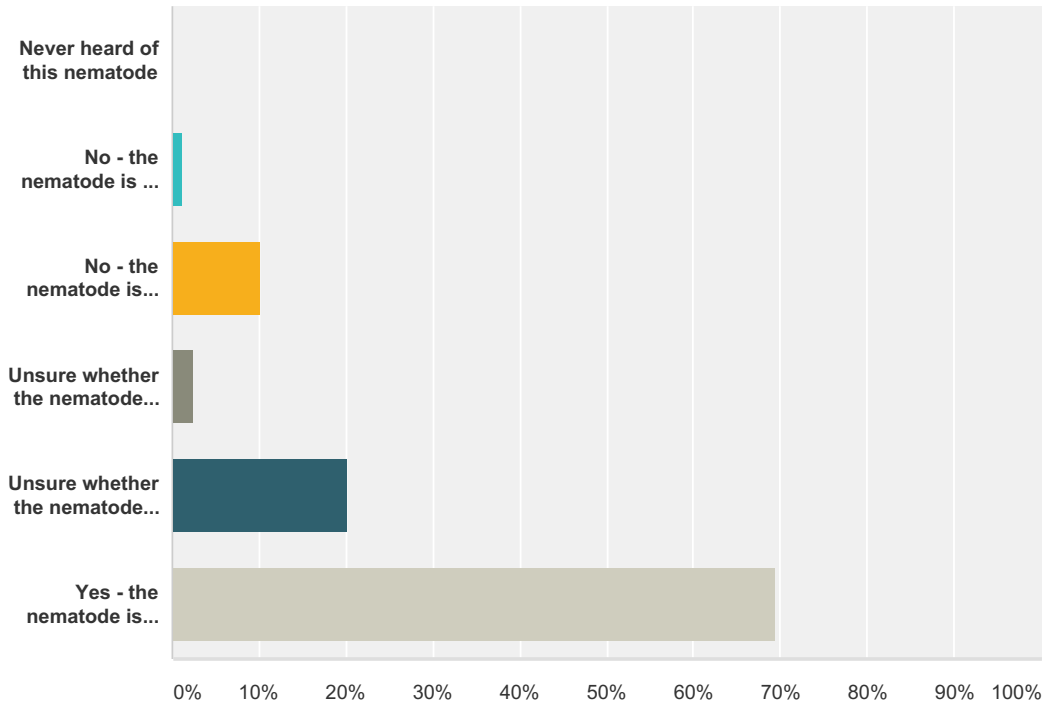


**Q1 Do you think that *Pratylenchus thornei* is a CROP PRODUCTION CONSTRAINT in your farming or consulting operations ?
Please select ALL suitable responses**

Answered: 79 Skipped: 0

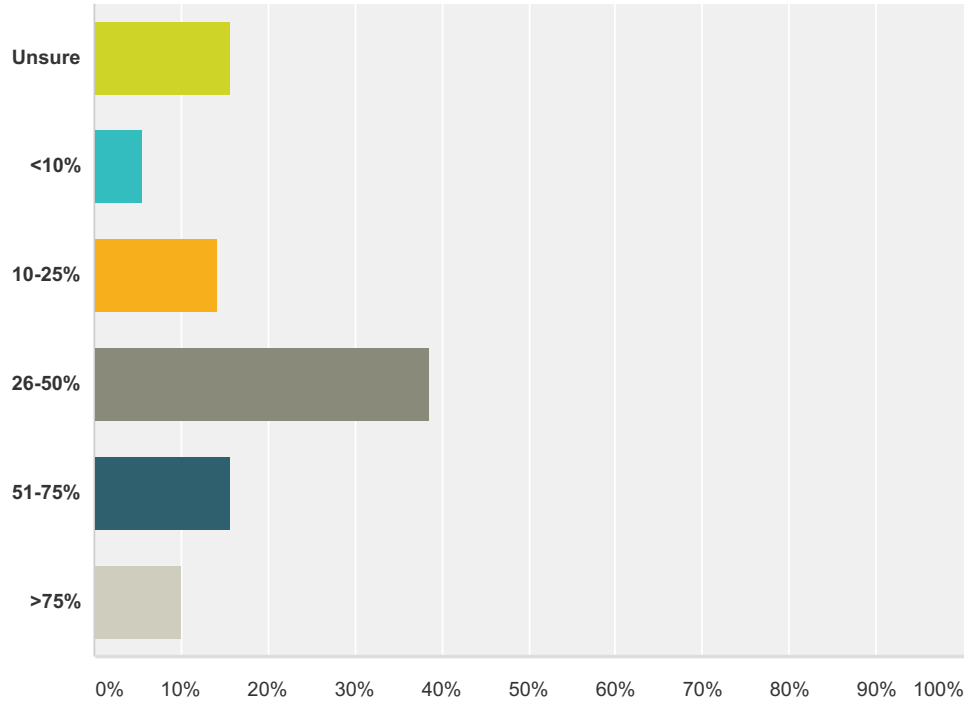


Answer Choices	Responses
Never heard of this nematode	0.00% 0
No - the nematode is not present	1.27% 1
No - the nematode is present but not at damaging levels	10.13% 8
Unsure whether the nematode is present	2.53% 2
Unsure whether the nematode is at damaging levels	20.25% 16
Yes - the nematode is present and frequently at damaging levels	69.62% 55
Total Respondents: 79	

#	Other response (please specify)	Date
1	Generally the levels are pretty good however there are some individual cases I need to test as a double check.	9/8/2014 12:19 PM
2	Not sure how prevalent and won't know until we commence a comprehensive survey of all paddocks but need to determine timing in both a seasonal context, soil moisture requirements for best results and at what point in a crop sequence gives the best timing to enact management decisions that result in an improved economic outcome. Current status is that we assume we have nematodes at damaging levels in all paddocks but the challenge is what to rotate with when wheat and chickpea are our best economic performers.	8/30/2014 6:42 PM

Q2 On average, in approximately what % of YOUR TOTAL CROPPING AREA do you believe *Pratylenchus thornei* is a CROP PRODUCTION CONSTRAINT ? Please select the most appropriate response

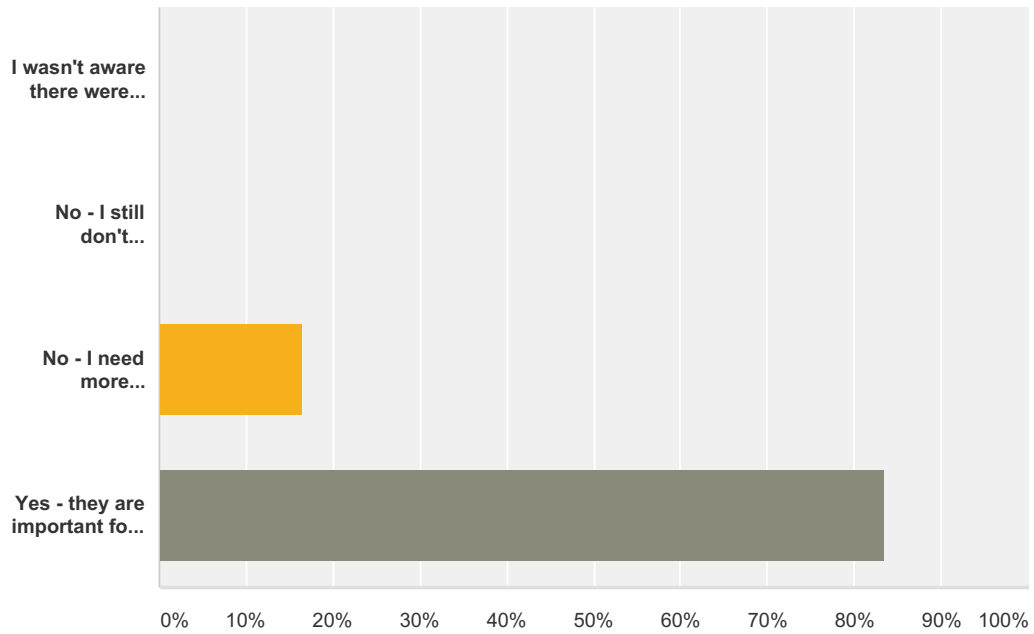
Answered: 70 Skipped: 9



Answer Choices	Responses
Unsure	15.71% 11
<10%	5.71% 4
10-25%	14.29% 10
26-50%	38.57% 27
51-75%	15.71% 11
>75%	10.00% 7
Total	70

Q3 Are the wheat variety ratings, published in Qld and NSW sowing guides, for TOLERANCE (eg moderately tolerant or MT) and RESISTANCE (eg moderately susceptible or MS) providing enough information to assist your management decisions ? Please select the most appropriate response

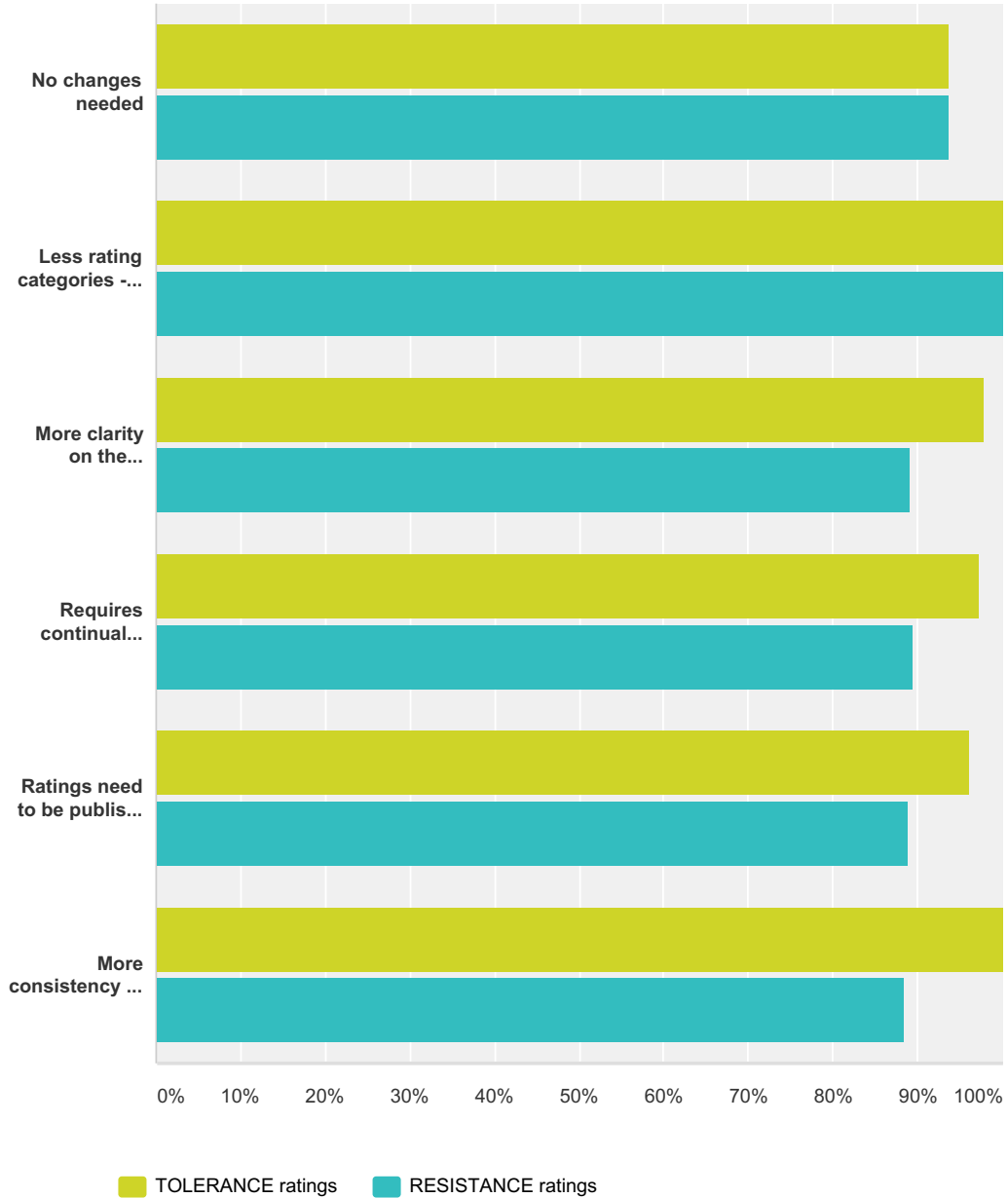
Answered: 79 Skipped: 0



Answer Choices	Responses
I wasn't aware there were ratings	0.00% 0
No - I still don't understand what is being rated	0.00% 0
No - I need more information to understand the differences between rating categories	16.46% 13
Yes - they are important for my variety selection	83.54% 66
Total	79

Q4 What changes to the wheat variety rating approach do you believe would assist your *Pratylenchus thornei* management ? Please select ALL suitable responses. You can select multiple answers for each row

Answered: 79 Skipped: 0



	TOLERANCE ratings	RESISTANCE ratings	Total Respondents
No changes needed	93.75% 15	93.75% 15	16
Less rating categories - to help simplify decisions	100.00% 1	100.00% 1	1

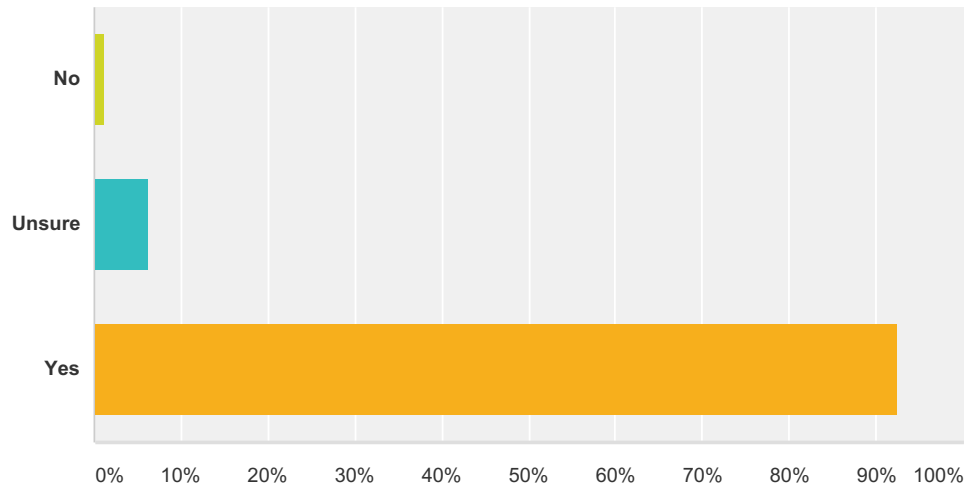
NGA Root-Lesion Nematode Survey 2014

More clarity on the magnitude of difference between categories	97.83% 45	89.13% 41	46
Requires continual reinforcement - nematodes are only one of many agronomy issues	97.37% 37	89.47% 34	38
Ratings need to be published more widely than just sowing guides	96.30% 26	88.89% 24	27
More consistency in variety ratings between publications	100.00% 26	88.46% 23	26

#	Other changes that would assist your management decisions (please specify)	Date
1	Numbers would be easier than the letters	9/10/2014 11:24 PM
2	Maybe some information on the response of a variety to varying numbers of <i>P. thornei</i>	9/10/2014 4:59 PM
3	There should be a numerical rating based on 100 being the bench mark from the best rated variety at the moment. All other varieties would then be rated according to the magnitude of difference from the benchmark variety. This would be similar to the rating for cotton tolerance to fusarium wilt.	9/10/2014 4:44 PM
4	Some of the older varieties seem to change tolerance with time so need to have regular reassessment.	9/8/2014 1:46 PM
5	Indication of the range in yield loss likely from various tolerance ratings and how this may vary to yield losses in varieties of other crop options (barley, chickpeas etc.) Multiplication factors expected from various resistance ratings	9/7/2014 5:52 PM
6	independent data on ratings of new varieties benchmarked against current knowledge would also be beneficial. Importance of independent cannot be overstated.	8/30/2014 6:44 PM
7	Relate rating to yield impacts or reductions in yield potential as compared to a resistant variety.	8/30/2014 6:30 PM
8	Current system seems to work well. As new research data becomes available it is good to hear about it as soon as possible.	8/20/2014 9:12 PM
9	New varieties coming through having confidence in the levels of resistance and tolerance for all varieties. Confidence is varied due the continual change of ratings which is due to the nature of nematodes.	8/18/2014 12:31 PM
10	It would be handy if tolerance and resistance could be combined in agronomically suitable varieties	8/16/2014 12:15 PM
11	Change to ratings back to the 1 to 9 scale	8/15/2014 2:45 PM
12	Sometimes a number system can be easier to understand or a % system	8/15/2014 12:43 PM
13	is a number scale possible?	8/15/2014 11:10 AM

Q5 Has the NGA project activity improved your level of KNOWLEDGE on the importance and impact of *Pratylenchus thornei* on crop production in the northern grains region ?Please select the most appropriate response

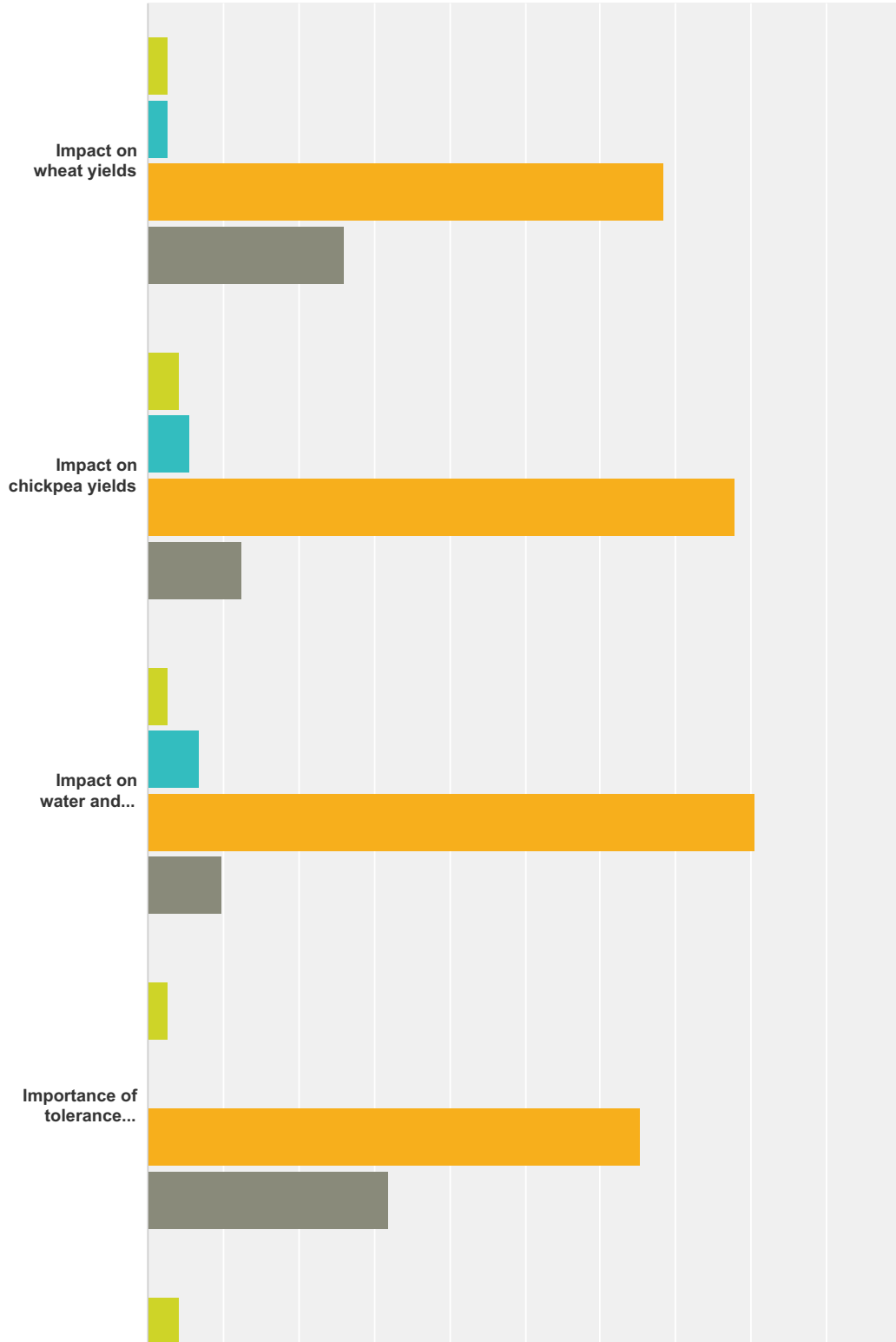
Answered: 79 Skipped: 0



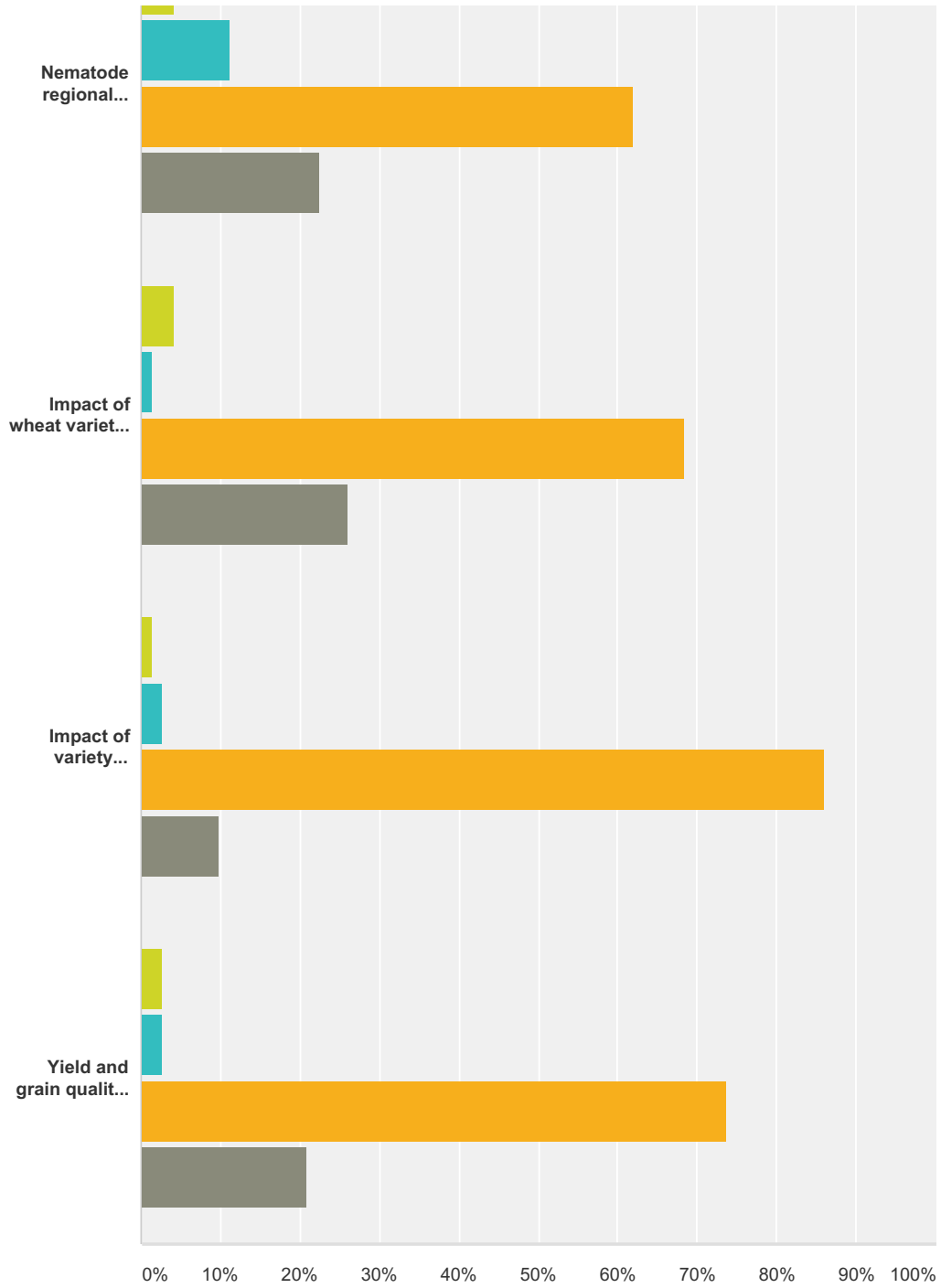
Answer Choices	Responses	
No	1.27%	1
Unsure	6.33%	5
Yes	92.41%	73
Total		79

Q6 In which areas has the NGA project activity improved your level of KNOWLEDGE on *Pratylenchus thornei* management ?Please select the most appropriate response for each row

Answered: 73 Skipped: 6



NGA Root-Lesion Nematode Survey 2014



- No change (already had a high level of knowledge)
- No change (low level of knowledge but other issues more important)
- Improved knowledge (but still need more)
- Improved knowledge (sufficient for this issue)

	No change (already had a high level of knowledge)	No change (low level of knowledge but other issues more important)	Improved knowledge (but still need more)	Improved knowledge (sufficient for this issue)	Total
Impact on wheat yields	2.74% 2	2.74% 2	68.49% 50	26.03% 19	73

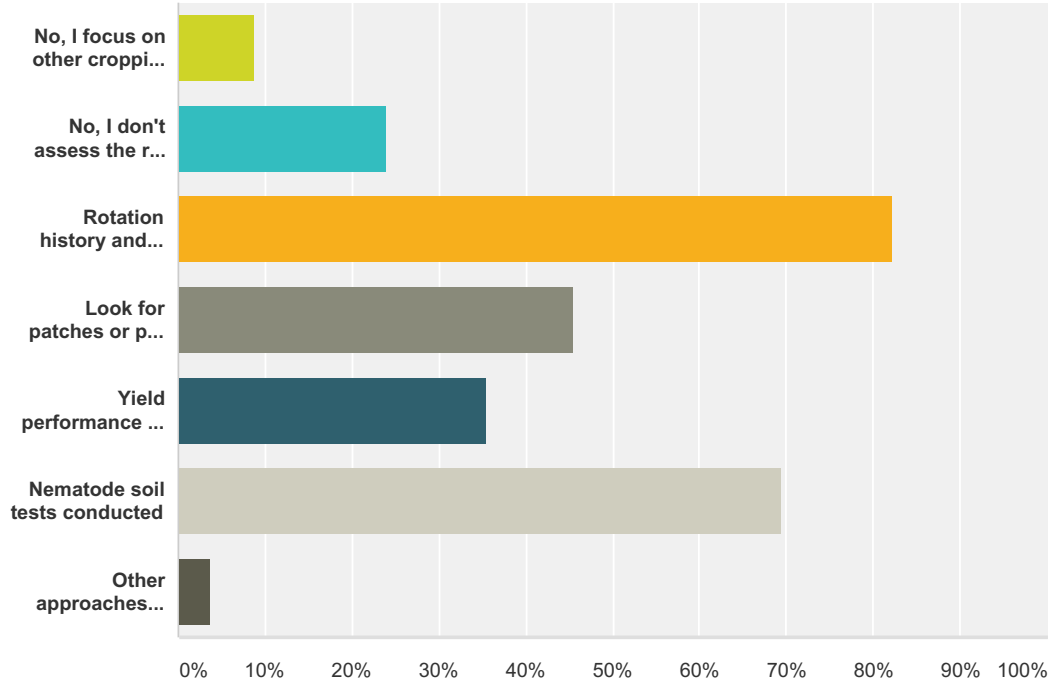
NGA Root-Lesion Nematode Survey 2014

Impact on chickpea yields	4.17% 3	5.56% 4	77.78% 56	12.50% 9	72
Impact on water and nutrient use efficiency in wheat	2.78% 2	6.94% 5	80.56% 58	9.72% 7	72
Importance of tolerance ratings for wheat variety selection	2.78% 2	0.00% 0	65.28% 47	31.94% 23	72
Nematode regional distribution	4.23% 3	11.27% 8	61.97% 44	22.54% 16	71
Impact of wheat variety selection on nematode build-up	4.11% 3	1.37% 1	68.49% 50	26.03% 19	73
Impact of variety selection in 'non-cereal' crops on nematode build-up	1.39% 1	2.78% 2	86.11% 62	9.72% 7	72
Yield and grain quality risk when in combination with crown rot	2.78% 2	2.78% 2	73.61% 53	20.83% 15	72

#	Other areas (please specify)	Date
1	Build up of numbers whilst the crop is growing	9/9/2014 9:45 AM
2	Regional distribution is interesting but not important from an agronomic perspective. We need data to be generated at a paddock level on all clients farms which will know be part of the system measurement that we do. See previous comments as to when and at what point in the system (i am thinking after the chickpea or winter break crop which will then influence cereal species/variety choice plus set the system for a possible longer break crop rotation)	8/30/2014 6:49 PM
3	Long fallow vs short fallow #'s movement in wet and dry cycle	8/25/2014 9:19 AM
4	good information given, but updates needed for continued good management	8/15/2014 12:41 PM

Q7 Do you assess *Pratylenchus thornei* 'risk', and if so, what approach(s) do you use ? Please select ALL suitable responses

Answered: 79 Skipped: 0

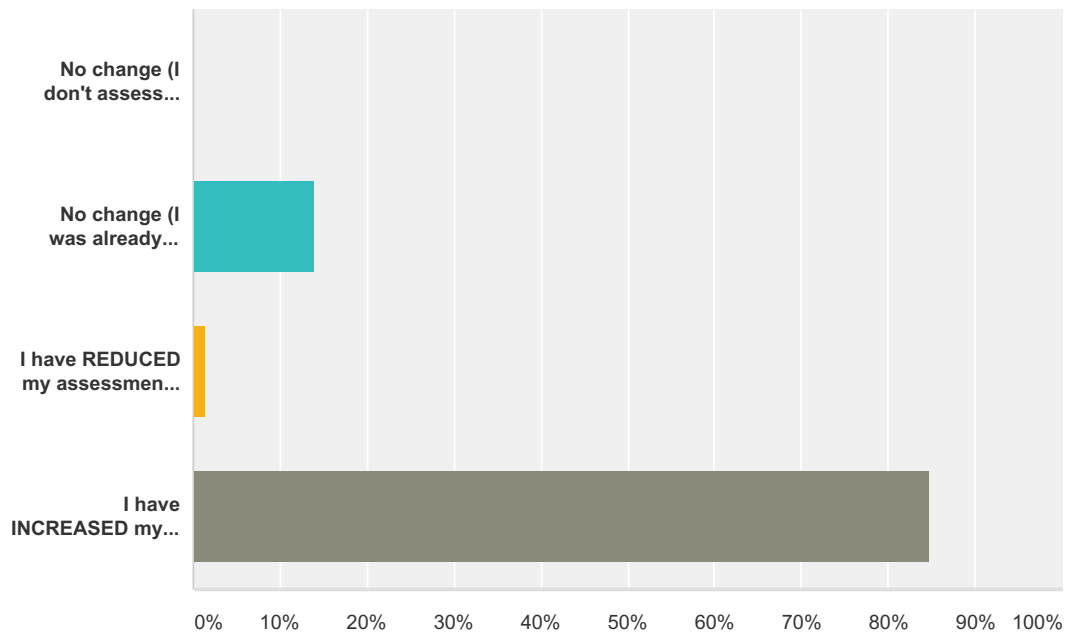


Answer Choices	Responses
No, I focus on other cropping issues	8.86% 7
No, I don't assess the risk but manage all paddocks assuming <i>Pratylenchus thornei</i> are a risk	24.05% 19
Rotation history and own/agronomist experience	82.28% 65
Look for patches or poor thrift in previous cereal	45.57% 36
Yield performance of intolerant varieties	35.44% 28
Nematode soil tests conducted	69.62% 55
Other approaches (please specify)	3.80% 3
Total Respondents: 79	

#	Other approaches (please specify)	Date
1	Nematode testing up to date has only been sporadic whereas crown rot testing has been of all cereal paddocks without fail for last 5 seasons. Plan to move testing to Predicta B/Nutrition from the one sampling effort following the winter break crop. Not sure how this will pick up CR as stubble crowns maybe harder to find??	8/30/2014 6:52 PM
2	Very few nematode tests conducted on the Liverpool Plains.	8/30/2014 6:34 PM
3	Assume presence of nematodes from crop rotation history and test results from paddocks in same region.	8/20/2014 9:20 PM

Q8 Has the NGA project activity changed your approach(s) to *Pratylenchus thornei* risk assessment ?Please select the most appropriate response

Answered: 72 Skipped: 7



Answer Choices	Responses
No change (I don't assess nematode risk)	0.00% 0
No change (I was already assessing nematode risk)	13.89% 10
I have REDUCED my assessment of nematode risk	1.39% 1
I have INCREASED my assessment of nematode risk	84.72% 61
Total	72

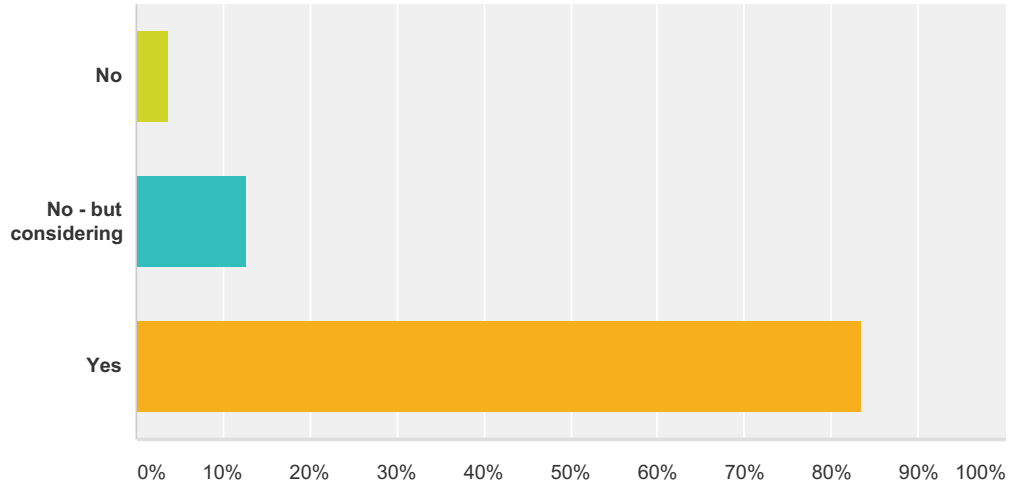
#	If you have changed your approach please indicate in what area eg increased soil testing	Date
1	Increasing the level of soil testing	9/10/2014 5:03 PM
2	more soil testing to back up suspected high risk paddocks	9/10/2014 3:59 PM
3	Closer attention to variety selection and soil testing.	9/8/2014 12:26 PM
4	Increased assessment as it is now considered or at least assumed. Not sure if this is assessment in a scientific sense but will progress from here	8/30/2014 6:53 PM
5	Have been very aware of Thornei and Neglectus from old friend in John Thompson at DAFF for many years. NGA are doing good work as well in this field,	8/25/2014 10:44 PM
6	Soil testing	8/20/2014 9:21 PM
7	Increased sampling. Management of rotation assumes nematode impact. Limited use of intolerant varieties.	8/18/2014 11:58 AM
8	Variety selection based on Resistance levels of individual varieties	8/15/2014 12:48 PM

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9	no soil testing done - dry time. increased discussion with growers. we need to be ready for next season.	8/15/2014 12:43 PM
10	Soil testing, variety choice and cropping rotation selection	8/15/2014 11:25 AM

Q9 Have you used any specific tool or practice for *Pratylenchus thornei* management in the last 5 years ?Please select the most appropriate response

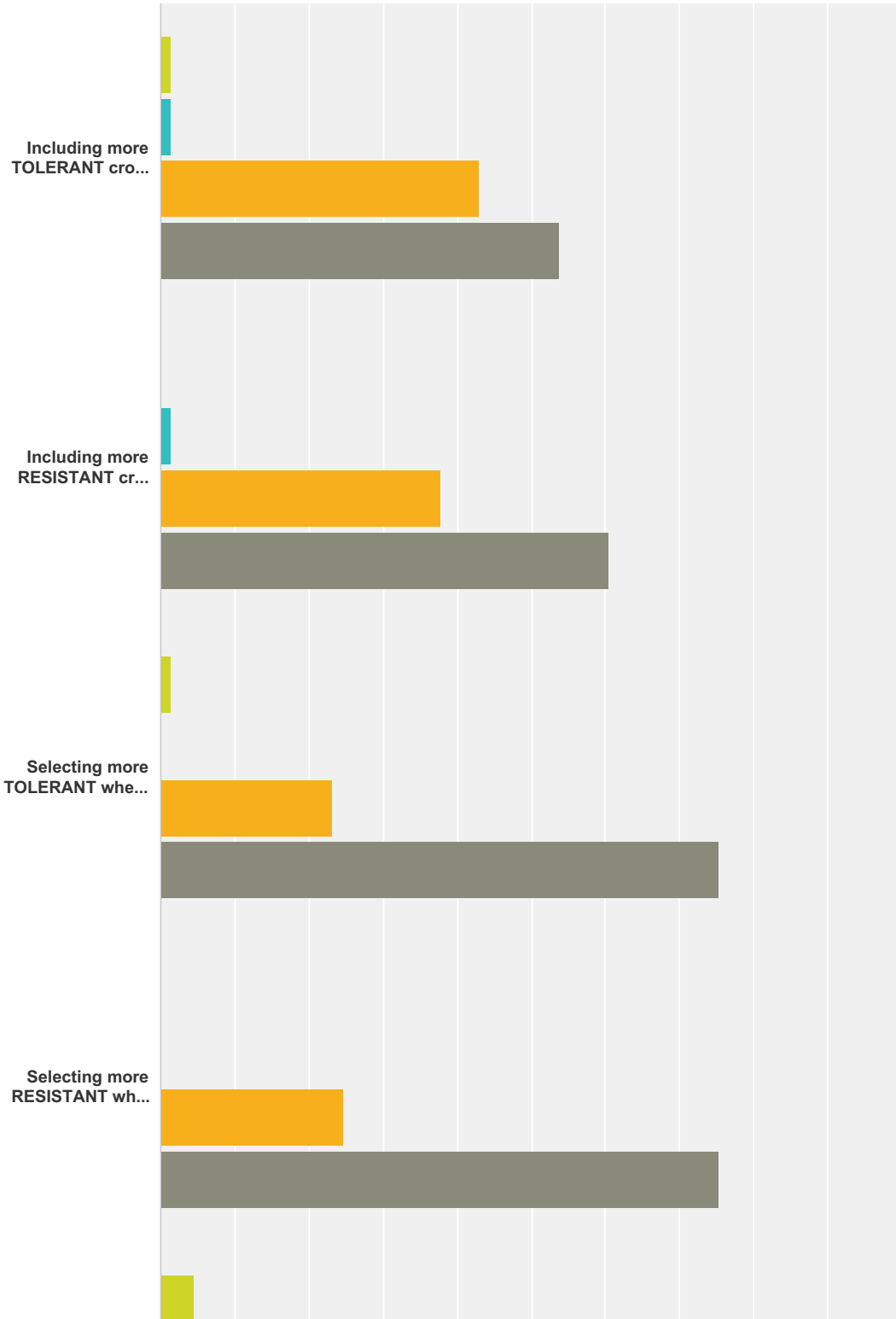
Answered: 79 Skipped: 0



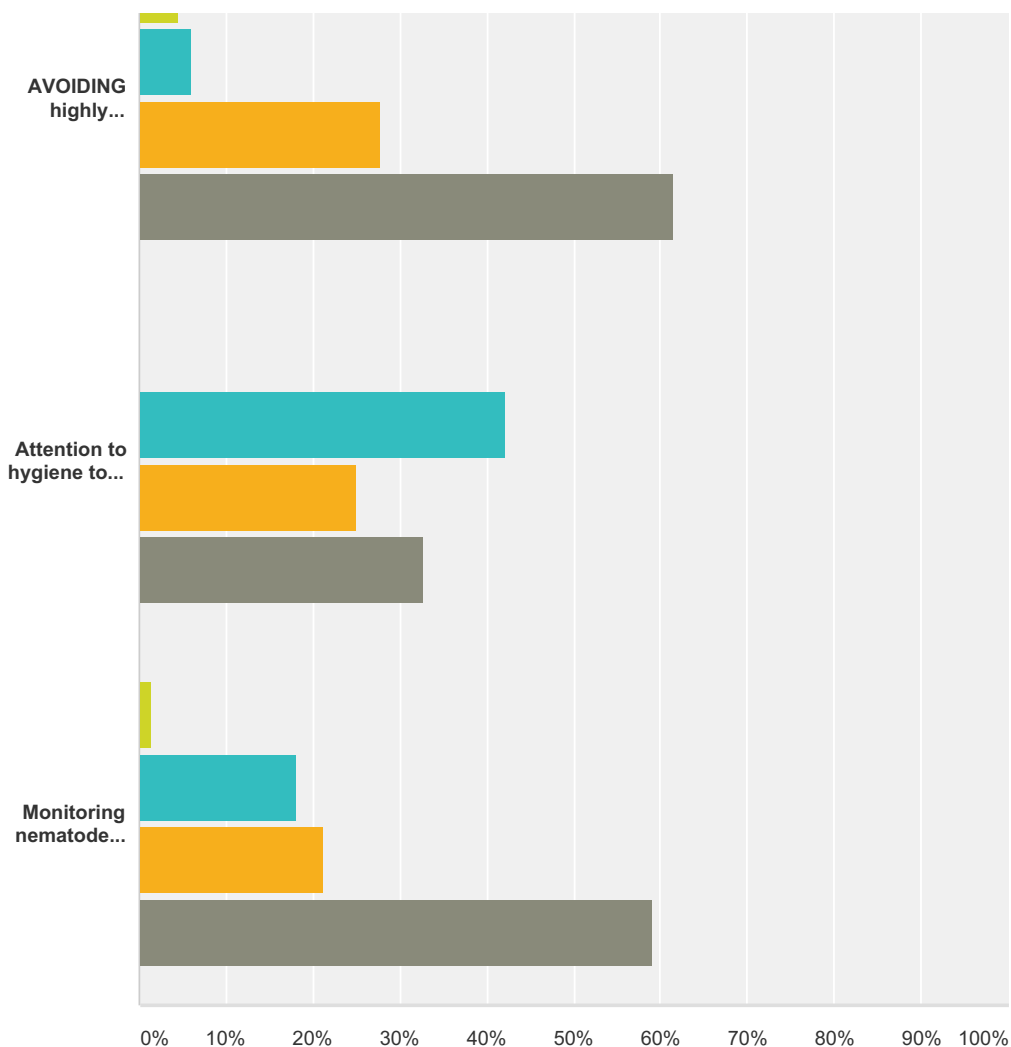
Answer Choices	Responses	
No	3.80%	3
No - but considering	12.66%	10
Yes	83.54%	66
Total		79

Q10 Has your USE of the following tools or practices for *Pratylenchus thornei* management changed since 2010 ?Please select the most appropriate response for each row

Answered: 66 Skipped: 13



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■ Decreased use
 ■ Unchanged - not using
 ■ Unchanged - was already using
■ Increased use

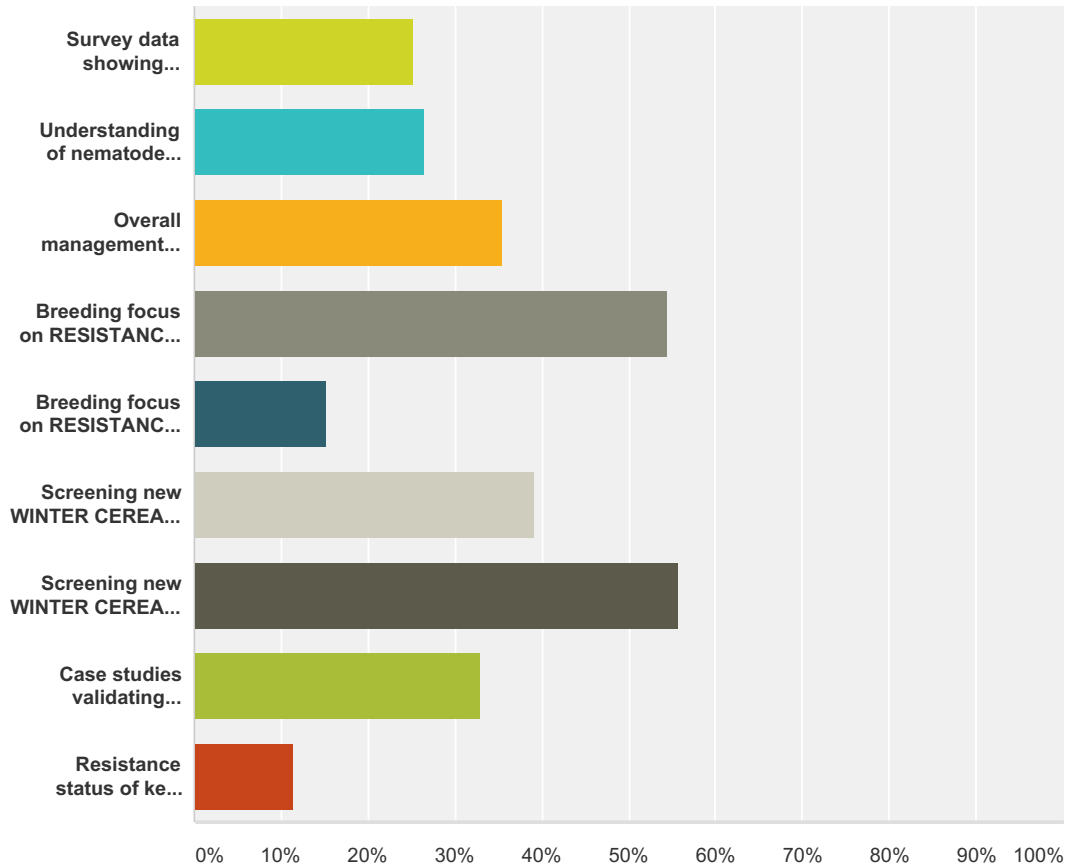
	Decreased use	Unchanged - not using	Unchanged - was already using	Increased use	Total
Including more TOLERANT crops in the rotation	1.54% 1	1.54% 1	43.08% 28	53.85% 35	65
Including more RESISTANT crops in the rotation	0.00% 0	1.52% 1	37.88% 25	60.61% 40	66
Selecting more TOLERANT wheat varieties	1.54% 1	0.00% 0	23.08% 15	75.38% 49	65
Selecting more RESISTANT wheat varieties	0.00% 0	0.00% 0	24.62% 16	75.38% 49	65
AVOIDING highly SUSCEPTIBLE or 'sucker' varieties	4.62% 3	6.15% 4	27.69% 18	61.54% 40	65
Attention to hygiene to limit nematode spread	0.00% 0	42.19% 27	25.00% 16	32.81% 21	64
Monitoring nematode populations using soil tests	1.52% 1	18.18% 12	21.21% 14	59.09% 39	66

NGA Root-Lesion Nematode Survey 2014

#	Other tools or practices you are using more frequently for <i>Pratylenchus thornei</i> management (please specify)	Date
1	of what relevance is hygiene when floodwater moves soil and residue across our farms sometimes 2-3 times a year. How practical is it to do in midsowing clay sticking to 60ft of planter tynes maybe 20 paddock moves across 40km	8/16/2014 12:22 PM

Q11 Please select a MAXIMUM of 3 priority areas, where you believe R,D&E activity needs to be INCREASED to assist your management of *Pratylenchus thornei*

Answered: 79 Skipped: 0



Answer Choices	Responses
Survey data showing nematode distribution and frequency	25.32% 20
Understanding of nematode biology and 'conducive conditions' for crop damage	26.58% 21
Overall management package linking 'risk categories' and management options	35.44% 28
Breeding focus on RESISTANCE in susceptible WINTER rotation crops eg chickpeas and faba beans	54.43% 43
Breeding focus on RESISTANCE in susceptible SUMMER rotation crops eg mungbeans and soybeans	15.19% 12
Screening new WINTER CEREAL varieties for TOLERANCE (yield impact) PRIOR to launch	39.24% 31
Screening new WINTER CEREAL varieties for RESISTANCE (population build-up) PRIOR to launch	55.70% 44
Case studies validating impact from cropping sequences on nematode populations	32.91% 26
Resistance status of key northern weed species	11.39% 9

NGA Root-Lesion Nematode Survey 2014

Total Respondents: 79

#	Other priority areas requiring INCREASED activity (please specify)	Date
1	Nematode biology & reduction in numbers over fallows & growth of resistant crops.	9/7/2014 6:12 PM
2	weed resistance or tolerance is an important issue but it is more about how quickly the nematodes can cycle on a weed emergence and what happens when the weeds are subsequently controlled. Also, weed escapes such as milk thistle (assuming it is a sucker) and the impact on the following crop in that weed escape patch/area (maybe just a single weed)	8/30/2014 6:58 PM
3	A hard one to answer. Really need to keep banging the drum all the time of above points.	8/25/2014 10:48 PM
4	Quantify the expected yield loss of each variety, similar to the table John Thompson had in his nematode publication.	8/18/2014 12:01 PM
5	predictive tool for base level to predict yield loss given sown variety and rotation sequence	8/16/2014 12:23 PM
6	Understanding the biology in long bare fallows, is a long bare fallow give similar results to growing a resistant crop?	8/15/2014 11:29 AM