



---

# QUALITATIVE REPORT

on the 2023-24 cotton season:  
A survey of consultants





---

# CONTENTS

## CONTENTS

Purpose.  
Coverage.  
Methodology.  
Data Collation.  
Acknowledgment.  
Disclaimer.

### 4 THE CONSULTANTS & THEIR CLIENTS

About the Consultants.  
About the Clients.

### 10 ON-FARM PRACTICES & ATTITUDES

Coverage.  
2023-24 Season.  
Planting.  
Farming System.  
Crop Protection.  
Weeds.  
Spray application.  
Defoliation.  
Nutrition Management.  
Nutrition.  
Yield Impact.

### 28 SUSTAINABILITY

### 30 APPENDICES

Appendix 1  
Appendix 2  
Appendix 3

## PURPOSE


The Cotton Research and Development Corporation (CRDC) commissions this survey each year to provide current and longitudinal knowledge of on-farm practices and attitudes, to aid the research, development and extension effort within the Australian cotton industry.

## COVERAGE

Data was collected by Crop Consultants Australia Inc. (CCA) from 54 cotton consultants, who answered most or all of the questions about their own practices and attitudes, as well as those of their grower clients.

The consultants represented 328 cotton growers and covered 202,774 hectares: 37% of the Australian cotton production area for the 2023-24 season (not adjusted for row spacing). This is based on the 2023-24 production figure of 473,887 hectares (Cotton Australia).

## METHODOLOGY

The survey consisted of 64 quantitative and qualitative questions, which sought to draw out both the details of actual agronomic practices and consultants' views of those practices. It was conducted from June to September 2024, with questions referring to the 2023-24 cotton season. Questions that collected data on clients or areas were only made available to one participant from a consultancy to avoid duplication. The number of consultants who responded to each question is denoted beside the  symbol.

## DATA COLLATION

The online Cvent survey program ([www.cvent.com](http://www.cvent.com)) was used to compile the data. Interpretations are up to the user.

## ACKNOWLEDGMENT

Thank you to the consultants who took the time and effort to complete this survey. The data in this survey provides valuable information for researchers and industry organisations in planning and carrying out projects. Thank you to Crop Consultants Australia and Black Canvas graphic design for the compilation of this report.

## DISCLAIMER

The Cotton Research and Development Corporation (CRDC) provides the information in this publication to assist understanding of the agronomic performance of the Australian cotton industry. CRDC accepts no responsibility or liability for the accuracy or currency of the information contained in this publication, nor for any loss or damage caused by reliance on the information and management approaches surveyed. While the 2023-24 survey contains information that should be of value to extension officers and researchers in defining future industry needs and as an information source in seeking to improve industry management practices, users of this publication must form their own judgement about the information it contains.

Crop Consultants Australia took all care in the gathering and collating of the data; however, the data was provided by individual consultants and agronomists and therefore is subject to associated constraints.



# THE CONSULTANTS AND THEIR CLIENTS

## ABOUT THE CONSULTANTS

1

Are you completing the survey on behalf of the business or business unit?\*

54 respondents

**\*Note:** 34 consultants completed the survey on behalf of their business or business unit, which involved completing the specific questions relating to staff, hectares and number of clients. 20 consultants completed the survey questions only relating to individual practices and attitudes.

2

Which of the following best describes your employment as a consultant?

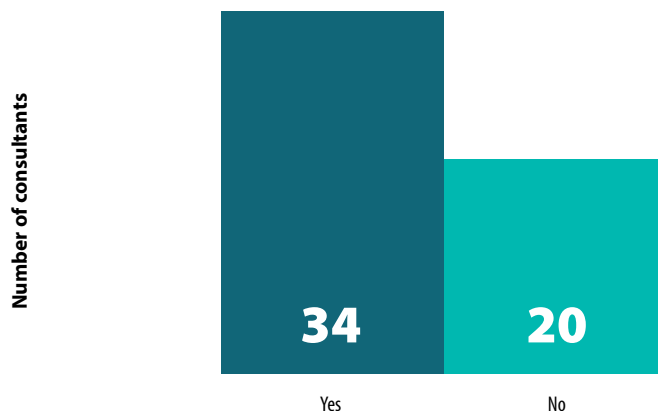
52 respondents

3

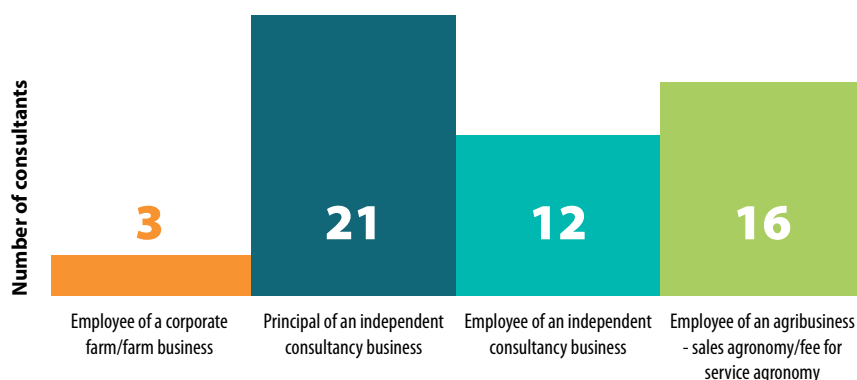
For how many seasons have you worked consulting in cotton?

52 respondents

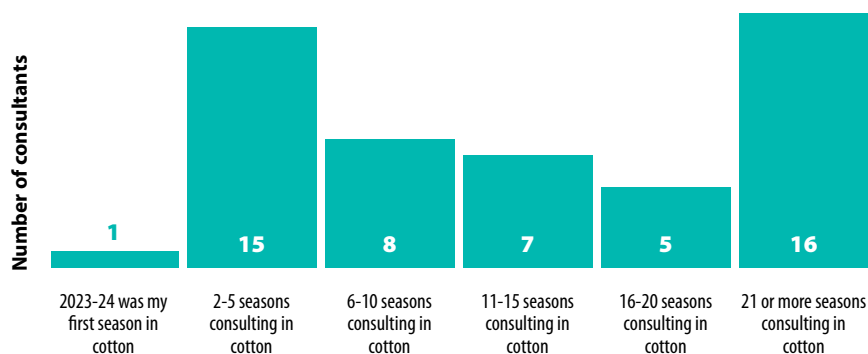
PRIMARY BUSINESS PERSON COMPLETING SURVEY



NATURE OF CONSULTANCY



NUMBER OF SEASONS CONSULTING IN COTTON



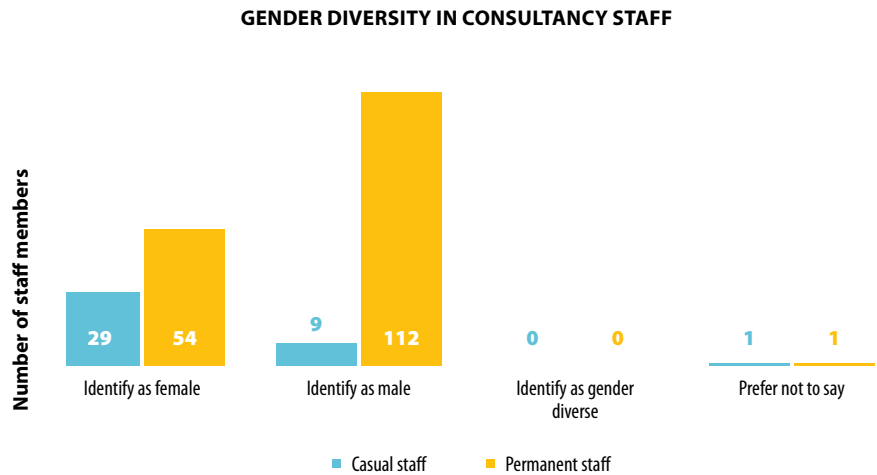


# THE CONSULTANTS AND THEIR CLIENTS

4

What was the gender diversity of the permanent and casual staff employed in your business (including yourself) in January 2024?

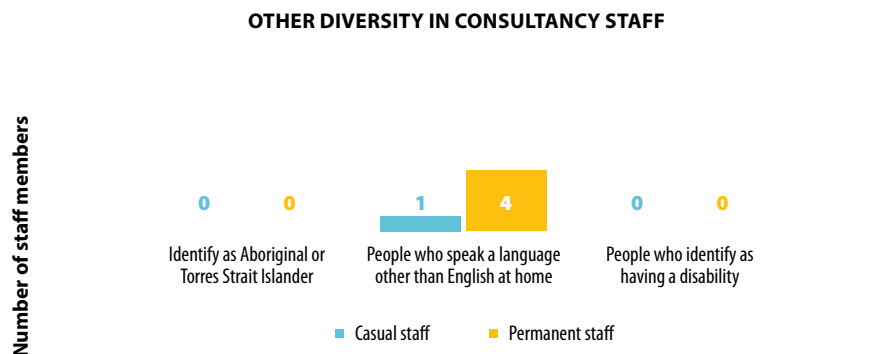
46 respondents



5

How many of the permanent and casual staff employed in your business (including yourself) in January 2024 identify as being in the following demographic groups?

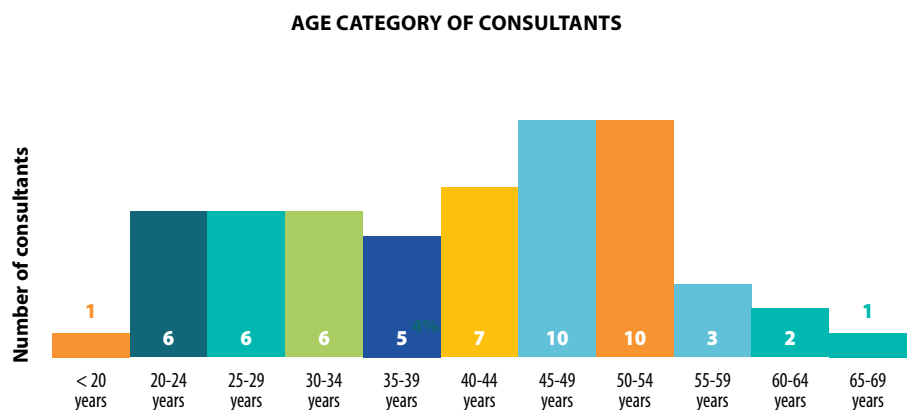
27 respondents



6

What age category do you belong to?

52 respondents





# THE CONSULTANTS AND THEIR CLIENTS

7

Please list out any learnings or lessons that you have gained in the 2023-24 season.

52 respondents

**\*Note:** these responses are verbatim as they are provided via the survey.

## Conditions and weather

Each season we prepare and submit our crops to the season and the weather will undoubtedly have the final say in the boll weights and yields.

Aiming to have more of spread in planting date to spread risk of adverse weather conditions.

Another different season: No two seasons are the same: Still that every season is different.

There is no such thing as a perfect season. Weather forecasts will always be just a guide.

That every season is still different in some way shape or form. Timing of Plant Growth Regulators.

Reinforced every season is different. Irrigation timing is more important for some varieties than others.

High humidity combined with high temps has had a huge impact on cotton boll factors.

The effect season length can have on yield: Effect of season on crop growth and physiology.

Very noticeable in our region of the Upper Namoi - The very large effect and difference Day Degrees has on cotton growth and yield when comparing this summer gone with the previous cotton season.

Day degrees Jan-March very favourable to yield and quality in southern NSW.

Does humidity play more of a role in the crop from a fruit loss perspective then we think i.e. crop with 2 waters yielded the same as a crop with 1 water?

Crop management during periods of excessively long hot and humid conditions, during peak flowering.

High relative humidity: Difficult to keep fruit load in humid environments; Prolonged high humidity negatively affects yields.

We dealt with a lot of humidity and rainfall this season, resulting in plant shedding lots of fruit. I learned that the crop canopy sensors can be used in these situations to provide confidence to length irrigation interval to reduce the chance of irrigating prior to rain.

Cotton really doesn't enjoy humidity for long periods at boll set/fill.

Gaining a better understanding of spray out and rates used based on climatic conditions.

Getting a large rainfall event during irrigation has severe water logging effects on the crop if you cannot get the water off quickly.

Cotton can recover well from a wet start.

The importance of growth management in a soft favourable season.

Growing cotton on after weather issues decreased yield potential worked well - although planting date needs to be on the earlier side.

Big challenge being bee safety and hives belonging to horticultural growers. Later season chemistry used for insects not suitable when bees are close by.

## People management

What the place of a mum in the field is and how to navigate the challenges young women have when being a consultant and being a mum.

Just because the season starts well, doesn't mean it will end well: Don't set sights on the end before the end arrives.

My first consulting year so basically everything.

Need to be on social media to attract young staff.

Having a successful team takes hard work, the little things count and keep the communication open and honest.

Setting a good example is important to reinforce good work ethic.

Eventually one gets tired of getting up at 4 am: I do not like humidity.

Being early in my career, it really is just about seeing decisions made on the ground and consolidating what I have learnt so far.



# THE CONSULTANTS AND THEIR CLIENTS

I had the chance to shadow other agronomists and see how they make decisions, and how that will inform my own agronomy decisions in seasons to come.

I found that I had improved my ability to practise and implement some autonomy within my role off the back of experience from prior seasons. Dealing with different challenges over the course of the season just gone, I have gained a lot of knowledge on what it takes to be a good mentor, so I look forward to that next phase of my career.

## In crop management

Get the basics right in the good seasons. Plant on time then add water and nitrogen.

Relevance of prior crop/close fields for IPM.

Fungicide timings and best practices for managing fungicide resistance.

Are mirids really as big of a problem as we think they are?

Thrip pressure varies considerably and should not be underestimated. Humidity effects on cavitation highlighted.

Green vegetable bug control is hard to achieve with soft chemistry.

Pegasus resistance is on the rise and will be aiming not to use it and rotate other chemistry if two spotted mite becomes an issue this year.

Resistance (Weeds and Mites, Insects) are still one of our biggest challenges going forward.

We need more, not fewer options (paraquat).

Population dynamics of pests are as important as pest & predator numbers on the day.

Heliothis when breeding up on weeds can take out small squares but will be controlled by the BT gene soon after.

Really focused on the use of Pix for boll setting and boll filling periods. It was found that a lot more Pix can be applied without have fruit shed then was thought previously.

No early (squaring) Pix application, despite vegetative growth.

Canopy management is very important in seasons with above average rainfall. Boll counts are a waste of time without weighing bolls. I would prefer not to use sledge when defoliating.

Gaining a better understanding of using Pix in canopy management: More growth regulator to be used.

Early Pix management and more applications. Mepiquat rates- probably should be using higher rates.

Don't apply mepiquat mid-season when square retention is very high.

Utilizing crop levers to get the best defoliation possible.

Read the plant and stick to the numbers for decisions on growth regulators and defoliant.

Get cotton picked before May.

The highest yielding irrigated varieties are also the highest yielding dryland varieties.

Management of XtendFlex cotton is very different to BT Cotton.

Need more nutrition in our older cropping soils; Land prep still a big-ticket item.

Red soil: complete ground prep then grow wheat and spray it out prior to planting cotton.

When trying to establish a back-to-back crop, don't hesitate to do a flush irrigation post planting if not 100% happy with seed placement.

There is no recipe to growing cotton in the North.

Lessons I've learned in the 23/24 season are:

- How to "grow-on cotton" in the NT
- Pix management not enough and too late
- row configuration trials
- planting population trials
- no NT wet season is the same
- soil constraints relating to acidity and cotton growth



# THE CONSULTANTS AND THEIR CLIENTS

## ABOUT THE CLIENTS

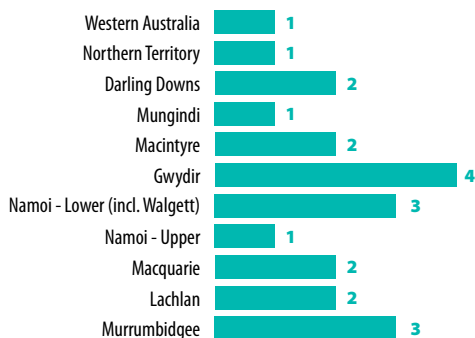
8

In which regions did you conduct the majority of your work in 2023/24? This question was only asked of those respondents that were **not** answering on behalf of their consultancy business.

 20 respondents

**\*Note:** Regions with no responses include North Queensland, Central Queensland, Wide Bay/Burnett/Lockyer, St George/Dirranbandi, Bourke and the Murray.

### REGIONS IN WHICH CONSULTANTS CONDUCT THE MAJORITY OF WORK



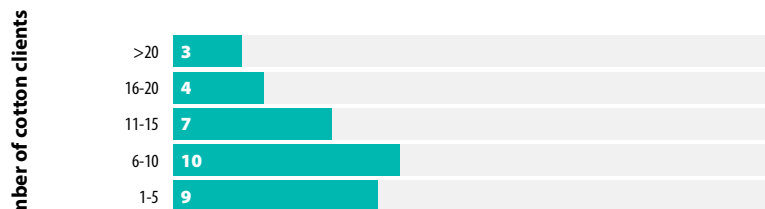
Number of consultants

9

How many cotton clients did the business (or business unit) service in 2023-24? This question was only asked of those consultants responding on behalf of their consultancy business.

 34 respondents

### CLIENTS SERVICED PER BUSINESS



Number of cotton clients

Number of consultants





# THE CONSULTANTS AND THEIR CLIENTS

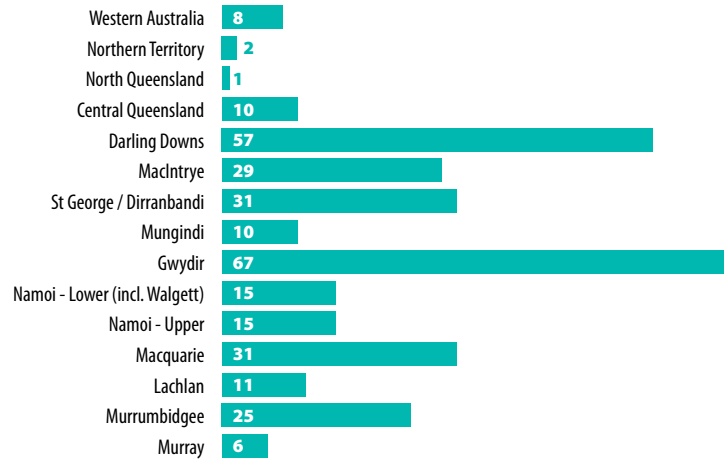
10

In which region/s are your cotton clients based? This question was only asked of those consultants responding on behalf of their consultancy business.

 34 respondents

**\*Note:** Regions with zero hectares have not been included on the chart.

LOCATION OF CLIENTS



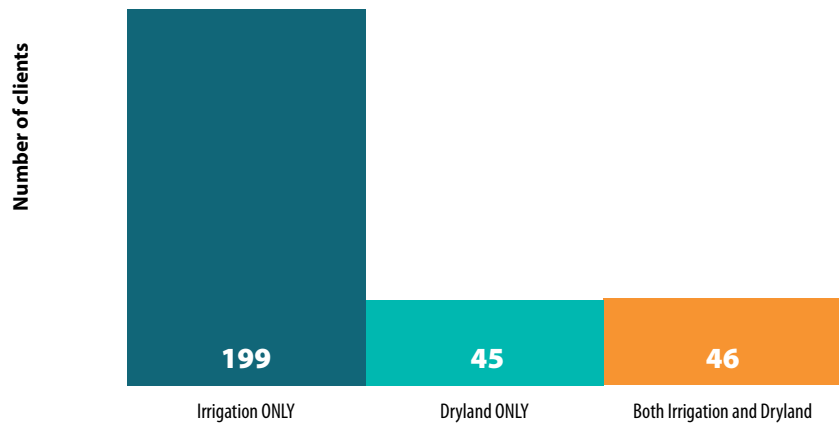
Number of clients

11

How many of your cotton clients have dryland, irrigation or both?

 32 respondents

IRRIGATION STATUS





# ON-FARM PRACTICES AND ATTITUDES

## COVERAGE

12

How many hectares of cotton (total area, not adjusted for row spacings) did your clients grow in the 2023-24 season?

32 respondents

13

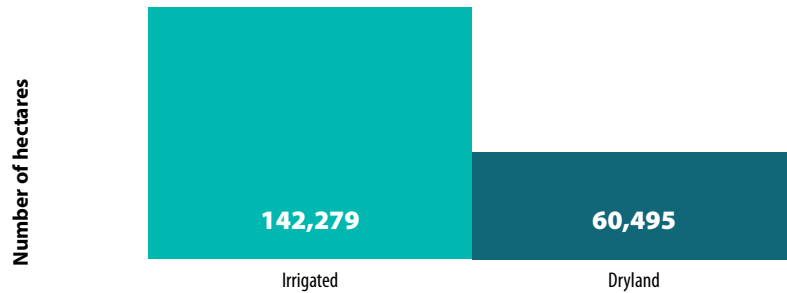
In which region/s are the irrigated cotton hectares of your clients situated?

30 respondents

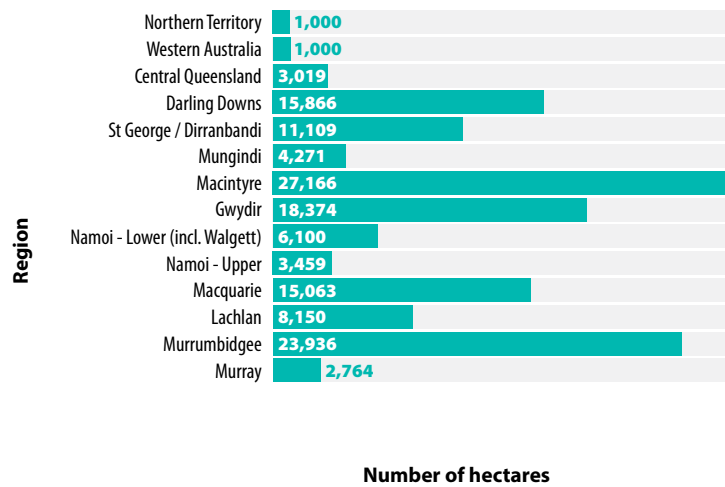
141,277ha

**\*Note:** Regions with zero hectares have not been included on the chart.

TOTAL SURVEY HECTARES



IRRIGATED COTTON HECTARES BY REGION





# ON-FARM PRACTICES AND ATTITUDES

14

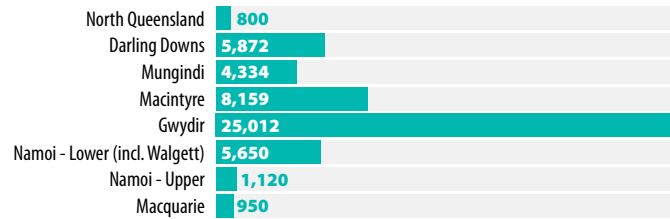
In which region/s are the dryland hectares of your clients situated?

19 respondents

51,897ha

\*Note: Regions with zero hectares have not been included on the chart.

DRYLAND COTTON HECTARES BY REGION



Number of hectares

## 2023-24 SEASON

15

Describe the 2023-24 cotton season in three words or less.\*

51 respondents

\*Verbatim responses are detailed in Appendix 1.





# ON-FARM PRACTICES AND ATTITUDES

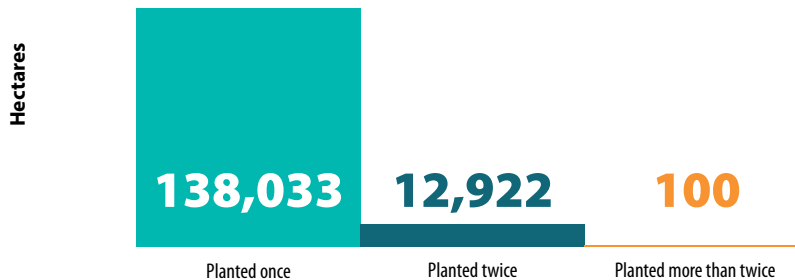
## PLANTING

16

Of the irrigated cotton hectares, how many planted once, planted twice or more than twice?

29 respondents

PLANTING OF IRRIGATED HECTARES

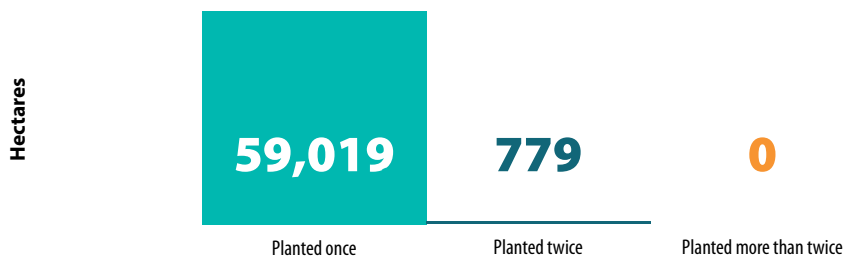


17

Of the dryland cotton hectares, how many were planted once, planted twice or more than twice?

17 respondents

PLANTING OF DRYLAND HECTARES



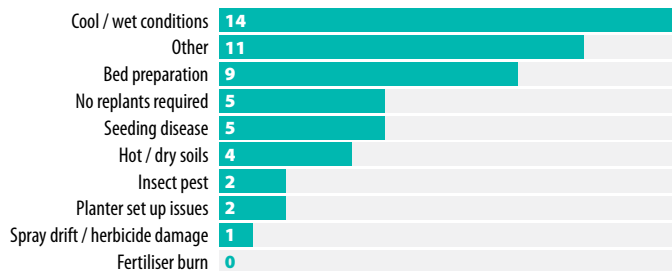
18

Select the reason/s why replants were required (select multiple as required):

30 respondents

\*Number of responses for the major reasons are presented in this graph. Responses listed as 'Other' include: poor seed quality (9), germination issues, irrigation mistiming.

REASONS FOR REPLANTS



Number of replants



# ON-FARM PRACTICES AND ATTITUDES

## FARMING SYSTEM

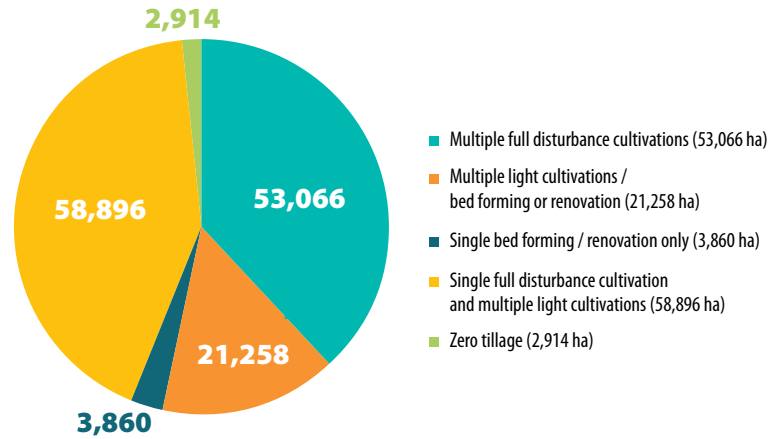
19

What reduced tillage practices were used in your 2023-24 irrigated cotton crops? Please allocate number of hectares to each practice.

30 respondents

139,994ha

IRRIGATED AREA (HECTARES)



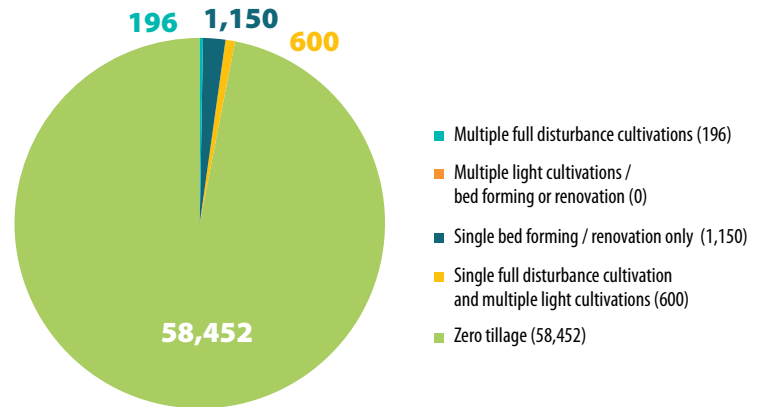
20

What reduced tillage practices were used in your 2023-24 dryland cotton crops? Please allocate number of hectares to each practice.

18 respondents

60,398ha

DRYLAND AREA (HECTARES)



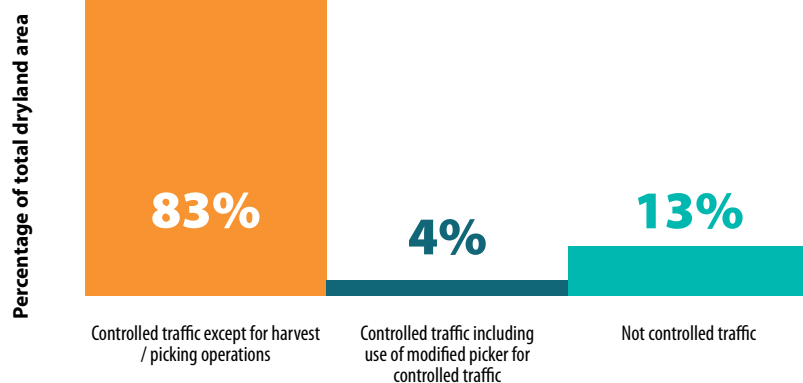
21

Of your irrigated cotton hectares, how widespread in 2023-24 was the use of controlled traffic by your cotton clients? Please allocate number of hectares (to best of your knowledge) to the options listed.

32 respondents

137,879ha

IRRIGATED AREA





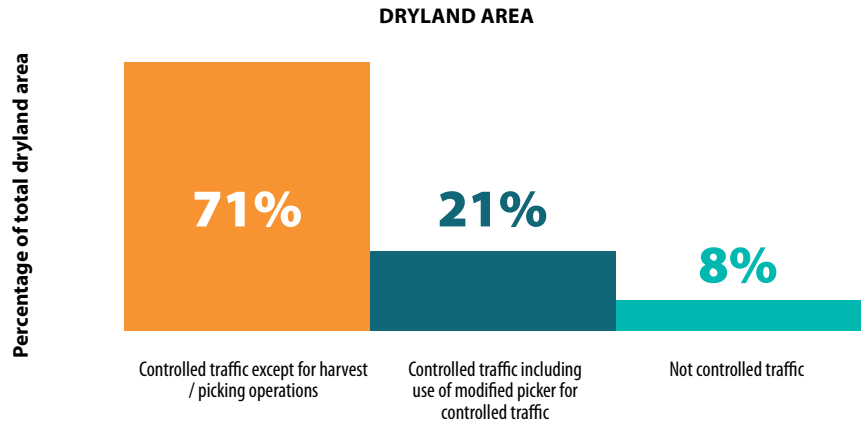
# ON-FARM PRACTICES AND ATTITUDES

22

Of your dryland cotton hectares, how widespread in 2023–24 was the use of controlled traffic by your cotton clients? Please allocate number of hectares (to best of your knowledge) to the options listed.

24 respondents

66,895ha

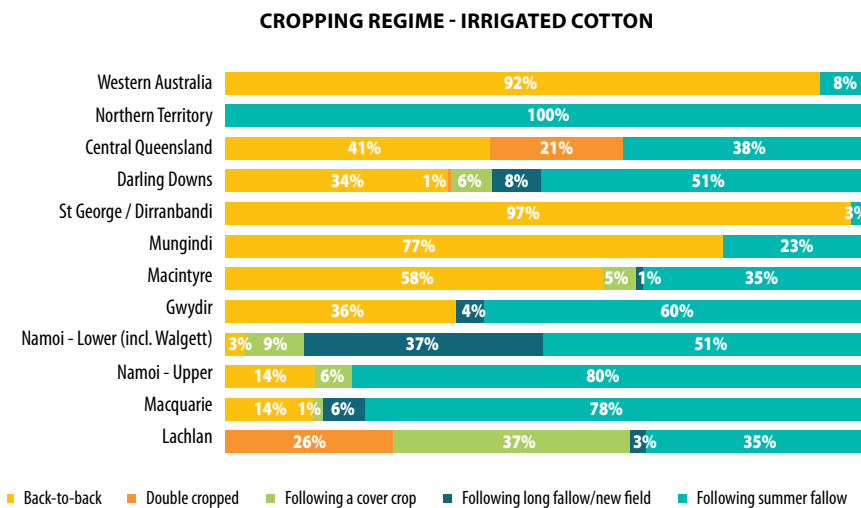


23

Of your irrigated cotton hectares in 2023-24, how many hectares apply to each fallow situation?

25 respondents

112,148ha



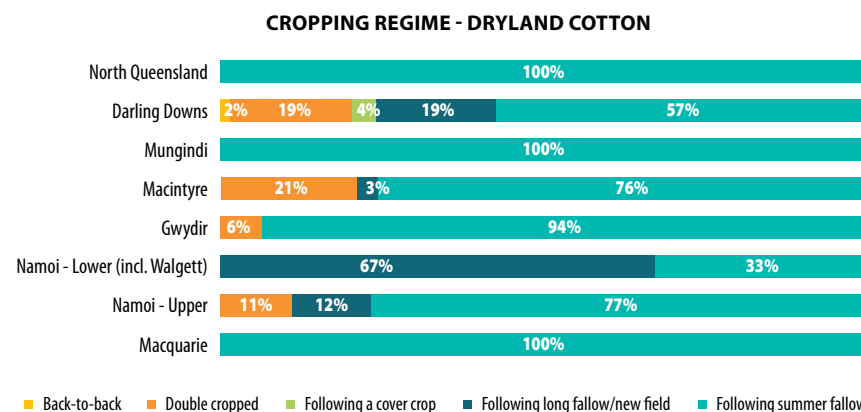
Percentage impact

24

Of your dryland cotton hectares in 2023-24, how many hectares apply to each fallow situation?

19 respondents

60,255ha



Percentage impact



# ON-FARM PRACTICES AND ATTITUDES

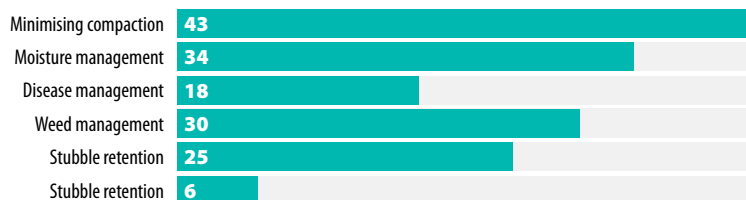
25

What are the main factors that impact on your decisions about tillage management, controlled traffic and crop rotation?\*

48 respondents

**\*Note:** Number of responses for the major factors are presented in this graph. Responses listed as 'Other' include: back to back cotton (2); crop destruction; the Resistance Management Plan (RMP); nematode management and availability of equipment.

## FACTORS THAT IMPACT ON DECISIONS ABOUT TILLAGE, CONTROLLED TRAFFIC AND CROP ROTATION



Number of consultants



CATE WILD



# ON-FARM PRACTICES AND ATTITUDES

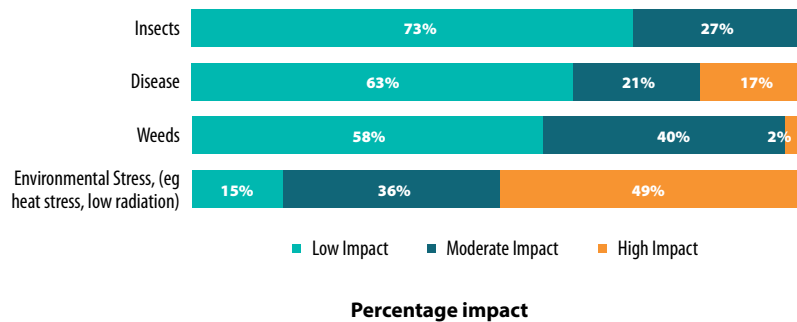
## CROP PROTECTION

26

Rate the average impacts you think insects, disease, weeds and environmental stress has had on you clients' 2023-24 crops.

48 respondents

### IMPACTS OF INSECTS, DISEASE, WEEDS AND ENVIRONMENTAL STRESS ON CROPS



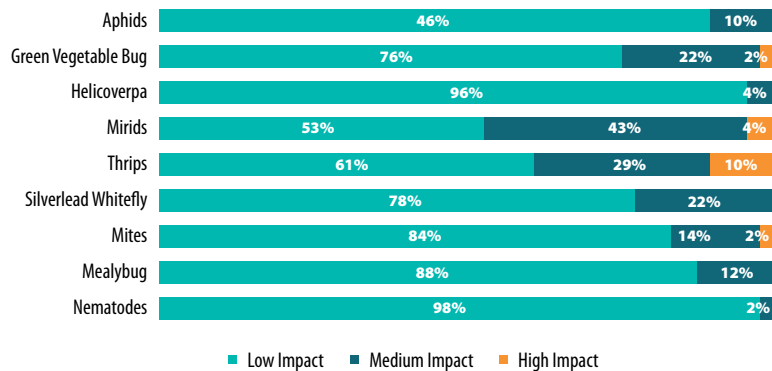
Percentage impact

27

Rate the average impacts you think the following pests had on your clients' cotton crops in 2023-24.

49 respondents

### IMPACTS OF INSECTS ON 2023-24 COTTON CROP



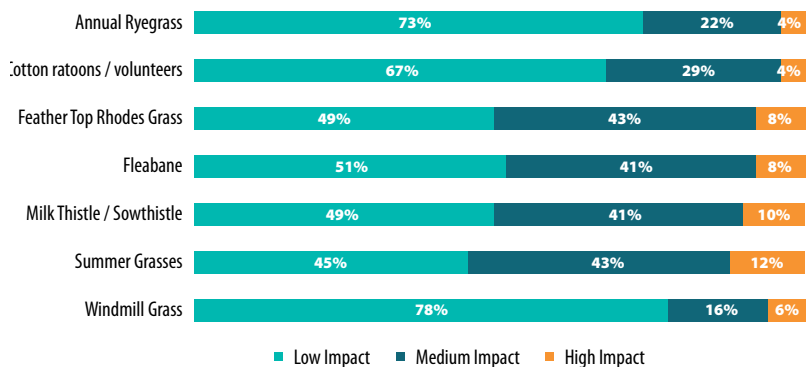
Percentage impact

28

Rate the average impacts you think the following weeds had on your clients' cotton crops in 2023-24.

49 respondents

### IMPACTS OF WEEDS ON 2023-2024 COTTON CROP



Percentage impact





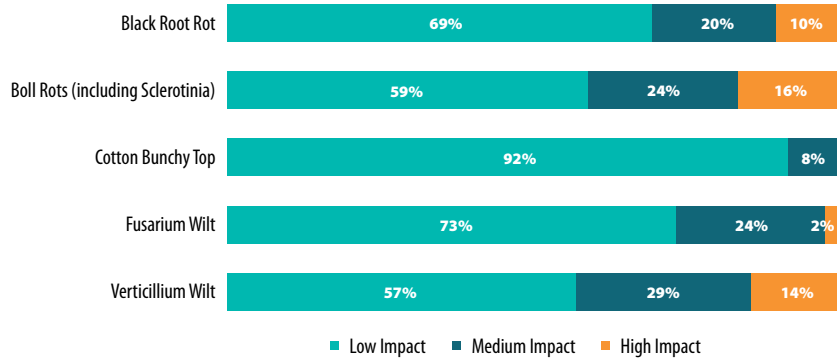
# ON-FARM PRACTICES AND ATTITUDES

29

Rate the average impacts you think the following diseases had on your clients' cotton crops in 2023-24.

49 respondents

## IMPACTS OF DISEASE ON 2023-24 COTTON CROP



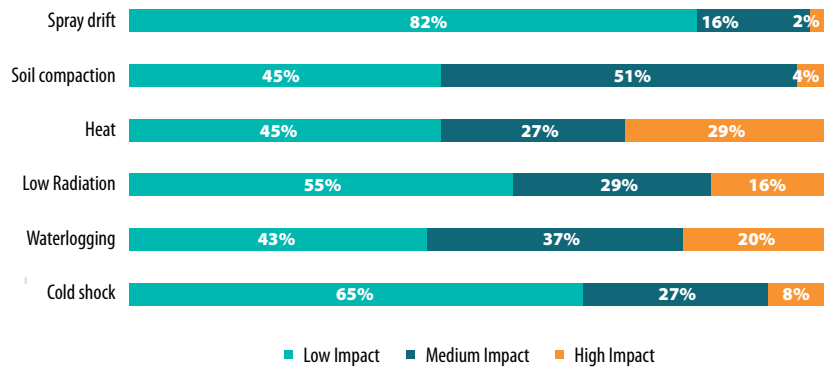
Percentage impact

30

Rate the average impacts you think the following prevailing environmental conditions had on your clients' cotton crops in 2023-24.

49 respondents

## IMPACTS OF ENVIRONMENT ON 2023-24 COTTON CROP



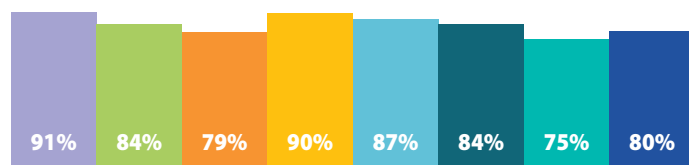
Percentage impact

31

With regards to insect pest management in 2023-24 cotton fields, how widely used (in terms of total irrigated and dryland hectares) are the practices listed below?

27 respondents

## INSECT MANAGEMENT PRACTICES (COTTON AREA)



Percentage of total cotton crop

- The industry's recommended sampling strategies are used to monitor past pest abundance and plant damage
- The industry's recommended thresholds are used when making pest control decisions whenever possible
- The IRMS is followed when selecting insecticides/miticides
- Pesticide selection aims to conserve beneficial insects whenever possible
- Weed hosts are controlled to prevent pest build up
- Rotations cropping and frequency of cotton decisions consider cotton pest risks
- Rotations cropping and frequency of cotton used as part of integrated weed management strategy
- Rotations cropping and frequency of cotton decisions consider cotton disease risks



# ON-FARM PRACTICES AND ATTITUDES

32

Thinking about your clients, please select the options applicable to changes in their practices in the past 5 years due to the impacts of disease?

30 respondents

\*Other practices mentioned were: Growing canola as a rotation for disease, introduced cover cropping prior to cotton rotation, variety selection - i.e. 606 grown in fields with known vert issues, added more potassium in their fertiliser to help protect the crop against disease, use targeted chemistry for wilts, improved soil potassium.

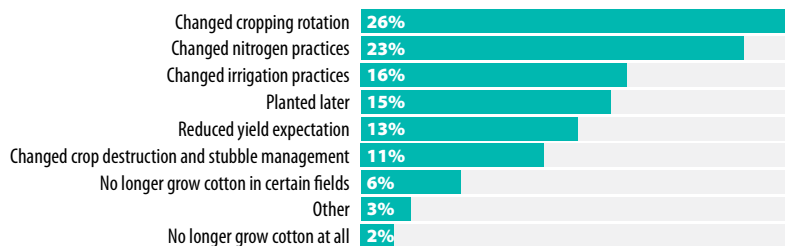
## WEEDS

33

Of the irrigated and dryland cotton hectares over which you consulted in 2023-24, what is the total area (suspected or confirmed) with herbicide resistant weeds?

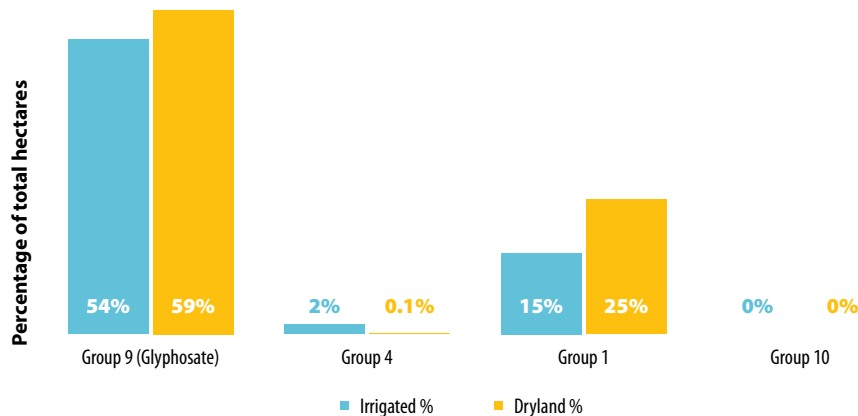
29 respondents

CHANGES IN PRACTICES IN THE PAST 5 YEARS DUE TO THE IMPACTS OF DISEASE.



Percentage of clients represented in the survey

TOTAL AREA (SUSPECTED OR CONFIRMED) WITH HERBICIDE RESISTANT WEEDS





# ON-FARM PRACTICES AND ATTITUDES

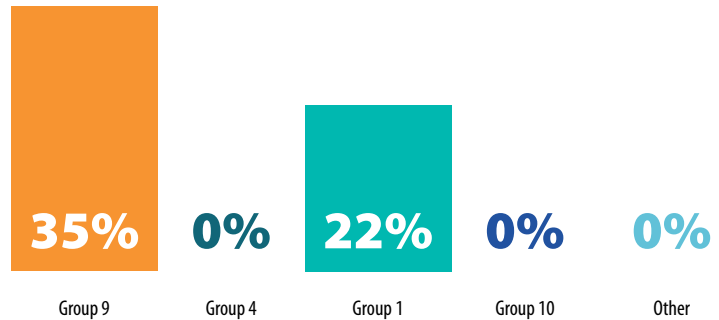
34

How many of your cotton clients have had herbicide resistance confirmed?

43 respondents

Percentage of total number of clients in survey

CLIENTS THAT HAVE HAD HERBICIDE RESISTANCE CONFIRMED

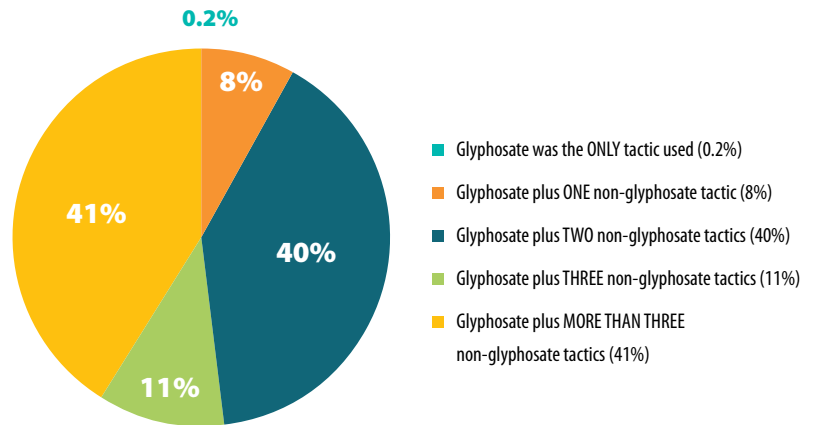


35

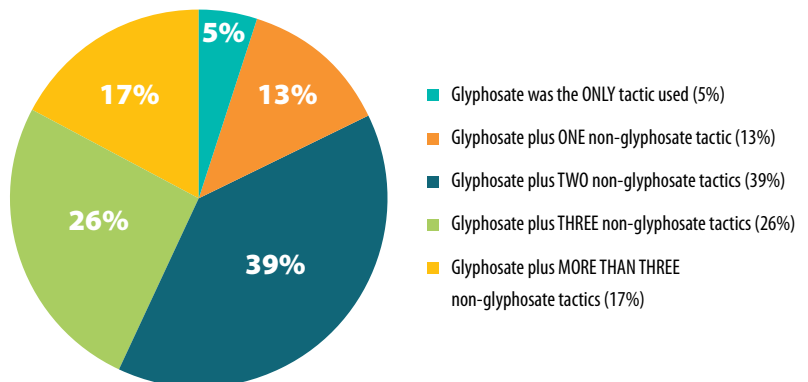
Of the irrigated and dryland cotton hectares over which you consulted in 2023-24, please estimate how many tactics were used for the cotton crop, including in preparation. For this question, a tactic is considered a weed control operation such as cultivation, herbicide or chipping.

26 respondents

NUMBER OF WEED CONTROL TACTICS - IRRIGATED



NUMBER OF WEED CONTROL TACTICS - DRYLAND





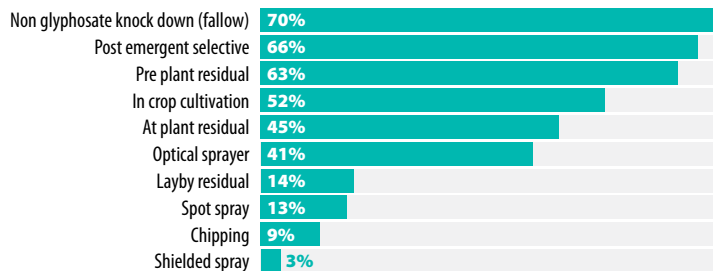
# ON-FARM PRACTICES AND ATTITUDES

36

Thinking about your cotton clients and how they have managed weeds across their cotton farming system, what weed control tactics do they undertake?

26 respondents

## USE OF NON GLYPHOSATE WEED CONTROL TACTICS



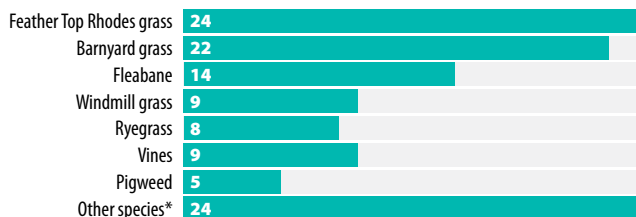
Percentage of total clients in the survey

37

In your experience what weed species are currently or emerging as the biggest challenge to control in the irrigated system?

46 respondents

## WEED SPECIES CHALLENGES FOR IRRIGATED COTTON



Number of consultants

**\*Note:** Other species includes: tridax daisy, sowthistle, nettles, brown beetle grass, milkthistle, Singapore daisy, summer grass, crown beard, spurge, *Polymeria puscilla*, wireweed, prickly lettuce, button grass, Queensland bluegrass, Australian bindweed, anoda weed.

The number of responses for the major weeds are presented in this graph. Full verbatim answers are presented in Appendix 2.



# ON-FARM PRACTICES AND ATTITUDES

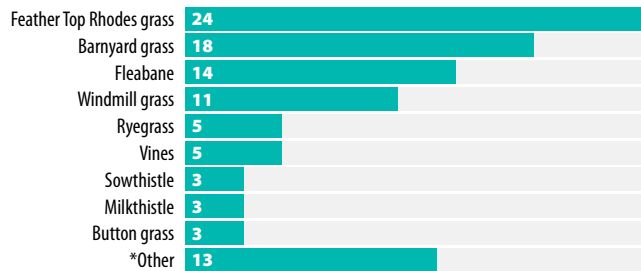
38

In your experience what weed species are currently or emerging as the biggest challenge to control in the dryland system?

40 respondents

**\*Note:** Other includes: liverseed grass, button grass, prickly lettuce, pigweed, summer grass, tridax daisy, nettles, Singapore daisy, spurge, Queensland bluegrass and Australian bindweed. The number of responses for the major weeds are presented in this graph. Full verbatim answers are presented in Appendix 3.

## WEED SPECIES CHALLENGES FOR DRYLAND COTTON



Number of consultants

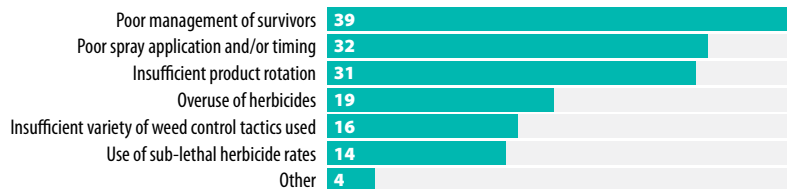
39

In your opinion, what do you believe are the major factors that lead to herbicide resistant population developing on your clients' farms?

46 respondents

**\*Note:** Other includes: grower mindset, lack of residuals, lack of cost effective herbicide options and roadside contamination.

## MAJOR FACTORS CONTRIBUTING TO HERBICIDE RESISTANCE



Number of consultants



ANGUS ROBERTS



# ON-FARM PRACTICES AND ATTITUDES

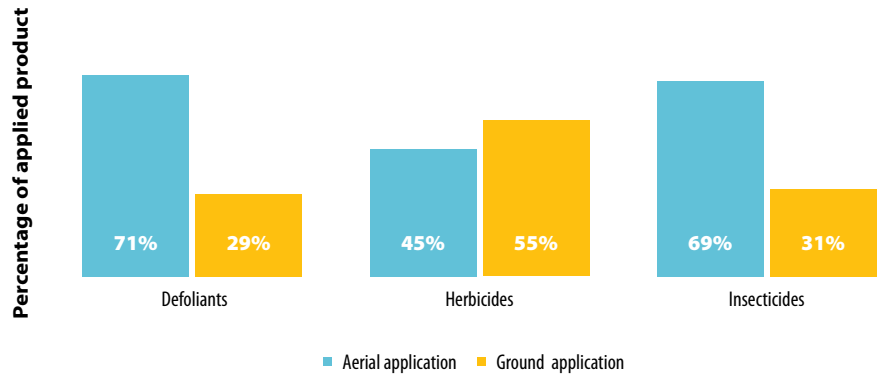
## SPRAY APPLICATION

40

Thinking about application of crop protection products, on average what is the percentage applied by air or by ground application?

45 respondents

AVERAGE PERCENTAGE APPLIED BY AIR OR GROUND APPLICATION



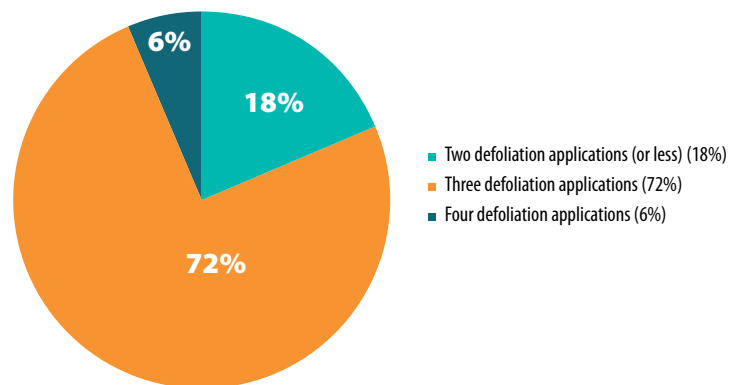
## DEFOLIATION

41

Thinking about your irrigated cotton hectares, how many applications of defoliant products were required?

23 respondents

NUMBER OF DEFOLIATION APPLICATIONS - PERCENTAGE OF IRRIGATED HECTARES





# ON-FARM PRACTICES AND ATTITUDES

## NUTRITION MANAGEMENT

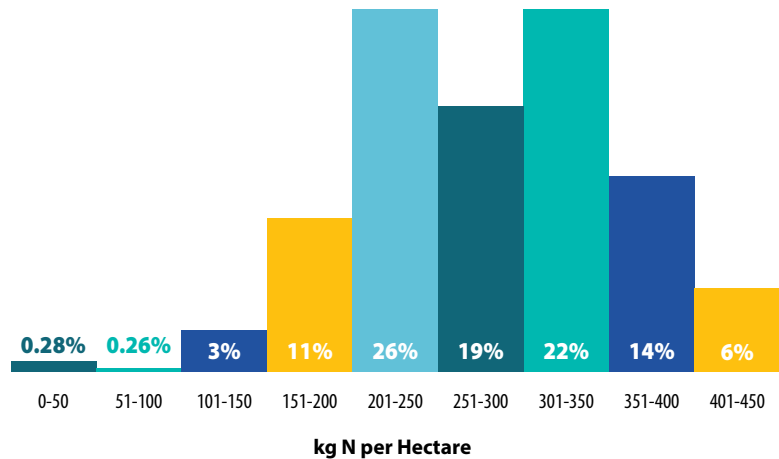
42

What is your best estimate of how much nitrogen was applied per hectare for your total irrigated cotton hectares in 2023-24? Include all applications made in the previous fallow period as well as in-crop applications.

25 respondents

129,112ha

AMOUNT OF NITROGEN APPLIED IN IRRIGATED COTTON



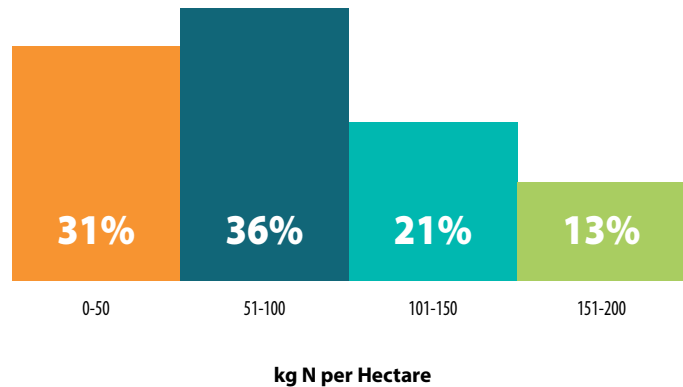
43

What is your best estimate of how much nitrogen was applied per hectare for your dryland cotton hectares in 2023-24? Include all applications made in the previous fallow period as well as in-crop applications.

20 respondents

55,495ha

AMOUNT OF NITROGEN APPLIED IN DRYLAND COTTON

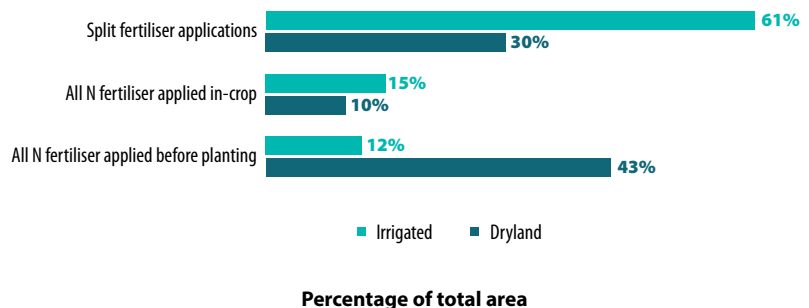


44

In 2023-24, when were the cotton crops' nitrogen fertiliser requirements applied?

24 respondents

TIMING OF NITROGEN FERTILISER APPLICATION





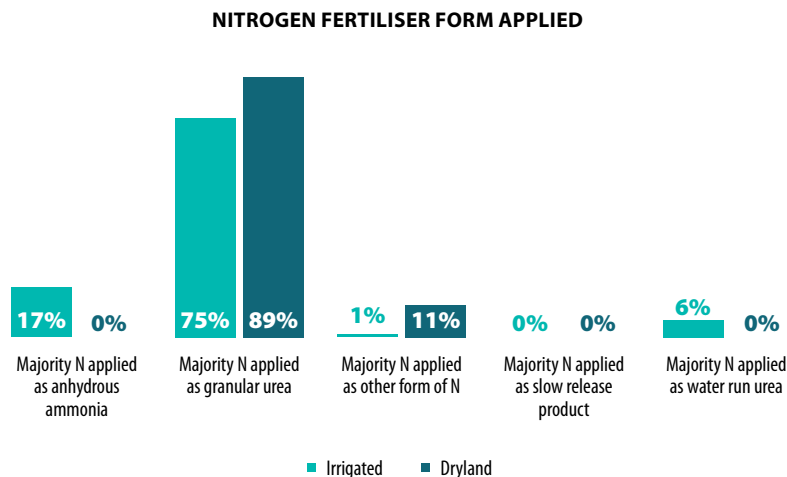
# ON-FARM PRACTICES AND ATTITUDES

45

In 2023-24, how were the cotton crops' nitrogen fertilizer requirements applied?

26 respondents

**\*Note:** Responses have been summarized. Full verbatim responses are presented as Appendix 6.



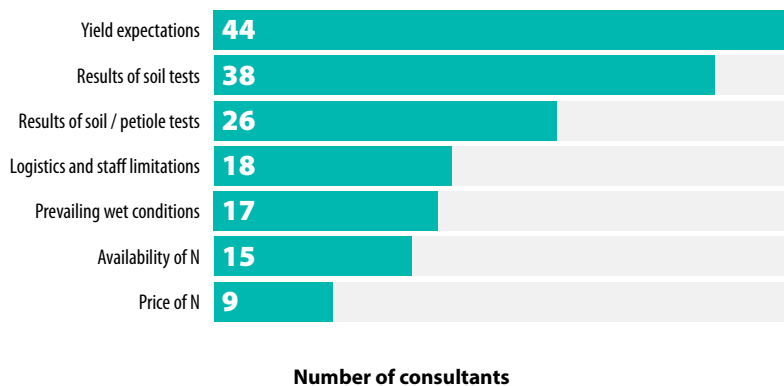
## NUTRITION

46

What factors influenced your decisions about nitrogen application (rates, timing, N budgets) in the 2023-24 season?

46 respondents

### FACTORS INFLUENCING DECISIONS ABOUT NITROGEN APPLICATION



ANGUS ROBERTS







# ON-FARM PRACTICES AND ATTITUDES

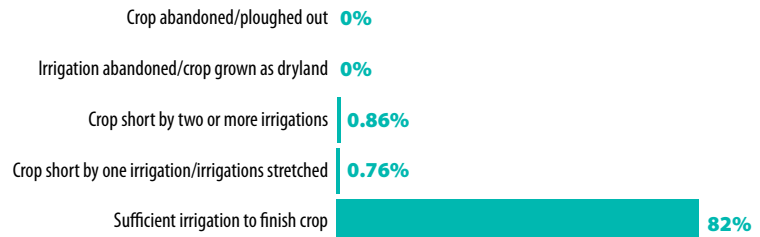
## WATER MANAGEMENT

47

For the irrigated cotton hectares over which you consulted in 2023-24, how much area was affected by limited water and what was the average yield in each case?

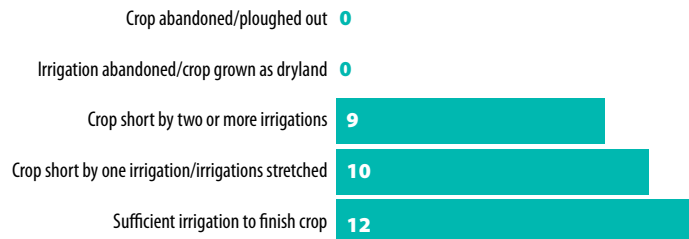
26 respondents

### IRRIGATED AREA AFFECTED BY LIMITED WATER



Percentage of total irrigated area

### IRRIGATED YIELD AFFECTED BY LIMITED WATER



Average yield in bales/ha of crop



ANGUS ROBERTS



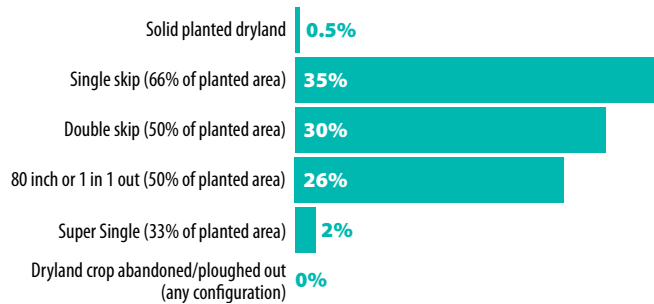
# ON-FARM PRACTICES AND ATTITUDES

48

For the dryland cotton hectares over which you consulted, please indicate your best estimate of yield for each situation.

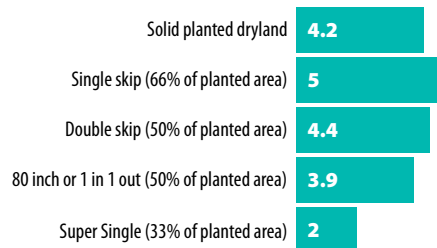
17 respondents

## DRYLAND COTTON AREA BY ROW CONFIGURATION



Percentage of total dryland area

## DRYLAND COTTON YIELD BY ROW CONFIGURATION



Yield (bales/ha)

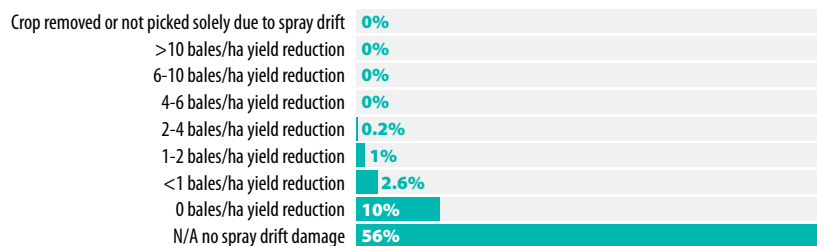
## YIELD IMPACT

49

What yield impacts do you estimate spray drift had on your clients' crops this season?

24 respondents

## IMPACT OF SPRAY DRIFT ON YIELD



Percentage of area



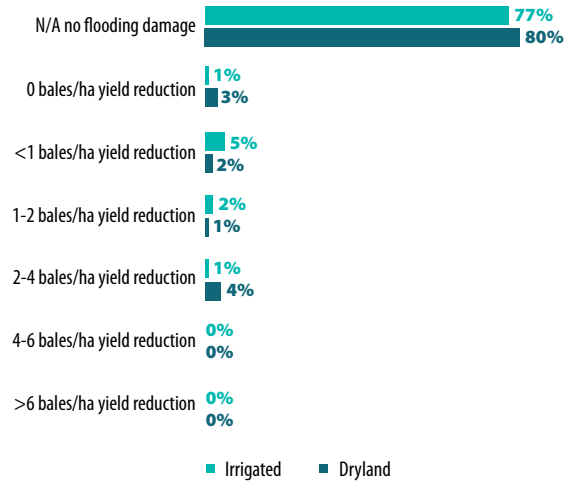
# ON-FARM PRACTICES AND ATTITUDES

50

What yield impacts do you estimate flooding had on your clients' cotton crops in 2023-24?

24 respondents

## IMPACT OF FLOODING



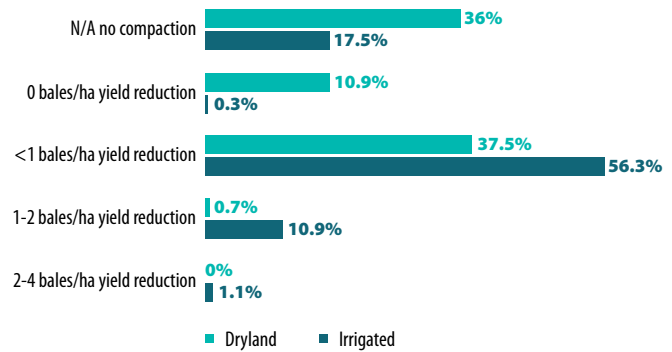
Percentage of total area

51

What impact do you estimate compaction had on your clients' cotton yields in 2023-24??

25 respondents

## IMPACT OF SOIL COMPACTION ON YIELD



Total survey Hectares



# SUSTAINABILITY

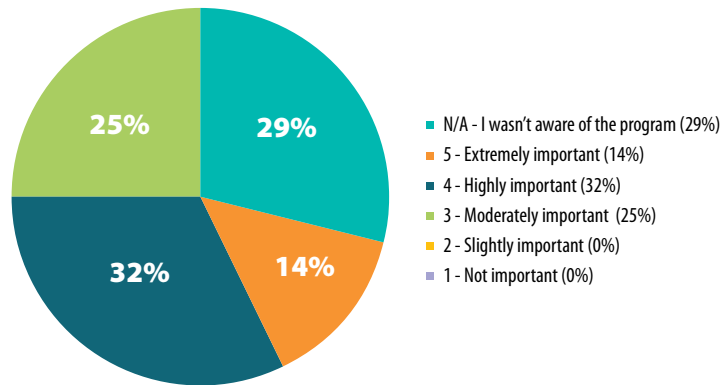
## SUSTAINABILITY

52

How important is cotton's "PLANET. PEOPLE. PADDOCK" sustainability program to the industry?

44 respondents

IMPORTANCE OF THE "PLANET.PEOPLE.PADDOCK" SUSTAINABILITY PROGRAM TO THE INDUSTRY



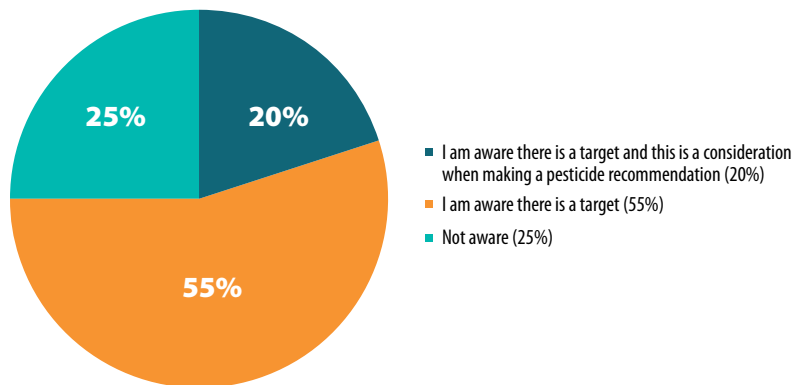
53

Are you aware of the cotton industry targets to reduce the environmental impact of pesticides (as measured by Environmental Toxic Load) by five per cent, every five years.

44 respondents

**\*Note:** Other comments are detailed in Appendix 8.

AWARENESS OF COTTON INDUSTRY TARGETS TO REDUCE ENVIRONMENTAL IMPACT OF PESTICIDES



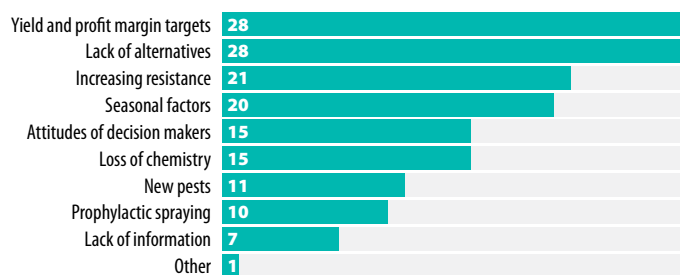
54

What do you see as the greatest challenge to reducing pesticide (insecticides, herbicides, fungicides, defoliants) usage and why?

43 respondents

**\*Additional comments are attached as Appendix 9.**

GREATEST CHALLENGES TO REDUCING CHEMICAL USAGE



Number of consultants



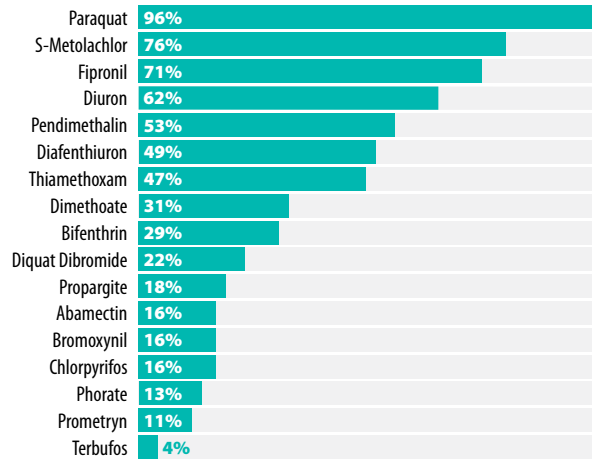
# SUSTAINABILITY

55

Of the following higher hazard pesticides, what do you estimate the impact would be if the use of these actives in cotton was no longer allowable?

44 respondents

PERCENTAGE OF CONSULTANTS WHO ESTIMATE THE IMPACT OF LOSS OF ACTIVES TO BE HIGH OR VERY HIGH



56

Do you have any additional comments about the impact of the potential loss of these actives?

15 respondents

Ok to lose chemistry if there is a new alternative in the market. Losing chemistry without replacing them will be an issue.

The loss of any 1 individual active is not a major concern but if all above actives were to be removed without replacement chemistry - the impact would be compounded.

Paraquat is the exception to this which has become very important in combating glyphosate tolerant & resistant weeds.

Once Transform comes off patent usage will increase as price is the main reason for reducing use of this product and why most use fipronil which flares aphids and whitefly resulting in more and higher insecticide applications and cost.

We need to do more work to understand the impacts in the Northern Australian Cotton system with the wet season and limited opportunities for weed control at certain times of the year.

The loss of paraquat is a major concern for the cotton industry. Particularly in regard to the management of sow thistle, fleabane, windmill grass and feather top Rhodes grass.

Real alternatives need to be available before any of our tools are removed.

Impact from losing these actives will result in more intensive cropping systems and the potential to slack on other sustainable practices to make cotton production economically sustainable.

Increasing production costs and losses to producers has to be fed along the production chain to the consumer, otherwise farming will no longer be financially sustainable.

Loss of paraquat is an obvious one given the issues happening in the industry currently - it is vital to our system ahead of planting and the changes will have a long-term impact on the new and introduced XtendFlex system over time as well. Fipronil is cheap and effective.

With resistance in weed and insects increasing we need more not fewer options.

Some of these products are only used sporadically. But you take them away the option to rotate or select a product for use in an ideal situation is reduced.

We need Metolachlor.

Residual herbicides such as Diuron and S-Metolachlor reduce requirements for in-crop herbicide applications.

Phorate extremely important in the southern valleys.



# APPENDICES

## APPENDIX 1

### QUESTION 14

Describe the 2023-24 cotton season in three words or less.

#### 51 respondents

Hot with humidity	Great, Rewarding, Positive
Cold Dry Hot	Better than average
Surprising, encouraging, different	Steep learning experience
Above average	Wet, humid, late
Mites. Average yields	Cool
Tough start, good finish	IPM
Rewarding	Challenging
Strong	Had Potential
Pleased	High square retention
Wet slow start	Late with Challenges
Testing, somewhat rewarding	Wet, Hot, Ok
Disappointing	Busy
Challenging	Humid flood good
Humid	Relating to dryland
Low yields, humidity	Variable rain yield
Wet and flooding	Surprising, challenging, rewarding
Wet start, good finish	Bad boll rot
Mild and straightforward	Dry to wet
Challenging.	Ideal temperatures
Wet then dry	Shorter, warmer, average
Mild and wet	Unpredictable Challenging
Wet-overcast-exciting	Hot humid difficult
Dragged out	Wet and warm
Good, bad ugly	Humid
Warm wet variable	Variable
Wet, Humid, Long	Low-pressure
Better than last	Unpredictable, Disappointing, Timing
Humid Lower Yielding	Changeable
Good	Humidity
Humid	Challenging
Shedding	Challenging, Low vigour
Colour	Sunny and surprising



# APPENDICES

## APPENDIX 2

### QUESTION 36

In your experience what weed species are currently or emerging as the biggest challenge to control in the irrigated system?

Brown Beetle Grass, Peachvine (XtendFlex likely change), barnyard grass (possible resistance to glyphosate).	Glyphosate resistant Barnyard Grass, Polymeria Puscilla.
Fleabane, becoming gly resistant.	Glyphosate resistant ryegrass.
Windmill grass, blowing in from grazing country and blocking drop boxes, stopping pipes etc.	Glyphosate resistant Milk thistle.
Gly resistant everything.	Glyphosate resistant milk thistle, barnyard grass, feather top Rhodes, fleabane.
Brown beetle grass.	Gly Resistant Ryegrass, Fleabane, Feathertop Rhodes Grass.
Multi resistant ryegrass (Gly+GpA+paraquat).	Gly tolerant Pigweed, wireweed, Stinging nettles.
Fleabane.	Feathertop Rhodes grass.
Ryegrass.	Glyphosate & group 1 resistant windmill & Feathertop Rhodes grass.
Barnyard grass.	Glyphosate resistant Barnyard Grass.
Feather top Rhodes grass.	Stinging nettle, Glyphosate resistant ryegrass, Milk thistle, Fleabane, Pigweed, Clethodim resistant windmill grass, Clethodim resistant ryegrass.
Glyphosate resistant tridax daisy.	Control of peachvine and fleabane with only glyphosate as a tool.
Feathertop Rhodes grass, glyphosate resistant barnyard grass.	Glyphosate resistant milk thistle, glyphosate resistant Barnyard grass, glyphosate and group 1 resistant Feathertop Rhodes grass.
Since using Stomp at planting and Dual Gold in crop OTT not having the resistant weed issues we use to such as resistant barnyard grass. Generally not too much of an issue now.	Fleabane.
Tridax or Singapore Daisy Barnyard Grass - glyphosate resistant.	Summer grasses such as glyphosate resistant barnyard and glyphosate tolerant feathertop rhodes grass.
Gly tolerant Sowthistle - germinating all year round throughout the fallow period. Very hard to manage on large scale farms that don't have access to camera sprayers.	Gly res Barnard grass, Gly tolerant Milk T, Gly res Feathertop Rhodes grass.
Glyphosate resistant feathertop rhodes grass, barnyard grass and milkthistle.	Windmill Grass, Barnyard Grass, Fleabane, Feathertop Rhodes grass.
Glyphosate res Feathertop Rhodes grass, summer grass, crown beard. Group 1 res to Feathertop Rhodes grass and summer grass.	Gly and verdict resistant barnyard grass, gly resistant Feathertop Rhodes grass, gly resistant fleabane, prickly lettuce, peach vine, red pigweed, button grass, tar vine, gly and verdict resistant Queensland blue grass, bell vine, anoda weed.
volunteers and glyphosate resistant tridax daisy.	Glyphosate resistant annual ryegrass. Fleabane.
Glyphosate resistant barnyard grass, Glyphosate resistant windmill grass, Glyphosate resistant milk thistle.	Glyphosate resistant barnyard grass, feathertop rhodes grass, peachvine/bellvine, pig weed.
Windmill grass, Peachvine, Milkthistle.	Glyphosate resistant annual ryegrass. Fleabane
Gly resistant sowthistle, bell vine dead nettle.	Glyphosate resistant barnyard grass, feathertop rhodes grass, peachvine/bellvine, pig weed.
Bellvine and peach vine in crop, Resistant Milkthistle in the fallow, Glyphosate resistant Feathertop Rhodes grass and BYG in crop.	Gly resistant ABY grass, Feathertop Rhodes grass, peachvine.
Ipomea vines, ABYG, Feathertop Rhodes grass, Sowthistle, Spurge.	



# APPENDICES

## APPENDIX 2 CONTINUED

Glyphosate tolerant windmill grass, glyphosate resistant milk thistle, glyphosate resistant barnyard grass, feather top Rhodes grass, glyphosate resistant fleabane

Glyphosate resistance in Windmill grass and Feathertop Rhodes Grass.

Gly res Australian bindweed, barnyard grass, Feathertop Rhodes grass, windmill grass

Roundup resistant grasses, milk thistle & increasing resistance to group a in grasses.

Glyphosate resistant Barnyard Grass  
Glyphosate Resistant Feathertop Rhodes Grass  
Red Pigweed

Glyphosate Resistant Barnyard Grass  
Glyphosate Resistant Feathertop Rhodes Grass  
Flaxleaf Fleabane

Milk thistle, fleabane, ryegrass, windmill grass and feathertop rhodes grass

Gly resistant ARG, Barnyard grass, fleabane, Feathertop Rhodes, portulaca

KATE LUMBER







# APPENDICES

## APPENDIX 3

### QUESTION 37

In your experience what weed species are currently or emerging as the biggest challenge to control in the dryland system?

Feather top Rhodes grass, fleabane, Gly resistant Windmill grass.	Glyphosate resistant milk thistle, glyphosate resistant Barnyard grass, glyphosate and group 1 resistant FTRG.
Gly resistant ryegrass.	Milk thistle that seems to be resistant to glyphosate but when we test the seeds the results come back susceptible or only mildly resistant.
Rye grass, windmill grass, feathertop rhodes grass, sow thistle, stinging nettle, fleabane.	Gly Res Barnyard, Gly tolerant Milk T, Fleabane, FTR, Gly tolerant Button grass.
Windmill grass.	Windmill Grass, Barnyard Grass, Fleabane, FTR.
Not dryland.	Gly and verdict resistant barnyard grass, gly resistant ftrg, gly resistant fleabane, prickly lettuce, peach vine, red pigweed, button grass, tar vine, gly and verdict resistant Queensland blue grass, sweet summer grass.
No experience.	Glyphosate resistant barnyard grass, feathertop rhodes grass, peachvine/bellvine, pig weed.
Feathertop Rhodes grass, glyphosate resistant barnyard grass, button grass, milk thistle.	Gly resistant ABY grass, FTR grass.
Cotton volunteers.	Feather top Rhodes grass, glyphosate tolerant barn yard grass, glyphosate resistant barn yard grass, glyphosate resistant fleabane.
Singapore Daisy.	Applying knockdown onto windmill grass before stress causes reduced application efficacy, Glyphosate resistance in Windmill grass and Feathertop Rhodes Grass.
Again Gly tolerant sowthistle.	Gly res Australian bindweed, barnyard grass, FTR, windmill grass.
Glyphosate resistant feathertop rhodes grass, barnyard grass and milkthistle.	Roundup resistant grasses, milk thistle & increasing resistance to group a in grasses.
Volunteers and glyphosate resistant tridax daisy.	Glyphosate resistant Barnyard Grass, Glyphosate Resistant Feathertop Rhodes Grass, Glyphosate resistant fleabane.
Glyphosate resistant barnyard grass, Glyphosate resistant windmill grass, Glyphosate resistant milk thistle, Feather Top Rhodes grass.	Glyphosate Resistant Barnyard Grass, Glyphosate Resistant Feathertop Rhodes Grass, Flaxleaf Fleabane.
FTG, Milkthistle, BYG, LSG.	Milk thistle, fleabane, ryegrass, windmill grass and feather top Rhodes grass.
Gly resistant sowthistle, tall fleabane.	
Glyphosate resistant Ryegrass, BYG, FTR, Milkthistle and Fleabane.	
Ipomea vines, ABYG, FTR, Sowthistle, Spurge.	
Glyphosate resistant ryegrass and windmill grass.	
Glyphosate Resistant Milk thistle.	
Milk thistles & fleabane in fallow leading up to cotton.	
No Dryland.	
Glyphosate resistant Liverseed grass, paraquat resistant Tall fleabane, Qld Bluegrass.	
Glyphosate & group 1 resistant windmill & ftr	
Glyphosate resistant Barnyard Grass, Glyphosate resistant Feather Top Rhodes Grass	
Gly resistant milk thistle, fleabane, feathertop and barnyard grass. Group 1 resistant summer grasses	







Cotton Research and Development Corporation  
PO Box 282, Narrabri, NSW 2390  
Phone: 02 6792 4088  
[crdc@crdc.com.au](mailto:crdc@crdc.com.au)



Crop Consultants Australia Incorporated  
PO Box 349, Woombye, QLD 4559  
Mobile: 0429 925 459  
[info@cropconsultants.com.au](mailto:info@cropconsultants.com.au)