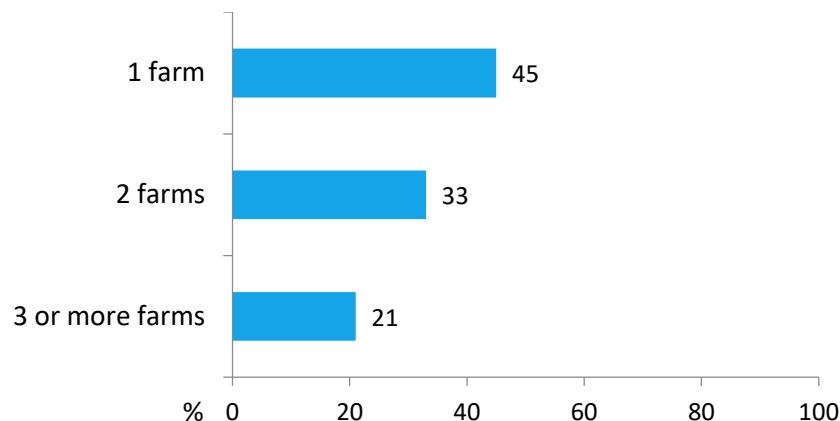
QS4a. Which aquaculture industry do you work in? Is it... Prawns, Barramundi, etc.? *Base: Aquaculture farms n=39*

QA1a. Which of the following describes your aquaculture production system/s? *Base: Aquaculture farms n=39*

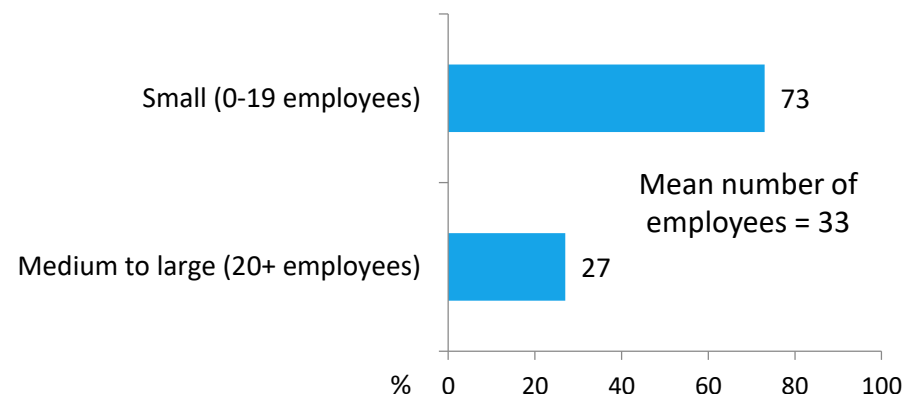
QA3. What type of water supply do you have for the farm/s? *Base: Aquaculture farms*

Number of farms, employees and if export

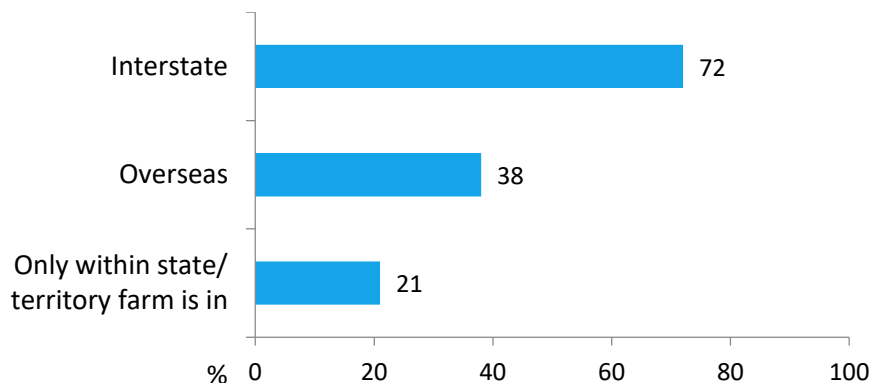
Number of farms



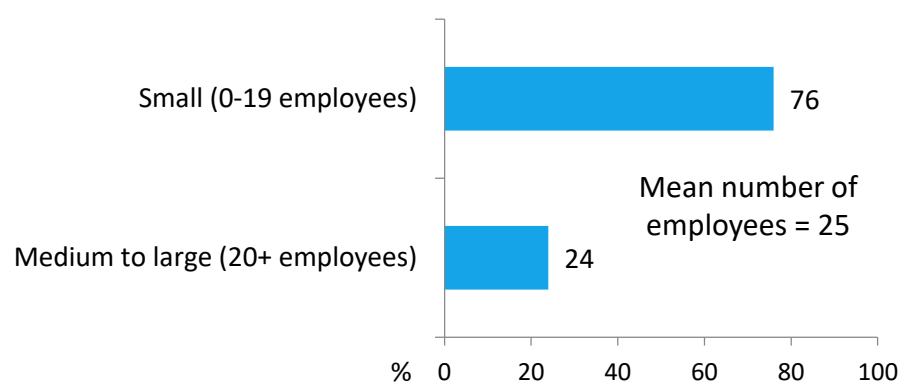
Number of employees during peak season



If they sell overseas or interstate



Number of employees during off-peak season



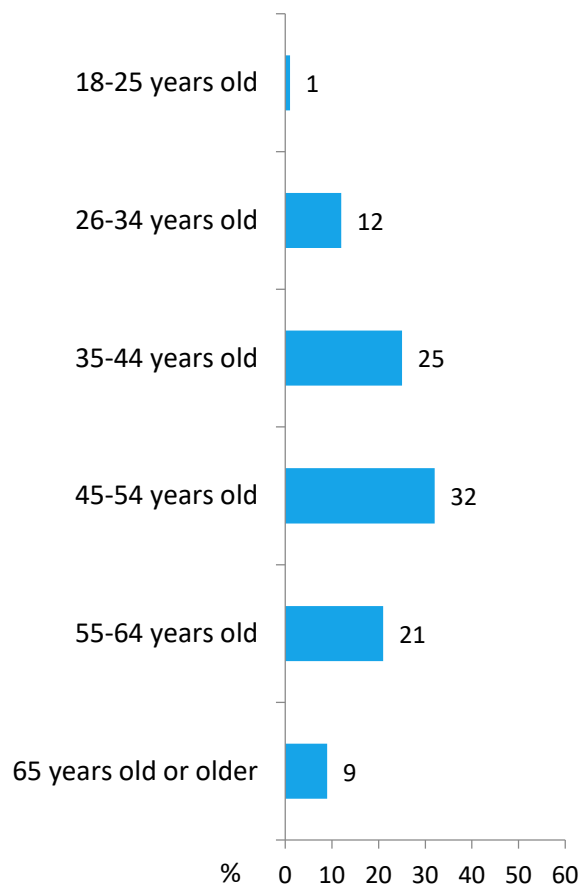
QA2a. How many farms do you own or manage, or provide biosecurity services to? *Base: Aquaculture farms n=39*

QA4. How many full-time equivalent staff members does your farm currently employ during (A) Peak seasons, (b) Off-peak seasons? *Base: Aquaculture farms n=39*

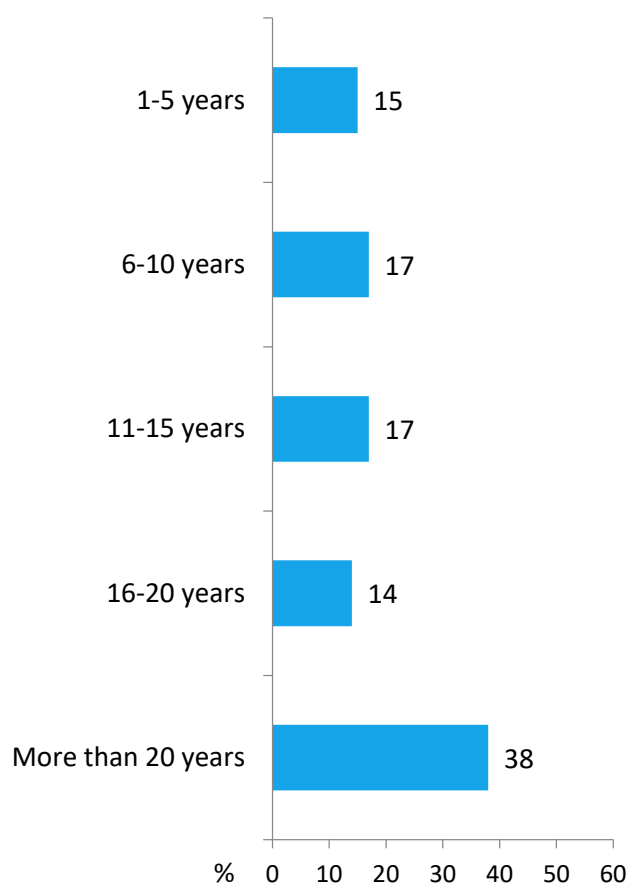
QB7. To the best of your knowledge, is any of the produce from your farm/s sold...? *Base: Those who own, manage, or responsible for biosecurity on a farm n=39*

Age, years in the industry and aquatic health quals

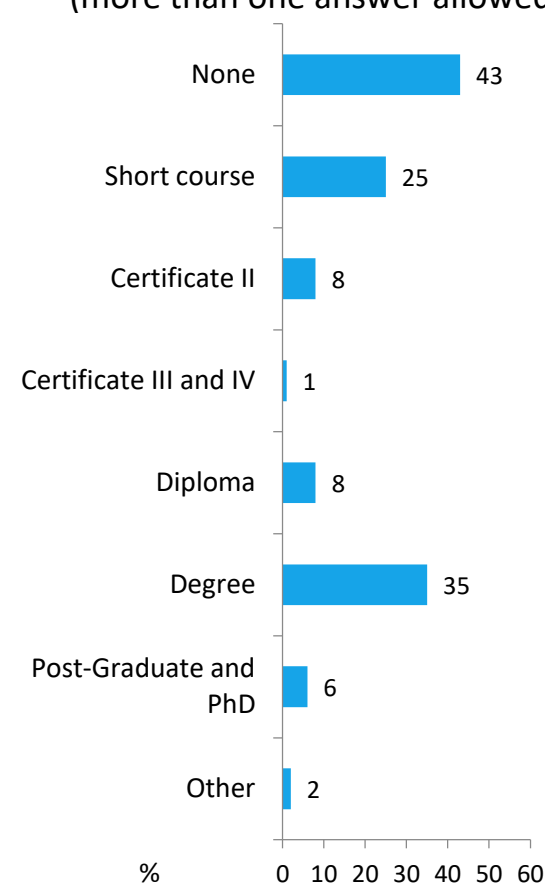
Age
(only single answer allowed)



Years in the aquaculture industry
(only single answer allowed)



Aquatic health management qualification
(more than one answer allowed)



QS1. Firstly, can you confirm your age...? **Base:** Total sample n=103

A5. How many years have you been working in or with the aquaculture/fisheries industry? **Base:** Total sample n=103

QA6. Which of the following formal training in aquatic health management have you had? **Base:** Total sample n=103

“There has been further focus on [biosecurity] within industry as it is growing.”

Two-thirds of farms and stakeholders rated their knowledge of biosecurity as good or very good and most say it has improved in the last few years. There is slightly lower awareness of other aspects.

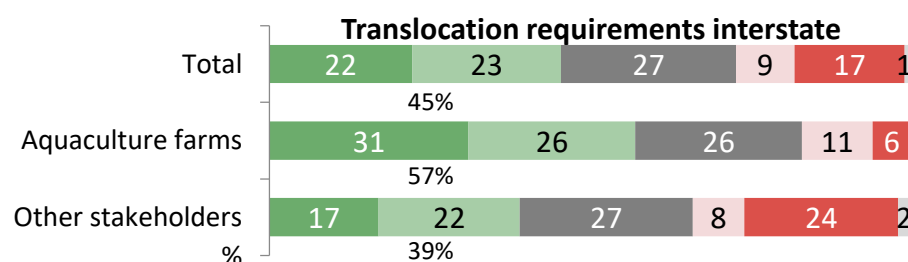
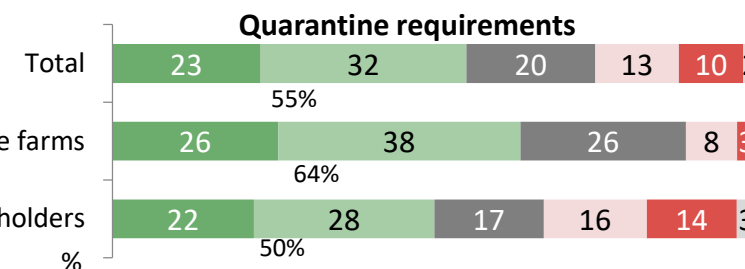
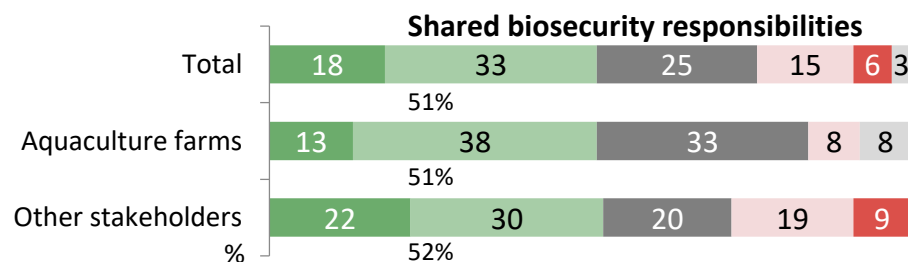
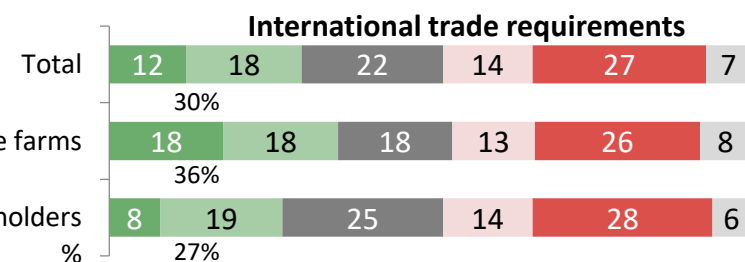
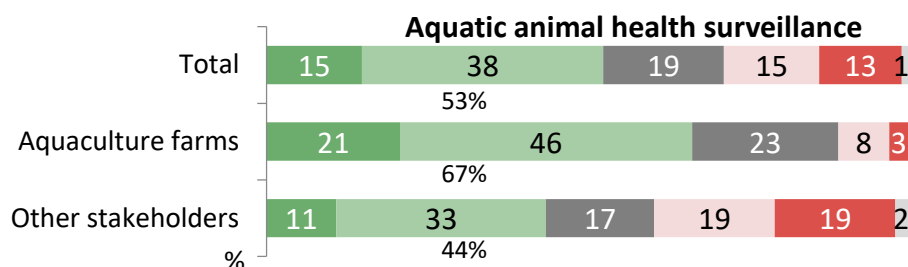
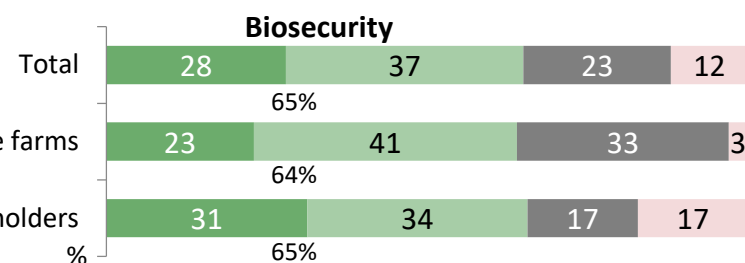
There is a mix of positive and negative attitudes relating to biosecurity.

4

Awareness, understanding and attitudes towards biosecurity

Awareness of biosecurity and related aspects

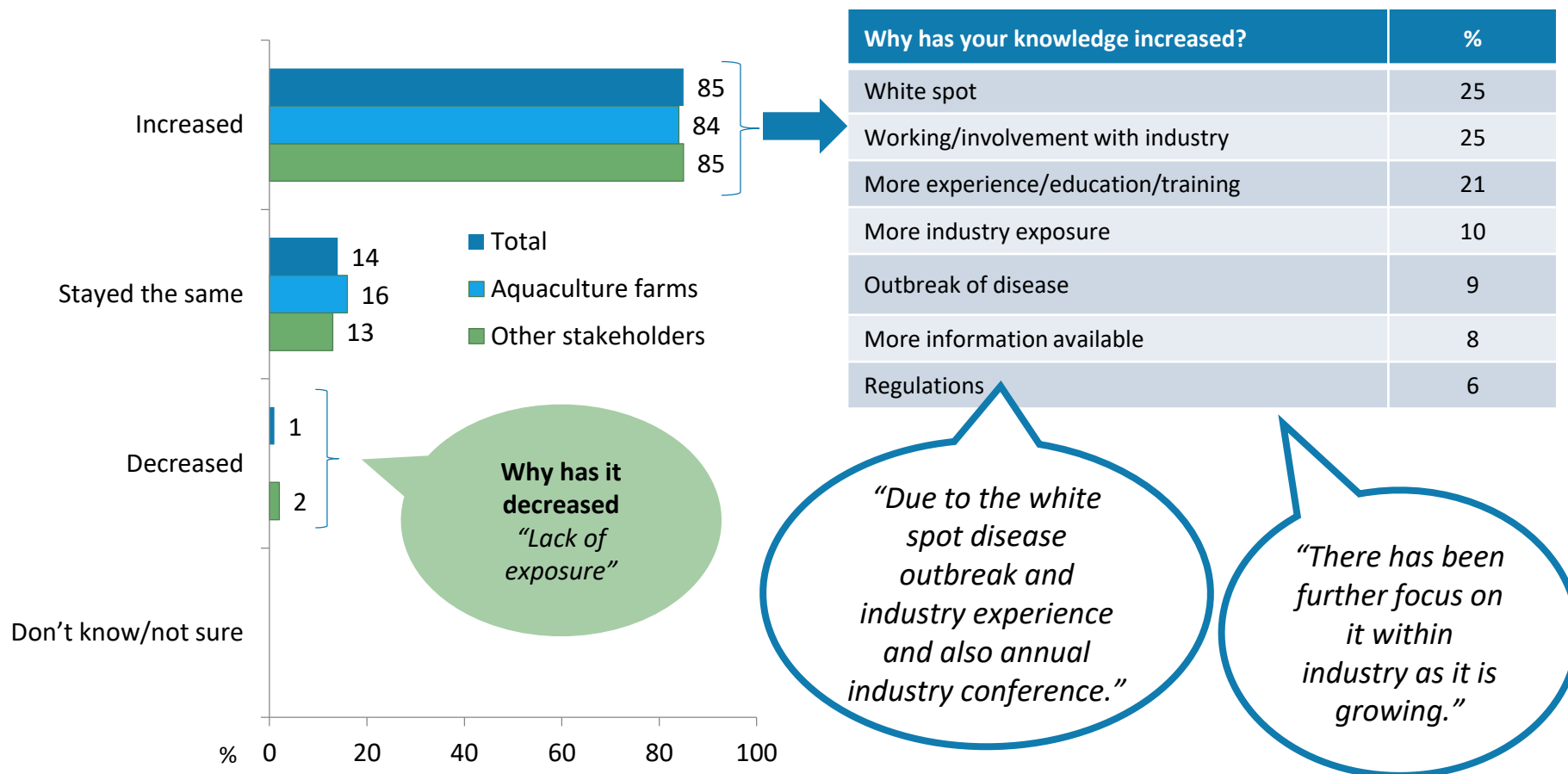
Two-thirds of respondents (consistent across farms and stakeholders) rated their knowledge of biosecurity as good or very good. Around half to two thirds rated their knowledge of quarantine requirements, surveillance, shared responsibilities and translocation requirements as good or very good, and in each case this was highest for aquaculture farms than for others stakeholders. International trade requirements had the lowest awareness.



Very good Good Neither Poor Very poor Don't know

Whether their awareness has improved or not

A vast majority (85%) of both aquaculture farms and other stakeholders considered that their knowledge of biosecurity had increased in the last three years. Reasons given included incursions such as white spot (25%), their involvement in the industry (25%) and more experience and training (21%).



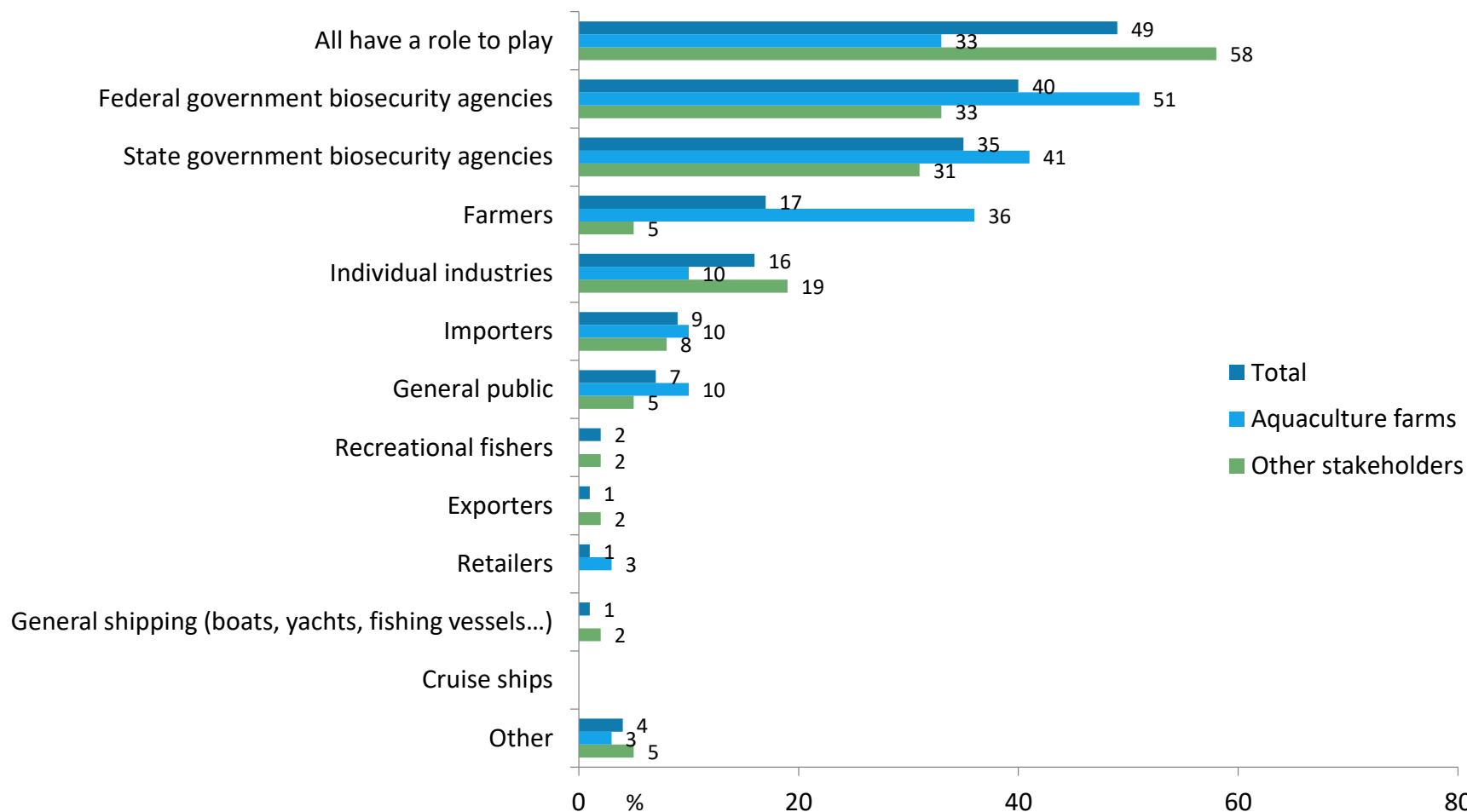
QB2a. Would you say your knowledge of biosecurity has increased, stayed the same or decreased in the last three years? *Base: Total n=103*

QB2b. Why is that? *Base: Those who said their knowledge of biosecurity has increased in the last three years n=77*

QB2c. Why is that? *Base: Those who said their knowledge of biosecurity has decreased in the last three years n=1*

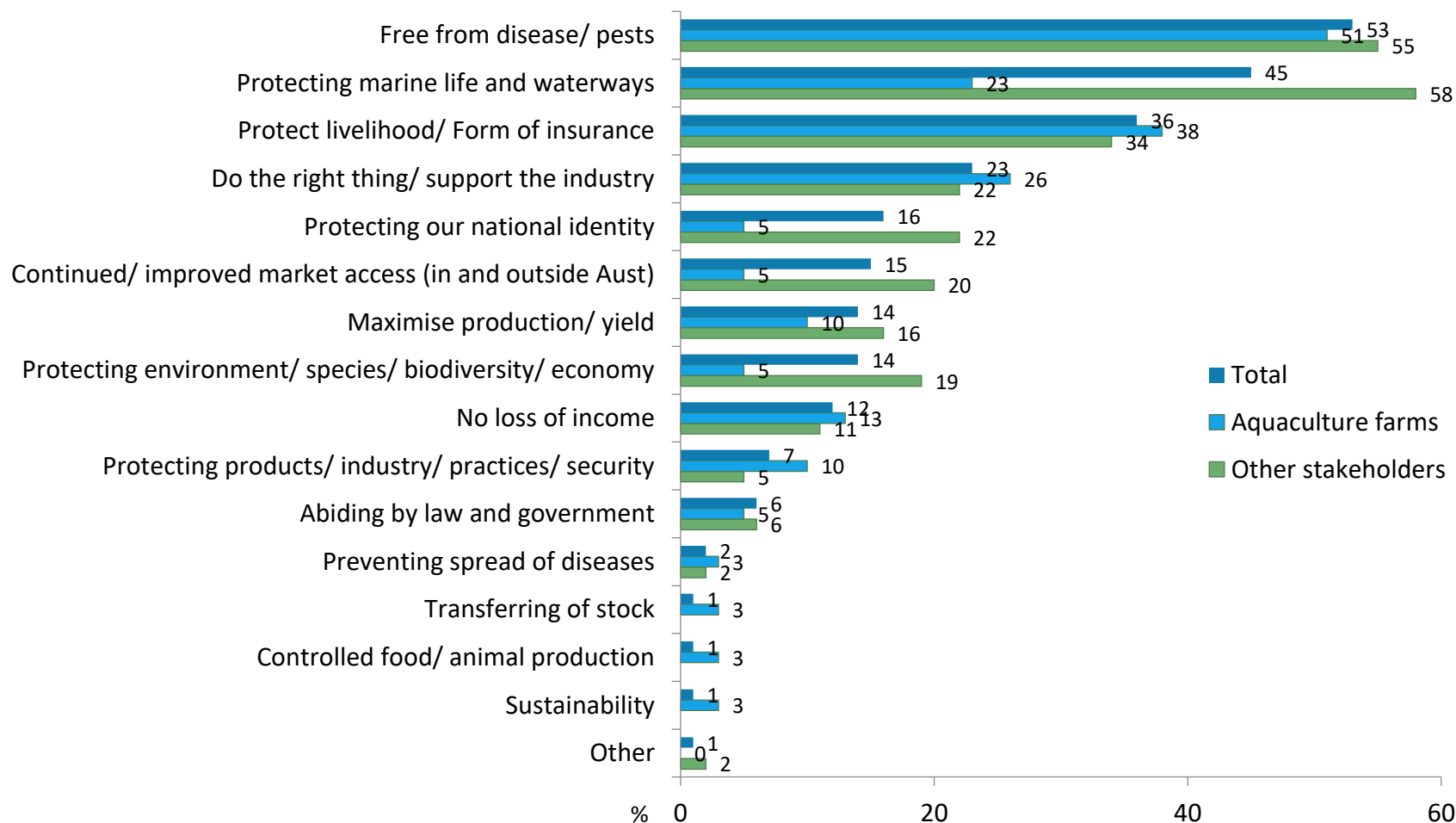
Who they think is responsible for biosecurity

While half of respondents thought everyone had a role to play in biosecurity, this was far more prevalent among stakeholders (58%) than farms (33%). Farms were most likely to hold the Federal Government (51%) and State government biosecurity agencies responsible (41%).



What are the perceived benefits of biosecurity

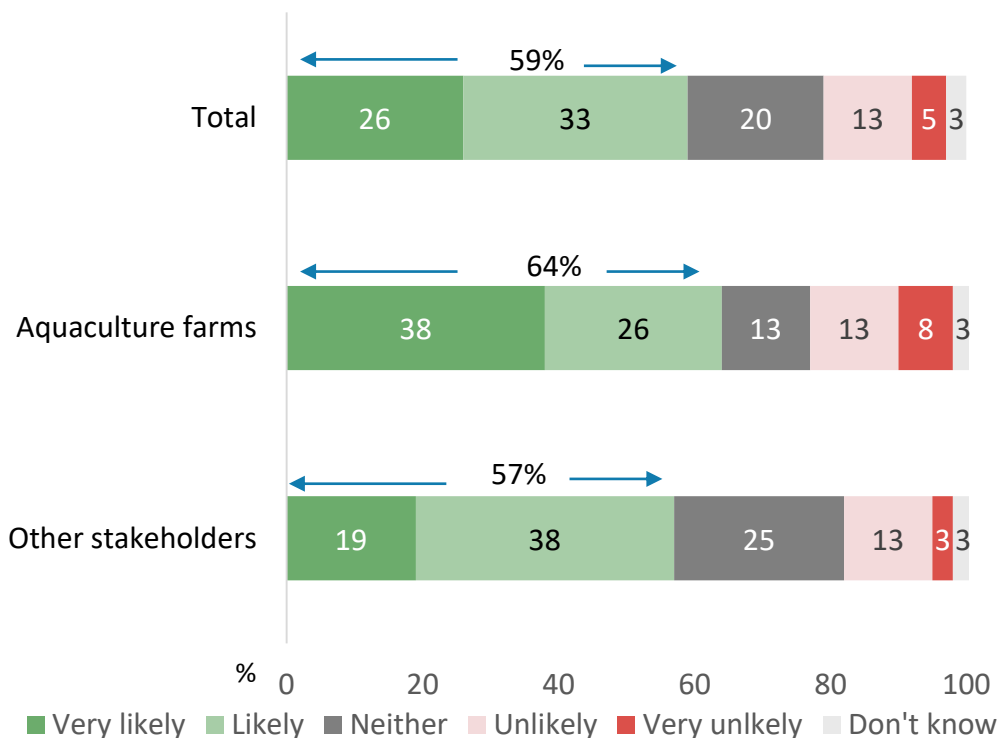
Half of the respondents saw being free from disease and pests as the main benefit of biosecurity, and while farms agreed with this (51%), stakeholders saw protecting marine life and waterways as the most important benefit at 58% (whereas this was only identified as a benefit of biosecurity by 23% of aquaculture farms).



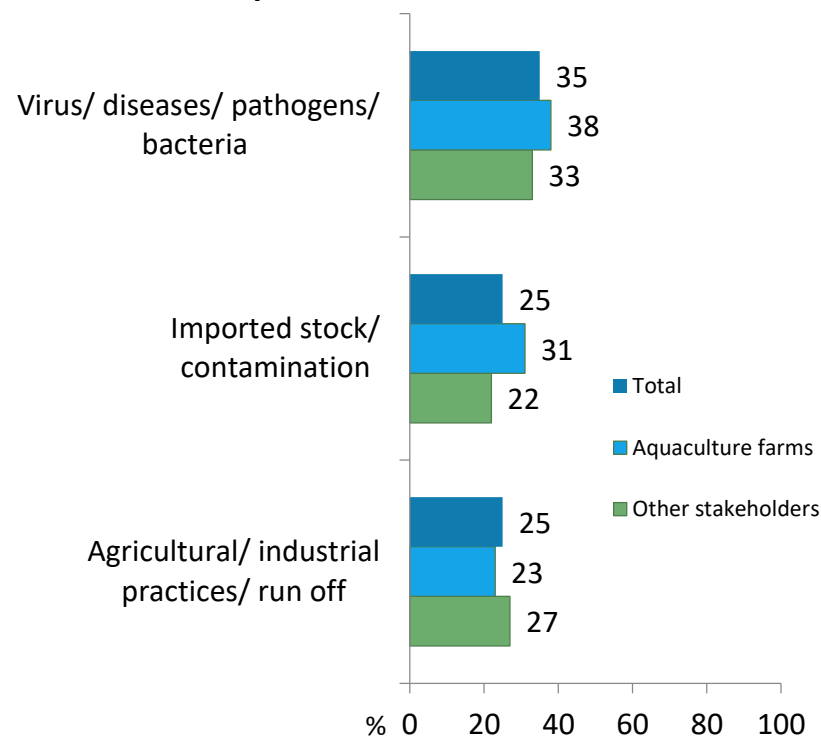
Likelihood of a major outbreak and top 3 threats

The likelihood of a major outbreak in the next year was rated as likely or very likely by 64% of farms and 57% of other stakeholders. Viruses, diseases, pathogens and bacteria were seen as the major threat by 38% of farms and 33% of other stakeholders, followed by contamination via new stock by 31% of farms and 22% of other stakeholders and agricultural and industrial practices and run-off. Other items mentioned as the top three threats are provided on the next page.

Likelihood of a major outbreak



Top three threats indicated



QB5. On a scale from 1 to 5 where 1 is very unlikely and 5 is very likely, how would you rate the likelihood of a major aquatic disease outbreak in Australia in the next 12 months? *Base: Total sample n=103*

QB6. Please describe what you see as the top three threats facing the aquatic industry? *Base: Total sample n=103*

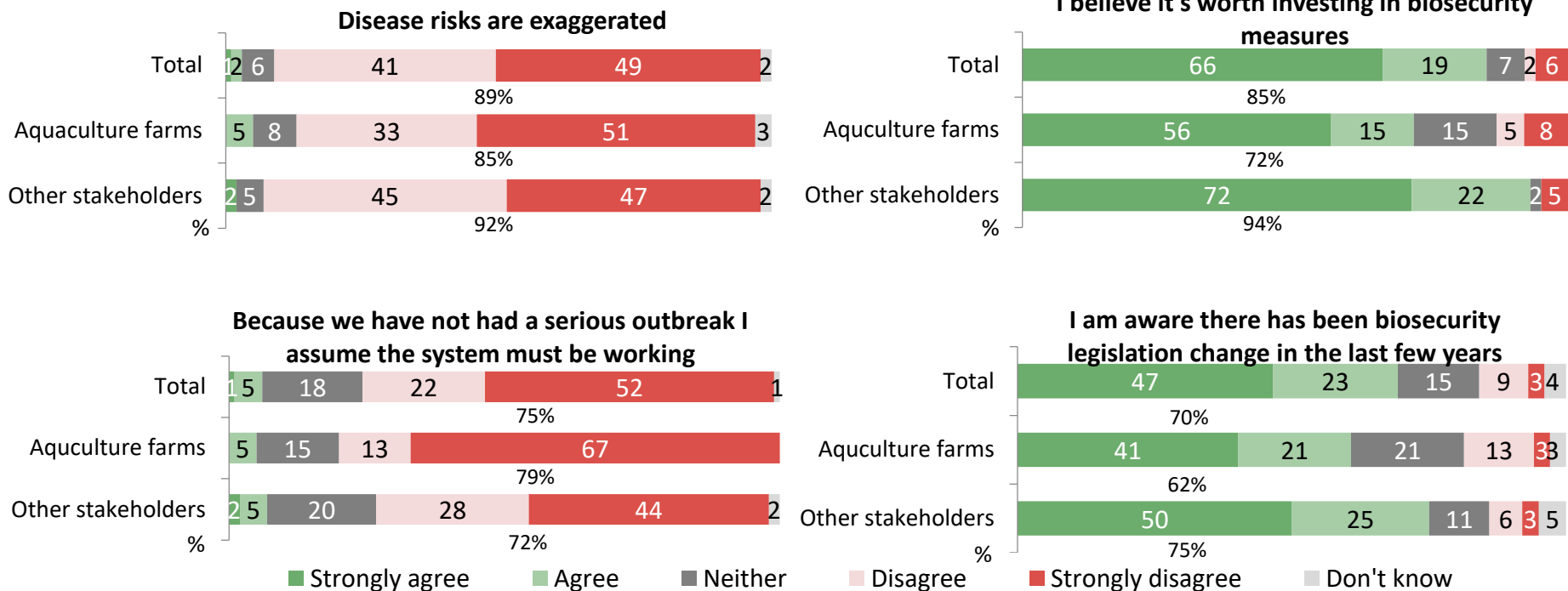
The full list of top 3 threats mentioned

Mentioned in the top three threats	Total	Farms	Other
Virus/ diseases/ pathogens/ bacteria	35%	38%	33%
Imported stock contamination	25%	31%	22%
Agricultural/ industrial practices/ run off	27%	28%	29%
Pests/ invasive species	17%	3%	25%
White spot	13%	3%	19%
Climate change/ loss of habitat	12%	5%	16%
Lack of knowledge/education/training	12%	13%	11%
Council/govt restrictions/laws, red tape	11%	24%	4%
Poor Biosecurity	10%	13%	8%
Pollution	8%	10%	6%
Excessive use of resource/ overfishing	7%	8%	6%
Water access/ threats to supply/ quality	7%	8%	7%
Shipping/import conditions/compliance	7%	5%	8%
Lack of leadership/ monitoring/ planning	7%	0%	11%
Translocation	5%	10%	2%
Increased market demand/access	4%	8%	2%

Mentioned in the top three threats	Total	Farms	Other
Natural/ environmental disasters	4%	5%	3%
Lack of resource/ licensing	4%	0%	6%
Illegal fishing/ trades	4%	0%	6%
Rising costs	3%	8%	0%
Ballast	3%	5%	2%
Loss of business/ workforce/ financial support	3%	3%	3%
Economic viability	3%	3%	3%
Drought/lack of rain	2%	5%	0%
Unregulated/ unlawful practices	2%	5%	0%
Lack of security	2%	3%	2%
Seasonal change	1%	3%	0%
Lack of regulations	1%	0%	2%
Inability to adapt	1%	0%	2%
Lack of quality control	1%	0%	2%
Other	8%	10%	6%
None – no threats/ none identified	10%	10%	9%
Don't know/ not applicable	11%	8%	13%

Attitudes to biosecurity

Most do not believe the disease risk is exaggerated (with only 5% of farms and 2% of other stakeholders agreeing it is) and they do believe it's worth investing in biosecurity (with only 13% of farms and 5% of other stakeholders disagreeing). At the same time, they do not assume that just because there has not been a serious outbreak the system must be working (with only 5% of farms agreeing they do and 7% of other stakeholders) and many (although not all) are aware there has been biosecurity legislation change in the last few years (with 61% of farms and 75% of other stakeholders indicating awareness).

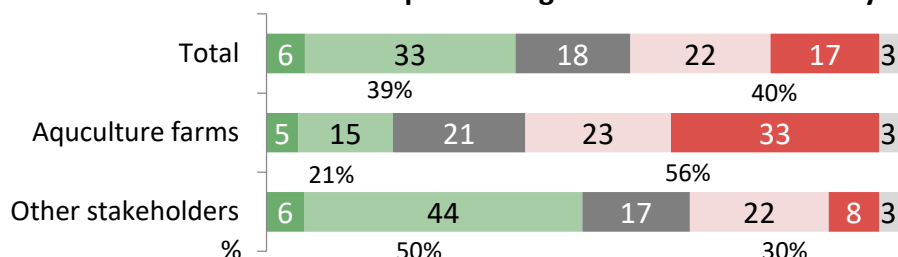


B8. The following are statements some people have made about biosecurity. For each statement please indicate on a scale from 1 to 5 where 1 is strongly disagree and 5 is strongly agree, the extent to which you agree or disagree. *Base: Total sample n=103*

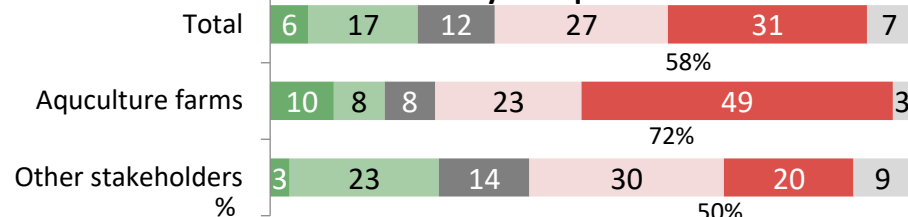
More on attitudes to biosecurity

However, over half (56%) of the farms disagree Australia is doing well with its biosecurity (and only 21% agree) compared to half of the other stakeholders agreeing (and only 30% disagreeing). This is because most farms (at 72%) don't believe Australia is strict enough with biosecurity and quarantine measures when it comes to imports (and half of the other stakeholders have the same view). In addition, while 41% of farms believe they have been properly informed of the biosecurity requirements, over a third (36%) don't believe they have been and over half (54%) believe decisions are made by government bodies without real consultation with producers and industry (with only 10% disagreeing with this). Other stakeholders were more likely to feel they have been properly informed (52%) and quite evenly split on whether decisions are made with real consultation.

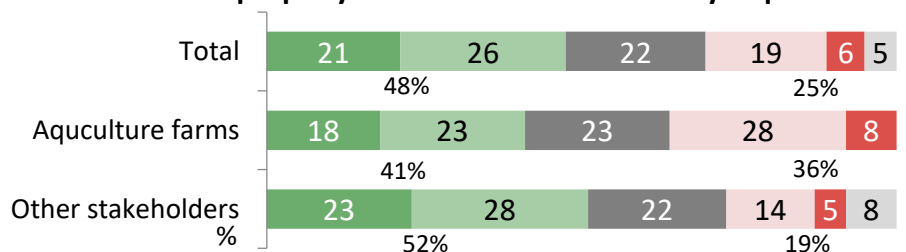
Australia is performing well with its biosecurity



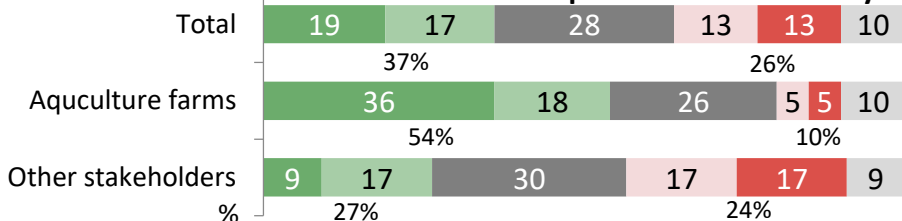
When it comes to imports, Australia is strict enough with biosecurity and quarantine measures



I have been properly informed of the biosecurity requirements



Decisions are made by government bodies without real consultation with producers and industry



■ Strongly agree
 ■ Agree
 ■ Neither
 ■ Disagree
 ■ Strongly disagree
 ■ Don't know

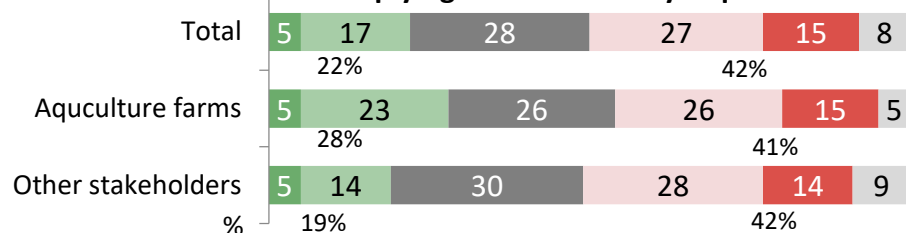
B8. The following are statements some people have made about biosecurity. For each statement please indicate on a scale from 1 to 5 where 1 is strongly disagree and 5 is strongly agree, the extent to which you agree or disagree.

Base: Total sample n=103

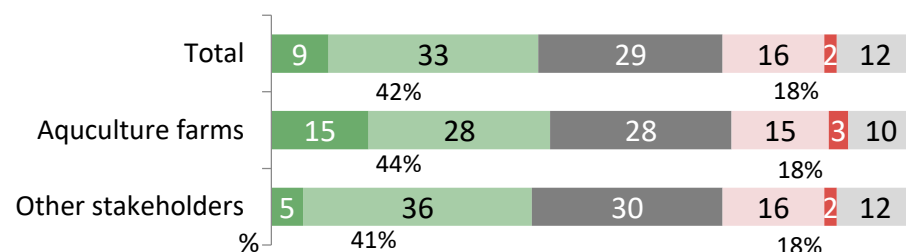
And more on attitudes to biosecurity

Quite a significant proportion of farms (42%) and other stakeholders (42%) indicated they believe there are practical and operational limitations to complying with biosecurity requirements, although over a quarter of farms (28%) and almost one in five (19%) of other stakeholders did not believe there were such limitations to complying. Similarly a significant proportion of farms (44%) and other stakeholders (41%) agreed the rules and their application keep changing (with 18% disagreeing). Whilst the greater proportion of farms and other stakeholders agreed or were neutral on Australia being strict enough with biosecurity and quarantine requirements for exports, a greater proportion indicated Australia is strict enough with translocation. However 20% of farms and 25% of other stakeholders do not believe the requirements for moving stock within or between states is strict enough.

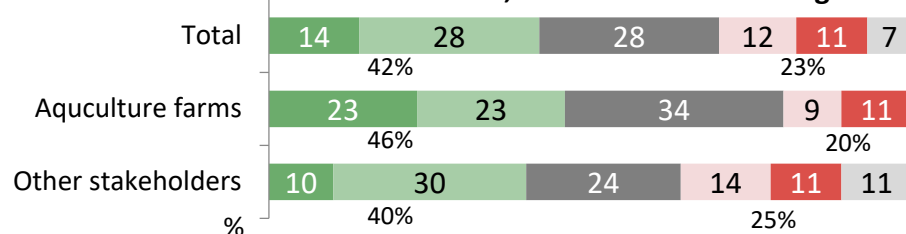
There are no practical or operational limitations to complying with biosecurity requirements



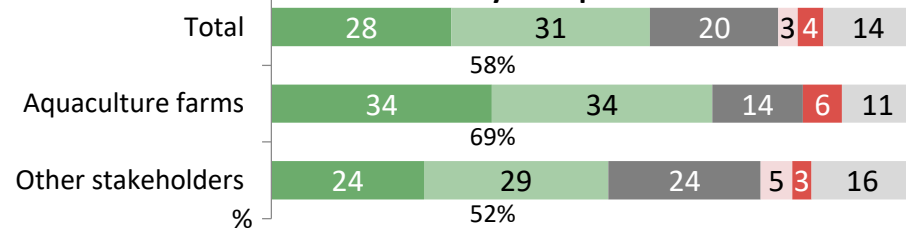
The rules and application of the rules keep changing



When it comes to moving stock within or between states, Australia is strict enough



When it comes to exports, Australia is strict enough with biosecurity and quarantine measures



■ Strongly agree
 ■ Agree
 ■ Neither
 ■ Disagree
 ■ Strongly disagree
 ■ Don't know

B8. The following are statements some people have made about biosecurity. For each statement please indicate on a scale from 1 to 5 where 1 is strongly disagree and 5 is strongly agree, the extent to which you agree or disagree. *Base: Total sample n=103*

Two-thirds of those who have a responsibility for biosecurity on the farm indicate that the major trigger for further investigation is an unexplained mortality rate (67%). In contrast 44% indicated that a change in feed rates triggered their concern, and 33% said when they observed abnormal or unusual behaviour.

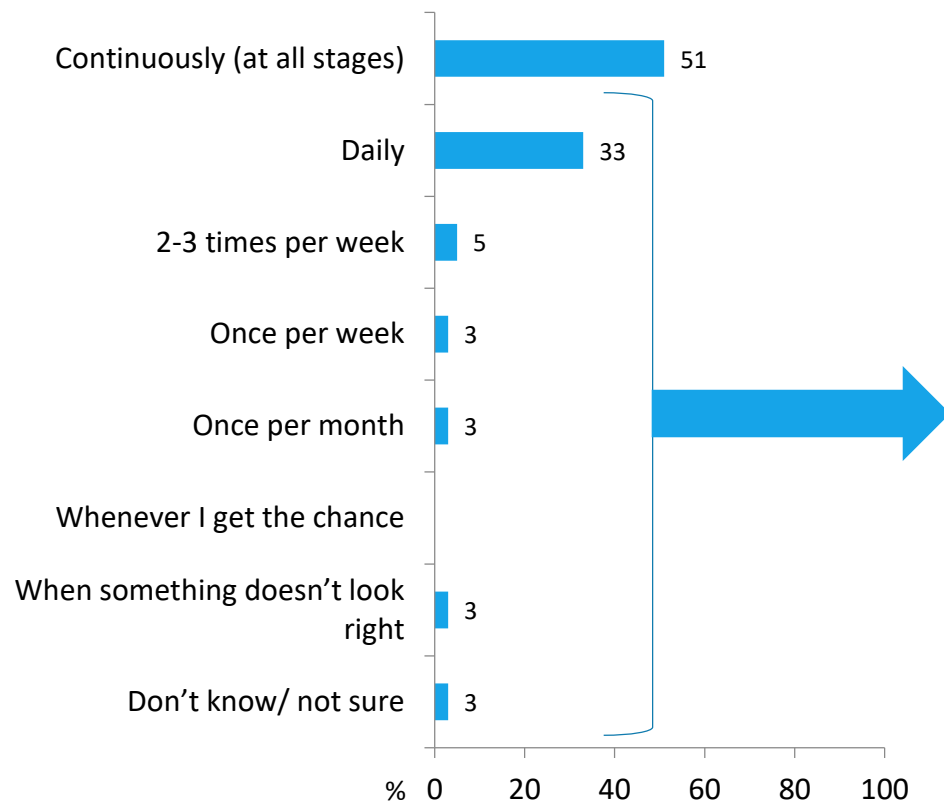
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Monitoring and reporting of incidents

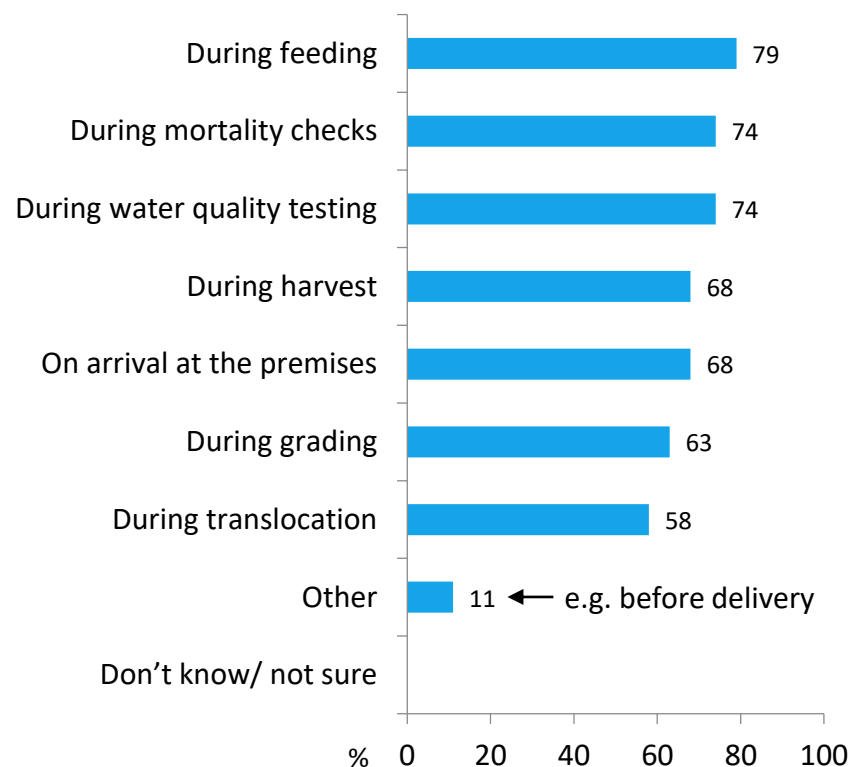
Frequency and timing of checking stock health

Half of those who work on farms indicate they check the health of their stock continually at all stages and another third daily. Those who don't check continually at all stages say it is mainly during feeding (79%), mortality checks (74%) or during water testing (74%).

Frequency of checking the health of stock



If not continually (all the time), the stages when they check the health of stock



The visible signs that trigger concern whilst checking stock health

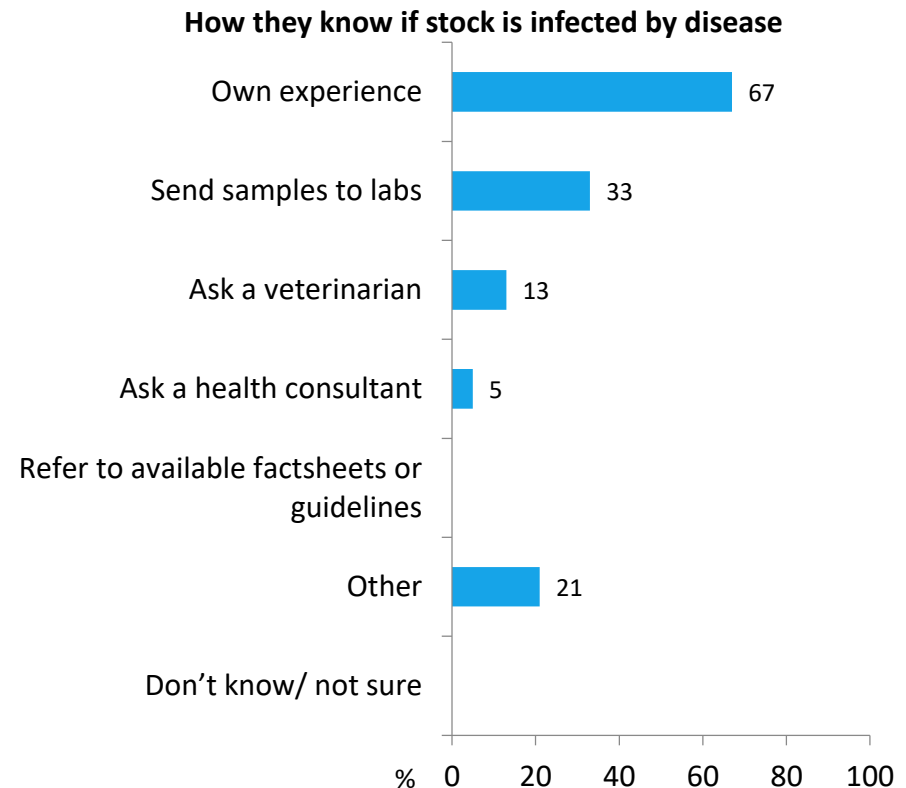
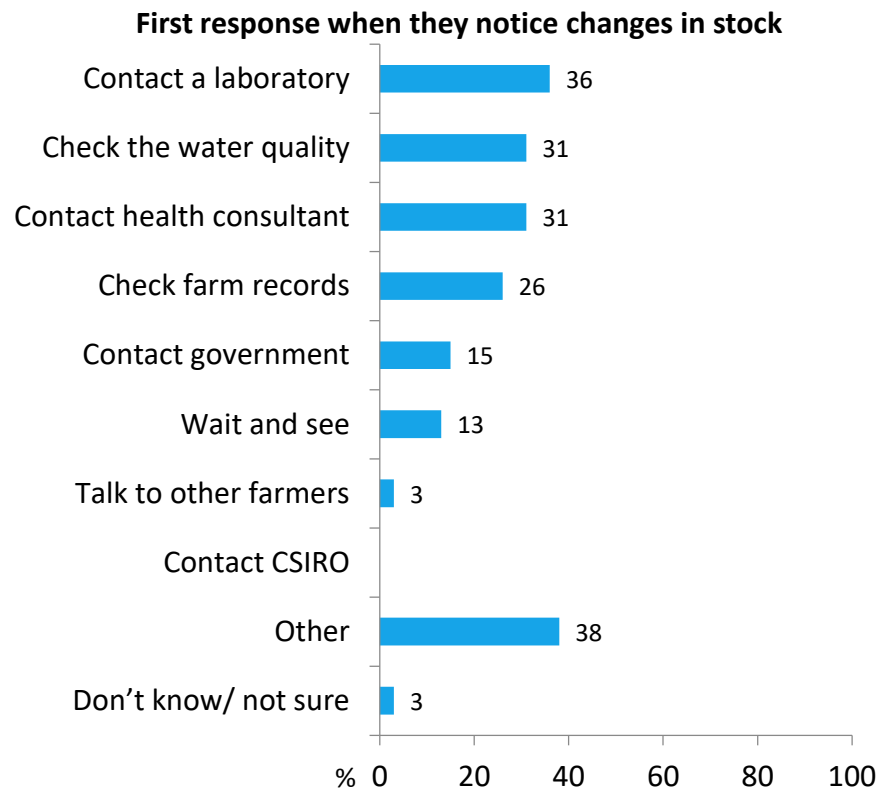
Two-thirds of those who have a responsibility for biosecurity on the farm indicate that the major trigger for further investigation is an unexplained mortality rate (67%). A change in feed rates triggered a concern for 44%, while 33% said when they observed abnormal or unusual behaviour and 31% indicated visual cues.

	%
Unexplained mortality rate	67
Feed rates	44
Abnormal or unusual behaviour	33
Visual cues	31
Water quality	10
Pathology report	10
Bird activity	10
Growth rates	3
Other	17

↑
Biofouling, environmental factors, management, guidelines, external factors

First response and knowledge of changes in stock health is noticed

For just over a third the first response if they saw changes in the health of their stock would be to contact a laboratory, and for nearly a third it would be to check the water quality and contact a health consultant. Around a quarter would check the farm records. Only a small proportion would contact government, wait and see or talk to other farmers. A majority (67%) believe their own experience would tell them if stock is infected, while a third would send samples to a laboratory and only 18% said by asking a vet or health consultant.



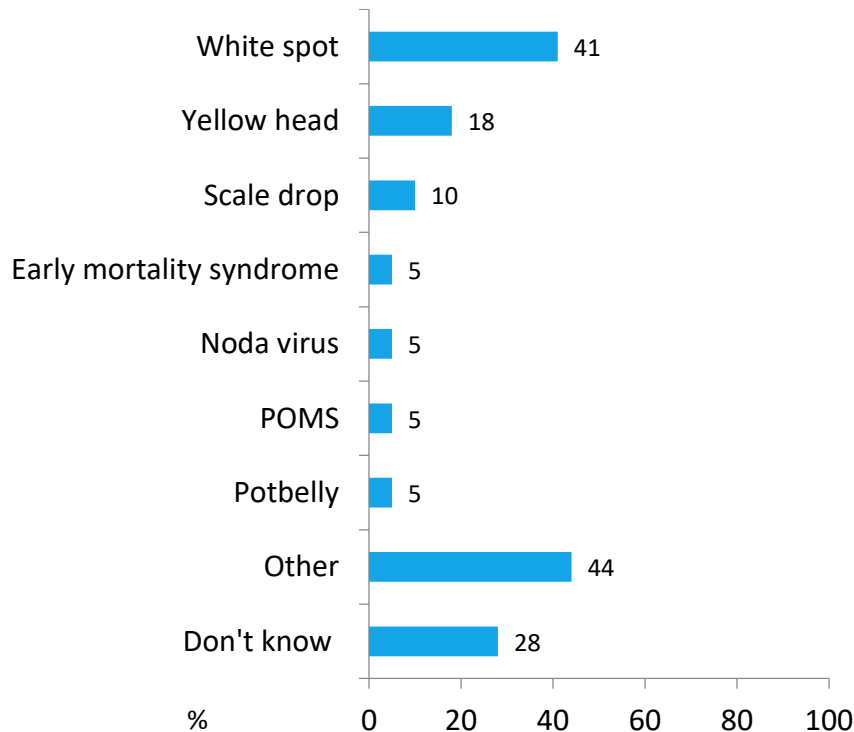
QC4. What is your first response when you see changes in the health of your stock? *Base: Those who work on an aquatic farm n=39*

QC5. And how do you know if your stock is infected by disease(s)? *Base: Those who work on an aquatic farm n=39*

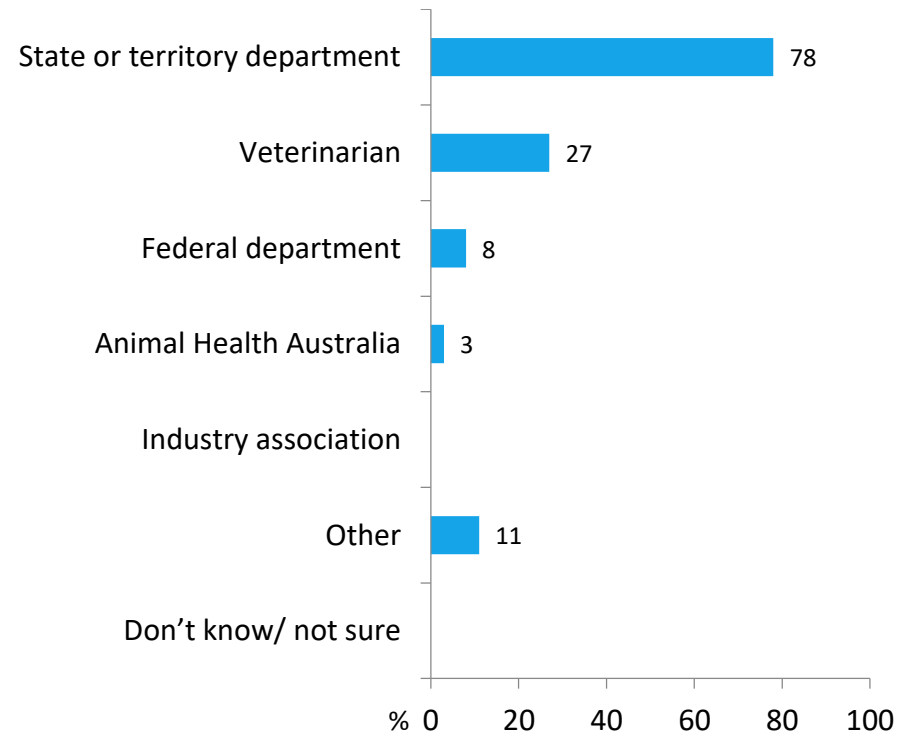
Knowledge of aquatic notifiable diseases and who they would notify

Perhaps unsurprisingly given the media coverage, White Spot was cited as a notifiable disease by 41% of those who work on farms. As with some other research many could not specifically indicate a notifiable disease. Almost 80% of those working on farms indicated they would notify their state/territory government of a notifiable disease, despite 15% notifying the government as a first response to noticing changes in the health of their stock.

Top notifiable aquatic health diseases mentioned

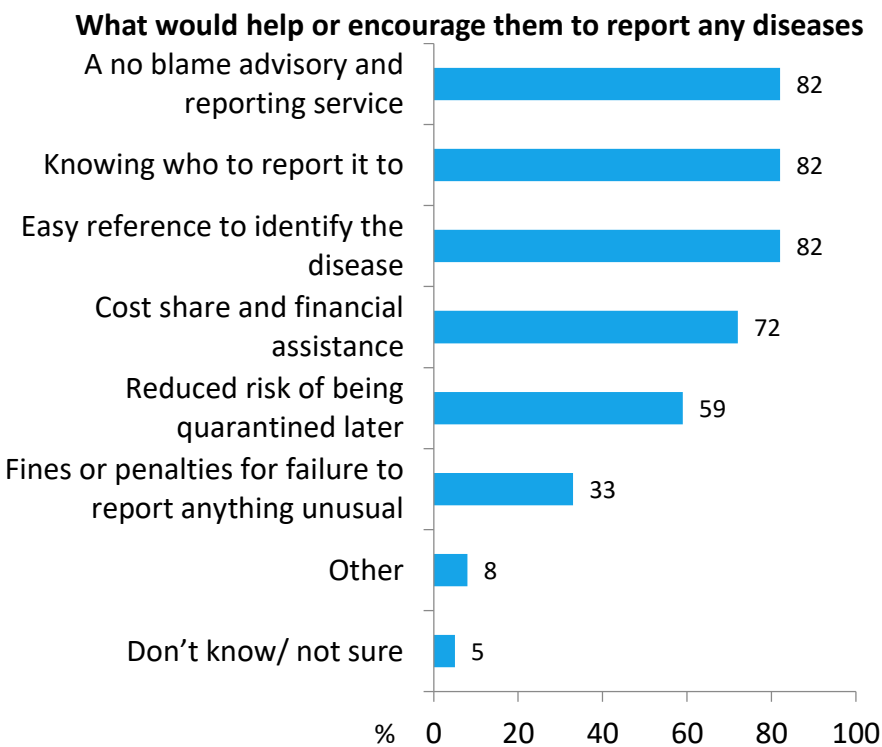
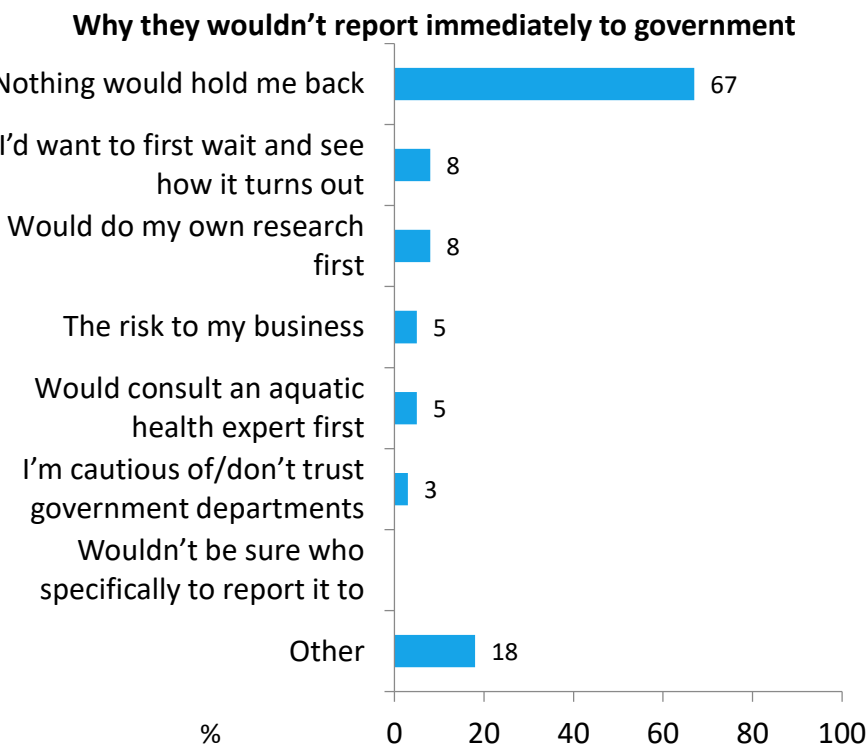


Who they would notify if they suspected they had a notifiable disease on the farm



Why they wouldn't report immediately to government and what would help/encourage them

Two thirds would immediately report. Those reticent to do so cited reasons such as wait and see (8%), do a bit of research first (8%), fear of the impact on the business (5%) and caution/distrust of government (3%). A majority (82%) would be encouraged to report if there was a no blame advisory/reporting service, better information about to whom they should report, and an easy reference for identifying disease, while 72% indicated a cost sharing and financial assistance arrangement would make a difference and 59% if there was reduced risk of being quarantined. Only a third indicated fines or penalties would have an impact.



QC8. What, if anything, would hold you back from reporting something to government immediately?
QC9. Which of the following options would help or encourage you to report any diseases found?
Base: for both questions: Those who work on an aquatic farm n=39

Most farms (94%) said they kept animal movement records and water quality records, and just slightly fewer (85%) said they kept monitoring records for sick and dead animals and disease testing records.

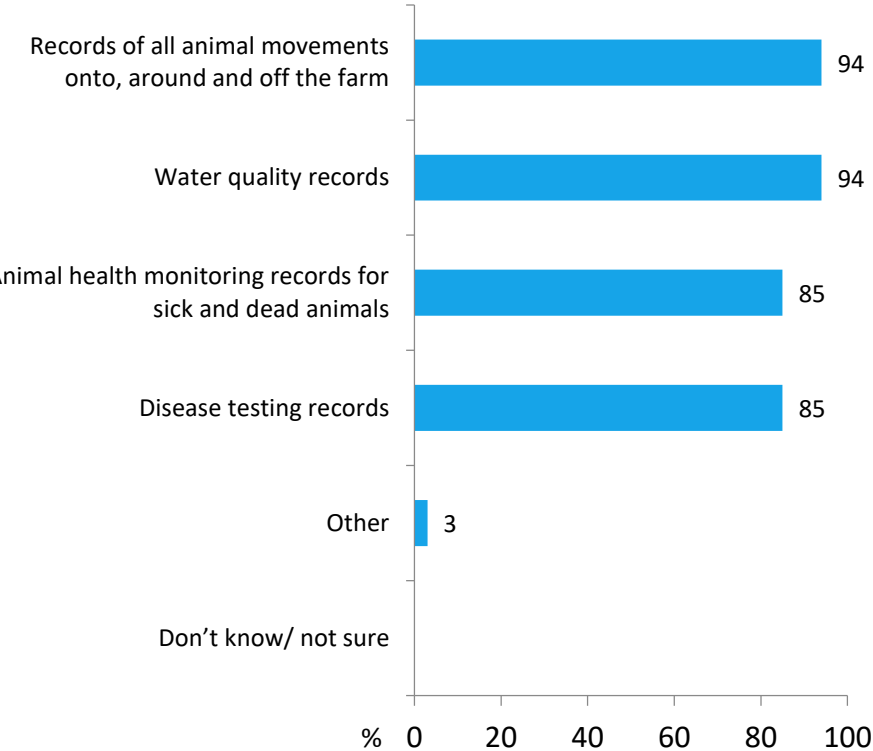
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Specific aquaculture farm practices

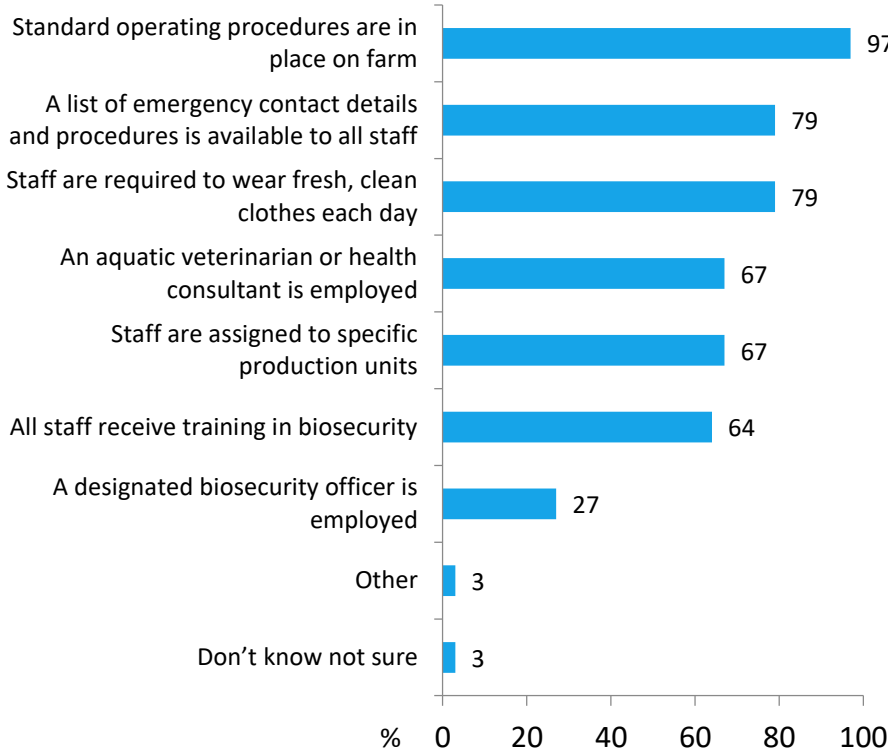
Record keeping tools and staff management practices in place on the farm

Most farms (94%) said they kept animal movement records and water quality records, and just slightly fewer (85%) said they kept monitoring records for sick and dead animals and disease testing records. Almost all farms had standard operating procedures, and 79% had a list of emergency contacts and procedures and require staff to wear clean clothes. Around two thirds had a vet or health consultant employed, staff assigned to specific production units and ensured all staff are trained in biosecurity. Only around a quarter have a designated biosecurity officer.

Record keeping tools in place



Staff management practices in place

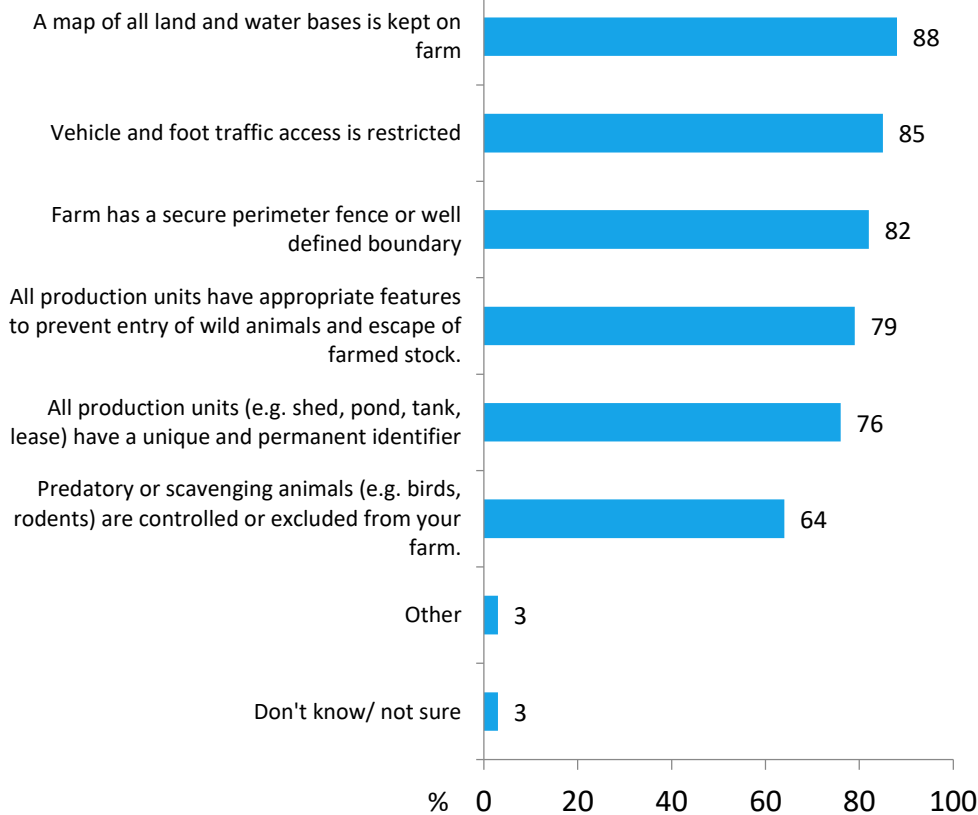


QD1. Which of the following *record keeping tools* do you currently have in place on your farm?
QD2. Which of the following *staff management practices* do you currently have in place on your farm?
Base: For both questions: Those who own, manage, or responsible for biosecurity on a farm n=39

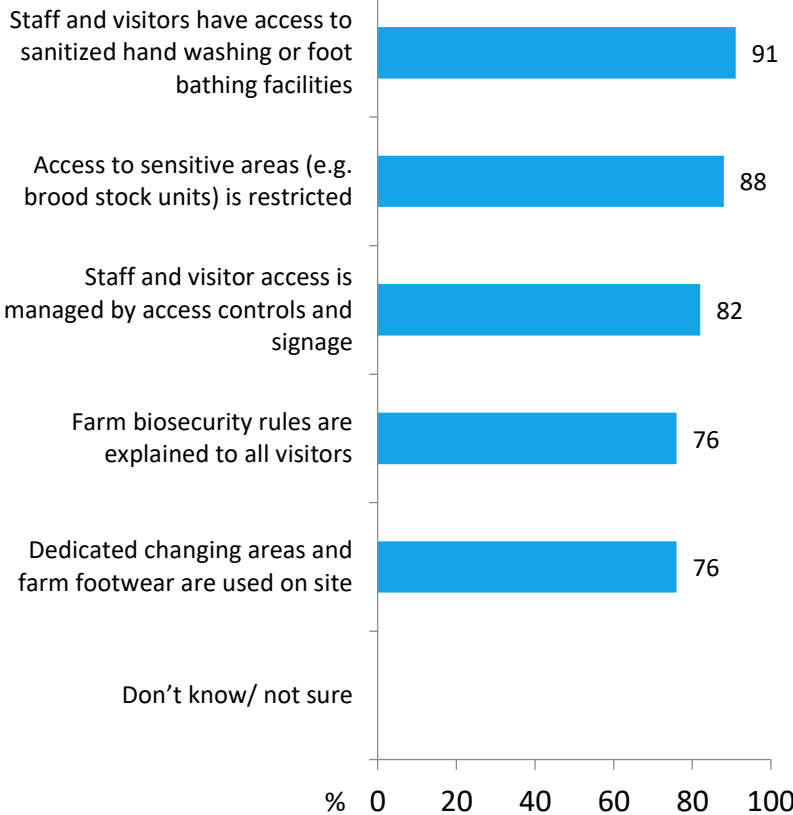
Property and people management tools in place on the farm

Most farms have the property and people management tools in place. In particular, 88% keep a map of all land and water bases, 85% restrict vehicle and foot traffic, and 82% have secure boundaries for property management; while for people management, 91% provide sanitized hand and foot wash facilities and 88% restrict access to sensitive areas

Property management tools



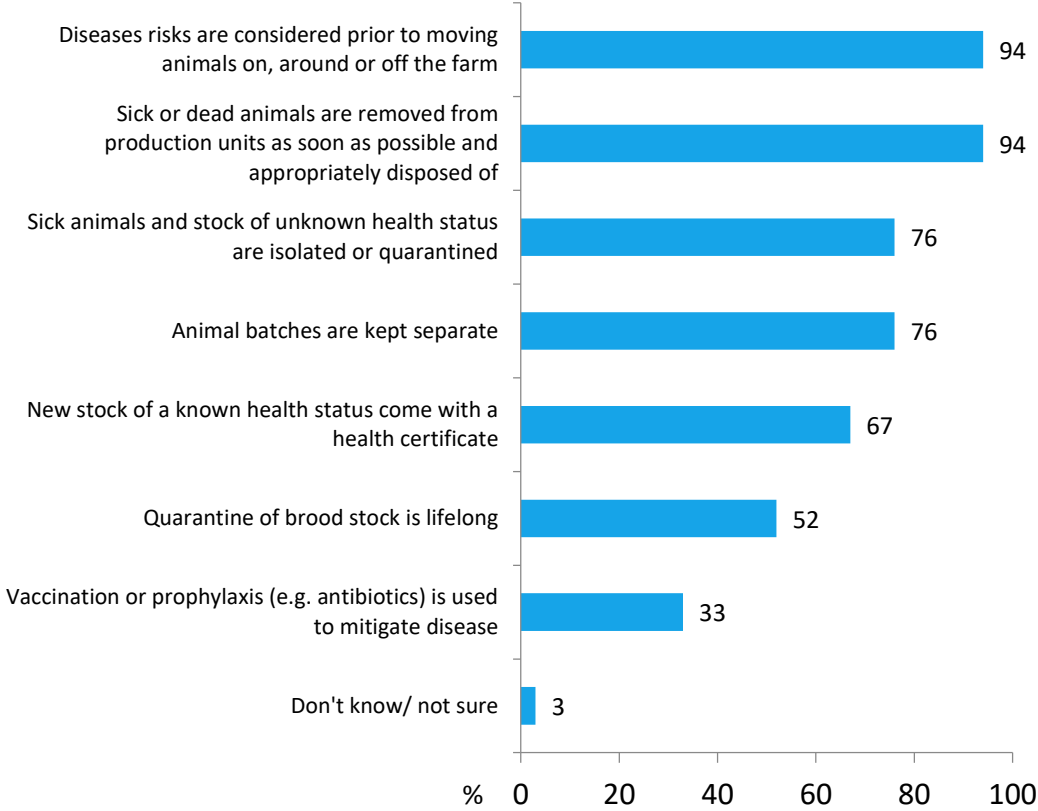
People management tools



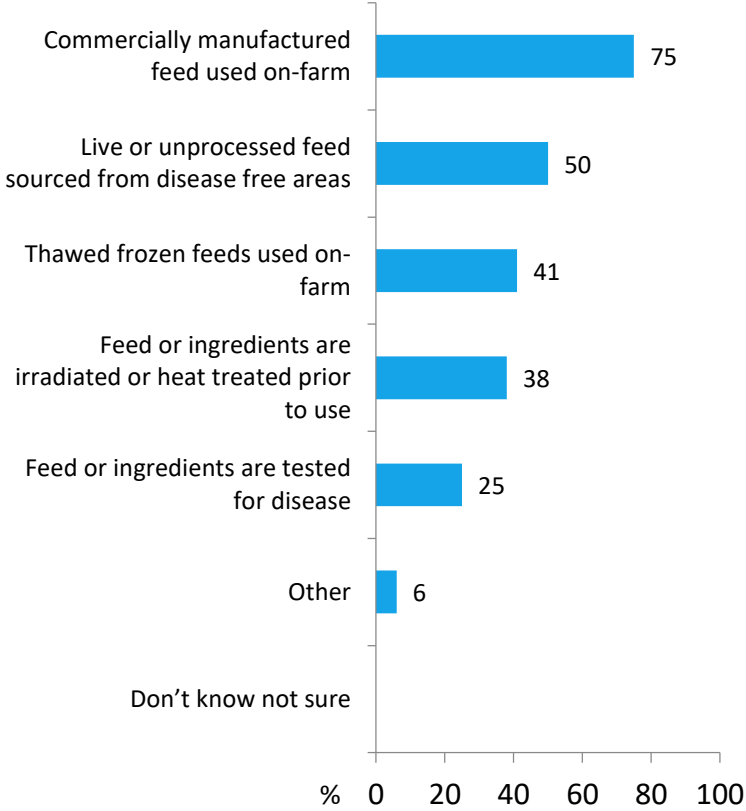
Animal and feed management tools in place on the farm

Almost all (94%) claim to consider disease risk when moving animals, and to remove sick or dead animals quickly and dispose of appropriately. 75% use commercially manufactured feed and 50% use live or unprocessed feed from disease-free areas. However, there are some animal and feed management tools that are not used by many farms.

Animal management tools in place



Feed management tools in place

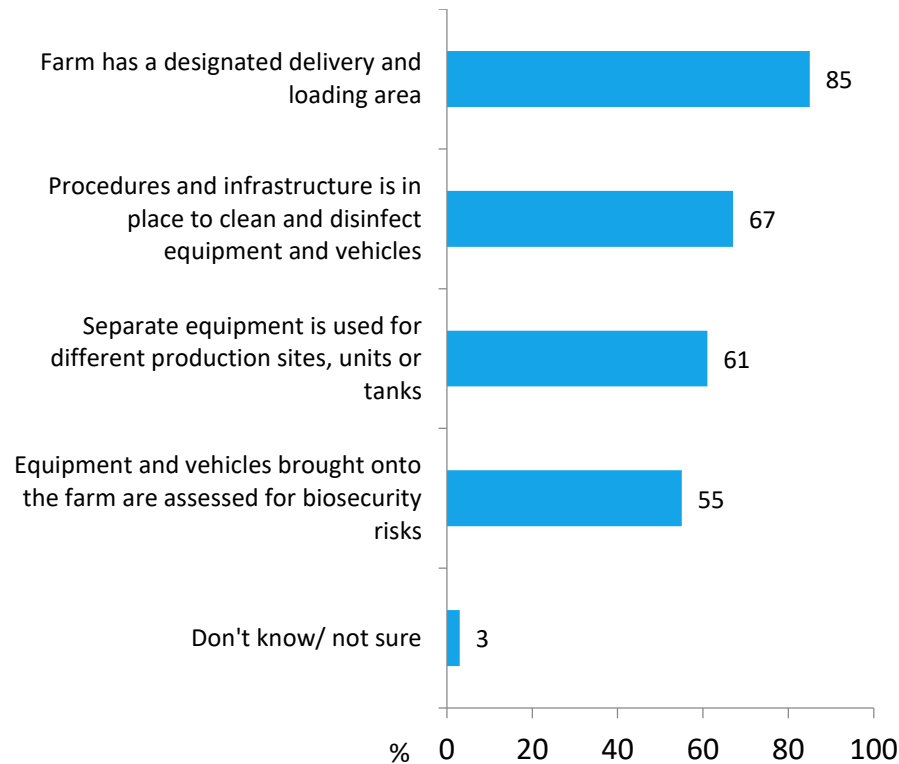


QD5. Which of the following *animal* management practices do you currently have in place on your farm?
QD6. Which of the following *feed* management practices do you currently have in place on your farm?
Base: For both questions: Those who own, manage, or responsible for biosecurity on a farm n=39

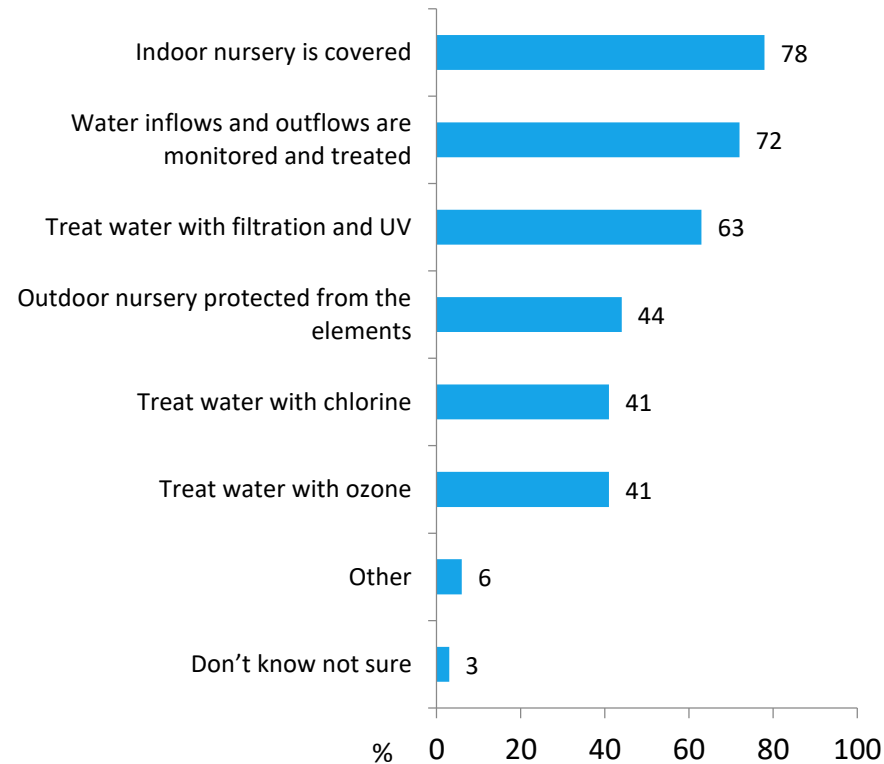
Vehicle/equipment and water management tools and in place on the farm

A majority (85%) of farms have a designated delivery and loading area and 67% have procedures to clean and disinfect equipment and vehicles. Indoor nurseries are covered in 78% of farms and water inflows and outflows are monitored and treated in 72% of farms. But again there are a number of tools not used by many farms.

Vehicle and equipment management tools in place



Water management tools in place



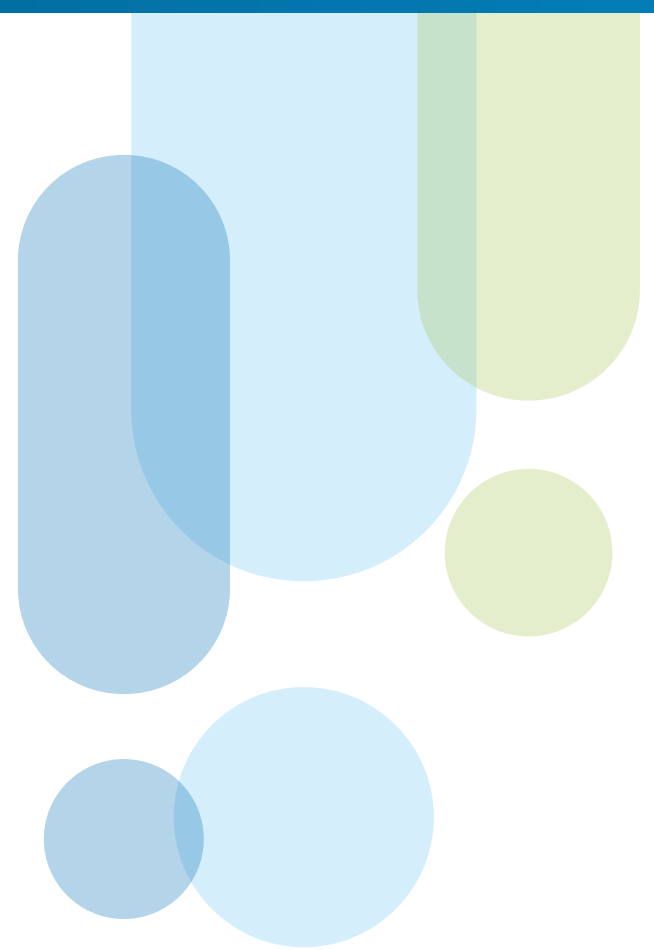
“[A biosecurity plan is] the best protection that we can do for ourselves.”

But... “It adds cost to the business and we are only as strong as the weakest link if others don’t manage biosecurity well.”

And... “It’s not required by law...there is too much red tape out there we don’t need any more.”



Biosecurity plans



What do the terms ‘biosecurity’ and ‘biosecurity plan’ mean to you?

Most people (38%) associated the terms ‘biosecurity’ and ‘biosecurity plan’ with preventing the spread of disease, and 28% associated the terms with protecting the business and its future.

	%
Prevent the spread of disease	38
Protecting the business and its future	28
Having a process/system in place to prevent or manage the outbreak of disease	13
Management of risk [risk not stated]	6
Insurance	6
Other	25

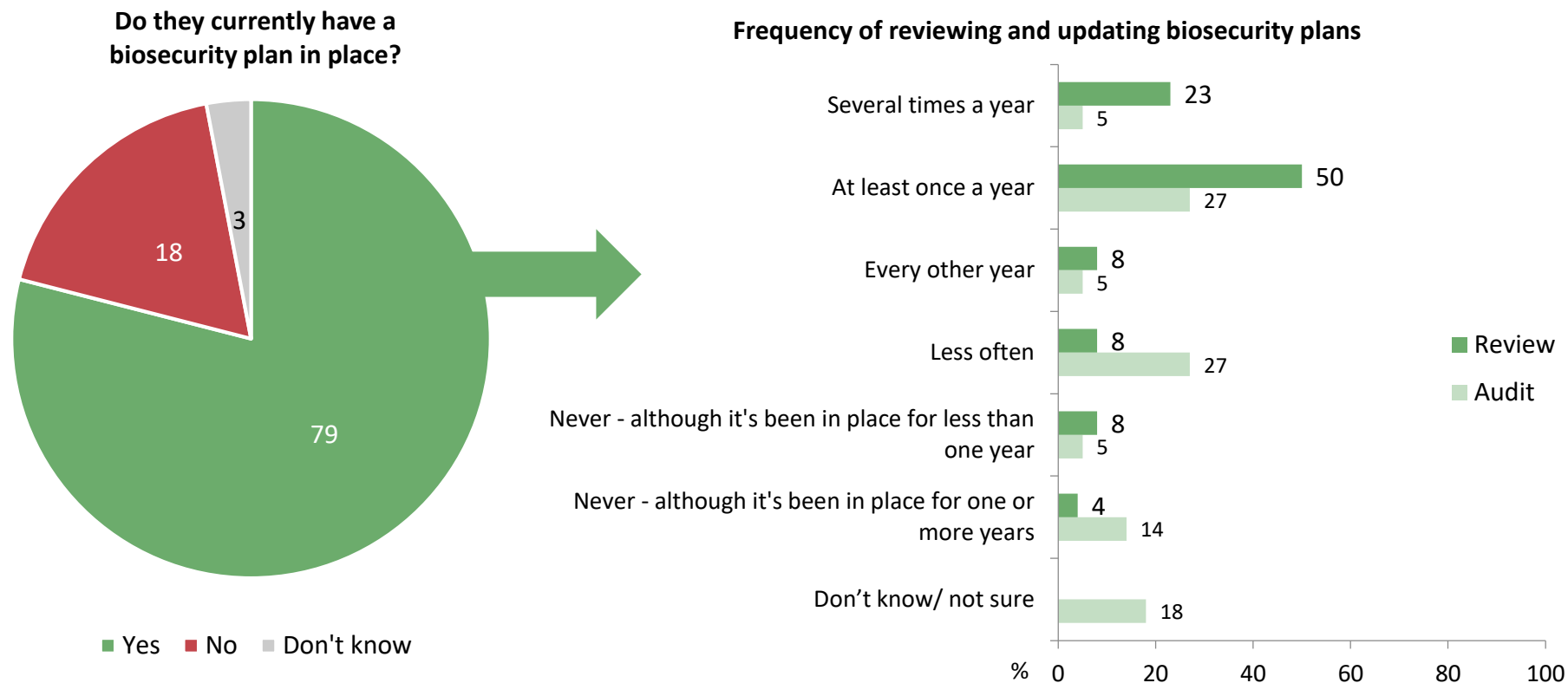
“Maintaining an environment where the risk of disease are kept to a minimum by preventative measures.”

“A lot of paperwork which to me is common sense...the rest is over the top.”

“It’s just so that staff and people know what to do in the event of a biosecurity hazard.”

Biosecurity plan in place on farm and frequency of reviewing and updating the plan

The majority (79%) claim to have a biosecurity plan in place for their farm and of these, nearly three-quarters (73%) are reviewing and updating it at least once a year or more frequently. In contrast, 20% are reviewing and updating every other year or less often or have never done so. Approximately 1 in three (32%) are having their plan audited at least once a year or more frequently; 14% have never had their plan audited despite it being in place for one or more years.



QE2. Do you currently have a biosecurity plan in place for your farm/s? *Base: Those who own, manage, or responsible for biosecurity on a farm n=39*

QE3. With your biosecurity plan, how often do you ... (a) Review and update; (b) Have it audited? *Base: Those who have a plan n=31*

40

Advantages and disadvantages of having a biosecurity plan and reasons for not having one

More than half (56%) of respondents saw the main advantage of having a biosecurity plan to be around procedure – ensuring everything that needed to be done was listed and could be referred to. 40% said the plan provided security. Disadvantages centred around time and cost and those who didn't have a plan felt it unnecessary.

Main advantages of having a biosecurity plan	%
Procedural	56
Security against disease for self and industry	40
Identify and manage risks	24
Training	8
Other	8

"That's the best protection that we can do for ourselves."

"It's not required by law, there is too much red tape out there we don't need any more."

Main disadvantages of having a biosecurity plan	%
Ongoing management of the plan	27
Time consuming	23
Ensuring others understand and implement plans	19
Costs involved	19
No disadvantages	19

"It adds cost to the business and we are only as strong as the weakest link if others don't manage biosecurity well."

Reasons for not having a biosecurity plan

- Having other plans/ procedures in place
- Don't need it/ Not necessary
- In the process of getting one done

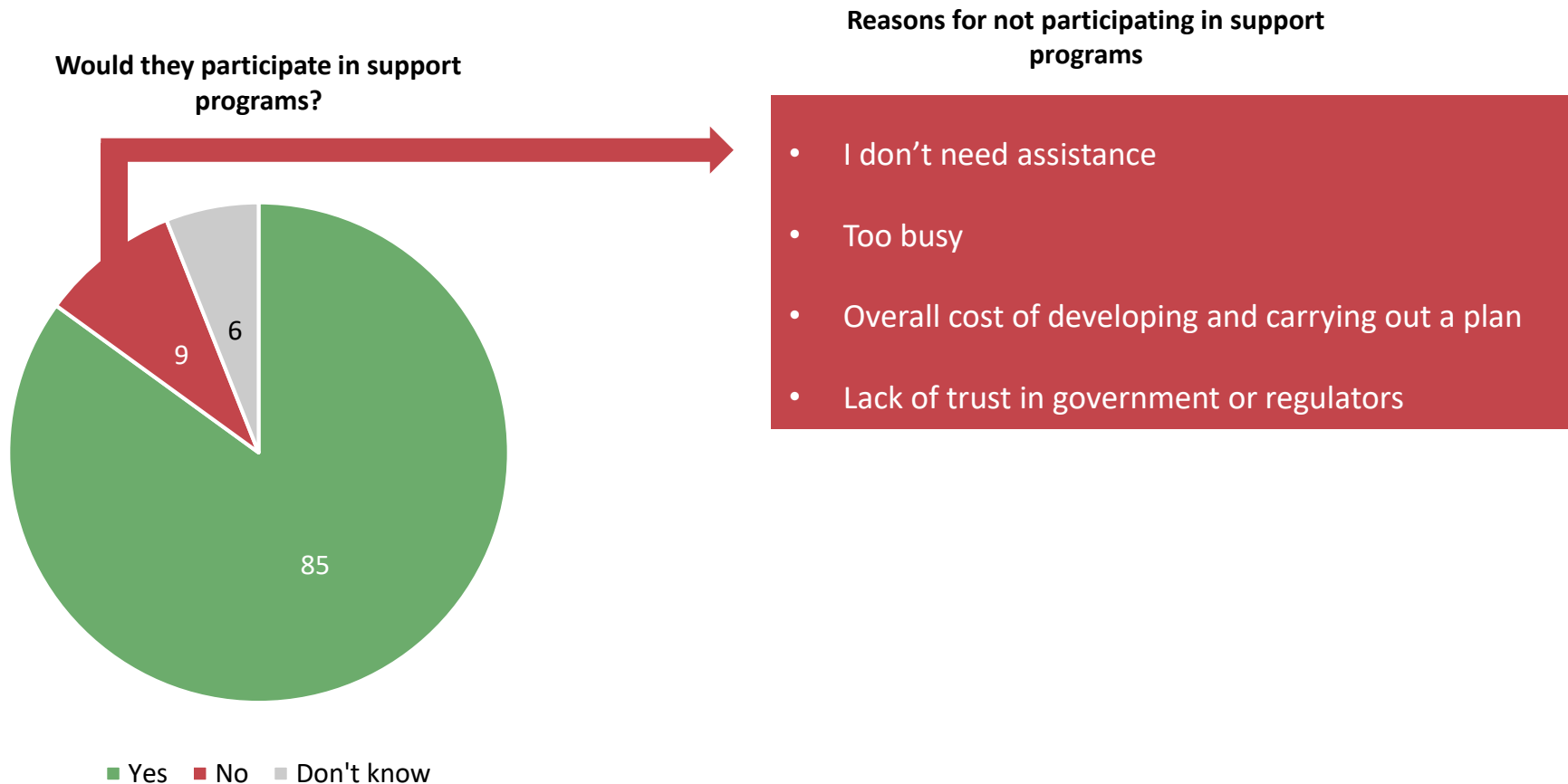
QE4a. What are the main advantages of having a biosecurity plan? *Base: Have a biosecurity plan n=31*

QE4b. And what are the main disadvantages, challenges or issues of having a biosecurity plan? *Base: Have a biosecurity plan n=31*

QE5. And why is it that you don't have a biosecurity plan? What has stopped you from having one? *Base: Do not have a plan n=7*

Would they participation in support programs and reasons why they wouldn't

With just such a small number of farms stating that they would not participate, it is difficult to ascertain specific barriers. The positive is that most (85%) would participate in supports programs.

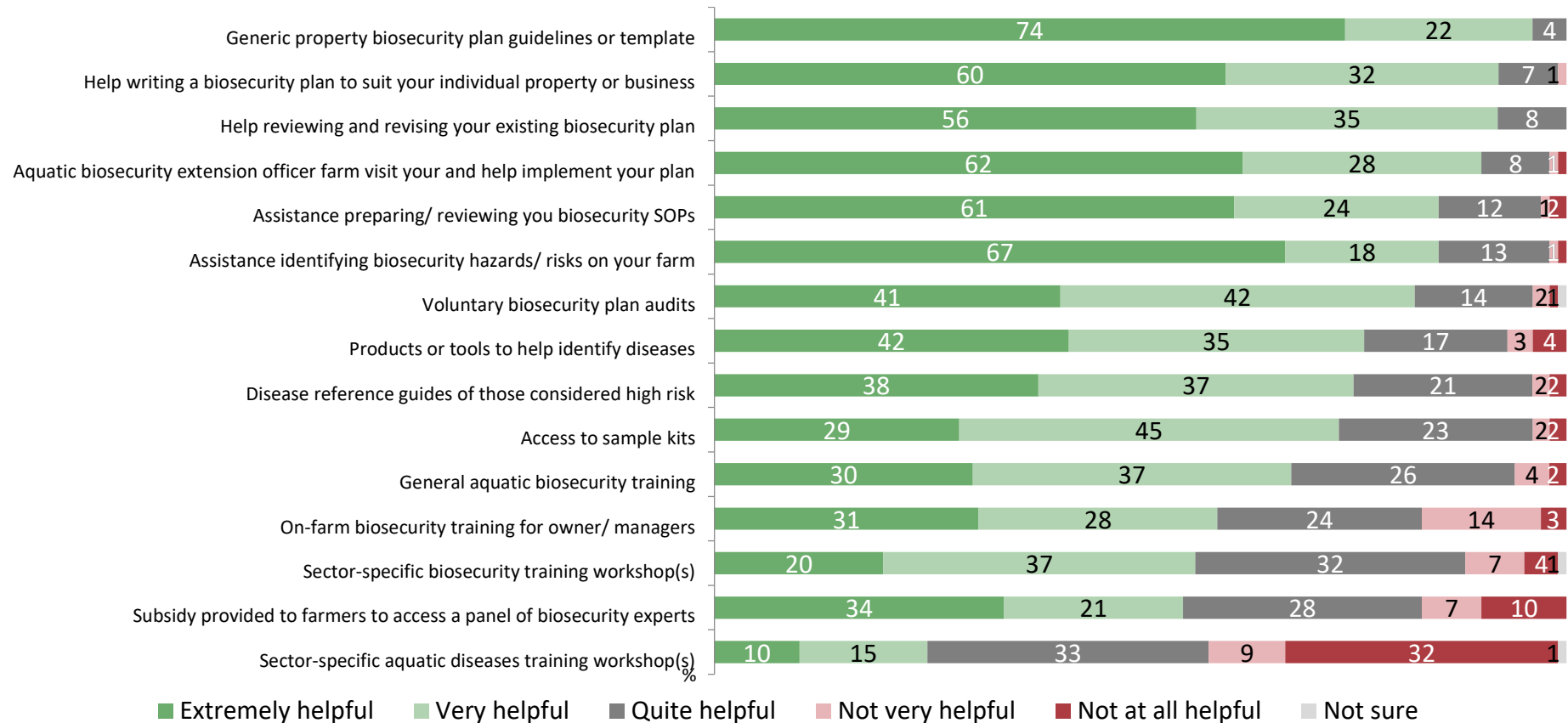


QE6. Would you participate in a support program to help you develop and implement a biosecurity plan for your farm/s? *Base: Those who own, manage, or responsible for biosecurity on a farm n=39*

QE7. Why not? *Base: Those who said they wouldn't participate in the support program = 4*

Support for developing and reviewing a biosecurity plan

Almost all the proposed support tools were of interest to most or many of the farms — in particular generic property biosecurity plan guidelines or templates, help writing a plan to suit the individual property or business and in reviewing the existing plan, a visit by a biosecurity extension officer to help implement the plan and assistance with SOPs and identifying risks. The least popular was training and particularly sector-specific aquatic disease trainings workshop(s).



QE8. On a scale of 1 to 5, where 1 is not at all helpful and 5 is extremely helpful, how helpful would each of the following support tools be in helping you develop or review a biosecurity plan for your farm/s, should you wish to do so?

Base: Those who own, manage, or responsible for biosecurity on a farm n=39

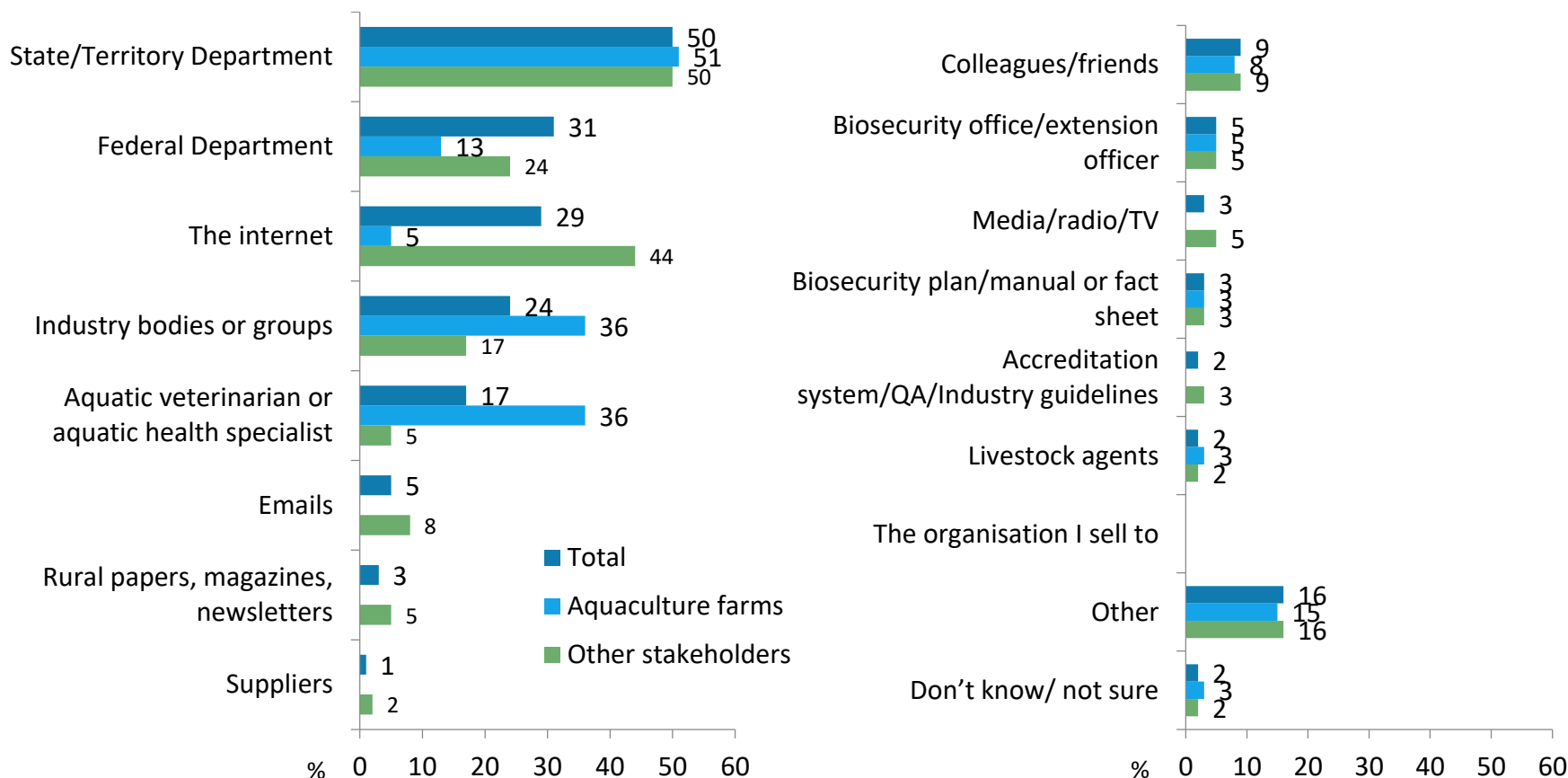
Half of the respondents indicated they obtained information and advice from their relevant state/territory department. Farms were also likely to look to industry bodies and groups and vets/health specialists but unlikely to use the internet (whereas the internet is an important source for other stakeholders)

8

Information sources and support

How participants obtain information and advice on biosecurity matters

Half of the respondents indicated they obtained information and advice from their relevant state/territory department. Farms were also likely to look to industry bodies and groups and vets/health specialists (both 36%) and non-farms to the internet (44%). Farms were unlikely to use the internet (5%).



How participants obtain information and advice on biosecurity matters (cont.)

Which industry bodies or groups? (Total – 24%, Farms – 36%, Other – 17%)

Australian Prawn Farmers Association

Oyster Farmers

Fish Health

CSIRO

Pearl Producers Association / International Pearling Industry

Sunfish

Animal Health Australia

Which site/s on the internet? (Total – 29%, Farms – 5%, Other – 44%)

Google

Science and environment sites

Dept Agriculture and Water Resources

Food Authority

Dept Primary Industry

Industry website

AusVetPlan

Which newsletters? (Total – 3%, Farms – 0%, Other – 5%)

Dept Primary Industry biosecurity newsletter

FRDC Magazine

Qld Fisheries

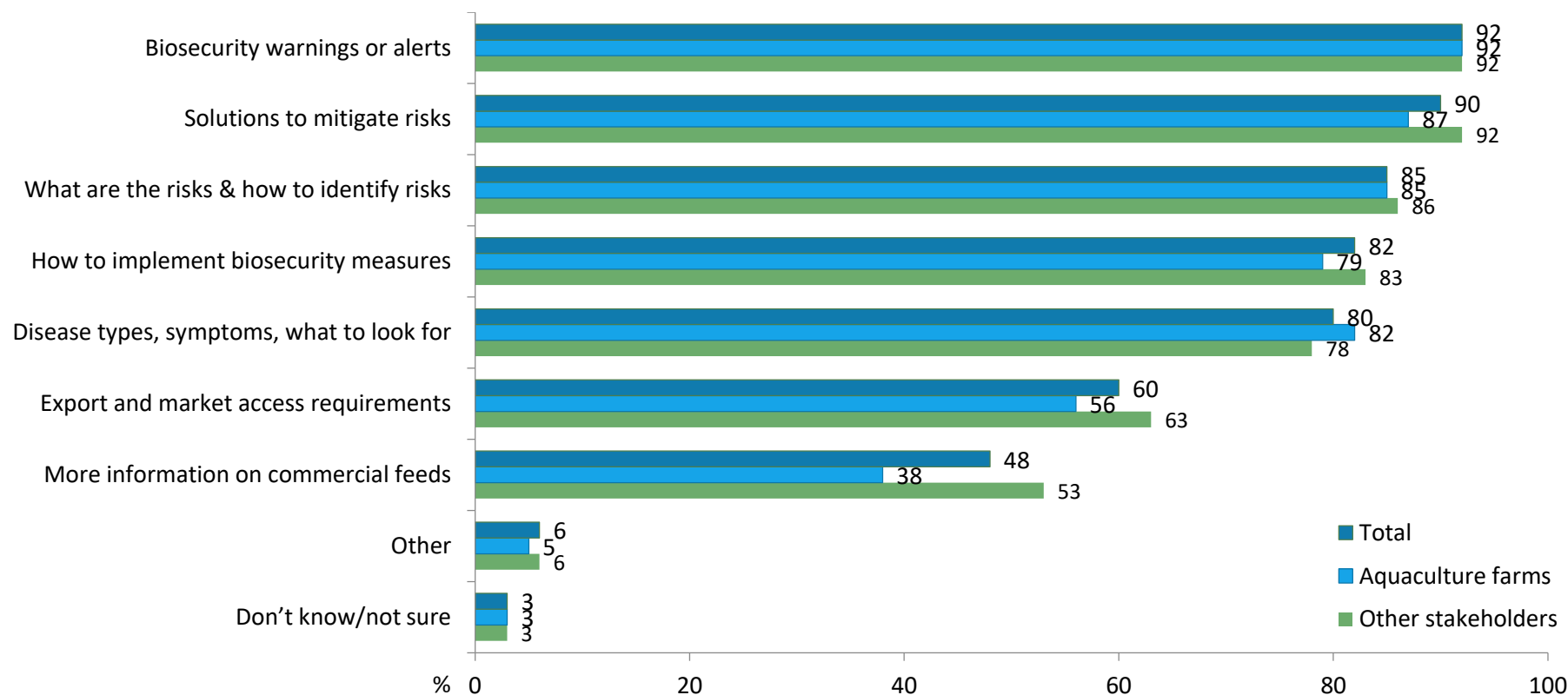
From what sources are the emails? (Total – 5%, Farms – 0%, Other – 8%)

From scientists

E9b. Where do you typically obtain information and advice for animal health, aquatic animal protection, diseases, and other biosecurity matters? *Base: Total sample n=103*

Which specific information about biosecurity do participants feel they need to access

Respondents were keen to have more information on most aspects of biosecurity, and farms and stakeholders had similar priorities. 92% of respondents wanted to know more about biosecurity warnings and alerts, 90% on solutions to mitigate risks, and 85% on risks and how to identify them. There was less interest in export and market access requirements but still over half of farms (56%) and other stakeholders (63%) were interested and similarly while fewer were interested in more information on commercial feeds there was still a significant proportion who were.



E10. Which of the following specific information or topics about biosecurity do you feel you need to be able to access?

Base: Total sample n=103, Farms n=39, Stakeholders n=64



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