




# WEEDSMART WEEK 2018 NARRABRI

## DIVERSIFY AND CONQUER: MANAGE WEEDS USING THE BIG 6

LOCHARBA STATION | AUGUST 20-21 | NARRABRI

 0415 375 868

 [www.weedsmart.org.au](http://www.weedsmart.org.au)

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# STAKEHOLDERS MAKE THIS EVENT POSSIBLE

Thank you to our below stakeholders for making WeedSmart Week such a fantastic event.



Australian Government  
Cotton Research and  
Development Corporation



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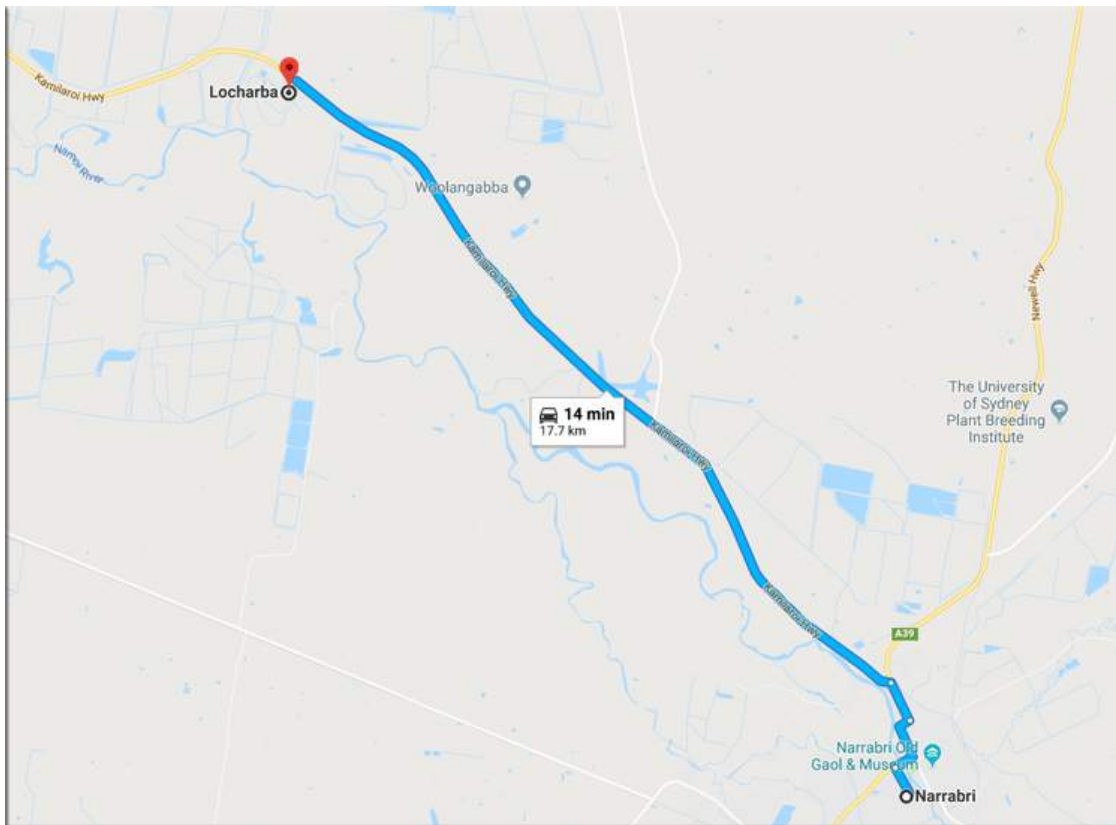


## HOW TO GET THERE

Thank you for joining us for WeedSmart Week in Narrabri this year. We're excited to bring you speakers from across the country and the opportunity to visit top growers in the region. We look forward to bringing you a practical forum day, delivered by growers and agronomists, providing information on controlling resistant weeds. Farm visits will take place on August 21 and will give attendees the opportunity to talk directly to growers and farm managers about their farming systems.

### DAY 1 - LOCHARBA FARM

Locharba is a 14-minute drive along the Kamilaroi Hwy, heading North-West from the Narrabri town centre.



### DAY 2 - BUS PICK-UP

Buses will leave from the Narrabri Visitors' Centre which is located on Tibbereena St, Narrabri.



# THE BIG 6

## WEEDSMART WEEK IS CENTRED AROUND THE PRINCIPLES IN THE BIG 6

Once "The 10 Point Plan", our mantra has evolved to "The Big 6" to help make winning the battle against crop weeds simple to follow and apply. There are now 6 core points for you to follow and some additional "WeedSmart Wisdom" points for you to consider. Head to [www.weedsmart.org.au/the-big-6](http://www.weedsmart.org.au/the-big-6) for practical tips and tricks to implement these strategies on-farm and further information on the research to back up these steps. This plan is all about the farmer calling the shots, not the weeds.

### ROTATE CROPS AND PASTURES -

diverse herbicide choices, diverse cultural practices.

- Use double break crops, fallow and pasture phases to drive the weed seedbank down over consecutive years.



### DOUBLE KNOCK -

to preserve glyphosate.

- Follow glyphosate with a high rate of paraquat to control survivors in a fallow or pre-sowing situation.

### MIX AND ROTATE HERBICIDES -

rotating buys you time, mixing buys you shots.

- Rotate between herbicide groups;
- Use different groups within the same herbicide mix;
- Always use full rates.

THE BIG  
6

### STOP WEED SEED SET -

take no prisoners.

- Crop top canola, pulses and feed barley (currently under permit) in weedy paddocks;
- Consider hay, brown manure or long fallow in high-pressure paddocks;
- Spray top/spray fallow pasture prior to the cropping phase.

### CROP COMPETITION -

stay ahead of the pack.

- Adopt at least one competitive strategy (but two is better), including reduced row spacing, higher seeding rates, east-west sowing and competitive varieties.



### HARVEST WEED SEED CONTROL -

the holy grail.

- Capture weed seed survivors at harvest using chaff lining, chaff tramlining, chaff carts, narrow windrow burning or integrated Harrington Seed Destructor (iHSD).



WEEDSMART  
WISDOM

- Never cut the rate
- Spray well – choose correct nozzles, adjuvants and water rates
- Clean seed – don't seed resistant weeds
- Clean borders – avoid evolving resistance on the fence line
- Test – know your resistance levels

# MORNING

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8 AM

## REGISTRATION

*Arrive Locharba Research Station  
(see map) coffee/tea*

8:30 AM

## PROF HUGH BECKIE - AHRI DIRECTOR

*Welcome and intro **The BIG 6***

8:40 AM

## PETER BACH - DALBY FARMER

*"We can grow anything in the  
North - diversity is the answer"*

9 AM

## GREG CONDON - AHRI AGRONOMIST

***Strip 'n disc** - for weeds, water &  
yield*

9:30 AM

## ROB LONG - AGRONOMIST

*Using optical spray technology  
efficiently & double knock  
strategies*

10:00 AM

## MORNING BREAK

**Morning tea provided**

10:30 AM

## DREW PENBERTHY - AGRONOMIST

***Mix and rotate herbicides** or  
we're stuffed! - Getting residuals  
into the northern system for  
summer cropping*

11:00 AM

## PETER MCKENZIE - AGRONOMIST

*Getting residuals into your winter  
cropping system - solutions to  
incorporation with disc*

11:30 AM

## PAUL MCINTOSH - AHRI AGRONOMIST

***Crop competition** - optimising  
weed control with row spacing -  
mung bean, sorghum and wild oats*

11:50 AM

## CHRIS ROCHE - GULARGAMBONE FARMER

*Farmer experience - crop  
competition*



## AFTERNOON

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12:20

### FORUM – Q&A PANEL

*Rob Long, Greg Condon,  
Paul McIntosh*

12:50 PM

### LUNCH

Lunch provided

1:50 PM

### WARWICK HOLDING – YERONG CREEK FARMER

*Farmer experience – crop topping,  
chaff decks and weedlining*

2:10 PM

### TONY LOCKREY – AGRONOMIST

*Stop weed seed set - fallow, crop  
topping and other tactics to  
control weeds in crop*

2:30 PM

### MICHAEL WALSH – RESEARCH AGRONOMIST, UNI SYDNEY

*Harvest weed seed control -  
opportunity to utilise HWSC to  
control weeds in the North*

2:50 PM

### BRAD JACKSON – GURLEY FARMER

*Farmer experience – NWB and  
beyond.*

3:10 PM

### FORUM – Q&A PANEL

*Michael Walsh, Peter McKenzie,  
Drew Penberthy*

3:40 PM

### LISA MAYER – WEEDSMART PROJECT LEAD

*Conclusions and thanks*

3:50PM

### MACHINERY DEMONSTRATIONS

Complimentary drinks &  
nibbles



## MACHINERY

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1. Emar chaff deck
2. Weedit automated spray rig
3. Also John Deere:
  - ExactApply™ Nozzles
  - New John Deere Spray Tips, 3D, LDM and LDT
  - New mobile device App ApplyPlus
  - John Deere Mobile Weather for sprayers



## DAY 2 - FARM VISITS

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**21st AUGUST - Please meet at the Narrabri Visitors Centre for bus pick-up at 8am.**

**STOP 1**

**TOM LAMPE**

*Bobbiwaa*

**STOP 2**

**GLENN COUGHRAN**

*Beefwood*

**STOP 3**

**LUNCH**

*Croppa Creek Golf Club*

**STOP 4**

**BRAD JACKSON**

*Gurley*

**STOP 5**

**BELLATA**

*Dropping people off who have cars in Bellata*

**STOP 6**

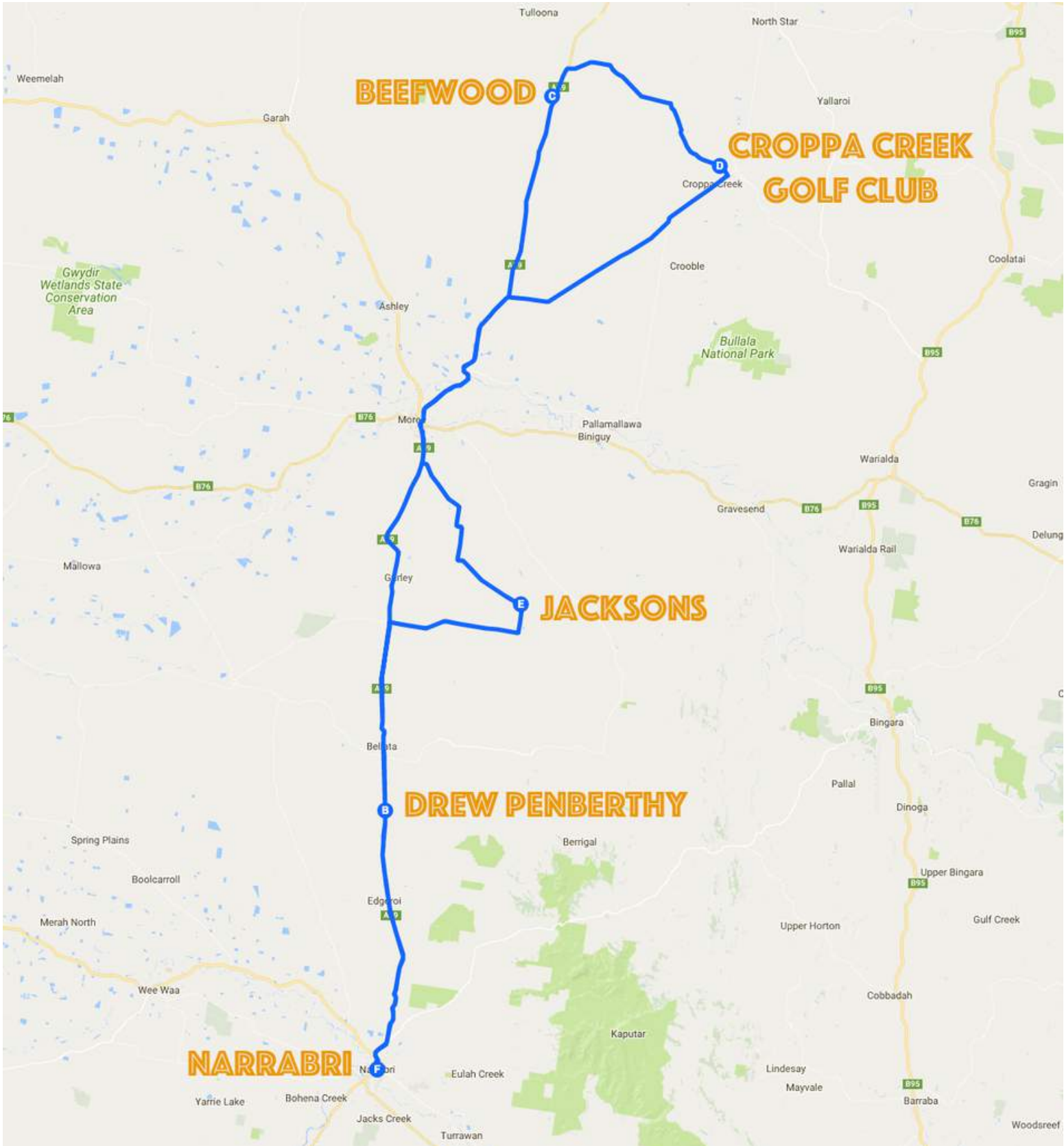
**NARRABRI**

*Day close*





# DAY 2 - MAP



# PROFILES



## BYRON BIRCH

*Byron Birch is implementing a 5-year rotation of cereals, pulses and dryland cotton on a 4500 ha lease block on 'Morven', north-west of Narrabri. The 2016 flood in the Narrabri area delivered annual ryegrass that appears to have some tolerance to both Group A and B chemistry, and there are some small patches of glyphosate-resistant barnyard grass emerging. These patches have been chipped and marked for future monitoring. Dryland cotton also provides strong competition for moisture over summer and suppresses the expansion of this weed. Byron uses the winter fallows in and out of cotton to implement effective double knock treatments so each winter cropping program begins clean of weeds. Byron's take-home message from 2017 WeedSmart Week was the importance of rotating all herbicide chemistry within the cropping program.*



## GLENN COUGHRAN

*Glenn Coughran, Beefwood Farms' manager, has used optical sprayers as the foundation of a rejuvenated weed control program over the last 12 years and seen the benefits of combining this technology with autonomous tractors over the last three years. The combination has allowed more efficient and targeted use of herbicides through double knocking and more timely and frequent applications to treat weeds at their most susceptible growth phase. With low weed density across the 11,000 ha operation Glenn is able to avoid the use of pre-emergent herbicides, which have limited crop rotation choices in the past, particularly in years where summer rainfall has been low. Glenn is keen to see 'green-on-green' optical weed detection become a reality and is working closely with AgriFac to have this technology integrated into their spraying equipment.*



## BRAD JACKSON

*Brad Jackson farms with his father Peter and brothers Phil and Matt at Gurley. They have a robust winter cropping program featuring wheat, barley, chickpea, canola and linseed. Following 2017 WeedSmart Week they have reintroduced the use of pre-emergent herbicides to their herbicide program and taking every opportunity to mix and rotate herbicide modes of action. The Jackson's WeedIT optical sprayer has revolutionised their herbicide program, allowing them to spray low weed density paddocks more frequently and target small, fresh seedlings. They also use it to provide a second knock following a broadacre spray on paddocks with high weed numbers. Brad and Phil are also developing valuable weed management tactics, such as camera-guided inter-row cultivator and green manuring, that can be employed in an organic farming system at Westmar.*





### **TOM LAMPE**

*Tom Lampe uses livestock to deal with weeds that are hard-to-kill with herbicide. Using three 250 ha paddocks, each with a 5 ha 'cooler', Tom sprays the paddocks soon after harvest and then allows the sheep to graze the stubble. Although Tom does not usually grow fodder crops, a rotation of wheat, barley, chickpea and sorghum provides additional feed for the stock through the year. Having grown lucerne previously Tom plans to re-introduce a lucerne phase within the next few years and is expanding his cropping program to include canola. To avoid weed encroachment from along fencelines, Tom sows crops as close to the border as possible and has the option of baling the first round if there are weeds present. He also occasionally bales barley straw as a fodder conservation measure.*



### **GEOFF O'NEILL**

*Geoff O'Neill was one of the first growers to adopt no-till and controlled traffic farming in the north-west of NSW. As such he has long been aware of the value of glyphosate and the repercussions that glyphosate resistance would cause in their farming business. Barnyard grass is Geoff's #1 concern on 'Llano', west of Bellata. To date, the O'Neill's crop rotation of cereal, legume, cereal, long fallow into cotton and long fallow out to cereal has kept herbicide resistance at bay. Glyphosate applied prior to planting usually provides adequate control of winter grass weeds and Geoff concentrates on establishing an even stand in all crops. The long fallow then gives the opportunity to apply a double knock if necessary.*



### **DREW PENBERTHY**

*Drew Penberthy has implemented a diverse cropping and herbicide use program on his farms near Bellata that has successfully curtailed herbicide resistance in winter weeds. He is now targeting summer weeds such as barnyard grass and milk thistle through a combination of summer cropping and fallow management. Drew has been using the double knock strategy of glyphosate plus hormone followed by paraquat since 2005 and knows the value of keeping water rates high. In the fallow he is rotating pre-emergent herbicides and in-crop he is avoiding the use of Group A chemistry in cereals to prolong their use in break crops.*





### **JASON ROGERS**

*Jason Rogers targets summer grasses when they are small and fresh using a double knock of glyphosate and paraquat. In recent years he has moved into applying residual herbicides soon after harvest and GPS-marking any suspect weed patches to be treated with spot spraying or strategic tillage on his farms north-west of Moree. Jason is also mixing and rotating fallow sprays to extend the efficacy of all available modes of action. Barley and Clearfield canola provide early canopy closure and the strongest crop competition for winter weeds. Any isolated weed escapes in summer fallows or winter crops are targeted with spot spraying or chipping to maintain the low weed numbers.*



### **CHARLES SULLIVAN**

*Charles Sullivan has recently returned to farm with his father Mark on 'Derna' at Crooble. Some years ago the Sullivans identified some glyphosate-resistant liverseed grass and have been using different strategies to combat it ever since. They also inherited herbicide resistant annual ryegrass. While ryegrass is present naturally along the creek lines, the imported population is resistant to all in-crop herbicide options. The Sullivans have been proactive in dealing with the resistant populations using targeted spot spraying with glyphosate and paraquat and re-introducing some older pre-emergent herbicides into their program, particularly in problem paddocks. Charles is keen to use emerging technologies to improve their selective management of weeds across the farm.*



### **WARWICK HOLDING**

*Warwick & Di run a continuous cropping operation based on a no-till, 12m controlled traffic system. They began the transition to a disc system last year with the purchase of a 12m John Deere disc on 308mm row spacing. The Holdings were early adopters of narrow windrow burning in the region but although effective, found it time-consuming and stressful. Chaff decks were added to the system last year to contain chaff and weed seeds to permanent tramlines while retaining the straw component for ground cover. They have now developed a 'weedlining' system where the weedy tramlines can be sprayed separately using a targeted herbicide strategy, with only ~8% of the paddock sprayed. Harvest weed seed control complements crop topping, with canola sprayed under the windrows.*





### **CHRIS ROCHE**

*Chris runs his family farm with his wife Sarah and son Michael. They farm 3100 ha of wheat, barley, canola, chickpeas, faba beans, albus lupins and field peas on their property in Gulargambone. Chris has a strong focus on crop competition for cereal crops and canola for weed control. Other weed control tactics used include also NWB, a WeedSeeker and in the last five years a shift to using pre-emergent herbicides.*



### **PAUL MCINTOSH**

*Paul has worked in the agriculture industry since 1974, starting off as a trainee stock and station agent with Elders. Over the past 40 years he's worked in a number of areas including Murgon, Miles, Wandoan, Dalby, Springsure, Emerald, and the Toowoomba region. Paul loves meeting the people on the land and working with them in their farming endeavours.*



### **MICHAEL WALSH**

*Michael Walsh is Associate Professor and Director of Weed Research with the University of Sydney. Mike worked with the Australian Herbicide Resistance Initiative from 1999 to 2016 where he focused on the research and development of harvest weed seed control (HWSC) systems.*





**LISA MAYER**

*Lisa Mayer leads the WeedSmart project, a national industry owned initiative which disseminates 'more crop, less weeds' messages with the goal of keeping herbicides working in the face of growing resistance. Lisa will introduce the speakers and provide an overview of the day's theme "The BIG 6".*



**PROF HUGH BECKIE**

*Professor Beckie is an international expert on herbicide resistance in plants, with a focus on management strategies, tactics, and practises. He is a Fellow of the Weed Science Society of America and Canadian Weed Science Society, and recipient of the QEII Diamond Jubilee Medal.*



**GREG CONDON**

*Greg Condon is an AHRI Agronomist and also runs Grassroots Agronomy with his wife Kirrily Condon. Greg has more than 20 years experience in the industry. He is particularly passionate about increasing the adoption of harvest weed seed control, and believes it has a critical role to play in the future of the Australian grains industry.*

