

# Survey of Oilseed Growers and Advisors – Sunflower Results

May 2007

Research conducted on behalf of the:

# better OILSEEDS

project

Funded by:

**Grains Research and Development Corporation**

and

**Australian Oilseeds Federation**



# insightrix<sup>®</sup>.com

**INSIGHTRIX Research PTY LTD**

Suite 18, Darlot Street

Horsham VIC 3400

Tel: (03) 5381 1116

[www.insightrix.com.au](http://www.insightrix.com.au)

This report was compiled by Insightrix Research Inc.

Suite 18, 62 Darlot Street  
Horsham VIC 3400  
ABN 66 069 775 136

**Jessica Schnell, Director of Research Services, [jessica.schnell@insightrix.com](mailto:jessica.schnell@insightrix.com)**  
**Lang McGilp, VP of Research Services, [lang.mcgilp@insightrix.com](mailto:lang.mcgilp@insightrix.com)**  
**Avril Hogan, Project Manager, [avril.hogan@insightrix.com](mailto:avril.hogan@insightrix.com)**

**For:**

**Grains Research and Development Corporation  
and  
Australian Oilseeds Federation**

## Executive Summary

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The Better Oilseeds project, funded by the Grains Research and Development Corporation (GRDC) and Australian Oilseeds Federation (AOF) conducted industry research on oilseed growers and advisors across Australia. As a part of their research, the Better Oilseeds project contracted Inshightrix Research to conduct a survey of oilseed growers and advisers to understand the producers' reasoning for planting oilseeds and to find out what industry changes are needed to increase the area planted to oilseeds. In total, 226 canola, sunflower or soybean growers in Australia were surveyed. A total of 53 of these respondents were sunflower growers. This report summarizes the results of the survey for these respondents.

### **Background Information**

A majority of respondents are growers (84.9%), while seven (13.2%) are advisors and one respondent is both. As an insufficient number of advisors are present to make an adequate sample, the results in this report include both groups together.

Nearly two-thirds of respondents (64.1%) have grown sunflowers since 2003 and therefore are considered current growers. Of the eighteen respondents who have chosen to stop growing sunflowers, most indicate sale price of the crop was a factor in this decision (38.9%) followed by drought (33.3%).

In addition to oilseed crops, most producers have other activities on their farm. A strong majority of respondents grow cereal crops (91.1%), 82.2% grow sorghum and 73.3% raise livestock. In terms of the percentage of land used for each of these activities, 42.5% is used for cereal crops, 30.9% for livestock, and 28.6% for sorghum (among those who grow these crops / have livestock). Oilseed crops take up 19.0% of farmland on average.

Sunflower growers have generally neutral soil pH, with an overall average pH level of exactly 7.0. The mean average annual rainfall is 574 mm .

### **Sunflower Production**

Close to two-thirds of respondents (64.2%) always use or advise others to use certified seed. The average length of time respondents have grown or advised on sunflowers is 15.5 years with a median of 15 years.

The most significant factor on the decision to grow sunflowers is profitability with 71.7% giving this factor a rating of 4 or 5 out of 5 (a significant impact). Diversification of the farming operation also has a large impact on the decision to grow sunflowers (56.6% rating it as 4 or 5 out of 5). When these results are analysed for significant differences in demographics, profitability of sunflower production is more likely to be rated higher by those respondents who had gone onto post-secondary education than those who had some or completed high school (an average rating of 4.0 versus 3.5 out of 5 respectively).

Fewer than one-half of respondents (45.3%) believe growing sunflowers is more difficult than growing cereal crops and a similar proportion (41.3%) believe that it is about as difficult to grow. Reliability of sunflowers is an important factor, with two thirds of respondents (66.0%) indicating this influences the area sown. Nearly one-half of growers use sunflowers to diversify their farming operation (47.2%) although one-third feel the opposite way (32.1%). The most significant factor that respondents believe limits sunflower production is rainfall variability (mentioned by 56.6% of respondents).

Few respondents (17.8%) grow sunflowers to control herbicide resistance on their farm.

Respondents were asked to name the three main factors which cause them to plant fewer sunflowers than they might like to. Price is the most common factor (56.6% mentioning it and 22.6% ranking it first). Soil conditions were mentioned by 32.0% of respondents with 7.5% ranking it first, and vulnerability to disease was mentioned by 30.2% of respondents with 22.6% ranking it first. When respondents were asked what would make it easier to grow sunflowers, over one-half cited price (52.8%) followed by more reliable rainfall and earlier, more predictable break of seasons (37.7%) and the development of disease resistant seed varieties (28.3%).

Looking to the future, one-half of respondents plan to keep their sunflower production about the same (45.3%) while one quarter (24.5%) plan to grow more. On the other hand, 15.1% plan to grow less and another 15.1% are uncertain. Triggers are used by over three quarters of respondents (77.4%). The most common triggers are presence of sub-soil moisture (70.7%), price above a certain amount (41.5%) and price relative to other crops (41.5%).

A more consistent or better price is the most common factor that would make respondents consider growing more sunflowers (71.7%). Other common mentions included developing disease resistant seed varieties (24.5%) and more reliable rainfall and earlier or more predictable break of seasons (22.6%). Remaining mentions were made by fewer than 10 respondents.

The most common marketing tools used for sunflowers are forward or deferred pricing contracts (48.1%). Commercial agronomists or resellers are the most common formal source respondents use for information about sunflowers (61.8%) followed by the government department of agriculture (47.1%).

### ***Sunflower Performance***

Sunflower producers have on average, 95 hectares of sunflowers in the ground this year. In terms of ranges, the least amount planted on average is 77 hectares, the most is 392 hectares and the typical or average amount planted is 223 hectares. Median amounts are 100 hectares in the ground this year, 353 hectares at the most, 55 hectares at the least and typically, 150 hectares.

Overall, the average sunflower yield is 1.56 tonnes per hectare. Respondents indicated that on average, the highest sunflower yield they have achieved is 2.92 tonnes per hectare on average and the lowest sunflower yield they have ever had is 0.55 tonnes per hectare.

Only 29.6% of respondents believe the cost of production is a limitation to sunflower production compared to other crops.

The mean crop rotation for sunflowers is 3.7 years with a median of 3 years. Crops most commonly grown prior to sunflowers are wheat (88.6%) and barley (34.3%). Similarly, wheat (65.7%), sorghum (37.1%) and barley (34.3%) are most commonly grown after sunflowers.

One-half of respondents (51.9%) typically use a zero tillage regime, while three-in-ten (29.6%) use minimum tillage and 18.5% use conventional tillage regime.

One-third (33.3%) of respondents aim to sow sunflowers in each of February and September, but only 29.2% typically do sow in February and 20.8% typically do sow in September. Cut-off months are most commonly in March (23.1%) or October (23.1%).

### ***General Information***

More than two-thirds of respondents are members of farm groups (67.3%), the most common of which are Agforce (31.4%) and New South Wales Farmers Association (20.0%).

A large majority of respondents are male (90.6%). Education is spread more or less evenly, with a slight majority (52.8%) having completed post-secondary education compared to those who have not. Over one third of respondents (35.8%) are aged 55 years and older.

In terms of size of operation, the mean farm size is 2450 hectares (median of 1902 hectares).

Almost one-half of respondents compare the performance of their sunflower crop in informal discussions or at social occasions (48.9%). A total of 39.5% would participate in benchmarking crop performance if available. Those unsure about participating in such benchmarking (18.4%) require more information before making a decision.

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## Introduction and Methodology

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### **Goals and Objectives**

The Better Oilseeds project, funded by the Grains Research and Development Corporation (GRDC) and the Australian Oilseeds Federation (AOF) conducted industry research on oilseed growers and advisors across Australia. The purpose of the survey was to understand the producers' reasoning for planting oilseeds and to find out what industry changes are needed to increase the area planted to oilseeds. Crops researched included canola, sunflowers and soybean. This report will focus on the results from growers and advisors of sunflowers

### **Scope of Work**

To achieve these objectives, the Better Oilseeds project contracted Insightrix Research Services to conduct a multimode (telephone and online) survey of Australian oilseed farmers. The survey process included the following stages:

1. **Survey Design:** Insightrix worked together with the Better Oilseeds project to develop the questionnaire to ensure that all of the project objectives could be met. The survey was designed for optimal clarity and flow.
2. **Survey programming and testing:** Insightrix programmed the survey using an online CATI system. Insightrix pre-tested the survey and assessed the pre-test results. Insightrix provided recommendations on survey wording, flow, and questionnaire structure to ensure the required results would be achieved.
3. **Quantitative data collection:** A small list of potential respondents was provided to Insightrix by the Better Oilseeds project, the remaining contacts were purchased from a list company. Each of the potential respondents were contacted by Insightrix researchers via telephone, the purpose of the research was explained and they were asked to participate. The respondents were given the option of completing the survey over the telephone or online. If the respondent chose the online option their email address was recorded and they were sent a personalised HTML email invitation. A unique ID number was embedded in the URL which tracked the respondents' progress through the survey and prohibited multiple responses.
4. **Survey monitoring:** the Better Oilseed project representatives and Insightrix monitored the real time results of the survey during the data collection process. Access was provided to the Better Oilseeds project representatives to monitor the completed surveys by day, the overall response rate, and the results for each question in the survey.
5. **Survey Analysis and Reporting:** Insightrix provided this summary report, which includes frequencies, cross-tabulations and key findings.

### **Distribution and Response Rates**

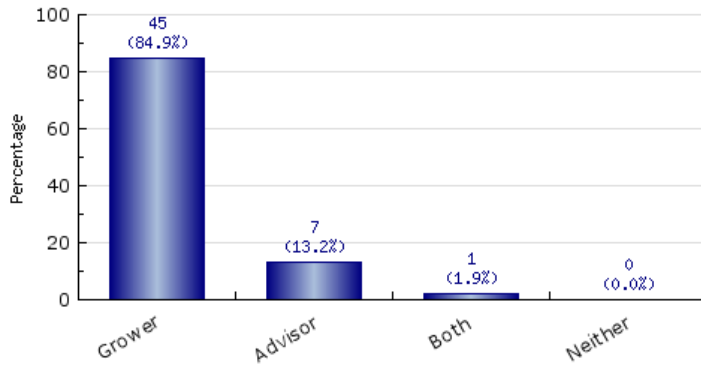
Data was collected from April 4, 2007 to May 7, 2007. In total, 226 canola, sunflower or soybean growers in Australia were surveyed. Most (209 respondents) completed the survey by phone, while 17 completed the survey online. This report contains the results for the 53 respondents who are sunflower growers.

## Survey Results

### Background Information

#### Are you a Grower or an Advisor?

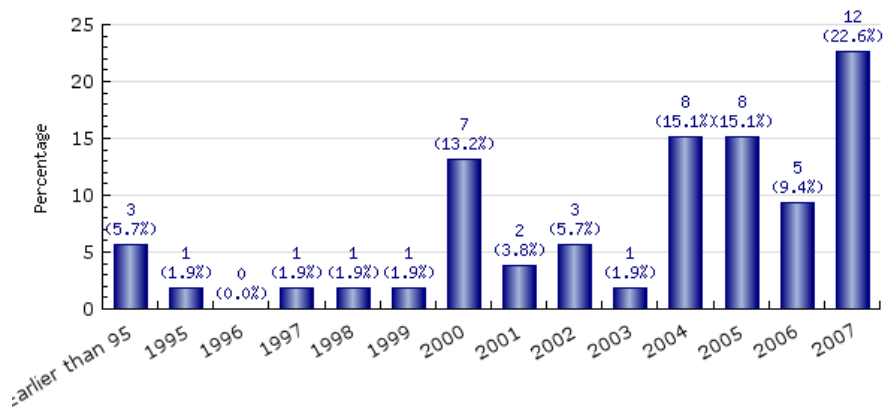
The majority of respondents are growers (84.9%) while 13.2% are advisors and one respondent (1.9%) is both.



#### When did you last grow sunflowers?

#### When did you last advise a producer on sunflowers?

A total of 22.6% of respondents are growing sunflowers this year and another 39.6% grew sunflowers between 2004 to 2006. Current growers (growers since 2003) make up 64.1% of respondents.



### Current Farming Operation

#### Which of the following enterprises do you have on your farm in addition to oilseeds...

The majority of the respondents grow cereal crops (91.1%), sorghum (82.2%), pulse crops (55.6%) or raise livestock (73.3%) in addition to growing oilseed crops. Other crops grow in addition are maize (42.2%) and cotton (20%).

Enterprises other than sunflowers	Frequency (n=45)	Percent
Cereal crops	41	91.1
Sorghum	37	82.2
Livestock	33	73.3
Pulse crops	25	55.6
Maize	19	42.2
Cotton	9	20
Other	7	15.5
Total	45	100

Entries under other:

- (2) Rice
- (1) Bird Seed Crops
- (1) Grazing Oat
- (1) Oats and Porridge
- (1) Safflower
- (1) sow improved pastures.

#### Approximately what percentage of your farm land is currently being used for each crop / livestock enterprise, including your sunflower production...

On average 42.5% of sunflower growers' farmland is used for cereal crops, 30.9% for livestock, and 28.6% for sorghum. Oilseed crops claim on average, 19.0% of producers' farmland.

Percentage of farmland used for each crop type	N	Average % of land
Cereal	39	42.5
Livestock	29	30.9
Sorghum	33	28.6
Rice	2	20.0
Maize	12	19.3
Oilseed	20	19.0
Pulse	20	14.6
Cotton	5	8.6
Other	3	5.0

#### What is the soil pH for most of your farmland?

The average pH for sunflower growers is 7.0 (ranging from 5.0 to 8.4).

Soil pH	Frequency	Percent	Cumulative Percent
5.0-5.9	5	16.1	16.1
6.0-6.9	5	16.1	32.3
7.0-7.9	14	45.2	77.4
8.0 and up	7	22.6	100.0
<b>Total</b>	<b>31</b>	<b>100.0</b>	

#### What is your farm's average annual rain fall?

The mean average annual rainfall is 574 mm and the median is 610 mm. One-third of respondents have an average annual rainfall between 600 mm and 649 mm.

Average Annual Rainfall	Frequency	Percent
Less than 300 mm	1	2.2
300 mm to 499 mm	8	17.8
500 mm to 599 mm	8	17.8
600 mm to 649 mm	15	33.3
650 mm to 699 mm	5	11.1
700 mm and up	8	17.8
<b>Total</b>	<b>45</b>	<b>100.0</b>

#### What is your farm's average rain fall between the months of April and October?

On average, 34% of sunflower producers' annual rainfall is between April and October was (200mm out of 574mm).

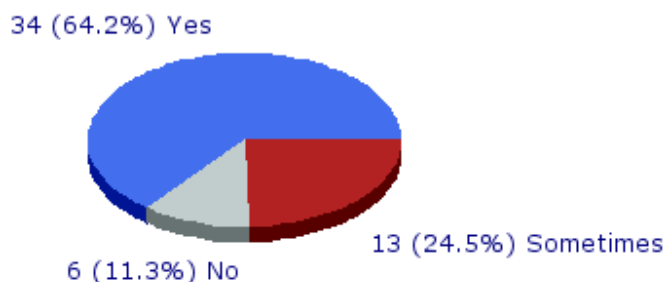
Average rainfall between April and October	Frequency	Percent
Less than 100 mm	6	17.6
100 mm to 149 mm	7	20.6
150 mm to 199 mm	2	5.9
200 mm to 249 mm	7	20.6
250 mm to 299 mm	4	11.8
300 mm to 349 mm	3	8.8
350 mm and up	5	14.7
<b>Total</b>	<b>34</b>	<b>100.0</b>

### Sunflower Production

**Do you always use certified seed?**

**Do you always advise producers to use certified seed?**

Nearly two thirds of respondents always use certified seed (64.2%) while 24.5% sometimes use certified seed. Eleven percent never use certified seed.



53 responses

**Approximately how many years have you grown or did you grow sunflowers?**

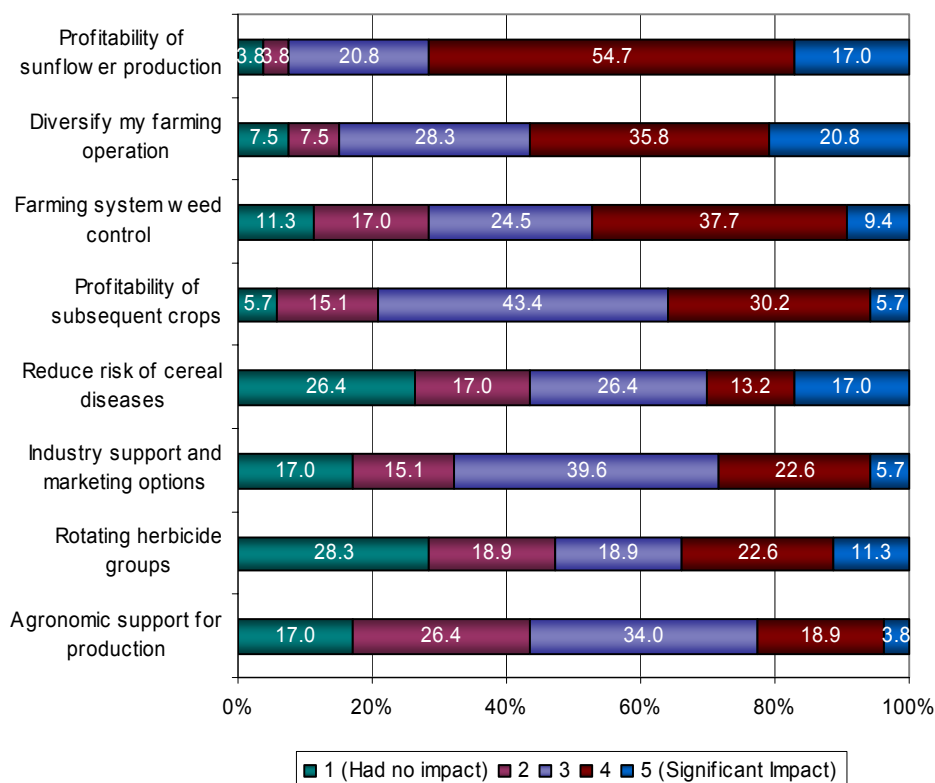
**Approximately how many years have you advised producers to grow sunflowers?**

The number of years respondents have been growing sunflowers was spread more or less evenly across the board with a range of less than five years to as high as 40 years. However, 46.2% have been growing the crop for less than 15 years. The mean length of time was 15.5 years with a median of 15 years.

Number of years growing sunflower	Frequency	Percent
Less than 5 years	11	21.2
5 to 9 years	6	11.5
10 to 14 years	7	13.5
15 to 19 years	7	13.5
20 to 24 years	8	15.4
25 to 29 years	5	9.6
30 to 34 years	6	11.5
35 years and up	2	3.8
Total	52	100.0

**Please rate how much of an impact each of the following has / had on your decision to grow or advise people to grow sunflowers Please use a scale from 1 to 5 where 1 is had no impact at all and 5 is had a significant impact**

Profitability has the most significant effect producers' decision on whether or not to grow sunflowers with 71.7% providing a rating of four or five on a five point scale. Other factors that have a high impact on the decision to grow the crop include diversification of the farming operation (56.6%), weed control (47.1%) and profitability of subsequent crops (35.9%).

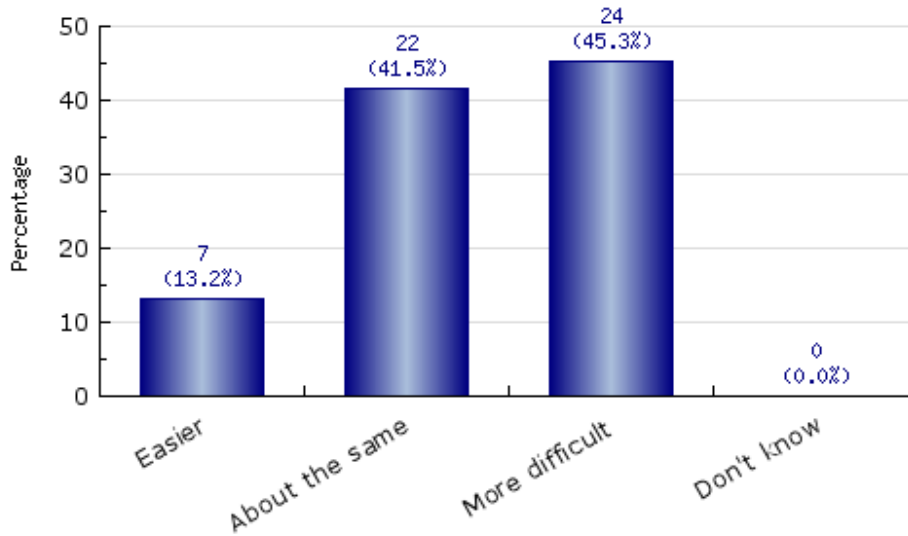


Factors impacting the decision to grow sunflowers	Average Rating	% rated 4 or 5
Profitability of sunflower production	3.8	71.7
Diversify my farming operation	3.5	56.6
Profitability of subsequent crops	3.2	35.9
Farming system weed control	3.2	47.1
Industry support and marketing options	2.8	28.3
Reduce risk of cereal diseases	2.8	30.2
Agronomic support for production	2.7	22.7
Rotating herbicide groups	2.7	33.9

Growers who had gone onto post-secondary education were significantly more likely to cite profitability as having a significant impact on their decision to grow sunflowers than those without post-secondary studies (average rating of 4.04 versus 3.48 out of 5).

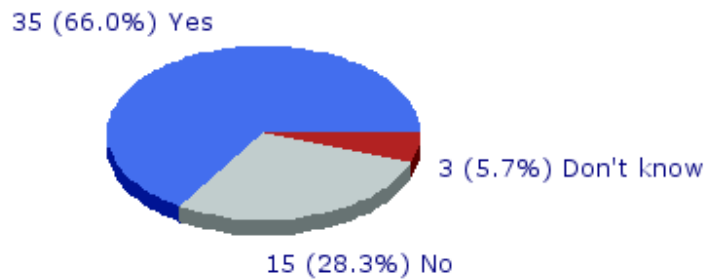
**How would you compare growing sunflowers to growing cereal crops in general. Would you say it is easier, about the same, or more difficult to grow sunflowers compared to cereals?**

Most respondents claim growing sunflowers is more difficult than growing cereal crops (45.3%) whereas only 13.2% of respondents believe that it is easier. A total of 41.5% believe that it is about as difficult to grow as cereal crops.



**Does the reliability of sunflower production influence the sown area?**

Two-thirds of respondents indicate the reliability of sunflower crops influence the sown area. On the other hand, nearly three-in-ten report this does not have an impact on the sown area.

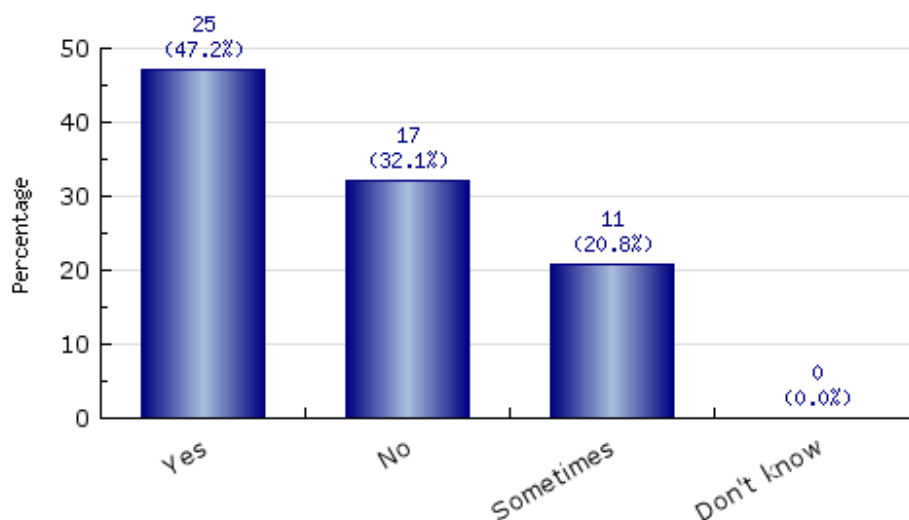


53 responses

**Do you grow or did you grow sunflowers to diversify your farm operation for risk of price fall in an individual crop?**

**Do you advise producers to grow sunflowers to diversify their farm operation for risk of price fall in an individual crop?**

Nearly one-half of respondents (47.2%) use sunflowers to diversify their farming operation whereas almost one-third (32.1%) do not.



**What are the limiting factors to sunflower production? (Choose all that apply)**

The most significant limiting factors to sunflower production were the variability of rainfall (56.6%), commodity price (37.7%) and diseases (30.2%). Other factors include weeds (20.8%), insects (26.4%), soil issues (13.2%) and climate (13.2%).

Limiting factors to sunflower production	Frequency	% of Responses
Rainfall variability	30	56.6
Commodity price	20	37.7
Diseases	16	30.2
Insects	14	26.4
Weeds	11	20.8
Soil issues	7	13.2
Climate	7	13.2
Cost of production	6	11.3
Irrigation water	4	7.5
Planting window	4	7.5
<b>Total</b>	<b>53</b>	<b>100</b>

**Which weeds do you normally manage for?**

**Which weeds do you normally advise others to manage for?**

Of the eleven respondents who indicated weeds were a limiting factor, most (8 of 11) report they control for grasses. Three respondents mentioned summer grass specifically; two mentioned black oats, castor oil plant and Johnson grass, and one respondent mentioned each of bindweed, fleabane, wire weed, milk thistles, devil's claw, noogoora burr and yellow vine.

**Which diseases do you normally manage for?**

**Which diseases do you normally advise others to manage for?**

Of the sixteen respondents who indicated disease is a limiting factor to sunflower production, seven control for tobacco streak virus, while five control for sclerotinea. Other diseases

mentioned include alternaria (3) and rust (2), and single mentions for each of the following: chocolate spot, parthenium, powdery mildew and head rot.

#### Which insects do you normally manage for?

#### Which insects do you normally advise others to manage for?

Of the fourteen respondents who indicated insects are a limiting factor, nine control for Rutherglen Bugs and five control for Heliothis. Single mentions include: white fly, false wire worm, locusts, caterpillars, earwigs, crickets and aphids.

#### Do you grow sunflower to control herbicide resistance on your farm?

A majority of producers (82.2%) do not grow sunflowers to control herbicide resistance.



45 responses

#### What are the three main factors that cause you to plant fewer sunflowers than you might like to?

#### What are the three main factors that cause producers to plant fewer sunflowers than they might like to?

Price is the largest prohibiting factor to sunflower growers, with 56.6% indicating this influences them to plant fewer sunflowers than they would like to. Other significant factors include soil conditions (32.0%), vulnerability to disease (30.2%) and lack of rainfall (26.5%). The two factors most frequently mentioned first are price (22.6%) and vulnerability to disease (22.6%).

Main factors causing farmers to grow fewer sunflowers	% ranked as 1st	% ranked as 2nd	% ranked as 3rd	Total %
Price	22.6	17.0	17.0	56.6
Soil Conditions (Ex: Moisture in Soil, Soil Type)	7.5	15.1	9.4	32.0
Vulnerability to Disease (Ex: Tobacco Streak Virus)	22.6	1.9	5.7	30.2
Lack of Rainfall/Drought	17.0	7.6	1.9	26.5
Lack of Stubble Cover	5.7	7.6	7.6	20.9
Unpredictable Breaks of the Seasons/ Unreliable Weather	3.8	9.4	3.8	17.0
Lack of Available Land/ Crop Rotation	1.9	5.7	3.8	11.2
Profitability	5.7	3.7	1.9	11.2
Availability of Water/ Availability of Irrigation	3.8	1.9	3.8	9.5
Cost of Production and Cost of Inputs	1.9	3.7	1.9	7.5
Vulnerability to Insect and Pest Infestation	0.0	3.7	1.9	5.6
Low Yield	0.0	0.0	3.8	3.8
No other factors	0.0	13.3	26.3	39.6
Other	9.4	9.4	11.3	30.2

**What are the three most difficult weeds to control on your farm?  
What are the three most difficult weeds to control related to this crop?**

The most difficult weed respondents claim to control for is fleabane (15.1% ranking it first, 20.8% total mentions). Other common weeds include native jute (18.9% total mentions), and sweet summer grass (18.9% total mentions).

	% ranked as 1st	% ranked as 2nd	% ranked as 3rd	Total %
Fleabane	15.1	3.8	1.9	20.8
Native Jute	9.4	3.8	5.6	18.8
Sweet Summer Grass	9.4	7.6	1.9	18.9
Black/ Wild Oats	1.9	0.0	13.2	15.1
Thistles	1.9	9.4	1.9	13.2
Barnyard Grass	1.9	7.6	1.9	11.4
Burrs	1.9	5.6	1.9	9.4
Ryegrass	5.7	3.8	0.0	9.5
Nutgrass	9.4	0.0	0.0	9.4
Johnson Grass	3.8	1.8	3.8	9.5
Parthenium	5.7	0.0	3.8	9.5
Oil Plants. Ex: Castor Oil Plants	3.8	1.8	1.9	7.6
Wild Radish	3.8	1.8	0.0	5.6
Bladder Ketmia	1.9	1.8	1.9	5.7
Vine Weed	1.9	3.8	0.0	5.7
Peach vine	1.9	3.8	0.0	5.7
Wire Weed	0.0	1.8	3.8	5.7
Bell Vine	0.0	5.6	0.0	5.6
No other weeds	0.0	9.6	24.3	33.9
Other	20.8	26.3	32.1	79.2

**What kinds of things would make it easier to grow sunflowers?**

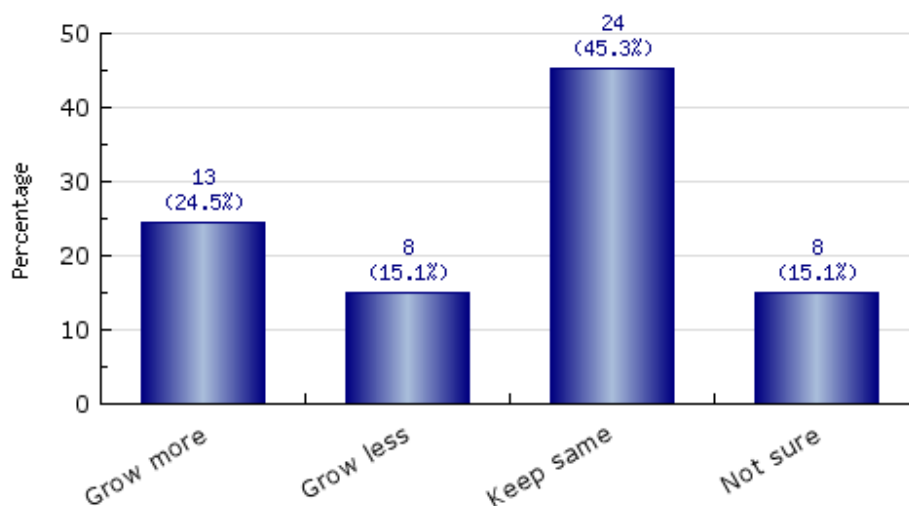
When asked to indicate what factors would make it easier to grow sunflowers, 52.8% reported a better price or stable market, followed by more reliable rainfall and climate factors (37.7%), and disease resistant seed varieties (28.3%). Other mentions were noted by fewer than two-in-ten respondents.

Factors that would make it easier to grow sunflowers	Frequency (n=53)	Percent
Better Price/Stable Market	28	52.8
More Reliable Rainfall and Earlier or More Predictable Break of Seasons	20	37.7
Develop Disease Resistant Seed Varieties	15	28.3
Develop Better Weed Control Herbicides	8	15.1
Improve Access to GM Seeds/ GM Round-up Ready Seed Varieties	3	5.7
Develop Insect and Pest Resistant Varieties	3	5.7
Develop Drought Tolerant Seed Varieties	3	5.7
Nothing can be done	2	3.8
Reduce Cost of Production (ie cost of seed, chemicals and equipment)	1	1.9
Improve Farming Equipment	1	1.9
Other	7	13.2

### Looking to the future, do you want to change your sunflower production?

#### Looking to the future, would you recommend producers growing more, less or the same amount of sunflowers?

Less than one-half of respondents indicate they plan to keep their sunflower production at about their current level (45.3%) while almost one quarter (24.5%) indicate they plan to grow more sunflowers. On the other hand, 15.1% plan to retrench from sunflower production to an extent and another 15.5% are uncertain as to their future sunflower crop plans.



### Why did you choose to stop growing sunflowers?

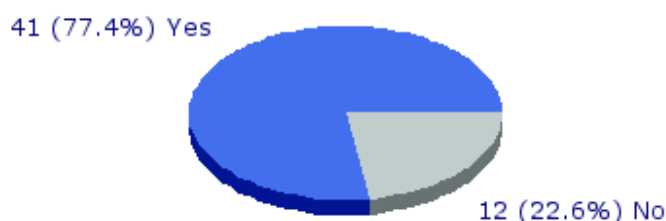
Of the eighteen respondents who have chosen to stop growing sunflowers, most indicate price was a factor in this decision (38.9%) followed by drought (33.3%), disease (27.8%), profitability (22.2%) and lack of stubble cover (22.2%).

Factors influencing respondents to stop growing sunflowers	Total #	% of Responses
Price Not High	7	38.9
Drought/Seasonal Conditions/ Lack of Access to Irrigation	6	33.3
Vulnerability to Disease	5	27.8
Low Profitability	4	22.2
Lack of Stubble Cover	4	22.2
Low Yield	1	5.6
Other	2	11.1

### Do you use triggers such as time of opening rain or grain price to determine if you plant sunflowers?

#### Do you use triggers such as time of opening rain or grain price to determine if you advise others to plant sunflowers?

More than three-quarters of respondents (77.4%) use triggers such as time of opening rain or grain price to determine whether they will plant sunflowers.



53 responses

**What are the triggers used to determine if you plant sunflowers?  
What are the triggers used to determine if you advise others to plant sunflowers?**

The most common trigger producers use to determine whether or not to plant sunflowers is the presence of subsoil moisture (70.7%), followed by 41.5% commodity prices above a mean level of \$547. The same proportion (41.5%) use price relative to other crops as a trigger.

Triggers to determine whether sunflowers would be planted	Frequency (n=41)	Percent
Presence of sub soil moisture	29	70.7
Price above \$	17	41.5
Price relative to other crops	17	41.5
Opening break by:	7	17.1
Cost of inputs	7	17.1
Sufficient irrigation allocation	3	7.3
Other (please specify):	7	17.1

**What would make you consider growing more sunflowers?  
What would make you consider advising producers to grow more sunflowers?**

Price is the most common factor that would affect producers' decision to grow more sunflowers (71.7%). Other factors include development of disease resistant seed varieties (24.5%), climate factors (22.6%) and the development of better, higher-yield varieties of sunflowers (17.0%).

Factors that would make respondents consider growing more sunflowers	Frequency (n=53)	Percent
Consistent and Better Price	38	71.7
Develop Disease Resistant Seed Varieties	13	24.5
More Reliable Rainfall and Earlier or More Predictable Break of Seasons	12	22.6
Better Varieties/Develop Higher Yield Varieties	9	17.0
Develop Better Weed Control Herbicides	5	9.4
More Stored Water Availability/ Access to Irrigation	3	5.7
Nothing can be done	2	3.8
Profitability Margin	2	3.8
More Land Available/Rotation	2	3.8
Lower Cost of Production	1	1.9
Other	3	5.7

**Do you regularly use any of the following marketing tools with respect to sunflowers?**

Of the 27 respondents who indicated the marketing tools they use, nearly one-half (48.1%) employ forward or deferred pricing contracts while 22.2% use production or deferred delivery contracts. Over one-quarter (25.9%) report they do not use any marketing tools.

Marketing tools used	Frequency (n=27)	Percent
Forward or deferred pricing contracts	13	48.1
Production or deferred delivery contracts	6	22.2
Basis contracts	4	14.8
Commodity options	3	11.1
Future for hedging inputs or outputs	2	7.4
Other	4	14.8
None	7	25.9

Entries under other:

- (1) Fixed Tonnage Contract
- (1) Hectare Contract.
- (1) market advisor
- (1) Self marketing - find own buyers, Word of mouth.

**What sources do you use for information about growing sunflowers?**

A small majority of respondents (61.8%) use information from commercial agronomists or resellers while nearly one-half (47.1%) consult the government department of agriculture. Other sources include private consultants (29.4%), farmer groups (23.5%), the media (23.5%) and the Internet (17.6%). Specific magazines and newsletters referenced include: Australian Grain, Ground Cover, Country Life, The Country, Agmarketing and Pacific Seed.

Sources of information about growing sunflowers	Frequency (n=34)	Percent
Commercial agronomist (reseller)	21	61.8
Government department of agriculture	16	47.1
Private consultant	10	29.4
Farmer group	8	23.5
Media	8	23.5
Internet	6	17.6
GRDC updates	5	14.7
Magazines	4	11.8
Newsletters	4	11.8
Seminars or forums	3	8.8
Total	34	100

***Sunflower performance over the past few years***

**How many acres or hectares of sunflowers do you currently have or plan to have in the ground this year?**

The mean amount of sunflowers that respondents plan to plant this year is 95 hectares (median of 100 hectares).

Amount of sunflower respondents plan to plant	Frequency	Percent
Less than 50 ha	4	33.3
50 ha to 99 ha	1	8.3
100 ha to 149 ha	5	41.7
150 ha and up	2	16.7
<b>Total</b>	<b>12</b>	<b>100.0</b>

**What has been the most sunflowers you have planted in any one year?**

The 5% trimmed mean (i.e. excluding outliers) for the most amount of sunflowers planted in one year is 392 hectares (median of 353 hectares).

Most sunflower planted in one year	Frequency	Valid Percent
Less than 100 ha	6	22.2
100 ha to 199 ha	4	14.8
200 ha to 299 ha	2	7.4
300 ha to 449 ha	3	11.1
450 ha to 599 ha	4	14.8
600 ha to 999 ha	6	22.2
1000 ha and up	2	7.4
<b>Total</b>	<b>27</b>	<b>100.0</b>

**What has been the least amount of sunflowers you have planted in any one year?**

The 5% trimmed mean (i.e. excluding outliers) for the least amount of sunflowers planted in one year is 77 hectares (median of 55 hectares).

Least sunflower planted in one year	Frequency	Percent
Less than 10 ha	2	11.1
10 ha to 19 ha	6	33.3
20 ha to 49 ha	1	5.6
50 ha to 99 ha	2	11.1
100 ha to 199 ha	5	27.8
200 ha and over	2	11.1
<b>Total</b>	<b>18</b>	<b>100.0</b>

**What is the typical or average amount of sunflowers you plant?**

The 5% trimmed mean (i.e. excluding outliers) for the typical amount of sunflowers planted each year is 223 hectares (median of 150 hectares).

Average sunflower planted in one year	Frequency	Percent
Less than 50 ha	7	26.9
50 ha to 149 ha	5	19.2
150 ha to 199 ha	4	15.4
200 ha to 399 ha	4	15.4
400 ha to 999 ha	4	15.4
1000 ha and up	2	7.7
Total	26	100.0

### What is your average yield?

On average, respondents indicated the highest sunflower yield they have achieved is 2.92 tonnes per hectare. One half of all respondents indicated their highest yield was between 1.85 and 3.21 tonnes per hectare.

The overall average sunflower yield is 1.56 tonnes per hectare. One half of all respondents indicated that their average yield is between 1.04 and 1.95 tonnes per hectare.

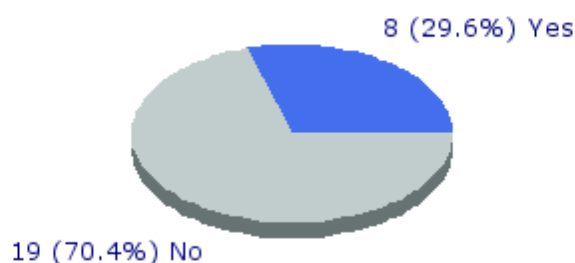
On average, respondents indicated the lowest sunflower yield they have ever had is 0.55 tonnes per hectare. All but one respondent has had a yield of less than 2 tonnes per hectare, while 20% (4 respondents) have had a year with no yield.

Tonnes per hectare	Mean	25th Percentile	Median	75th Percentile
Highest Sunflower Yield	<b>2.92</b>	1.85	2.47	3.21
Average Sunflower Yield	<b>1.56</b>	1.04	1.24	1.95
Lowest Sunflower Yield	<b>0.55</b>	0.21	0.56	0.70

\* Base: 20 respondents

### Is the cost of production a limitation to growing sunflowers compared to other crops?

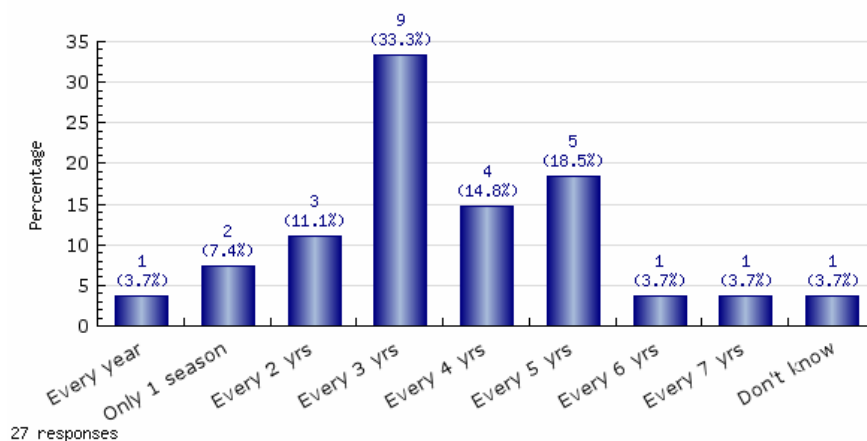
Only 29.6% of respondents report the cost of production is a limitation to sunflower production compared to other crops.



27 responses

**How often do you generally grow sunflowers in the same paddock?**

One-third (33.3%) of respondents grow sunflowers in the same paddock every third year while 14.8% do so more often than every third year. A total of 40.7% grow sunflowers in the same paddock less often than once every three years. The average crop rotation is 3.7 years with a median of 3 years.

**What other crops do you typically grow before growing sunflowers?****What other crops do you typically recommend growing before growing sunflowers?**

A large majority (88.6%) of growers claim to typically grow wheat before growing sunflowers. Approximately one third (34.3%) grow barley, 22.9% sorghum and 20.0% maize.

Crops grown before sunflowers	Frequency (n=35)	Percent
Wheat	31	88.6
Barley	12	34.3
Sorghum	8	22.9
Maize	7	20.0
Oats	2	5.7
Lentils	1	2.9
Chick peas	1	2.9
Peas	1	2.9
Clover	1	2.9

**What other crops do you typically grow after growing sunflowers?****What other crops do you typically recommend growing after growing sunflowers?**

The most common crops farmers produce after growing sunflowers are wheat (65.7%), sorghum (37.1%) and barley (34.3%).

Crops grown after growing sunflowers	Frequency (n=35)	Percent
Wheat	23	65.7
Sorghum	13	37.1
Barley	12	34.3
Maize	3	8.6
Chick peas	3	8.6
Oats	2	5.7
None	1	2.9

**What tillage system do you typically use?**

More than one-half of respondents (51.9%) use a zero tillage regime. Three-in-ten (29.6%) employ a minimum tillage approach while 18.5% proceed with conventional cultivation.

Tillage system used	Frequency (n=27)	Percent
Zero till	14	51.9
Minimum till	8	29.6
Convention cultivation	5	18.5
Controlled traffic	2	7.4

**When do you ideally aim to sow sunflowers?**

Equal proportions of producers (33.3%) aim to sow sunflowers in February or September.

Month when typically aim to grow sunflower	Frequency	Percent
January	2	8.3
February	8	33.3
August	3	12.5
September	8	33.3
October	3	12.5
Total	24	100.0

Those in New South Wales typically aim to sow in September, while those in Queensland aim to sow in February.

		Month when typically aim to sow sunflower					Total
		January	February	August	September	October	
New South Wales	Count	0	0	3	5	2	10
	%	.0%	.0%	30.0%	50.0%	20.0%	100.0%
Queensland	Count	2	8	0	2	0	12
	%	16.7%	66.7%	.0%	16.7%	.0%	100.0%
Victoria	Count	0	0	0	1	1	2
	%	.0%	.0%	.0%	50.0%	50.0%	100.0%
Total	Count	2	8	3	8	3	24
	%	8.3%	33.3%	12.5%	33.3%	12.5%	100.0%

**When do you typically sow sunflowers?**

Three-in-ten producers typically sow sunflowers in February (29.2%) while two-in-ten (20.8%) typically sow in September.

Month when typically sow crop type	Frequency	Percent
January	4	16.7
February	7	29.2
March	1	4.2
August	3	12.5
September	5	20.8
October	3	12.5
December	1	4.2
Total	24	100.0

Three of the nine respondents from New South Wales typically sow in January, three typically sow in August, and three sow in September or October. Seven of the thirteen respondents from Queensland typically sow in February.

		Month when typically sow sunflower							Total
		January	February	March	August	September	October	December	
New South Wales	Count	3	0	0	3	2	1	0	9
	%	33.3%	.0%	.0%	33.3%	22.2%	11.1%	.0%	100.0%
Queensland	Count	1	7	1	0	2	1	1	13
	%	7.7%	53.8%	7.7%	.0%	15.4%	7.7%	7.7%	100.0%
Victoria	Count	0	0	0	0	1	1	0	2
	%	.0%	.0%	.0%	.0%	50.0%	50.0%	.0%	100.0%
Total	Count	4	7	1	3	5	3	1	24
	%	16.7%	29.2%	4.2%	12.5%	20.8%	12.5%	4.2%	100.0%

### What is typically your cut off date when you decide not to grow sunflowers?

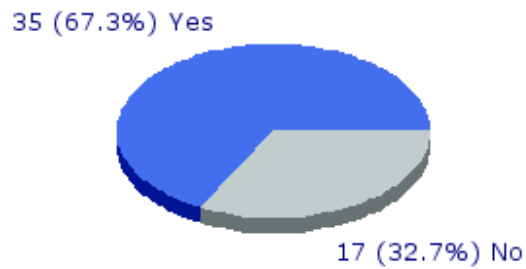
The cut-off month when respondents typically decide not to grow sunflowers is most often in March (23.1%) or October (23.1%).

Cut off month when typically decide not to grow sunflower	Frequency	Percent
January	3	11.5
February	4	15.4
March	6	23.1
September	3	11.5
October	6	23.1
November	2	7.7
December	2	7.7
Total	26	100.0

### General Information

#### Are you a member of a farm group?

Over two-thirds of respondents (67.3%) are a member of a farm group. The most common farm groups include Agforce (31.4%) and New South Wales Farmers Association (20.0%)



52 responses (excludes 1 "refused / don't know" responses)

	Total #	% of Responses
AgForce	11	31.4
New South Wales Farmers Association	7	20.0
Grain Growers Association	3	8.6
Land Care	3	8.6
Sustainable Farming Systems	2	5.7
Agvance	1	2.9
No Till Association	1	2.9
Conservation Farmers	1	2.9
Other Farm Groups	7	20.0

#### Gender:

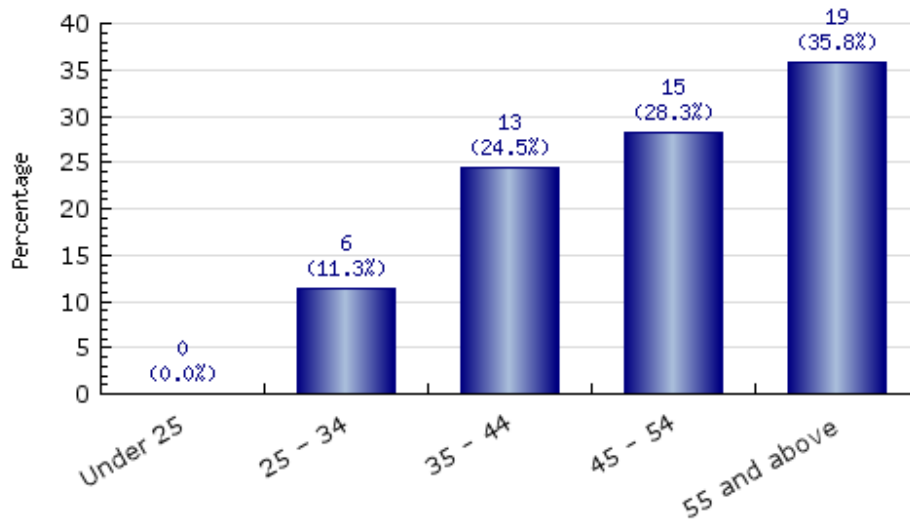
More than 9 in 10 of the respondents are male (90.6%) while 9.4% are female.



53 responses

**Into which age group do you fall into?**

The most common age group of respondents is 55 and above.



53 responses

**Which of the following best describes the highest level of education you have achieved?**

Although the level of education was generally spread across the board, the younger the respondent was, the more likely they had completed a university degree. The opposite holds true for older respondents.

Age of respondent by highest level of education achieved			Highest level of education achieved				Total
			Some high school	Completed high school	TAFE or Diploma	University degree or higher	
Age 25 - 34	Count	0	0	3	3	6	
	% of Total	.0%	.0%	5.7%	5.7%	11.3%	
35 - 44	Count	1	4	4	4	13	
	% of Total	1.9%	7.5%	7.5%	7.5%	24.5%	
45 - 54	Count	3	1	5	6	15	
	% of Total	5.7%	1.9%	9.4%	11.3%	28.3%	
55 and above	Count	10	6	3	0	19	
	% of Total	18.9%	11.3%	5.7%	.0%	35.8%	
Total	Count	14	11	15	13	53	
	% of Total	26.4%	20.8%	28.3%	24.5%	100.0%	

**What is the total size of the farm under your control?**

More than one-half of respondents have less than 2000 hectares of land under their control. The 5% trimmed mean is 2450 hectares with a median of 1902 hectares.

Total size of farm	Frequency	Percent	Cumulative Percent
Less than 250 ha	3	6.7	6.7
250 ha to 499 ha	6	13.3	20.0
500 ha to 999 ha	5	11.1	31.1
1000 ha to 1499 ha	5	11.1	42.2
1500 ha to 1999 ha	4	8.9	51.1
2000 ha to 2499 ha	6	13.3	64.4
2500 ha to 3499 ha	5	11.1	75.6
3500 ha to 4999 ha	2	4.4	80.0
5000 ha to 9999 ha	6	13.3	93.3
10000 ha and up	3	6.7	100.0
<b>Total</b>	<b>45</b>	<b>100.0</b>	

**Do you compare the performance of your sunflower crop with any of the following sources or activities?**

Almost one-half of the respondents (48.9%) claim to compare the performance of their sunflower crop in informal discussions with others, while 24.4% use formal discussion groups and a further 15.6% use benchmarking services. Another 37.8% of respondents do not compare their performance.

Comparison Source	Frequency (n=45)	Percent
Informal discussions – social occasions	22	48.9
Don't compare	17	37.8
Discussion groups	11	24.4
Benchmarking – Top Crop Monitoring	7	15.6

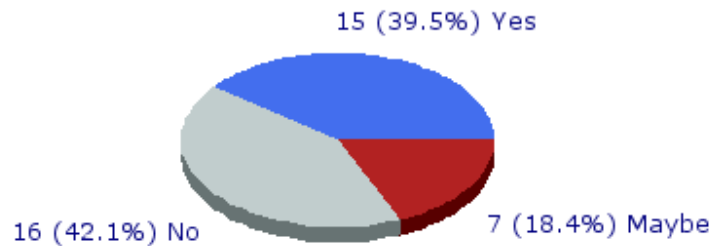
**Who provides the benchmarking service? (Select all that apply)**

Of the seven respondents who use a benchmarking service, four use the NSW Department of Primary Industries District agronomist, three use an agronomist or agriculture supplier, two use a private consultant and one uses a private benchmarking company.

Benchmarking service used	Frequency (n=7)	Percent
NSW Department of Primary Industries District Agronomist	4	57.1
Agronomist / Agricultural supplier	3	42.9
Private Consultant	2	28.6
Private benchmarking company	1	14.3

**Would you participate in benchmarking crop performance if it was made available to you?**

Four-in-ten respondents (39.5%) are willing to participate in benchmark crop performance while a similar proportion (42.1%) are not. A total of 18.4% are undecided and would need further information before participating.



38 responses

**What is your nearest town?**

<b>New South Wales (n=16)</b>	
Biniguy	1
Deniliquin	1
Griffith	2
Gunnedah	4
Guyra	1
Inverell	1
Moree	3
Narrabri	1
Quirindi	1
Willow Tree	1
<b>Queensland (n=25)</b>	
Bamboowa	1
Capella	6
Claremont	3
Clermont	3
Clifton	3
Emerald	2
Mt. Tyson	1
Pitsworth	1
Rollston	1
Springsure	1
Warrak	1
Warrara	1
Wondai	1
<b>Victoria (n=2)</b>	
Balmoral	1
Shelford	1
<b>Western Australia (n=1)</b>	
Dumbleyung	1