

#### METHODOLOGY & INTERVIEW LENGTH

- N = 100 telephone interviews per crop of up to 30 minutes duration
- Fieldwork timing:
  - o November/December 2014

#### SAMPLE STRUCTURE & CUT-OFF SIZES

	Sample	Cut-off size
<b>GER - WOSR; n=100</b>		
Mecklenburg- Vorpommern	25	150ha
Schleswig-Holstein	27	30ha
Niedersachsen	23	50ha
Bavaria	25	30ha
<b>TOTAL WOSR</b>	<b>n=100</b>	

#### SCREENING CRITERIA

- Growers of winter oil seed rape
- Above minimum cut-off size of cultivated area of WOSR with a range of farm sizes
- Contact: Key **decision maker** on pesticides (usually owner / business manager)
- Germany - WOSR:
  - o All users of NNIs on WOSR prior to the suspension

**SCREENING & INTRODUCTION (3 min.)**

→ Ask for owner/ manager or person responsible for decisions on use of pesticides on [CROP].

Hello, my name is [...] from MARKET PROBE. We are an independent market research agency, working on a survey focusing on WINTER OILSEED RAPE growers and agronomists and I would be very interested in your opinions and attitudes on a number of subjects. I can assure you that your individual responses will not be identifiable in the overall results.

**0. (do not ask) Define region.**

→ Single response

Mecklenburg- Vorpommern	1
Schleswig-Holstein	2
Niedersachsen	3
Bavaria	4

**1. Are you the person responsible for decisions regarding the use of pesticides on your WINTER OILSEED RAPE crop?**

→ SPONTANEOUS. Single response

Yes, farmer/grower	1
No	2

*IF Q1=2 ⇒ ASK for the right person*

**2. A. How many hectares of the following crops did you grow on your farm/ business (across all possible sites) FOR HARVEST IN 2014 (2013/2014 season)? And what other crops did you grow? How many hectares of [...]?**

→ READ WINTER OILSEED RAPE ONLY. Probe for other crops they cultivate and ask for areas.

A) WINTER OILSEED RAPE	... ha	ALL COUNTRIES: IF A > [Cut off] ⇒ QUOTA 'WINTER OILSEED RAPE'
B) Other (Specify) 1.....	... ha	
C) Other (Specify) 2.....	... ha	
D) Other (Specify) 3.....	... ha	
E) Other (Specify) 4.....	... ha	
F) Other (Specify) 5.....	... ha	

**3. What is your total farm size (including all possible sites)?**

→ Numeric question. Use '-1' in case of 'don't know/no answer'

... hectares
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**COMPARISON OF PRODUCTION AREA IN 2014/2015 SEASON (PLANTED THIS AUTUMN) WITH THE 2013/2014 SEASON**

5. Have you planted more, about the same or less WOSR this autumn (2014/2015 season) than the area you grew for harvest in 2014 (2013/2014 season) on your farm/ business (across all possible sites)? Did you...

→ Single response

...plant more this autumn than you grew for harvest in 2014	1
...plant about the same area this autumn as you grew for harvest in 2014	2
... plant less this autumn than you grew for harvest in 2014	3
Don't know/No answer	99

**IF MORE WOSR HAS BEEN PLANTED THIS AUTUMN (2014/2015 SEASON) THAN IN THE PREVIOUS YEAR (2013/2014 SEASON) (Q5 CODE 1), ASK**

6. And what are all your reasons for planting more WOSR this autumn (2014/2015 season) than last year (2013/2014 season)?

→ Open ended. Probe.

**IF LESS WOSR HAS BEEN PLANTED THIS AUTUMN (2014/2015 SEASON) THAN IN THE PREVIOUS YEAR (2013/2014 SEASON) (Q5 CODE 3), ASK**

7. And what are all your reasons for planting less WOSR this autumn (2014/2015) than last year (2013/2014 season)?

→ Open ended. Probe.

8. How many hectares of WOSR have you planted on your farm/ business (across all possible sites) this autumn (2014/2015 season)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

... hectares

**IF NEONICOTINOID SUSPENSION/BAN NOT MENTIONED AT Q7 ASK Q9, OTHERS SKIP TO Q11:**

9. You are no doubt aware that this is the first year in which WOSR seed treated with neonicotinoid insecticides cannot be sown. Has this had any direct impact on the AREA of WOSR you have planted this autumn (2014/2015 season)?

	Yes	1
	No	2

11. Has the suspension of neonicotinoids had an impact on any other aspect of the management of your WOSR planted this autumn (2014/2015 season)?

	Yes	1
	No	2

**IF YES AT Q11, ASK**

12. What are all the other ways in which the suspension of neonicotinoids has impacted on your management of WOSR so far this autumn (2014/2015 season)?

→ Open ended. Probe.

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13. And which of the following changes have been implemented on your farm so far this autumn (2014/2015 season) due to the suspension of neonicotinoids for use on WOSR?

→ READ OUT. Multiple responses.

	Q13 (Multiple responses)
Reduced area of WOSR grown	1
Switched variety of WOSR	2
Switched to pyrethroid insecticides	3
Increased the number of foliar applications	4
Increased use of granular insecticides	5
Switched from WOSR to cereals	6
Switched from WOSR to CORN	7
Higher seed rate	8
Checking of yellow water traps intensified (Gelbschalen)	9
Other (Specify) .....	96
Other (Specify) .....	97
Other (Specify) .....	98
Don't know / no answer	99

**IF NO AT Q 9 AND Q11 (NO IMPACT)**

14. Why do you say there has been no impact on your production of WOSR despite the suspension of neonicotinoid products?

→ Open ended. Probe.

**INSECT PESTS**

15. What are all the insect pests you face on your WOSR crop?

→ SPONTANEOUS. Multiple response.

16. And which ONE of these insect pests do you consider to be the most difficult to control?

→ SPONTANEOUS. Single response.

	Q15 Spontaneous (Multiple response)	Q16 Spontaneous (Single code only)
Flea beetle	1	1
Wessex flea beetle	2	2
Cabbage stem flea beetle ( <i>pysylliodes chrysocephala</i> )	3	3
Large striped flea beetle	4	4
Autumn aphids - Peach-potato aphid	5	5
Pollen beetle ( <i>Meligethes aeneus</i> )	6	6
Cabbage seed weevil ( <i>Ceutorhynchus assimillis</i> )	7	7
Rape stem weevil ( <i>Ceutorhynchus napi</i> )	8	8
Cabbage stem weevil ( <i>Ceutorhynchus pallidactyllus</i> )	9	9
Winter stem weevil	10	10
Brassica pod midge ( <i>Dasyneura brassicae</i> )	11	11
Cabbage root fly ( <i>Delia radicum</i> )	12	12
Mealy cabbage aphid	13	13
Turnip sawfly ( <i>Athalia rosae</i> )	14	14
Other (Specify) .....	96	96
Other (Specify) .....	97	97
Other (Specify) .....	98	98
Don't know / no answer	99	99

**IF FLEA BEETLE MENTIONED AT Q15 (CODES 1, 2, 3 OR 4), ASK**

17. In your opinion, what proportion of your WOSR has been affected by FLEA BEETLE so far this autumn (2014/2015 season) on your farm/ business (across all possible sites)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	... %
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18. At which, if any, of the following growth stages has FLEA BEETLE caused damage to your WOSR this autumn (2014/2015 season) on your farm/business (across all possible sites)?

→ Read. Multiple responses

19. Which of the following statements best describes the potential impact on your WOSR crop of damage incurred by FLEA BEETLE at [GROWTH STAGE]? Please use the following scale...

1 = Severe potential damage (loss of > 20% of the crop due to damage or disease)

2 = Moderate potential damage (loss of 10 - 20% of the crop due to damage or disease)

3 = Modest potential damage (loss of < 10% of the crop due to damage or disease)

99 = Don't know/No answer

→ PROMPTED. Put code in table for each growth stage

	Q18 Growth stage	Q19 Potential damage caused
Germination & emergence	1	...
Both cotyledons unfolded and green (BBCH 10)	2	...
First true leaf (BBCH 11)	3	...
Second true leaf (BBCH 12)	4	...
Third true leaf (BBCH 13)	5	...
Fourth true leaf (BBCH 14)	6	...
Fifth true leaf (BBCH 15)	7	...
Later than fifth true leaf (BBCH 16)	8	...
Other. Specify...	98	
Don't know/No answer	99	

**IF CABBAGE ROOT FLY MENTIONED AT Q15 (CODE 12), ASK**

20. In your opinion, what proportion of your WOSR has been affected by CABBAGE ROOT FLY so far this autumn (2014/2015 season) on your farm/ business (across all possible sites)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	... %
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21. At which, if any, of the following growth stages has CABBAGE ROOT FLY caused damage to your WOSR this autumn (2014/2015 season) on your farm/business (across all possible sites)?

→ Read. Multiple responses

22. Which of the following statements best describes the potential impact on your WOSR crop of damage incurred by CABBAGE ROOT FLY at [GROWTH STAGE]? Please use the following scale...

- 1 = Severe potential damage (loss of > 20% of the crop due to damage or disease)  
2 = Moderate potential damage (loss of 10 - 20% of the crop due to damage or disease)  
3 = Modest potential damage (loss of < 10% of the crop due to damage or disease)  
99 = Don't know/No answer

→ PROMPTED. Put code in table for each growth stage

	Q21 Growth stage	Q22 Potential damage caused
Germination & emergence	1	...
Both cotyledons unfolded and green (BBCH 10)	2	...
First true leaf (BBCH 11)	3	...
Second true leaf (BBCH 12)	4	...
Third true leaf (BBCH 13)	5	...
Fourth true leaf (BBCH 14)	6	...
Fifth true leaf (BBCH 15)	7	...
Later than fifth true leaf (BBCH 16)	8	...
Other. Specify...	98	
Don't know/No answer	99	

**ASK IF CODES 1 OR 2 AT Q19 OR Q22 AT ANY GROWTH STAGE**

23. Have you had to reseed any part of your WOSR crop this autumn (2014/2015 season) due to FLEA BEETLE OR CABBAGE ROOT FLY damage?

Yes, FLEA BEETLE	1
Yes, CABBAGE ROOT FLY	2
No	3

**IF YES (Q23 CODES 1 OR 2), ASK... OTHERS SKIP TO Q26**

24. What area did you have to reseed?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	... ha
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25. And how much do you estimate the total cost of reseeded to have been (including seeds, labour, fuel)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

 ... €

**ASK ALL**

26. A) Taking into account any changes in your crop protection regime as a direct result of the suspension of use of neonicotinoids, do you anticipate that your WOSR YIELD will decrease, stay about the same or increase?

→ Single response.

**IF DECREASE (Q26A CODE 1), ASK**

- B) And how much is this reduction in yield likely to cost you in terms of [dt/ha]?

→ Numeric question. Use '-1' in case of 'don't know/no answer'.

- C) And do you anticipate that the QUALITY of your WOSR CROP will decline, stay about the same or improve?

→ Single response.

**IF DECLINE (Q26C CODE 1), ASK**

- D) And how much is this reduction in quality likely to cost you in terms of [€/dt]?

→ Numeric question. Use '-1' in case of 'don't know/no answer'.

→ READ. Single response for each aspect.

	Decrease/ Decline	Stay about the same	Increase/ improve	DK/No answer	Estimated cost
Yield	1	2	3	99	...[dt/ha]
Quality	1	2	3	99	...[ €/dt]

27. And taking into account the recent suspension of neonicotinoids, what proportion of your WOSR CROP do you estimate you can successfully grow without any negative impact on quality or yield?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

 ... %

**INSECTICIDE SEED TREATMENTS**

**28. What would you say are all the benefits or advantages of using a seed treatment rather than any other insecticide formulation?**

→ *Open ended. Probe.*

**FOLIAR INSECTICIDE USE**

**29. A) Which one of the following statements best describes how you decide when or whether to apply a FOLIAR insecticide treatment on your WOSR CROP?**

→ *READ OUT. Single response*

I follow a pre-defined program or spraying calendar whether or not insect pests are detected	<b>1</b>
I carry out a treatment when there are signs of insect pests/low levels of insect pests are visible on the crop	<b>2</b>
I only carry out a treatment when an infestation/outbreak has become serious	<b>3</b>
I only carry out a treatment when I am advised to do so by technicians/retailers/other farmers	<b>4</b>
Don't know/No answer	<b>99</b>

**B) How do you monitor pest levels on your WOSR crop?**

→ *READ OUT. Multiple responses.*

	<b>Q29B (Multiple responses)</b>
Visual inspection/field walking	<b>1</b>
Yellow water trays	<b>2</b>
SMS alert service	<b>3</b>
Other (Specify) .....	<b>98</b>
Don't know / no answer	<b>99</b>

30. How many times did you treat your WOSR crop with FOLIAR insecticides...  
A) during the 2013/2014 season and  
B) so far this autumn (2014/2015 season)?

→ *Numeric question. Use '-1' in case of 'don't know/no answer'*

A. During 2013/2014	... applications
B. So far this autumn (2014/2015 season)	... applications

**ASK FOR EACH YEAR/SEASON MENTIONED AT Q30**

31. Thinking now about your foliar insecticide program for WOSR during [YEAR/SEASON], at which of the following growth stages did you apply a foliar insecticide on your WOSR crop?

- a. Applied during 2013/2014 season
- b. Applied so far this autumn - during 2014/2015 season

→ *READ OUT. Multiple response(s)*

**IMPACT OF BAN ON YIELDS AND COSTS**

33. What was your WOSR YIELD in [dt/ha] at harvest in 2014 (2013/2014 season)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	...dt/ha]
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34. A. Prior to the neonicotinoid suspension (2013/2014 season), how much did you spend (in €/hectare) on insect control on WOSR over one complete season?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

B. And how much have you spent/do you estimate you are you likely to spend (in €/hectare) on insect control on WOSR since the neonicotinoid suspension came in, again over one complete season (2014/2015 season)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

A) Insecticide spend prior to suspension (2013/2014 season):	... [€]/ha
B) (Estimated) Insecticide spend post suspension (2014/2015 season):	...[€]/ha

35. Still thinking about your current production regime for WOSR (2014/2015 season), for each of the following aspects would you say your costs have increased, stayed about the same or decreased as a direct result of the suspension of neonicotinoids?

→ READ. Single response for each aspect.

	(Costs have) ...increased	(Costs have) ...stayed about the same	(Costs have) decreased	DK/No answer
A) WOSR seeds	1	2	3	99
B) Foliar insecticides	1	2	3	99
C) Machinery & fuel	1	2	3	99
D) Labour	1	2	3	99
E) Fungicides	1	2	3	99
G) And overall would you say your production costs have...	1	2	3	99

**IF COST OF WOSR SEEDS HAS INCREASED (Q35A CODE A1) OR DECREASED (Q35A CODE 3), ASK**

36. What are all the reasons why your WOSR SEED costs have [INCREASED/DECREASED] as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**IF COST OF FOLIAR INSECTICIDES HAS INCREASED (Q35 CODE B1), ASK**

37. A) What are all the reasons why your FOLIAR INSECTICIDE COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

B) And by what percentage do you estimate your foliar insecticide costs have increased?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

 ... %

**IF COST OF MACHINERY & FUEL HAS INCREASED (Q35 CODE C1), ASK**

38. What are all the reasons why your MACHINERY & FUEL COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**IF COST OF LABOUR HAS INCREASED (Q35 CODE D1), ASK**

39. What are all the reasons why your LABOUR COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**IF COST OF FUNGICIDES HAS INCREASED (Q35 CODE E1), ASK**

40. What are all the reasons why your FUNGICIDE COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**FUTURE CHANGES**

42. In the future do you anticipate making any further changes to your CROP ROTATION OR THE AREA OF WOSR grown as a direct result of the suspension of use of Neonicotinoids?

	Yes	1
	No	2

**IF YES AT Q42, ASK**

43. What changes are you likely to make?

→ Open ended. Probe.

44. And in the future do you anticipate making any further changes to your PESTICIDE REGIME on WOSR as a direct result of the suspension of use of Neonicotinoids?

	Yes	1
	No	2

**IF YES AT Q44, ASK**

45. What changes are you likely to make?

→ Open ended. Probe.

46. What future issues, if any, do you foresee with the insecticide products you have used to replace your neonicotinoid seed treatments?

→ Open ended. Probe.

47. A. Which of the following statements would most closely apply to you if the suspension of neonicotinoid seed treatments for use on WOSR was to be lifted?

→ READ OUT. Single response

I would DEFINITELY go back to using a neonicotinoid seed treatment on my WOSR crop	4
I would PROBABLY go back to using a neonicotinoid seed treatment on my WOSR crop	3
I would PROBABLY NOT go back to using a neonicotinoid seed treatment on my WOSR crop	2
I would DEFINITELY NOT go back to using a neonicotinoid seed treatment on my WOSR crop	1
Don't know/No answer	99

**IF PROBABLY OR DEFINITELY NOT (Q47 CODES 1OR 2), ASK**

**B. Why do you say that?**

→ Open ended. Probe.



**INFORMATION AND ADVICE**

48. Who or what are all the information sources or contacts that you have used to adapt to the suspension of neonicotinoids for use on your WOSR crop?

→ SPONTANEOUS. Multiple responses

→ PROBE for more answers!

	Q48
Pesticide supplier / dealer	1
Pesticide manufacturer	2
Field days & demos	3
Farmer meetings	4
Other farmers	5
Independent consultant/advisor	6
Internet / Websites	7
Supplier product guides	8
Other leaflets / catalogues	9
Newsletters/direct mail (by post)	10
Email newsletters	11
Official institutions / Research centers	12
Previous experiences	13
Specialised press / magazines	14
Advertising (in general)	15
SMS / Text messages	16
Other. Specify...	96
Other. Specify...	97
Other. Specify...	98
Don't know / No answer	99

49. And what was the nature of the information or advice that you were seeking, to help you adapt to the suspension of the neonicotinoids used on your WOSR crops?

→ Open ended. Probe.

Finally, some classification questions.

50. What is your age?

→ READ OUT. SINGLE RESPONSE

< 35 years old	1
35 - 44 years old	2
45 - 54 years old	3
55 - 64 years old	4
65 and older	5
[DO NOT READ] Don't know, no answer	99

51. What is your highest level of education?

→ READ OUT. SINGLE RESPONSE

None - on farm training	1
Primary education	2
Secondary education - non agricultural orientation	3
Secondary education - agricultural orientation	4
Higher education but not University - non agricultural	5
Higher education but nu University - agricultural	6
University or similar - non agricultural	7
University or similar - agricultural	8
Other. Specify...	98
[DO NOT READ] Don't know, no answer	99

52. Which of the following items of technology/media do you use for professional purposes on your farm?

→ READ OUT. Multiple response.

Mobile phone	1
PC	2
Internet	3
Email	4
iPad/Tablet	5
SmartPhone	6
None	90
[DO NOT READ] Don't know, no answer	99

53. How many fulltime employees work on your farm, yourself included?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	... employees
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THANK YOU

#### METHODOLOGY & INTERVIEW LENGTH

- N = **10 telephone interviews** per crop of up to **30 minutes duration**
  - o GER: WOSR: N=10
- Timing:
  - o GER: November/December 2014

#### SCREENING CRITERIA

- Respondent must be in a position to influence the choice of insecticides for use on oilseed rape (E.g. agronomist, adviser, researcher, official, large distributor...)
  - Germany: Landwirt - No bee-keeper associations

**SCREENING & INTRODUCTION (3 min.)**

→ Ask for person responsible for advising growers on use of pesticides on [CROP] or person responsible for defining or influencing policies or strategies for insect control on [CROP].

Hello, my name is [...] from MARKET PROBE. We are an independent market research agency, working on a survey focusing on [WINTER OILSEED RAPE] and I would be very interested in your opinions and attitudes on a number of subjects. I can assure you that your individual responses will not be identifiable in the overall results.

**Name of company / organization**

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**Job title / role**

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**4. (do not ask) Define region.**

→ Single response

Mecklenburg- Vorpommern	1
Schleswig-Holstein	2
Niedersachsen	3
Bavaria	4

**5. A. Do you personally advise or have an influence on decisions regarding the use of pesticides on [WINTER OILSEED RAPE] crops?**

→ SPONTANEOUS. Single response

	<b>WOSR</b>
Yes	1
No	2

*IF Q1A=2 ⇒ ASK for the right person*

**B. (do not ask) Define target crop. Target crop is...**

→ Single response

WINTER OILSEED RAPE	1	
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**COMPARISON OF PRODUCTION AREA IN 2014/2015 SEASON (PLANTED THIS AUTUMN) WITH THE 2013/2014 SEASON**

6. In your opinion would you say that farmers in Germany have planted more, about the same or less WOSR this autumn (2014/2015 season) than the area grown for harvest in 2014 (2013/2014 season)? Would you say that farmers have...

→ Single response

...Planted more this autumn (2014/2015 season) than they grew for harvest in 2014 (2013/2014 season)	1
...Planted about the same area this autumn (2014/2015 season) as they grew for harvest in 2014 (2013/2014 season)	2
...Planted less this autumn (2014/2015 season) than they grew for harvest in 2014 (2013/2014 season)	3
Don't know/No answer	99

**IF MORE WOSR HAS BEEN PLANTED FOR THIS AUTUMN (2014/2015 SEASON) THAN IN THE PREVIOUS YEAR (2013/2014 SEASON) (Q2 CODE 1), ASK**

7. And in your opinion what are all the reasons for planting more WOSR this autumn (2014/2015 season) than last year (2013/2014 season)?

→ Open ended. Probe.

**IF LESS WOSR HAS BEEN PLANTED FOR THIS AUTUMN (2014/2015 SEASON) THAN IN THE PREVIOUS YEAR (2013/2014 SEASON) (Q2 CODE 3), ASK**

8. And in your opinion what are all the reasons for planting less WOSR this autumn (2014/2015 season) than last year (2013/2014 season)?

→ Open ended. Probe.

**IF NEONICOTINOID SUSPENSION/BAN NOT MENTIONED AT Q4 ASK Q5, OTHERS SKIP TO Q7:**

9. You are no doubt aware that this is the first year in which WOSR seed treated with neonicotinoid insecticides cannot be sown. In your opinion has this had any direct impact on the AREA of WOSR planted in Germany this autumn?

	Yes	1
	No	2

**IF YES AT Q5 ASK**

10. Why / in what way has the suspension of neonicotinoids had an impact on the AREA of WOSR planted this autumn (2014/2015 season)?

→ Open ended. Probe.

**ASK ALL**

11. Has the suspension of neonicotinoids had an impact on any other aspect of the management of WOSR planted this autumn (2014/2015 season)?

	Yes	1
	No	2

**IF YES AT Q7, ASK**

12. What are all the other ways in which the suspension of neonicotinoids has impacted on the management of WOSR so far this autumn (2014/2015 season)?

→ Open ended. Probe.

13. And which of the following changes have been implemented on farms in Germany so far this autumn (2014/2015 season) due to the suspension of neonicotinoids for use on WOSR? Farmers have...

→ READ OUT. Multiple responses.

	Q9 (Multiple responses)
Reduced area of WOSR grown	1
Switched variety of WOSR	2
Switched to pyrethroid insecticides	3
Increased the number of foliar applications	4
Increased use of granular insecticides	5
Switched from WOSR to cereals	6
Switched from WOSR to CORN	7
Increased the seed rate	8
Intensified checking of yellow water traps (Gelbschalen)	9
Other (Specify) .....	96
Other (Specify) .....	97
Other (Specify) .....	98
Don't know / no answer	99

**IF NO AT Q5 AND Q7 (NO IMPACT)**

14. Why do you say there has been no impact on production of WOSR despite the suspension of neonicotinoid seed treatments?

→ Open ended. Probe.



**INSECT PESTS**

15. What are all the insect pests faced by growers of WOSR?

→ SPONTANEOUS. Multiple response.

16. And which ONE of these insect pests do you consider to be the most difficult to control?

→ SPONTANEOUS. Single response.

	Q11 Spontaneous (Multiple response)	Q12 Spontaneous (Single code only)
Flea beetle	1	1
Wessex flea beetle	2	2
Cabbage stem flea beetle ( <i>pysylliodes chrysocephala</i> )	3	3
Large striped flea beetle	4	4
Autumn aphids - Peach-potato aphid ( <i>Myzus persicae</i> )	5	5
Pollen beetle ( <i>Meligethes aeneus</i> )	6	6
Cabbage seed weevil ( <i>Ceutorhynchus assimillis</i> )	7	7
Rape stem weevil ( <i>Ceutorhynchus napi</i> )	8	8
Cabbage stem weevil ( <i>Ceutorhynchus pallidactyllus</i> )	9	9
Winter stem weevil	10	10
Brassica pod midge ( <i>Dasyneura brassicae</i> )	11	11
Cabbage root fly ( <i>Delia radicum</i> )	12	12
Mealy cabbage aphid	13	13
Turnip sawfly ( <i>Athalia rosae</i> )	14	14
Other (Specify) .....	96	96
Other (Specify) .....	97	97
Other (Specify) .....	98	98
Don't know / no answer	99	99

**IF FLEA BEETLE MENTIONED AT Q11 (CODES 1, 2, 3 OR 4), ASK**

17. In your opinion, what proportion of the WOSR crop has been affected by FLEA BEETLE so far this autumn on [AGRONOMISTS: ...farms where you provide advice/OTHER KMIs: farms in Germany?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	... %
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18. At which, if any, of the following growth stages has FLEA BEETLE caused damage to the WOSR this autumn (2014/2015 season)?

→ Read. Multiple responses

19. Which of the following statements best describes the potential impact on these WOSR crops of damage incurred by FLEA BEETLE at [GROWTH STAGE]? Please use the following scale...

1 = Severe potential damage (loss of > 20% of the crop due to damage or disease)

2 = Moderate potential damage (loss of 10 - 20% of the crop due to damage or disease)

3 = Modest potential damage (loss of < 10% of the crop due to damage or disease)

99 = Don't know/No answer

→ PROMPTED. Put code in table for each growth stage

	Q14 Growth stage	Q15 Potential damage caused
Germination & emergence	1	...
Both cotyledons unfolded and green (BBCH 10)	2	...
First true leaf (BBCH 11)	3	...
Second true leaf (BBCH 12)	4	...
Third true leaf (BBCH 13)	5	...
Fourth true leaf (BBCH 14)	6	...
Fifth true leaf (BBCH 15)	7	...
Later than fifth true leaf	8	...
Other. Specify...	98	
Don't know/No answer	99	

**IF CABBAGE ROOT FLY MENTIONED AT Q11 (CODE 12), ASK**

20. In your opinion, what proportion of the WOSR has been affected by CABBAGE ROOT FLY so far this autumn on [AGRONOMISTS: ...farms where you provide advice/OTHER KMIs: farms in Germany?]

→ Numeric question. Use '-1' in case of 'don't know/no answer'

	... %
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21. At which, if any, of the following growth stages has CABBAGE ROOT FLY caused damage to WOSR this autumn (2014/2015 season)?

→ Read. Multiple responses

22. Which of the following statements best describes the potential impact on WOSR crops of damage incurred by CABBAGE ROOT FLY at [GROWTH STAGE]? Please use the following scale...

1 = Severe potential damage (loss of > 20% of the crop due to damage or disease)

2 = Moderate potential damage (loss of 10 - 20% of the crop due to damage or disease)

3 = Modest potential damage (loss of < 10% of the crop due to damage or disease)

99 = Don't know/No answer

→ PROMPTED. Put code in table for each growth stage

	Q17 Growth stage	Q18 Potential damage caused
Germination & emergence	1	...
Both cotyledons unfolded and green (BBCH 10)	2	...
First true leaf (BBCH 11)	3	...
Second true leaf (BBCH 12)	4	...
Third true leaf (BBCH 13)	5	...
Fourth true leaf (BBCH 14)	6	...
Fifth true leaf (BBCH 15)	7	...
Later than fifth true leaf	8	...
Other. Specify...	98	
Don't know/No answer	99	

**ASK IF CODES 1 OR 2 AT Q15 OR Q18 AT ANY GROWTH STAGE**

23. Has any part of the WOSR crop [AGRONOMISTS: on farms where you provide advice/ OTHER KMIs: on farms in Germany had to be reseeded this autumn (2014/2015 season) due to FLEA BEETLE (GER: OR CABBAGE ROOT FLY) damage?

Yes, DUE TO FLEA BEETLE	1
Yes, DUE TO CABBAGE ROOT FLY	2
No	3

**ASK ALL**

21. A) Taking into account any changes in crop protection regime as a direct result of the suspension of use of neonicotinoids, do you anticipate that the WOSR YIELD [AGRONOMISTS: on farms where you provide advice/ OTHER KMIs: on farms in Germany will decrease, stay about the same or increase?

→Single response.

**IF DECREASE (Q21A CODE1), ASK**

B) And how much is this reduction in yield likely to cost the average farmer in terms of [GER: dt/ha]?

→ Numeric question. Use '-1' in case of 'don't know/no answer'.

C) And do you anticipate that the QUALITY of the WOSR CROP [AGRONOMISTS: on farms where you provide advice/ OTHER KMIs: on farms in Germany will decline, stay about the same or improve?

→Single response.

**IF DECLINE (Q21C CODE1), ASK**

D) And how much is this reduction in quality likely to cost the average farmer in terms of [GER: €/dt]?

→ Numeric question. Use '-1' in case of 'don't know/no answer'.

→ READ. Single response for each aspect.

	Decrease/ Decline	Stay about the same	Increase/ improve	DK/No answer	Estimated cost
Yield	1	2	3	99	...[ dt/ha]
Quality	1	2	3	99	...[ €/dt]

**FOLIAR INSECTICIDE USE**

AGRONOMISTS ONLY. OTHERS SKIP TO Q29:

23. A) Which one of the following statements best describes how your clients decide when or whether to apply a FOLIAR insecticide treatment on their WOSR CROP?

➔ *READ OUT. Single response*

	Q23A (Single response)
They follow a pre-defined program or spraying calendar whether or not insect pests are detected	1
They carry out a treatment when there are signs of insect pests/low levels of insect pests are visible on the crop	2
They only carry out a treatment when an infestation/outbreak has become serious	3
They only carry out a treatment when they are advised to do so by myself/retailers/other farmers	4
Don't know/No answer	99

B) And how do your clients monitor pest levels on their WOSR crops?

➔ *READ OUT. Multiple responses.*

	Q23B (Multiple responses)
Visual inspection/field walking	1
Yellow water trays	2
SMS alert service	3
Other (Specify) .....	98
Don't know / no answer	99

24. How many times did you recommend treatment of the WOSR crop with FOLIAR insecticides...

A) during the 2013/2014 season and

B) so far this autumn (2014/2015 season)?

➔ *Numeric question. Use '-1' in case of 'don't know/no answer'*

C. During 2013/2014	... applications
D. So far this autumn (2014/2015 season)	... applications

**IMPACT OF BAN ON COSTS**

AGRONOMISTS ONLY. OTHERS SKIP TO Q29:

28. A. Prior to the neonicotinoid suspension (2013/2014 season), how much did your clients spend (in [€]/hectare) on insect control on WOSR over one complete season?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

B. And how much did they spend/do you estimate they will have to spend (in [€]/hectare) on insect control on WOSR since the neonicotinoid suspension came in, again over one complete season (2014/2015 season)?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

A) Insecticide spend prior to suspension (2013/2014):	... [€]/ha
B) (Estimated) Insecticide spend post suspension (2014/2015):	...[€]/ha

ASK ALL

29. (Still) thinking about current production regimes for WOSR (2014/2015 season), for each of the following aspects would you say costs have increased, stayed about the same or decreased as a direct result of the suspension of neonicotinoids?

→ READ. Single response for each aspect.

	(Costs have) ...increased	(Costs have) ...stayed about the same	(Costs have) decreased	DK/No answer
E) WOSR seeds	1	2	3	99
F) Foliar insecticides	1	2	3	99
G) Machinery & fuel	1	2	3	99
H) Labour	1	2	3	99
E) Fungicides	1	2	3	99
G) And overall would you say your production costs have...	1	2	3	99

**IF COST OF WOSR SEEDS HAS INCREASED (Q29A CODE 1) OR DECREASED (Q29A CODE 3), ASK**

30. What are all the reasons why WOSR SEED costs have [INCREASED/DECREASED] as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**IF COST OF FOLIAR INSECTICIDES HAS INCREASED (Q29B CODE 1), ASK**

31. A) What are all the reasons why FOLIAR INSECTICIDE COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

- B) And by what percentage do you estimate foliar insecticide costs have increased?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

 ... %

**IF COST OF MACHINERY & FUEL HAS INCREASED Q29C CODE 1), ASK**

32. What are all the reasons why MACHINERY & FUEL COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**IF COST OF LABOUR HAS INCREASED (Q29D CODE 1), ASK**

33. What are all the reasons why LABOUR COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**IF COST OF FUNGICIDES HAS INCREASED (Q29E CODE 1), ASK**

34. What are all the reasons why FUNGICIDE COSTS have increased as a direct result of the suspension of neonicotinoids?

→ Open ended. Probe.

**ASK ALL**

35. A. Are you aware of any communication / exchange of information between growers/grower groups and bee-keepers/bee-keeper associations in Germany that identifies the location of hives and permits growers to warn beekeepers when an insecticide spray application is likely to take place?

Yes	1
No	2
Don't know/no answer	99

**IF YES ATQ35, ASK :**

- B. Please describe how this works including any use of technology, software, training etc.

→ Open ended. Probe.



**FUTURE CHANGES**

37. In the future, do you expect farmers to make any further changes to their CROP ROTATION OR THE AREA OF WOSR grown as a direct result of the suspension of use of Neonicotinoids?

	Yes	1
	No	2

**IF YES AT Q37, ASK**

38. What changes are they likely to make?

→ Open ended. Probe.

39. And in the future do you expect them to make any further changes to their PESTICIDE REGIME on WOSR as a direct result of the suspension of use of Neonicotinoids?

	Yes	1
	No	2

**IF YES AT Q39, ASK**

40. What changes are they likely to make?

→ Open ended. Probe.

**ASK ALL**

41. What future issues, if any, do you foresee with the insecticide products that have been used to replace neonicotinoid seed treatments?

→ Open ended. Probe.

**ASK ALL**

45. What strategies are you [AGRONOMISTS: currently recommending/ OTHER KMIs: would you advise] in order to avoid the development of resistance to NNI replacement products?

→ Open ended. Probe.

Finally, some classification questions.

46. What is your age?

→ READ OUT. SINGLE RESPONSE

< 35 years old	1
35 - 44 years old	2
45 - 54 years old	3
55 - 64 years old	4
65 and older	5
[DO NOT READ] Don't know, no answer	99

47. For how many years have you been working in a farm advisory/consultancy/research capacity?

→ Numeric question. Use '-1' in case of 'don't know/no answer'

... years
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THANK YOU