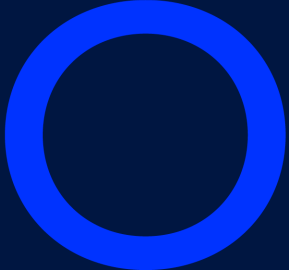


Growers' attitudes and practices towards area-wide management of weeds in the Riverina



INTERVIEW AND SURVEY FINDINGS

Gina Hawkes, Sonia Graham, Kaitlyn Height, Rebecca Campbell, Silja Schrader, Louise Blessington, Scott McKinnon



UNIVERSITY
OF WOLLONGONG
AUSTRALIA



Introduction

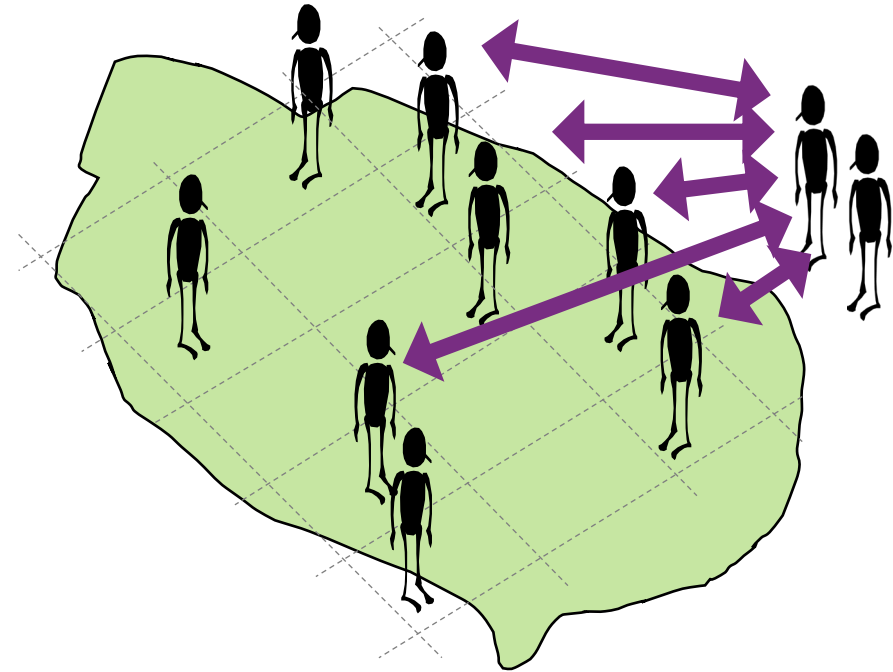
In 2020-2021 growers, agronomists, extension officers and public land managers were interviewed and surveyed.

The aim of the interviews was to:

- learn about attitudes towards AWM of weeds
- identify factors that explain participation in individual and AWM of weeds
- identify social costs and benefits of AWM of weeds

The aim of the survey was to collect data on:

- socio-economic characteristics
- the nature of farming operations
- weed management concerns and beliefs
- individual and collective weed management practices



Methods

Intensive interviews:

30 from Riverina (84 total)

Growers	14 participants
---------	-----------------

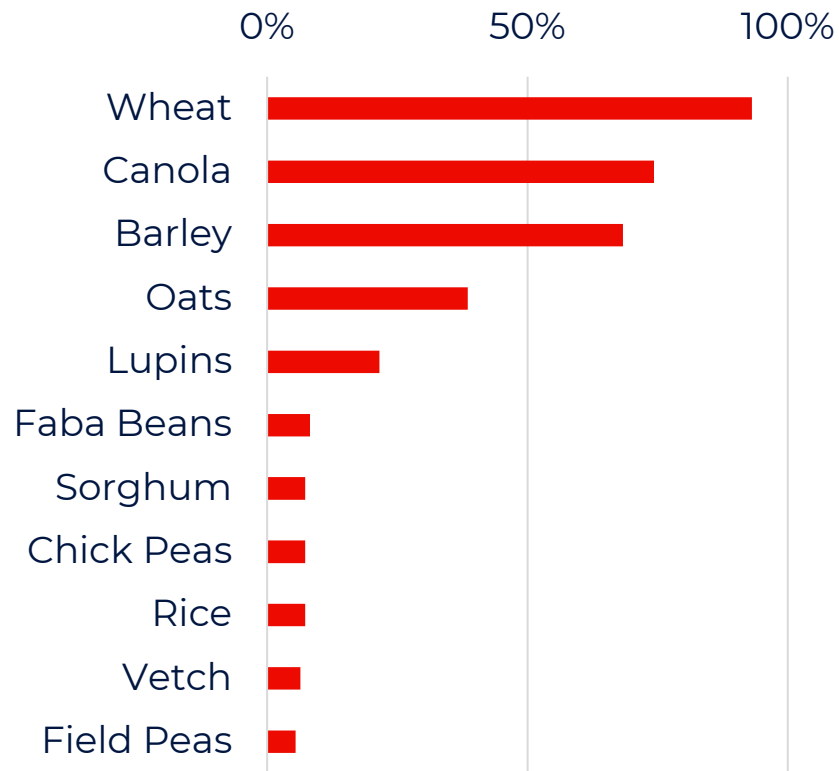
Advisers	10 participants
----------	-----------------

Government	6 participants
------------	----------------

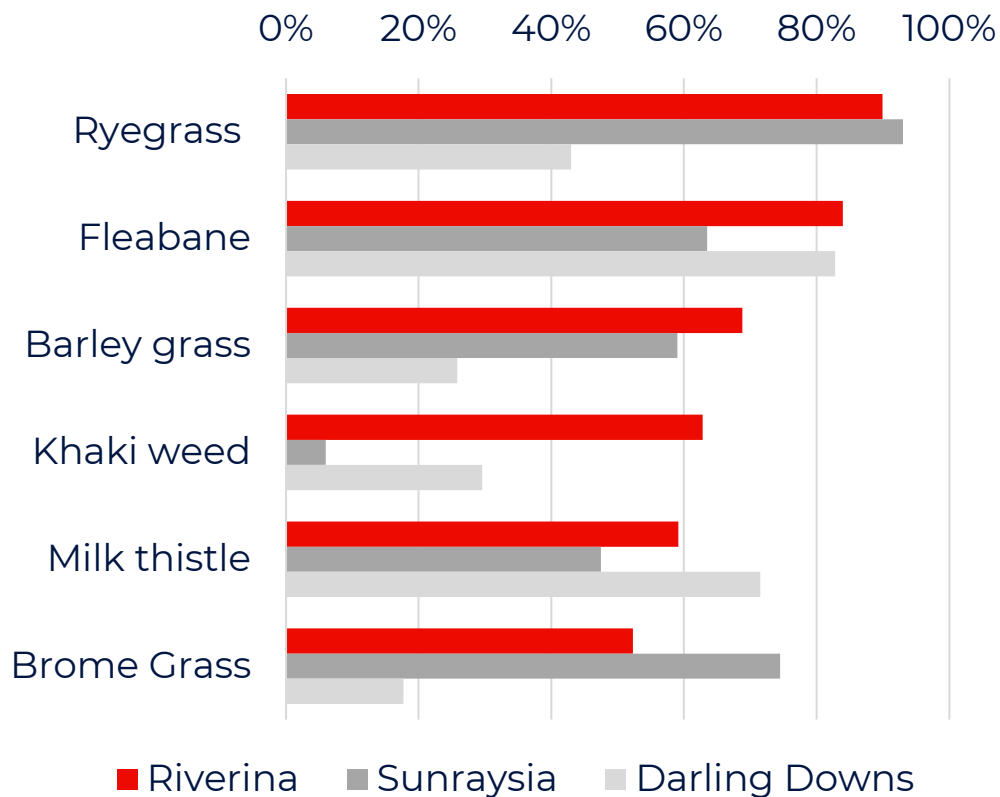
Survey:

218 growers from Riverina
(604 total – 200 Sunraysia, 186
Darling Downs)

Main crops grown by Riverina growers surveyed



Weeds of most concern in survey

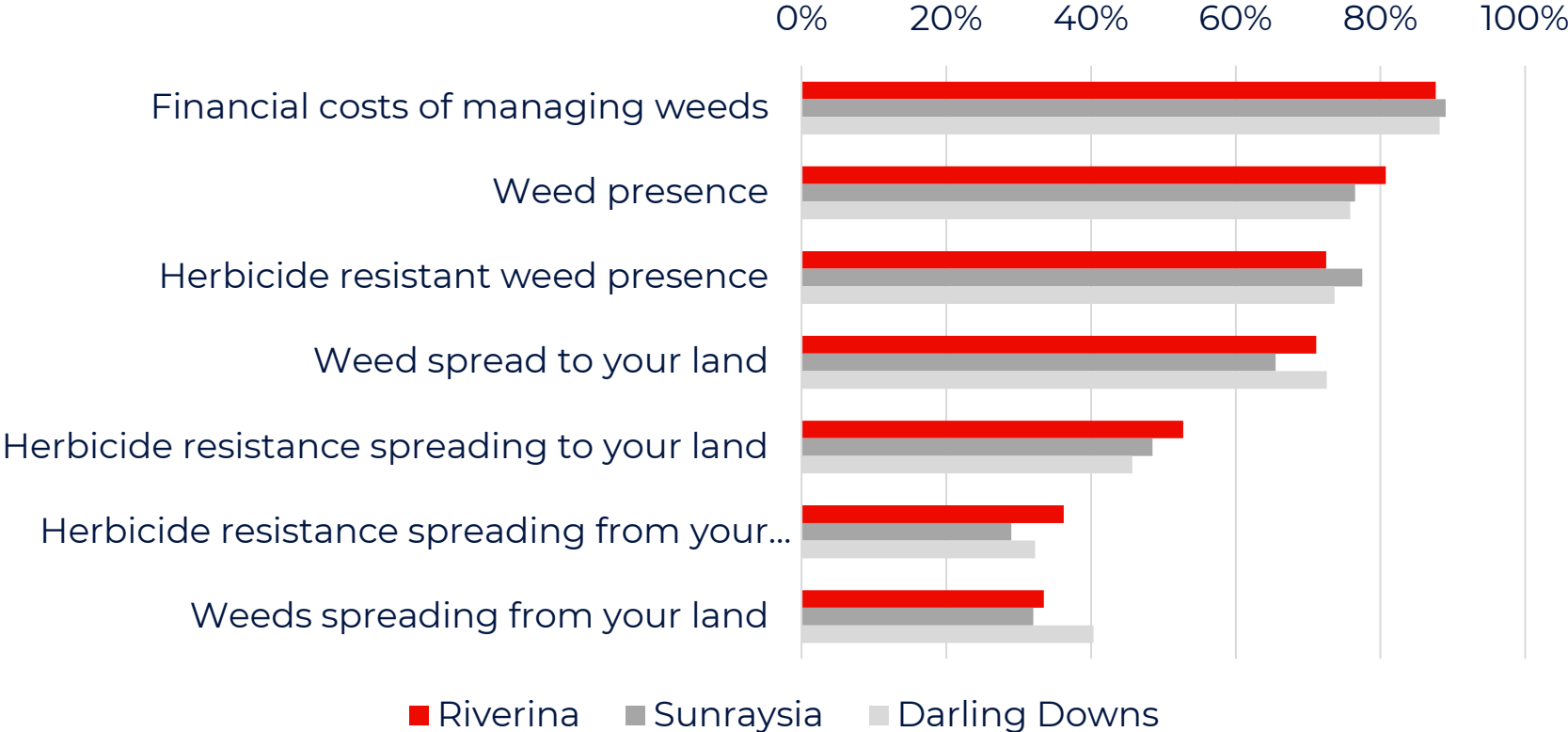


"You rarely find ryegrass that isn't Roundup resistant" (Grower)

"fleabane was never a weed 20-30 years ago and whereas probably in the last ten it's been a major summer fallow weed" (Adviser)

"Barley grass is another nuisance... when it goes to the head it's a problem with sheep because it sticks into their wool." (Grower)

Growers concerned or very concerned about weed issues

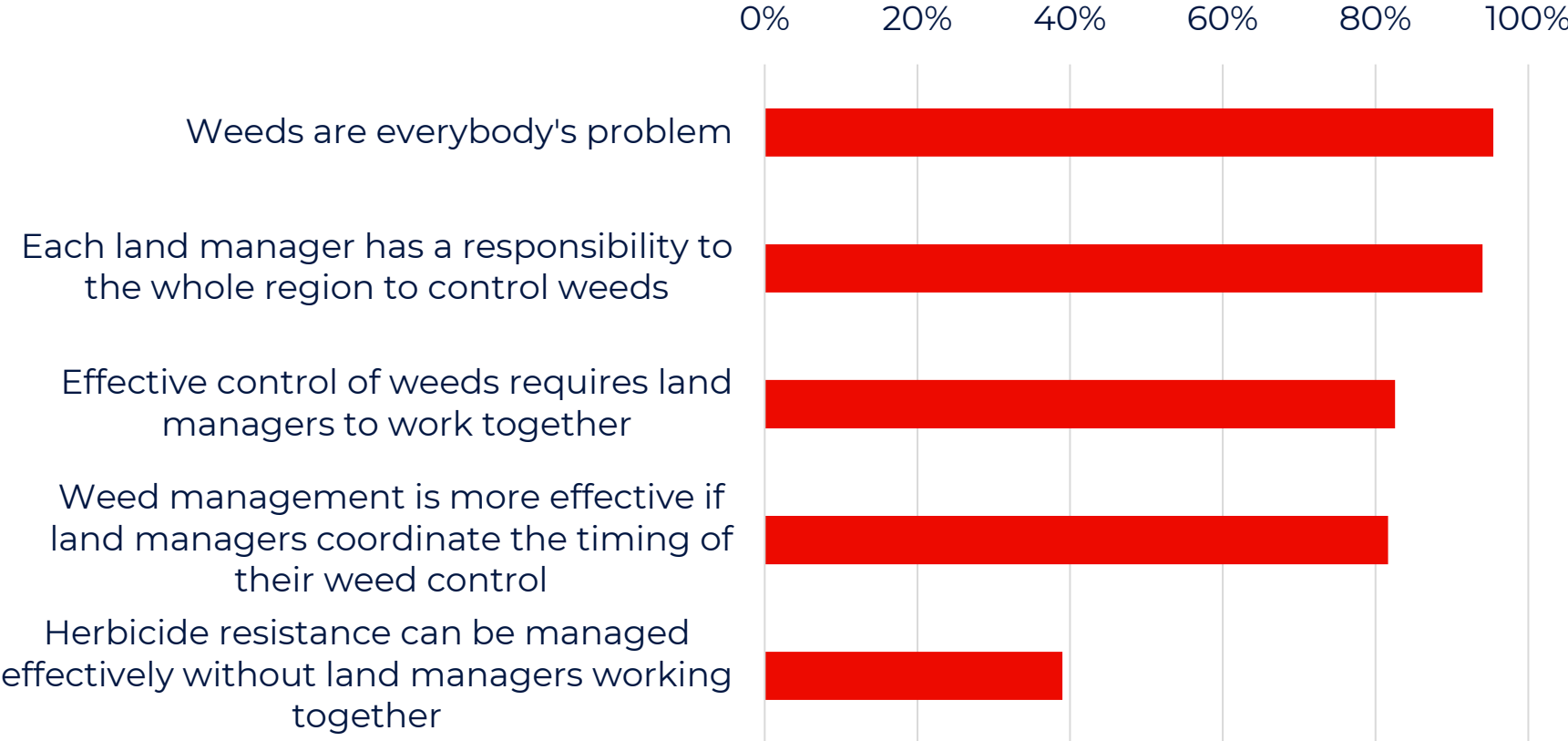


Grower agreement about AWM

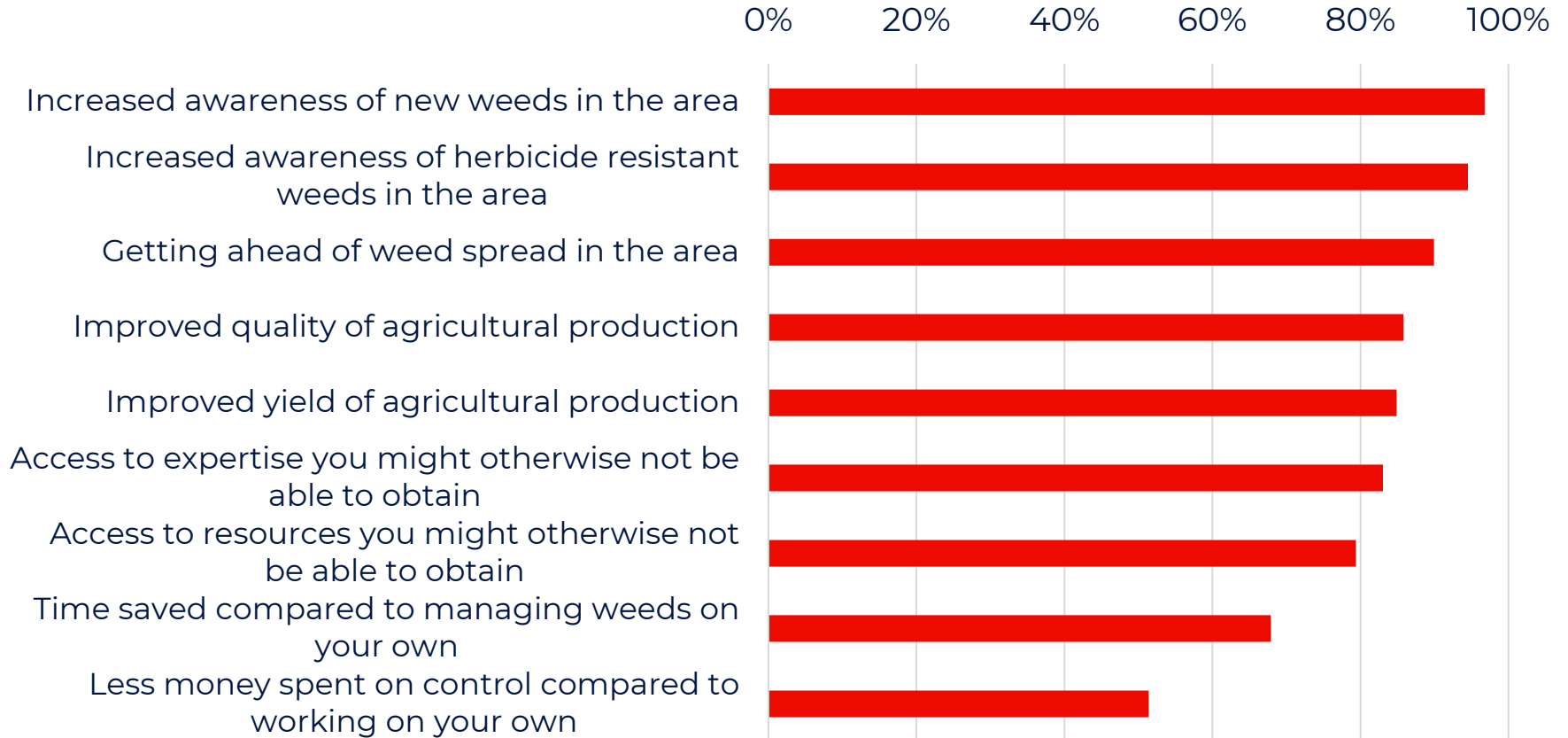
Belief in the importance of working together

“wind borne seed spread can be an issue too, so if you’ve got a neighbour who’s got fence lines and areas of high weed population and things like mustard weed, and just difficult to kill weeds, particularly in a broadleaf sense. So this is where I think the area-wide management strategy is a good thing because if we can all work together, so in terms of machinery hygiene, keeping our boundaries and in-field stuff controlled to a certain level, we can prevent cross boundary spread” (Grower)

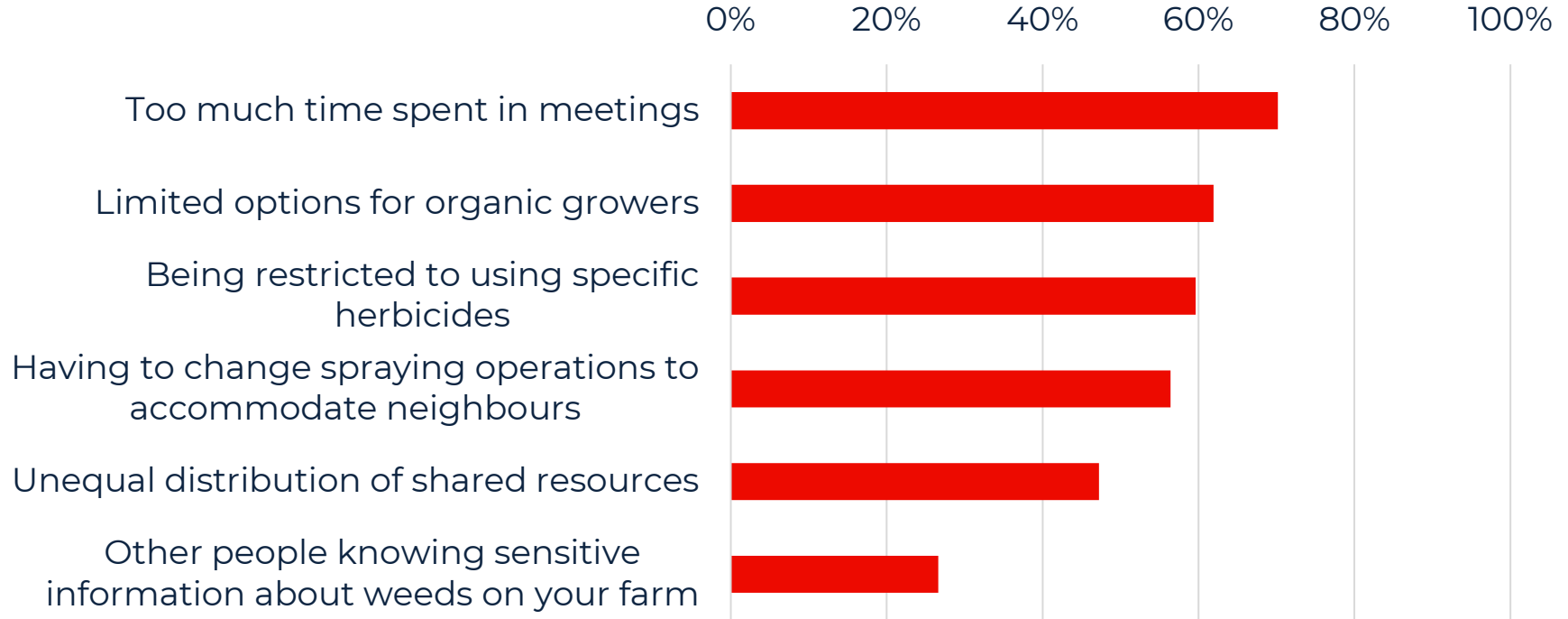
Grower agreement about AWM



Grower agreement benefits of AWM



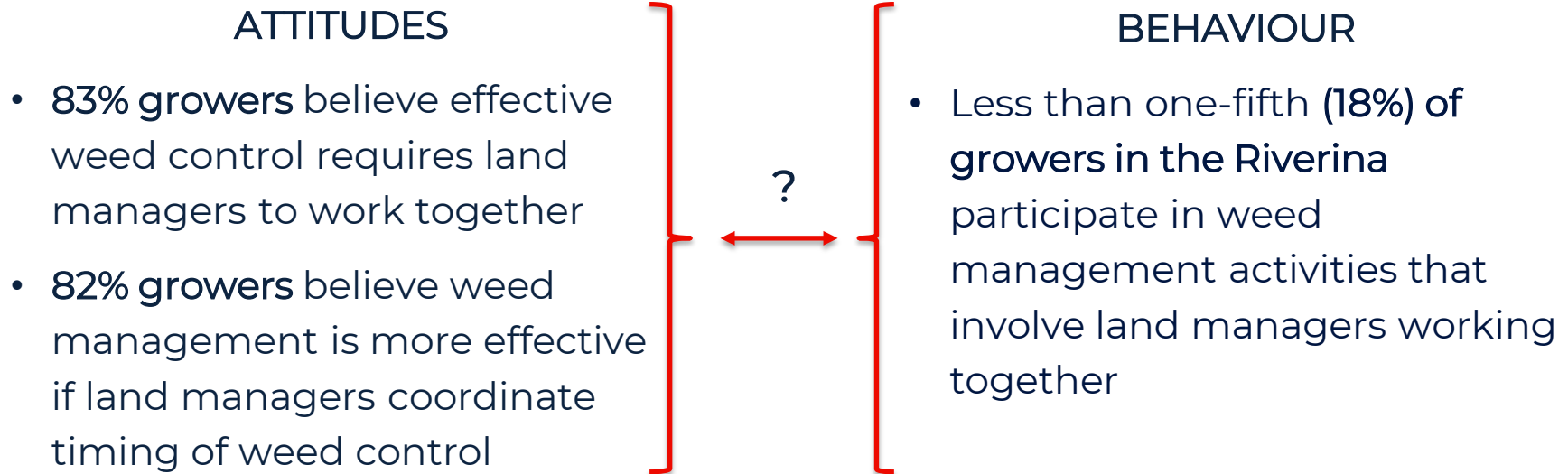
Grower agreement about costs of AWM



“There could be a number of people that just don’t like to get together, so they’re not involved. But they could be encouraged to be involved...we probably ask a lot of growers’ time to go to meetings. So, they’ve got to go and get something out of it” (Adviser)

There is an attitude-behaviour gap for AWM of weeds

Growers believe collective weed management is more effective but few collaborate



There are several factors that make growers more likely to collaborate

Area-wide management of weeds

Little consensus in interviews about what the term means

1. Geographic Area

- Nearly state-wide
- Valley
- Floodplain
- Local govt area
- Irrigation area
- Common areas
- Group of farms
- Whole farm
- Large-scale area
- Big area
- Whole area
- Broad location

2. Who and What

- “everyone”
- “everybody”
- “all”
- “working together”
- Other key terms included “collaboration”, “cooperation” and “coordination”.

3. When

- Synchronised timing: “same thing at the same time”
- Multi-year to multi-decadal

4. Which Weeds

- Ryegrass
- Silverleaf nightshade
- Fleabane

Factors that make growers more likely to collaborate

Factor	Riverina growers
Concern about herbicide resistance spreading to neighbouring land	36% concerned
Awareness that other land managers work together on weeds	39% aware
Discuss weed management with neighbours	27% discuss weeds with neighbours
Receive external support for weed management, e.g. government funding	4% receive support
Likely to attend meetings on managing local weed issues	74% likely
Likely to share information on weeds with other land managers	87% likely
Likely to work with others on weed management	53% likely

Greater uptake of AWM starts with good neighbours

There are many ways to encourage greater collaboration

1. Organise short meetings on **local** weed issues that are **achievable**
2. Highlight the **mobility of herbicide resistance**
(e.g. results of the genetic analysis and/or offer to provide HR testing)
3. Encourage growers to **talk to their neighbours** about weed management
4. Provide **funding** for collaborative weed management
5. Encourage **agronomists** to take the lead on linking growers
6. **Start** with a **small** group of dedicated landholders, document the benefits of AWM then scale up

Fleabane is ideal candidate for an AWM program

Fleabane is locally mobile, building herbicide resistance and of widespread concern

In both the stakeholder interviews and grower survey, fleabane was frequently identified as a weed of concern.

- 60% interviewees listed fleabane as one of the top weeds of most concern to them
- 84% Riverina growers surveyed identified fleabane as a weed of concern

Widespread concern about fleabane as well as *regionally-contained HR genetic diversity* makes it a useful weed to galvanise area-wide management programs within and across regions.

U

Thank you

Contact: ghawkes@uow.edu.au



UNIVERSITY
OF WOLLONGONG
AUSTRALIA

W

