

Data collection Good Growth Plan



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BACKGROUND INFORMATION

Market Probe is an independent market research agency specialized in agricultural research. For “The Good Growth Plan”, we are currently collecting farm data as part of a global project. This document is your guide for the collection of your farm data. We will already go through some topics, but we will also ask you to fill out some of the data yourself and send the information back to the market research agency.

- After planting (intermediary data transfer): PART I + II
- Before harvesting (intermediary data transfer): PART III
- After harvesting (final data transfer): PART IV + V + VI

In case of questions, don't hesitate to contact the local help desk ([insert helpdesk number here](#)).

Before we start data collection, we will guide you through the questionnaire, in order to make all questions clear to you. We will also give some more background information on the Good Growth Plan.

[Include training package](#)

PART I: SCREENING

1. Please fill out the unique code, given by the interviewer:

UNIQUE CODE: XX X XXX

Country code (See country codes Q2)

Farm type (1=RF and 2=BF)

Respondent number (Unique respondent number)

2. Please note down the country:

Algeria	01	Egypt	12	Jordan	23	Poland	34
Argentina	02	France	13	Kenya	24	Russia	35
Australia	03	Ghana	14	Korea	25	South Africa	36
Bangladesh	04	Guatemala	15	Malaysia	26	Spain	37
Belgium	05	Honduras	16	Mexico	27	Taiwan	38
Brazil	06	Hungary	17	Morocco	28	Thailand	39
China	07	India	18	The Netherlands	29	Ukraine	40
Colombia	08	Indonesia	19	Pakistan	30	USA	41
Costa Rica	09	Italy	20	Paraguay	31	Venezuela	42
East Africa	10	Ivory Coast	21	Peru	32	Vietnam	43
Ecuador	11	Japan	22	Philippines	33	Zambia	44

3. Please indicate the location in which your farm is located.

→ Please circle the location that applies.

<input type="checkbox"/>	xxx	1	<input type="checkbox"/>	xxx	11
<input type="checkbox"/>	xxx	2	<input type="checkbox"/>	xxx	12
<input type="checkbox"/>	xxx	3	<input type="checkbox"/>	xxx	13
<input type="checkbox"/>	xxx	4	<input type="checkbox"/>	xxx	14
<input type="checkbox"/>	xxx	5	<input type="checkbox"/>	xxx	15
<input type="checkbox"/>	xxx	6	<input type="checkbox"/>	xxx	16
<input type="checkbox"/>	xxx	7	<input type="checkbox"/>	xxx	17
<input type="checkbox"/>	xxx	8	<input type="checkbox"/>	xxx	18
<input type="checkbox"/>	xxx	9	<input type="checkbox"/>	xxx	19
<input type="checkbox"/>	xxx	10	<input type="checkbox"/>	xxx	20

4. Please note down the **target crop**:

→ Please circle the crop that applies. If there is only one target crop, circle one crop. If crop rotation, please circle all crops included in the rotation.

Apples	1	Pepper	12
Banana	2	Potato	13
Barley	3	Rice	14
Cauliflower for processing industry	4	Soybean	15
Cocoa	5	Stone fruit	16
Coffee	6	Sugarcane	17
Corn	7	Sunflower	18
Cotton	8	Tomato	19
Grape	9	Watermelon	20
Oilseed rape	10	Wheat	21
Pear	11		

5. What is your **total cultivated area of [TARGET CROP]** in **hectare**?

If size < cut-off size → close interview

6. What is the size of your **cultivated area** in **hectare**? This is the area used for growing crops (including fields that are used for pasture in a crop rotation).

→ Please write down the size of your cultivated area.

7. What percentage of your **agricultural production activities** is related to crop cultivation? And what to livestock?

→ Please indicate in terms of % of your time - sum should be 100%.

1. Crop cultivation%
2. Livestock%
	100%

8. Xxxx
9. Xxxx
10. Xxxx
11. Xxxx
12. Xxxx
13. Xxxx
14. Xxxx
15. Xxxx
16. Xxxx
17. xxxx

Based on country inputs, other screening criteria will be added. Like:

- Farm size
- Crop specificity
- Crop rotation production cycle
- Production types (ways of producing crops)
- Average yield in previous years
- Level of mechanization
- Primary input channel
- Primary output channel (coop, contract, farm gate, etc.)
- Expenses for inputs
- Degree of input use
- Problems with which pests and diseases
- Grower's age
- Basic characterization
 - Demographic profile and Media habit
 - Social Activities, e.g. Farmer Group
 - Buyers channel
 - Attitudinal test on farming and pesticide usage
- Decision and criteria processes
 - Source of brand or product information
- Criteria of choosing supplier

IF COUNTRY IS AUSTRALIA: PADDOCK INSTEAD OF FIELD OR GROWING AREA (CHECK WITH AGENCY)

IF COUNTRY IS THE NETHERLANDS: 1 APPLE FIELD AND 1 PEAR FIELD

IF CROP ROTATIONS: MULTIPLE CROPS

PART II : FARM CHARACTERISTICS

A. Contact information

18. Please fill out the **unique code**, given by the interviewer:

UNIQUE CODE: XX X XXX

Country code

(See country codes Q2)

Farm type

(1=RF and 2=BF)

Respondent number

(Unique respondent number)

19. **Surname**

→ Please write down your surname in capital letters.

20. **First name**

→ Please write down your first name in capital letters.

21. **Phone number**

→ Please write down your phone number, including the country and region codes.

22. **E-mail address**

→ Please write down your e-mail address in capital letters.

23. **Farm address - street**

→ Please write down the street name of the location of your farm in capital letters.

24. **Farm address - street number**

→ Please write down the street number.

25. **Farm address - postal code**

→ Please write down the postal code of the city in which your farm is located.

26. Farm address - city

→ Please write down the city in which your farm is located.

--

27. Age

→ Please write down your age in years.

..... years

28. Gender

→ Please circle your gender.

Male	1
Female	2

29. We are conducting this survey on behalf of a manufacturer of crop protection products. Would it be okay for you for this company to contact you with follow-up information?

Yes	1
No	2

30. Are you a full-time or part-time farmer?

→ Please circle your answer. Only one answer possible.

I am a full-time grower (no other activities generating income apart from farming)	1
I am a part-time grower (having other activities generating income, like teaching, ...)	2
Don't know / no answer	99

31. Until what age did you go to school?

→ Please write down the age until when you went to school.

Until..... year

32. What is your highest level of education?

→ Please circle your answer. Only one answer possible.

No education	1
Primary/Elementary school	2
Secondary school	3
Higher education (not university)	4
University degree	5
Other. Specify:	98
Don't know / no answer	99

IF Q32 is 2 or 3 or 4 or 5

33. Was this an agronomical/agricultural education?

→ Please circle your answer.

Yes	1
No	2

34. Are you a member of a producer group, association or cooperative?

→ Please circle your answer.

	Yes	1
	No	2

IF YES (CODE 1 in Q34)

35. A. What is the name of the producer group/association/cooperative that you are a member of?

→ Please note down your answer. If member of several, please note down all.

IF BELGIUM

B. Do you collaborate with a growing consultancy agency (e.g. TACO)?

→ Please circle your answer.

	Yes	1
	No	2

B. General farm activities

36. What are the crops you are cultivating?

→ Please circle all that apply. Please write down other crop if needed. (MR)

Apples	1	Pepper	12
Banana	2	Potato	13
Barley	3	Rice	14
Cauliflower for processing industry	4	Soybean	15
Cocoa	5	Stone fruit	16
Coffee	6	Sugarcane	17
Corn	7	Sunflower	18
Cotton	8	Tomato	19
Grape	9	Watermelon	20
Oilseed rape	10	Wheat	21
Pear	11		
Other. Specify 1:			96
Other. Specify 2:			97
Other. Specify 3:			98
Don't know / no answer			99

C. Soil erosion measures

41. Which of the following measures are taken to manage soil erosion on your farm?

→ Please tick all that apply. (MR)

Practices that reduce the effective length of the slope, such as grass strips and terraces across the slope	1
Practices that minimize the disturbance of the soil for seedbed preparation, e.g. direct drilling, chisel ploughing	2
Practices that increase the amount of soil cover and organic matter, e.g. cover crops, mulches, stubbles	3
Practices that increase the variety of crops grown on the land by improving crop rotations and including mixed cropping	4
Aligning crop management practices perpendicular to the slope, e.g. contour ploughing, planting and tramlines	5
Other crop management practices that reduce soil compaction and increase infiltration, e.g. a controlled traffic plan, sub-soiling	6
Irrigation practices that increase the effectiveness of infiltration, e.g. reduced sprinkle irrigation intensity, surge irrigation	7
Practices that allow runoff to go down slopes and paths without causing soil erosion, e.g. grassed waterways that prevent formation of rills and gullies, fascines that protect banks of water streams	8
Use a decision support system	9
Use information provided by officials about disease and pest pressure	10
None of these	90
Don't know / no answer	99

42. Please note down any other measures that are taken to manage soil erosion on your farm.

→ Please note down other measures.

F. Safety measures

49. Do you apply safety measures when applying chemicals?

→ Please circle your answer. (SR)

Yes	1
No	2

IF YES in Q49 (safe-use behavior)

50. Pesticides can be spilled or not disposed of properly at various points during their handling and use. It is important to prevent point sources coming into contact with humans and / or the environment, since this may cause harm and is not how they are intended to be used in crop protection.

Moreover, as pesticides are applied in a diffuse manner to pests, diseases and weeds in field and greenhouse environments, it is important to prevent diffuse sources coming into contact with humans and / or the environment to ensure they are used safely to protect crops, by making applications more precise and by using measures to prevent transfer from where they are applied to the rest of the environment.

To which extent are the following measures for safe-use of chemicals applied on your farm?

→ Please tick what applies. Only one answer possible for each measure.

	Always	Mostly	Some-times	Never	Don't know
a. I always keep products under lock and out of reach of children and animals.	4	3	2	1	99
b. I practice good personal hygiene and always wash my hands before eating and drinking	4	3	2	1	99
c. I wash myself and my clothes after working with chemicals.	4	3	2	1	99
d. I do not eat, smoke or drink whilst handling, working with or applying pesticides.	4	3	2	1	99
e. I understand the product label and can follow the advice stated. If I don't understand something, I can ask someone to explain it to me.	4	3	2	1	99
f. I routinely check and clean my spraying equipment before and after use, and repair it if needed to prevent leaking.	4	3	2	1	99
g. I am always using Personal Protective Equipment when preparing and spraying chemicals.	4	3	2	1	99
h. When I transport pesticides to the farm, I keep them in separate compartments and in sealed containers away from foodstuff and other goods.	4	3	2	1	99
i. When transporting chemicals from the farm to the field, I check that the equipment does not leak, avoiding transport on public roads if possible, and know what to do in an emergency plan in case leaks occur.	4	3	2	1	99
j. I preferably prepare products for application in places where I am able	4	3	2	1	99

to contain spills, and with appropriate use of Personal Protective Equipment (PPE).					
k. I triple rinse containers after use, and dispose of them in accordance with local recommendations.	4	3	2	1	99
l. On my farm, workers are not allowed to re-enter areas treated with chemical products until permitted.	4	3	2	1	99
m. I keep the details of chemical product applications recorded to avoid uncertainty near harvest.	4	3	2	1	99
n. I calibrate the spraying equipment to deliver the right amount, at the right place, and at the right time, to improve efficacy, productivity, and prevent transfer.	4	3	2	1	99
o. I try to reduce runoff and erosion from my fields if it is a problem, or try to prevent transfer to the rest of the environment, e.g. with buffers.	4	3	2	1	99
p. I optimize the application timing to weather patterns if it is a problem, or try to prevent transfer to the rest of the environment, e.g. with ponds.	4	3	2	1	99

IF YES in Q49 (safe-use behavior)

51. Which other measures for safe-use of chemicals do you apply on your farm to limit the risk of chemical spills, make applications more precise, and avoid transfer to humans and the rest of the environment?

→ Please note down all other measures for safe-use of chemicals that you apply.

52. In the past 12 months, did you or someone else on the farm have an **accident with pesticide poisoning**?

→ Please circle your answer. (SR)

Yes	1
No	2

IF YES in Q52 (accidents with pesticide poisoning)

53. What were the **immediate actions** taken to treat the pesticide poisoning?

→ Please note down all immediate actions to treat pesticide poisoning that you applied.

54. **Where** do you deposit the **rest water** after spraying?

→ Spontaneous. Please circle your answer. Please note down others if not in list. Multiple answers possible. (MR)

Citerne (phytobac, heliosecc, sentinel, biofilter, ...)	1
In fields	2
In rivers, streams, drain or via the ditch	3
Other specify 1:	96
Other specify 2:	97
Other specify 3:	98
Don't know / no answer	99

55. A. **Where** do you clean your spraying equipment? Is this **on farm** or **on field**?

→ Please circle your answer. Multiple answers possible. (MR)

On farm	1
On field	2
Don't know / no answer	99

B. **Where** do you dispose of the **cleaning water** used for cleaning the equipment?

→ Spontaneous. Please circle your answer. Please note down others if not in list. Multiple answers possible. (MR)

On field	1
Citerne (phytobac, heliosecc, sentinel, biofilter, ...)	2
On an unpaved surface	3
On a paved surface (drain / dike)	4
Other specify 1:	96
Other specify 2:	97
Other specify 3:	98
Don't know / no answer	99

C. Do you store the sprayer protected from rain?

→ Please circle your answer. (SR)

	Yes	1
	No	2

D. Do you use drift reducing nozzles?

→ Please circle your answer. (SR)

	Yes	1
	No	2

E. Are you interested to follow training to keep updated with crop growing in general and environment management?

→ Please circle your answer. (SR)

	Yes	1
	No	2

IF BELGIUM

F. Do you have a phyto licence?

→ Please circle your answer. (SR)

	Yes	1
	No	2

IF Q55F=1 (YES)

G. Which kind of phyto licence do you have?

→ Please circle your answer. (SR)

	P1	1
	P2	2
	P3	3
	NP	4
	P2s	5
Other. Specify:		98
	Don't know / no answer	99

ALL

H. How would you define your relationship with your neighbors/direct environment, in terms of crop protection products and safety measures?

→ Please circle your answer. (SR)

	very good	5
	good	4
	average	3
	bad	2
	very bad	1
	Don't know / no answer	99

IF Q55H=1 or 2 or 3 or 4 or 5

I. Can you please explain your answer?

→ *Please describe.*

G. Description of growing area

We now would like to ask you to select the 2 main growing areas for your [TARGET CROP] cultivation (in case of more than 2 main growing areas, please select the 2 largest growing areas). A growing area is defined as the area where the treatment and the conditions are unique, like one [TARGET CROP] variety, one program, one soil condition, one planting year in case of trees, ...

56. Please note down the growing area name (f.e. D-block, windmill field, ...).

→ Please note down the name of each growing area.

	Growing area A	Growing area B
Field description		

57. What is the size of each growing area for [TARGET CROP]?

→ Please write down the size of each growing area.

	Growing area A	Growing area B
Size of growing areahaha

58. In general, what is the topography of each growing area for [TARGET CROP]?

→ Please note down the slope of each growing area. Please write down other if needed. (SR)

	Growing area A	Growing area B
Hilly	1	1
Flat	2	2
Gentle slope	3	3
Steep slope	4	4
Valley	5	5
98. Other. Specify:
Don't know / no answer	99	99

59. A. Can you please give us the GPS location of each growing area for [TARGET CROP]? One point (corner or point on field) is sufficient.

→ Note down the latitude and longitude of one point of each growing area and indicate whether it is North/South and West/East.

	Growing area A		Growing area B	
1) Latitude°.....',.....''	N/S°.....',.....''	N/S
2) Longitude°.....',.....''	W/E°.....',.....''	W/E

B. If you have the GPS polygon available for each growing area of [TARGET CROP], please write it down below.

→ Note down the latitude and longitude of each point of the polygon and indicate whether it is North/South and West/East.

		Growing area A		Growing area B	
POINT 1	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 2	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 3	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 4	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 5	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 6	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 7	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E
POINT 8	1) Latitude°.....'....."	N/S°.....'....."	N/S
	2) Longitude°.....'....."	W/E°.....'....."	W/E

60. Do you rotate crops on each growing area for [TARGET CROP]?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q60=1 (crop rotation)

61. What crops are you cultivating in rotation on each growing area for [TARGET CROP]?

→ Please circle all that apply for each growing area. Note down other crops if not in list. (MR)

	Growing area A	Growing area B
Apples	1	1
Banana	2	2
Barley	3	3
Cauliflower for processing industry	4	4
Cocoa	5	5
Coffee	6	6
Corn	7	7
Cotton	8	8
Grape	9	9
Oilseed rape	10	10
Pear	11	11
Pepper	12	12
Potato	13	13
Rice	14	14
Soybean	15	15
Stone fruit	16	16
Sugarcane	17	17
Sunflower	18	18
Tomato	19	19
Watermelon	20	20
Wheat	21	21
96. Other. Specify 1:		
97. Other. Specify 2:		
98. Other. Specify 3:		
Don't know / no answer	99	99

IF Q60=1 (crop rotation)

62. Which crop is first/second/third/fourth/fifth/... in the production cycle of each growing area for [TARGET CROP]?

→ Please circle the first/second/third/fourth/fifth/... crop. Note down other crops if not in list. (MR)

	Growing area A					Growing area B				
	1 st	2 nd	3 rd	4 th	5 th	1 st	2 nd	3 rd	4 th	5 th
Apples	1	1	1	1	1	1	1	1	1	1
Banana	2	2	2	2	2	2	2	2	2	2
Barley	3	3	3	3	3	3	3	3	3	3
Cauliflower for processing industry	4	4	4	4	4	4	4	4	4	4
Cocoa	5	5	5	5	5	5	5	5	5	5
Coffee	6	6	6	6	6	6	6	6	6	6
Corn	7	7	7	7	7	7	7	7	7	7
Cotton	8	8	8	8	8	8	8	8	8	8
Grape	9	9	9	9	9	9	9	9	9	9
Oilseed rape	10	10	10	10	10	10	10	10	10	10
Pear	11	11	11	11	11	11	11	11	11	11
Pepper	12	12	12	12	12	12	12	12	12	12
Potato	13	13	13	13	13	13	13	13	13	13
Rice	14	14	14	14	14	14	14	14	14	14
Soybean	15	15	15	15	15	15	15	15	15	15
Stone fruit	16	16	16	16	16	16	16	16	16	16
Sugarcane	17	17	17	17	17	17	17	17	17	17
Sunflower	18	18	18	18	18	18	18	18	18	18
Tomato	19	19	19	19	19	19	19	19	19	19
Watermelon	20	20	20	20	20	20	20	20	20	20
Wheat	21	21	21	21	21	21	21	21	21	21
96. Other. Specify 1:	96	96	96	96	96	96	96	96	96	96
97. Other. Specify 2:	97	97	97	97	97	97	97	97	97	97
98. Other. Specify 3:	98	98	98	98	98	98	98	98	98	98
No systematic crop rotation, depends on situation	90	90	90	90	90	90	90	90	90	90
Don't know / no answer	99	99	99	99	99	99	99	99	99	99

63. Within one season, do you cultivate more than one crop on each growing area for [TARGET CROP]?
 → Please circle your answer. (SR)

		Growing area A	Growing area B
Yes		1	1
No		2	2

IF Q63=1 (more than one crop in one season)

64. A. Which crop are you cultivating before the main crop (previous crop) on each growing area for [TARGET CROP]?

B. Which crop are you cultivating as the main crop on each growing area?

C. Which crop are you cultivating after the main crop (succeeding crop) on each growing area for [TARGET CROP]?

→ Please circle the crop you are cultivating before the main crop, your main crop and the crop you are cultivating after the main crop. (SR per column)

	Growing area A			Growing area B		
	A.	B.	C.	A.	B.	C.
Apples	1	1	1	1	1	1
Banana	2	2	2	2	2	2
Barley	3	3	3	3	3	3
Cauliflower for processing industry	4	4	4	4	4	4
Cocoa	5	5	5	5	5	5
Coffee	6	6	6	6	6	6
Corn	7	7	7	7	7	7
Cotton	8	8	8	8	8	8
Grape	9	9	9	9	9	9
Oilseed rape	10	10	10	10	10	10
Pear	11	11	11	11	11	11
Pepper	12	12	12	12	12	12
Potato	13	13	13	13	13	13
Rice	14	14	14	14	14	14
Soybean	15	15	15	15	15	15
Stone fruit	16	16	16	16	16	16
Sugarcane	17	17	17	17	17	17
Sunflower	18	18	18	18	18	18
Tomato	19	19	19	19	19	19
Watermelon	20	20	20	20	20	20
Wheat	21	21	21	21	21	21
96. Other. Specify 1:						
97. Other. Specify 2:						
98. Other. Specify 3:						
Don't know / no answer	99	99	99	99	99	99

65. Do you practice **intercropping** (growing multiple crops on the same growing area in the same season) on each growing area for [TARGET CROP]?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q65=1 (intercropping)

66. **Which** crops do you intercrop on each growing area with [TARGET CROP]?

→ Please circle all crops you intercrop. Note down other crops if not in list. (MR)

	Growing area A	Growing area B
Apples	1	1
Banana	2	2
Barley	3	3
Cauliflower for processing industry	4	4
Cocoa	5	5
Coffee	6	6
Corn	7	7
Cotton	8	8
Grape	9	9
Oilseed rape	10	10
Pear	11	11
Pepper	12	12
Potato	13	13
Rice	14	14
Soybean	15	15
Stone fruit	16	16
Sugarcane	17	17
Sunflower	18	18
Tomato	19	19
Watermelon	20	20
Wheat	21	21
96. Other. Specify 1:		
97. Other. Specify 2:		
98. Other. Specify 3:		
Don't know / no answer	99	99

67. What is the soil type of each growing area for [TARGET CROP]?

→ Please circle the soil type that applies for each growing area. Note down other soil type if not in list. (SR)

	Growing area A	Growing area B
clay soil	1	1
silty clay soil	2	2
silty clay loam soil	3	3
clay loam soil	4	4
loam soil	5	5
silt loam soil	6	6
silt soil	7	7
sandy clay soil	8	8
sandy clay loam soil	9	9
sandy loam soil	10	10
loamy sand soil	11	11
sand soil	12	12
98. Other. Specify:		
Don't know / no answer	99	99

68. From your point of view, can you give your opinion of the soil quality of each growing area for [TARGET CROP]?

→ Please circle the soil quality that applies for each growing area. (SR)

	Growing area A	Growing area B
really good	4	4
good	3	3
bad	2	2
very bad	1	1
Don't know / no answer	99	99

69. In general, what was the condition of the soil in terms of moisture level for each growing area for [TARGET CROP]?

→ Please circle the moisture level that applies for each growing area. (SR)

	Growing area A	Growing area B
Very moisture	5	5
Rather moisture	4	4
Normal moisture level	3	3
Rather dry	2	2
Very dry	1	1
Don't know / no answer	99	99

PART III: FARMING PRACTICES - BEFORE HARVEST

70. Please fill out your unique code, given by the interviewer (has to be the same as in Q1):

UNIQUE CODE: XX X XXX

Country code (See country codes Q2)

Farm type (1=RF and 2=BF)

Respondent number (Unique respondent number)

A. Planting and fruit development - SOYBEAN

71. Could you please note down the soybean variety that has been used for each growing area for soybean?

→ Please note down the soybean variety that has been used for each growing area.

	Growing area A	Growing area B
Soybean variety

72. When did the first field preparation start for each growing area for soybean?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

73. What is the amount of seeds in kilogram that has been sown per m² for each growing area for soybean?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

74. When have the seeds been sown/planted for each growing area for soybean?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

75. What is the final stand - i.e. the number of plants - per m² for each growing area for soybean?

→ Please note down the final stand (number of plants) per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

76. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for soybean?

➔ Please note down the percentage for each growing area.

	Growing area A	Growing area B
% plot area lodged%%

B. Planting and fruit development - CEREALS (WHEAT)

77. Could you please note down the wheat variety that has been used for each growing area for wheat?

→ Please note down the wheat variety that has been used for each growing area.

	Growing area A	Growing area B
Wheat variety

78. When did the first field preparation start for each growing area for wheat?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

79. What is the amount of seeds in kilogram that has been sown per m² for each growing area for wheat?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

80. When was the crop sown/planted for each growing area for wheat?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

81. Could you please indicate the average number of tillers per plant at growth stage 37 for each growing area for wheat?

→ Please write down the average number of tillers per plant for each growing area.

	Growing area A	Growing area B
Average number of tillers per plant at growth stage 37tillers/planttillers/plant

82. Could you please indicate the average number of ears per square meter during flowering for each growing area for wheat?

→ Please write down the average number of ears per m² for each growing area.

	Growing area A	Growing area B
Average number of earsears/m ²ears/m ²

83. What is the final stand - i.e. the average total number of plants - per square meter for each growing area for wheat?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/ <u>m²</u>plants/ <u>m²</u>

84. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for wheat?

→ Please note down the percentage for each growing area.

	Growing area A	Growing area B
% plot area lodged%%

C. Planting and fruit development - CEREALS (BARLEY)

85. Could you please note down the barley variety that has been used for each growing area for barley?

→ Please note down the barley variety that has been used for each growing area.

	Growing area A	Growing area B
Barley variety

86. When did the first field preparation start for each growing area for barley?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

87. What is the amount of seeds in kilogram that has been sown per m² for each growing area for barley?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

88. When have the seeds been sown/planted for each growing area for barley?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

89. What is the final stand - i.e. the average total number of plants per square meter for each growing area for barley?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

IF WINTER BARLEY

90. Could you please indicate the average number of tillers per plant after winter for each growing area for barley?

→ Please write down the average number of tillers per plant for each growing area.

	Growing area A	Growing area B
Average number of tillers per plant after wintertillers/planttillers/plant

IF SPRING BARLEY

91. Could you please indicate the average number of ears per square meter at growth stage 51 to 59 for each growing area for barley?

→ Please write down the average number of ears per m² at growth stage 51 to 59 for each growing area.

	Growing area A	Growing area B
Average number of ears per m ² at growth stages 51-59ears/m ²ears/m ²

92. Could you please indicate the average number of ears per square meter during flowering for each growing area for barley?

→ Please write down the average number of ears per m² during flowering for each growing area.

	Growing area A	Growing area B
Average number of earsears/m ²ears/m ²

93. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for barley?

→ Please note down the percentage for each growing area.

	Growing area A	Growing area B
% plot area lodged%%

D. Planting and fruit development - GRAPE

94. Could you please note down the grape variety that has been used for each growing area for grape?

→ Please note down the grape variety that has been used for each growing area.

	Growing area A	Growing area B
Grape variety

95. What is the year of planting of the grape vines for each growing area for grape?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting

96. What is the total number of grape vines for each growing area for grape?

→ Please note down the total number of grape vines for each growing area.

	Growing area A	Growing area B
Number of grape vinesgrape vinesgrape vines

97. Do you prune each growing area for grape?

→ Please circle your answer.

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q97=1 (YES)

98. When did the pruning of the grape vines occur for each growing area for grape?

→ Please write down the period of pruning for each growing area.

	Growing area A		Growing area B	
Pruning period	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

99. When did the first grape vines reach the flowering stage for each growing area for grape?

→ Please write down the flowering date for each growing area.

	Growing area A	Growing area B
Flowering date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

100. Could you please indicate the average number of grape bunches per vine for each growing area for grape?

→ Please write down the average number of grape bunches per vine for each growing area.

	Growing area A	Growing area B
Average number of grape bunches per vinegrape bunches/vine grape bunches/vine

101. Could you please indicate the average number of berries per bunch for each growing area for grape?

→ Please write down the average number of berries per bunch for each growing area.

	Growing area A	Growing area B
Average number of berries per bunchberries/bunch berries/bunch

E. Planting and fruit development - CORN

102. Could you please note down the corn variety that has been used for each growing area for corn?

→ Please note down the corn variety that has been used for each growing area.

	Growing area A	Growing area B
Corn variety

103. When did the first field preparation start for each growing area for corn?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

104. What is the amount of seeds in kilogram that has been sown per m² for each growing area for corn?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

105. When have the seeds been sown/planted for each growing area for corn?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

106. What is the final stand - i.e. the average total number of plants per square meter for each growing area for corn?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

107. Could you please indicate the average number of cobs per square meter during flowering for each growing area for corn?

→ Please write down the average number of cobs per m² for each growing area.

	Growing area A	Growing area B
Average number of cobs per m ²cobs/m ²cobs/m ²

108. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for corn?

➔ *Please note down the percentage.*

	Growing area A	Growing area B
% plot area lodged%%

F. Planting and fruit development - COTTON

109. Could you please note down the cotton variety that has been used for each growing area for cotton?

→ Please note down the cotton variety that has been used for each growing area.

	Growing area A	Growing area B
Cotton variety

110. When did the first field preparation start for each growing area for cotton?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

111. What is the amount of seeds in kilogram that has been sown per m² for each growing area for cotton?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

112. When have the seeds been sown/planted for each growing area for cotton?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

113. What is the final stand - i.e. the average total number of plants per square meter for each growing area for cotton?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

G. Planting and fruit development - RICE

114. Could you please note down the rice variety that has been used for each growing area for rice?

→ Please note down the rice variety that has been used for each growing area.

	Growing area A	Growing area B
Rice variety

115. When did the first field preparation start for each growing area for rice?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

116. What production system (ways of planting rice) is used on each growing area for rice? Was it....?

→ Please tick what applies for each growing area. Only one answer possible per growing area. Note down other if not in list.

	Growing area A	Growing area B
Transplanted (TR)	1	1
Direct-seeded (DS)	2	2
Direct-seeded, wet-sown (DSWS)	3	3
Direct-seeded, dry-sown (DSDS)	4	4
System of Rice Intensification (SRI)	5	5
98. Other. Specify		
Don't know / no answer	99	99

117. What is the amount of seeds in kilogram that has been sown per m² for each growing area for rice?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

118. When have the seeds or seedlings been planted for each growing area for rice?

→ Please write down the date of planting for each growing area.

	Growing area A	Growing area B
Planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

119. Please indicate the inter-row space that is applied on each growing area for rice?

→ Please note down the inter-row space in **centimeter** for each growing area.

	Growing area A	Growing area B
Inter-row spacecmcm

120. Could you please indicate the average number of tillers per hill at the panicle initiation for each growing area for rice?

→ Please note down the average number of tillers per hill at the panicle initiation.

	Growing area A	Growing area B
Average number of tillers per hill at the panicle initiationtillers/hill tillers/hill

121. Could you please indicate the average number of tillers per hill at heading/flowering for each growing area for rice?

→ Please note down the average number of tillers per hill at heading/flowering.

	Growing area A	Growing area B
Average number of tillers per hill at heading/floweringtillers/hill tillers/hill

122. Could you please indicate the average number of tillers per hill at active ripening for each growing area for rice?

→ Please note down the average number of tillers per hill at active ripening.

	Growing area A	Growing area B
Average number of tillers per hill at active ripeningtillers/hill tillers/hill

H. Planting and fruit development - POTATO

123. Could you please note down the potato variety that has been used for each growing area for potato?

→ Please note down the potato variety that has been used for each growing area.

	Growing area A	Growing area B
Potato variety

124. When did the first field preparation start for each growing area for potato?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

125. What is the amount of seeds in kilogram that has been sown per m² for each growing area for potato?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

126. When have the seeds been sown for each growing area for potato?

→ Please write down the date of sowing for each growing area.

	Growing area A	Growing area B
Sowing date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

127. What is the final stand - i.e. the average total number of plants per square meter for each growing area for potato?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

I. Planting and fruit development - OILSEED RAPE

128. Could you please note down the oilseed rape variety that has been used for each growing area for oilseed rape?

→ Please note down the oilseed rape variety that has been used for each growing area.

	Growing area A	Growing area B
Oilseed rape variety

129. When did the first field preparation start for each growing area for oilseed rape?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

130. What is the amount of seeds in kilogram that has been sown per m² for each growing area for oilseed rape?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

131. When have the seeds been sown for each growing area for oilseed rape?

→ Please write down the date of sowing for each growing area.

	Growing area A	Growing area B
Sowing date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

132. What is the final stand - i.e. the average total number of plants per square meter for each growing area for oilseed rape?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

133. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for oilseed rape?

→ Please note down the percentage per growing area.

	Growing area A	Growing area B
% plot area lodged%%

J. Planting and fruit development - SUNFLOWER

134. Could you please note down the sunflower variety that has been used for each growing area for sunflower?

→ Please note down the sunflower variety that has been used for each growing area.

	Growing area A	Growing area B
Sunflower variety

135. When did the first field preparation start for each growing area for sunflower?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

136. What is the amount of seeds in kilogram that has been sown per m² for each growing area for sunflower?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

137. When have the seeds been sown/planted for each growing area for sunflower?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

138. What is the inter-row space that is used when planting sunflower on each of the growing areas?

→ Please note down the inter-row space in cm for each growing area.

	Growing area A	Growing area B
Inter-row spacecmcm

139. What is the final stand - i.e. the average total number of plants per square meter for each growing area for sunflower?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

140. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for sunflower?

➔ *Please note down the percentage.*

	Growing area A	Growing area B
% plot area lodged%%

K. Planting and fruit development - SUGARCANE

141. Could you please note down the sugarcane variety that has been used for each growing area for sugarcane?

→ Please note down the sugarcane variety that has been used for each growing area.

	Growing area A	Growing area B
Sugarcane variety

142. What is the year of planting for each growing area for sugarcane?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting (Year)(Year)

143. What is the average age of the plants in each growing area for sugarcane?

→ Please note down the average age of the plants for each growing area.

	Growing area A	Growing area B
Age of plantsyearsyears

144. What is the final stand - i.e. the average total number of plants per square meter for each growing area for sugarcane?

→ Please note down the total number of plants per m for each growing area.

	Growing area A	Growing area B
Final stand/Plant densityplants/m ²plants/m ²

145. Which of the following planting types have been used for each growing area for sugarcane?

→ Please tick what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Mechanical planting	1	1
Manual planting	2	2
98. Other. Specify		
Don't know / no answer	99	99

146. What is the replanting cycle (generation) for each growing area for sugarcane?

→ Please circle the replanting cycle that applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
First cycle: plant cane	1	1
Second cycle/ratoon	2	2
Third cycle/ratoon	3	3
Fourth cycle/ratoon	4	4
Fifth cycle/ratoon	5	5
Sixth cycle/ratoon	6	6
Seventh cycle/ratoon	7	7
Eight cycle/ratoon	8	8
Ninth cycle/ratoon	9	9
Tenth cycle/ratoon	10	10
Other specify:	98	98
Don't know / no answer	99	99

IF Q146=1 (first cycle)

147. When have the young plants been planted for each growing area for sugarcane?

→ Please write down the date of planting for each growing area.

	Growing area A	Growing area B
Planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

148. A. Could you please indicate the number of tillers per meter at 60 days after planting for each growing area for sugarcane?

→ Please note down the number of tillers per meter.

	Growing area A	Growing area B
Number of tillers per meter at 60 days after plantingtillers/mtillers/m

B. Could you please indicate the number of tillers per meter at 200 days after planting for each growing area for sugarcane?

→ Please note down the number of tillers per meter.

	Growing area A	Growing area B
Number of tillers per meter at 200 days after plantingtillers/mtillers/m

C. Could you please indicate the number of sugarcane failures in %-age at 60 days after planting for each growing area for sugarcane?

→ Please note down the percentage.

	Growing area A	Growing area B
Number of sugarcane failures at 60 days after planting%%

D. Could you please indicate the number of sugarcane failures in %-age at 200 days after planting for each growing area for sugarcane?

→ Please note down the percentage.

	Growing area A	Growing area B
Number of sugarcane failures at 200 days after planting%%

E. Prior to harvest, could you please indicate the percentage of the plot area that is lodged for each growing area for sugarcane?

→ Please note down the percentage.

	Growing area A	Growing area B
% plot area lodged%%

IF Q146=1 (first cycle)

149. For the plant cane in the first cycle, what was the total ton of cane per hectare that has been achieved for each growing area?

→ Please write down the total tons of cane per hectare for each growing area.

	Growing area A	Growing area B
Total tons of canes per hectare plant caneton/haton/ha

L. Planting and fruit development - TOMATO

150. Could you please note down the tomato variety that has been used for each growing area for tomato?

→ Please note down the tomato variety that has been used for each growing area.

	Growing area A	Growing area B
Tomato variety

151. Are tomatoes grown on open field or in greenhouse for each growing area?

→ Please indicate what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Open field	1	1
Greenhouse	2	2
98. Other. Specify 1:
Don't know / no answer	99	99

IF Q151=2 (greenhouse)

152. Are tomatoes grown in an active greenhouse or a passive greenhouse for each growing area?

→ Please indicate what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Active greenhouse	1	1
Passive greenhouse	2	2
98. Other. Specify 1:
Don't know / no answer	99	99

153. When did the first field preparation start for each growing area for tomato?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

154. What is the amount of seeds in kilogram that has been sown per m² for each growing area for tomato?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

155. When have the seeds/young plants been sown/planted for each growing area for tomato?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

156. What is the final stand - i.e. the average total number of plants per square meter for each growing area for tomato?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/plant densityplants/m ²plants/m ²

M. Planting and fruit development - PEPPER

157. Could you please note down the pepper variety that has been used for each growing area for pepper?

→ Please note down the pepper variety that has been used for each growing area.

	Growing area A	Growing area B
Pepper variety

158. Are peppers grown on open field or in greenhouse for each growing area?

→ Please indicate what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Open field	1	1
Greenhouse	2	2
98. Other. Specify 1:
Don't know / no answer	99	99

IF Q158=2 (greenhouse)

159. Are peppers grown in an active greenhouse or a passive greenhouse for each growing area?

→ Please indicate what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Active greenhouse	1	1
Passive greenhouse	2	2
98. Other. Specify 1:
Don't know / no answer	99	99

160. When did the first field preparation start for each growing area for pepper?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

161. What is the amount of seeds in kilogram that has been sown per m² for each growing area for pepper?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

162. When have the seeds/young plants been sown/planted for each growing area for pepper?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

163. What is the final stand - i.e. the average total number of plants per square meter for each growing area for pepper?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/plant densityplants/m ²plants/m ²

N. Planting and fruit development - WATERMELON

164. Could you please note down the watermelon variety that has been used for each growing area for watermelon?

→ Please note down the watermelon variety that has been used for each growing area.

	Growing area A	Growing area B
Watermelon variety

165. Are watermelons grown on open field or in greenhouse for each growing area?

→ Please indicate what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Open field	1	1
Greenhouse	2	2
98. Other. Specify 1:
Don't know / no answer	99	99

IF Q165=2 (greenhouse)

166. Are watermelons grown in an active greenhouse or a passive greenhouse for each growing area?

→ Please indicate what applies. Please write down other if needed. (SR)

	Growing area A	Growing area B
Active greenhouse	1	1
Passive greenhouse	2	2
98. Other. Specify 1:
Don't know / no answer	99	99

167. When did the first field preparation start for each growing area for watermelon?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

168. What is the amount of seeds in kilogram that has been sown per m² for each growing area for watermelon?

→ Please note down the total amount of seeds in kilogram per m² for each growing area.

	Growing area A	Growing area B
Seed densitykg/m ²kg/m ²

169. When have the seeds/young plants been sown/planted for each growing area for watermelon?

→ Please write down the date of sowing/planting for each growing area.

	Growing area A	Growing area B
Sowing/planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

170. What is the final stand - i.e. the average total number of plants per square meter for each growing area for watermelon?

→ Please note down the total number of plants per m² for each growing area.

	Growing area A	Growing area B
Final stand/plant densityplants/m ²plants/m ²

O. Planting and fruit development - BANANA

171. Could you please note down the banana variety that has been used for each growing area for banana?

→ Please note down the banana variety that has been used for each growing area.

	Growing area A	Growing area B
Banana variety

172. What is the year of planting for each growing area for banana?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting

173. What is the average age of the trees in each growing area for banana?

→ Please note down the average age of trees for each growing area.

	Growing area A	Growing area B
Age of treesyearsyears

174. What is the total number of trees for each growing area for banana?

→ Please note down the total number of trees for each growing area.

	Growing area A	Growing area B
Tree densitytreestrees

175. Do you prune each growing area for banana?

→ Please circle your answer.

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q175=1 (YES)

176. When did the pruning of the trees start for each growing area for banana?

→ Please write down the period of pruning for each growing area.

	Growing area A		Growing area B	
Pruning period	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

177. When was the last replanting of the trees - i.e. date when the last trees were replanted - for each growing area for banana?

→ Please indicate the last replanting of the trees for each growing area.

	Growing area A	Growing area B
Last replanting(Year)(Year)

178. Please indicate the percentage of trees that has been replanted during the last replanting phase for each growing area for banana?

→ Please indicate the percentage of trees that has been replanted for each growing area.

	Growing area A	Growing area B
Percentage of trees replanted%%

179. Did you leave the field fallow in the past before re-planting for each growing area for banana?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

P. Planting and fruit development - APPLE

180. Could you please note down the apple variety that has been used for each growing area for apple?

→ Please note down the apple variety that has been used for each growing area.

	Growing area A	Growing area B
Apple variety

181. What is the year of planting for each growing area for apple?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting

182. What is the total number of trees for each growing area for apple?

→ Please note down the total number of trees for each growing area.

	Growing area A	Growing area B
Tree densitytreestrees

183. Do you prune each growing area for apple?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q183=1 (YES)

184. When did the winter pruning of the trees start for each growing area for apple?

→ Please write down the period of pruning for each growing area.

	Growing area A		Growing area B	
Pruning period	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

185. When did the first trees reach the flowering stage for each growing area for apple?

→ Please write down the flowering date for each growing area.

	Growing area A	Growing area B
Flowering date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

- 186. What is the average number of flowers per tree at the flowering stage for each growing area for apple?**
→ Please tick what applies for each growing area. *Single response.*

	Growing area A	Growing area B
No flowers	1	1
Few flowers	2	2
Normal amount of flowers	3	3
A lot of flowers	4	4
Don't know / no answer	99	99

- 187. Could you please indicate the average number of apples per tree for each growing area for apple?**
→ Please write down the average number of apples per tree for each growing area.

	Growing area A	Growing area B
Average number of apples per treeapples/treeapples/tree

Q. Planting and fruit development - STONE FRUIT

188. Could you please note down the stone fruit variety that has been used for each growing area for stone fruit?

→ Please note down the stone fruit variety that has been used for each growing area.

	Growing area A	Growing area B
Stone fruit variety

189. What is the year of planting for each growing area for stone fruit?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting

190. What is the total number of trees for each growing area for stone fruit?

→ Please note down the total number of trees for each growing area.

	Growing area A	Growing area B
Tree densitytreestrees

191. Do you prune each growing area for stone fruit?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q191=1 (YES)

192. When did the pruning of the trees start for each growing area for stone fruit?

→ Please write down the period of pruning for each growing area.

	Growing area A		Growing area B	
Pruning period	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

193. When did the first trees reach the flowering stage for each growing area for stone fruit?

→ Please write down the flowering date for each growing area.

	Growing area A	Growing area B
Flowering date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

194. What is the average number of flowers per tree at the flowering stage for each growing area for stone fruit?

→ Please tick what applies for each growing area. Single response.

	Growing area A	Growing area B
No flowers	1	1
Few flowers	2	2
Normal amount of flowers	3	3
A lot of flowers	4	4
Don't know / no answer	99	99

195. Could you please indicate the average number of fruits per tree for each growing area for stone fruit?

→ Please write down the average number of fruits per tree for each growing area.

	Growing area A	Growing area B
Average number of fruits per tree fruits/tree fruits/tree

R. Planting and fruit development - COFFEE

196. Could you please note down the coffee variety that has been used for each growing area for coffee?

→ Please note down the coffee variety that has been used for each growing area.

	Growing area A	Growing area B
Coffee variety

197. What is the year of planting for each growing area for coffee?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting

198. What is the total number of trees for each growing area for coffee?

→ Please note down the total number of trees for each growing area.

	Growing area A	Growing area B
Tree densitytreestrees

199. Do you prune each growing area for coffee?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q199=1 (YES)

200. When did the pruning of the trees start for each growing area for coffee?

→ Please write down the period of pruning for each growing area.

	Growing area A		Growing area B	
Pruning period	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

201. When did the first trees reach the flowering stage for each growing area for coffee?

→ Please write down the flowering date for each growing area.

	Growing area A	Growing area B
Flowering date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

202. What is the average number of flowers per tree at the flowering stage for each growing area for coffee?
→ Please tick what applies for each growing area. Single response.

	Growing area A	Growing area B
No flowers	1	1
Few flowers	2	2
Normal amount of flowers	3	3
A lot of flowers	4	4
Don't know / no answer	99	99

203. When did the fruit development start for each growing area for coffee?
→ Please write down the fruit development date for each growing area.

	Growing area A	Growing area B
Fruit development date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

204. Could you please indicate the average number of coffee fruits per tree for each growing area for coffee?
→ Please write down the average number of coffee fruits per tree for each growing area.

	Growing area A	Growing area B
Average number of coffee fruits per treecoffee fruits/treecoffee fruits/tree

S. Planting and fruit development - COCOA

205. Could you please note down the cocoa variety that has been used for each growing area for cocoa?

→ Please note down the cocoa variety that has been used for each growing area.

	Growing area A	Growing area B
Cocoa variety

206. What is the year of planting for each growing area for cocoa?

→ Please note down the year of planting for each growing area.

	Growing area A	Growing area B
Year of planting

207. What is the total number of trees for each growing area for cocoa?

→ Please note down the total number of trees for each growing area.

	Growing area A	Growing area B
Tree densitytreestrees

208. Do you prune each growing area for cocoa?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q208=1 (YES)

209. When did the pruning of the first trees occur for each growing area for cocoa?

→ Please write down the period of pruning of the first trees for each growing area.

	Growing area A		Growing area B	
Pruning period	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

210. When did the first trees reach the flowering stage for each growing area for cocoa?

→ Please write down the date that the first trees reached the flowering stage for each growing area.

	Growing area A	Growing area B
Date flowering stage of first trees	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

211. What is the average number of flowers per tree at the flowering stage for each growing area for cocoa?
→ Please tick what applies for each growing area. *Single response.*

	Growing area A	Growing area B
No flowers	1	1
Few flowers	2	2
Normal amount of flowers	3	3
A lot of flowers	4	4
Don't know / no answer	99	99

212. Rain during flowering damages the flowers. What percentage of the trees were damaged for each growing area for cocoa?
→ Please note down the percentage of trees damaged for each growing area.

	Growing area A	Growing area B
Percentage of trees damaged% %

213. What is the average number of green pods per 25 trees (randomly selected) before the green pods become orange for each growing area for cocoa?
→ Please randomly select 25 trees that have pods per growing area. Please note down the average number of green pods of these 25 trees for each growing area.

	Growing area A	Growing area B
Average number of green pods per 25 treesgreen pods/25 trees green pods/25 trees

T. Planting and fruit development - CAULIFLOWER FOR PROCESSING INDUSTRY

214. Could you please note down the cauliflower varieties that have been used for each growing area for cauliflower for the processing industry?

→ Please note down the cauliflower varieties that have been used for each growing area.

	Growing area A	Growing area B
Cauliflower varieties

215. When did the first field preparation start for each growing area for cauliflower?

→ Please write down the date of the first field preparation for each growing area.

	Growing area A	Growing area B
Date first field preparation	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

216. When have the young plants been delivered to the farm for each growing area for cauliflower?

→ Please write down the date of delivery for each growing area.

	Growing area A	Growing area B
Delivery date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

217. Which type of plant is planted on each growing area for cauliflower?

→ Please tick what applies for each growing area. Multiple response.

	Growing area A	Growing area B
Peat pot	1	1
Tray	2	2
96. Other. Specify 1:		
97. Other. Specify 2:		
98. Other. Specify 3:		
Don't know / no answer	99	99

218. When have the young plants been planted for each growing area for cauliflower?

→ Please write down the date of planting for each growing area.

	Growing area A	Growing area B
Planting date	.../.../... (Day/Month/Year)	.../.../... (Day/Month/Year)

219. What is the final stand - i.e. the average total number of plants per hectare for each growing area for cauliflower?

→ Please note down the total number of plants per ha for each growing area.

	Growing area A	Growing area B
Final stand/plant densityplants/haplants/ha

220. What is plant distance between the rows and within the row for each growing area for cauliflower?

→ Please note down the plant distance within the row and between rows for each growing area.

	Growing area A			Growing area B		
Plant distancecm	xcmcm	xcm

V. Fertilizer usage

224. Do you apply organic fertilizers on each of the growing areas for [TARGET CROP]?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q224=1

225. What was the quantity used in ton per hectare on each of the growing areas for [TARGET CROP]?

→ Please note down the quantity in ton per hectare.

	Growing area A	Growing area B
Organic fertilizer quantityton/haton/ha

226. Do you apply chemical fertilizers on each of the growing areas for [TARGET CROP]?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

ONLY FOR BELGIUM: IF Q226=1

227. Do you carry out row-by-row and/or broadcast (entire field) fertilizer spreading on your cauliflower plots?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Only row by row fertilizer	1	1
Only broadcast fertilizer	2	2
A combination of row by row and broadcast fertilizer	3	3
Don't know / no answer	99	99

IF Q226=1

228. What was the quantity used in kilograms per hectare on each of the growing areas for [TARGET CROP]?

→ Please note down the quantity in kilograms per hectare.

	Growing area A	Growing area B
Chemical fertilizer quantitykg/hakg/ha

IF Q226=1

229. For the chemical fertilizers used, what is the distribution of N, P and K that has been used for each growing area for [TARGET CROP] in percentages?

➔ Please note down the amount of N, P, K equivalent that applies for each growing area.

	Growing area A	Growing area B
1. Fertilizer quantity - as N equivalent% %
2. Fertilizer quantity - as P (P_2O_5) equivalent % %
3. Fertilizer quantity - as K (K_2O) equivalent % %

W. Seed treatment

ALL COUNTRIES, EXCEPT BELGIUM + IF HYBRID = BOUGHT SEEDS (in programming automatically)

230. Do you buy young trees/seeds or do you use saved young trees/seeds for each growing area for [TARGET CROP]?

→ Please tick what applies for each growing area. (MR)

	Growing area A	Growing area B
Bought young trees/seeds	1	1
Saved young trees/seeds	2	2
96. Other. Specify 1:		
97. Other. Specify 2:		
98. Other. Specify 3:		
Don't know / no answer	99	99

IF Q230=1 (bought young trees/seeds) + ALWAYS FOR BELGIUM

231. Can you please indicate where you buy your young trees/seeds for each growing area for [TARGET CROP]?

→ Please circle your answer. Multiple answers possible. Please write down other if needed.

	Growing area A	Growing area B
Cooperative	1	1
Other farmers	2	2
Retailer or manufacturer	3	3
Own nursery	4	4
Other nursery	5	5
96. Other. Specify 1:		
97. Other. Specify 2:		
98. Other. Specify 3:		
Don't know / no answer	99	99

IF BELGIUM

232. From which supplier do you buy your young plants for each growing area for cauliflower?

→ Please circle your answer. Multiple answers possible. Please write down other if needed.

	Growing area A	Growing area B
Vermeulen	1	1
Blomme	2	2
D'Hondt	3	3
WPG	4	4
Denolf	5	5
Nollet	6	6
96. Other. Specify 1:		
97. Other. Specify 2:		
98. Other. Specify 3:		
Don't know / no answer	99	99

IF SEEDS

IF HYBRID SEEDS = In programming = EMPTY

233. Do you use on-farm or pre-treated seed treatment to treat the seeds for each growing area for [TARGET CROP]?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
On-farm seed treatment	1	1
Pre-treated seed treatment	2	2
None	90	90
Not applicable	91	91
Don't know / no answer	99	99

IF Q233=1 or 2 (seed treatment applied)

234. What is the quantity that has been used for 100 kilograms of seeds for each growing area for [TARGET CROP] (concentrate used - without solution in water)?

→ Please note down the amount in grams (for solid products) or millilitres (for liquid products) for 100 kilograms of seeds for each growing area.

	Growing area A	Growing area B
1. Seed treatment for solid products (in g/100kg seeds)g/100 kg seeds g/100 kg seeds
2. Seed treatment for liquid products (in ml/100kg seeds)ml/100 kg seeds ml/100 kg seeds

IF BELGIUM

235. Have the seeds of the young plants been coated for each of the growing areas for cauliflower?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q235=1 (coated seeds)

236. Which coating has been used for each of the growing areas for cauliflower?

→ Please write down the different coatings that have been used for each growing area.

Growing area A	Growing area B

IF BELGIUM

237. A. Which of the following seedbed treatments has been performed by the nursery for each of the growing areas for cauliflower?

→ Please tick what applies. (MR)

	Growing area A	Growing area B
Phyto-drip	1	1
Dummy pil	2	2
Don't know / no answer	99	99

IF Q237A=1 (Phyto-drip)

B. Which compound has been used by the nursery for each of the growing areas for cauliflower?

→ Please fill in the compound.

	Growing area A	Growing area B
Compound		

IF Q237A=2 (Dummy pil)

C. Which compound has been used by the nursery for each of the growing areas for cauliflower?

→ Please fill in the compound.

	Growing area A	Growing area B
Compound		

IF BELGIUM

238. Do you use on-farm tray treatment for each of the growing areas for cauliflower?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

IF Q238=1 (on-farm tray treatment)

239. Could you please note down, for each growing area of cauliflower, when the tray treatment took place, which products (growth regulators, fertilizers or crop protection) have been used and the dose rate?

→ Please note down the following details. Please look in your storage room in you don't know all details by heart.

- A. Date on which the product has been applied
- B. Brand product name
- C. Dosage and measurement unit

GROWING AREA A

Product number	a. Timing of product application	b. Brand product name	c. Dosage	
			Dose per 1000 plants	Measurement unit
1	.../.../... (Day/Month/Year)			
2	.../.../... (Day/Month/Year)			
3	.../.../... (Day/Month/Year)			
4	.../.../... (Day/Month/Year)			
5	.../.../... (Day/Month/Year)			
6	.../.../... (Day/Month/Year)			
7	.../.../... (Day/Month/Year)			
8	.../.../... (Day/Month/Year)			
9	.../.../... (Day/Month/Year)			
10	.../.../... (Day/Month/Year)			

GROWING AREA B

Product number	a. Timing of product application	b. Brand product name	c. Dosage	
			Dose per 1000 plants	Measurement unit
1	.../.../... (Day/Month/Year)			
2	.../.../... (Day/Month/Year)			
3	.../.../... (Day/Month/Year)			
4	.../.../... (Day/Month/Year)			
5	.../.../... (Day/Month/Year)			
6	.../.../... (Day/Month/Year)			
7	.../.../... (Day/Month/Year)			
8	.../.../... (Day/Month/Year)			
9	.../.../... (Day/Month/Year)			
10	.../.../... (Day/Month/Year)			

X. Crop protection products

240. Do you apply integrated pest and weed management practices on each growing area for [TARGET CROP]?

→ Please circle your answer. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

241. Could you please note down, on the next page, all products that have been used for growing area A and growing area B?

→ Please note down the following details per product. Please look in your crop protection products storage room if you don't know all details by heart.

- A. Date on which the product has been applied
- B. Type of product (Fungicide, insecticide, fertilizer, herbicide, miticides/acaricides, rodenticides, nematicides/molluscicides, plant growth regulator/harvest aids/adjuvants)
- C. Brand product name (e.g. Engeo 247 SC)
- D. Dosage in **kg/ha** for solid products. Dosage in **l/ha** for liquid products. Always refer to the concentrate of a product (not the solution in water)
- E. Indicate the unit of quantity: **kilogram** or **liter** per hectare
- F. Amount of water that the product is solved in per **hectare**
- G. Pest/disease/weed that is targeted
- H. Level of pest/disease/weed pressure (low, medium, high)
- I. Percentage of area treated against pests/diseases/weeds
- J. Percentage of crop free of pests/diseases/weeds at harvest
- K. Type of application equipment used (hand operated sprayers (e.g. knapsack), motorized boom sprayer, airblast sprayer, granular applicator, Aerial applicator, other) If other, please specify.
- L. Price of product per **kilogram** or **liter**

[illegible]

GROWING AREA A (continued)

Product number	a. Timing of product application	b. Type of product 1=Fungicide 2=Insecticide 3=Fertilizer 4=Herbicide 5=Miticides/ acaricides 6=Rodenticides 7=Nematicides/ molluscicides 8=Plant growth regulator/harvest aids/adjuvants	c. Brand product name	d. Dosage	e. Unit of quantity 1=Kilogram/ hectare 2=Liter/ hectare	f. Amount of H ₂ O solved in liters per hectare	g. Pest/disease/ weed targeted	h. Level of pest/ disease/ weed pressure 1=Low pressure 2=Medium pressure 3=High pressure	i. Percentage of the area treated against pests/ diseases/ weeds (in %)	j. Percentage of crop free of pests/ diseases/ weeds at harvest (in %)	k. Equipment type 1=Hand operated sprayers (e.g. knapsack), 2=Motorized boom sprayer 3=Airblast sprayer 4=Granular applicator 5=Aerial applicator 6=Other, specify	l. Price of product per kilogram or liter (in USD)
11	.../.../... (Day/Month/Year)											
12	.../.../... (Day/Month/Year)											
13	.../.../... (Day/Month/Year)											
14	.../.../... (Day/Month/Year)											
15	.../.../... (Day/Month/Year)											
16	.../.../... (Day/Month/Year)											
17	.../.../... (Day/Month/Year)											
18	.../.../... (Day/Month/Year)											
19	.../.../... (Day/Month/Year)											
20	.../.../... (Day/Month/Year)											

GROWING AREA A (continued)

Product number	a. Timing of product application	b. Type of product 1=Fungicide 2=Insecticide 3=Fertilizer 4=Herbicide 5=Miticides/ acaricides 6=Rodenticides 7=Nematicides/ molluscicides 8=Plant growth regulator/harvest aids/adjuvants	c. Brand product name	d. Dosage	e. Unit of quantity 1=Kilogram/ hectare 2=Liter/ hectare	f. Amount of H ₂ O solved in liters per hectare	g. Pest/disease/ weed targeted	h. Level of pest/ disease/ weed pressure 1=Low pressure 2=Medium pressure 3=High pressure	i. Percentage of the area treated against pests/ diseases/ weeds (in %)	j. Percentage of crop free of pests/ diseases/ weeds at harvest (in %)	k. Equipment type 1=Hand operated sprayers (e.g. knapsack), 2=Motorized boom sprayer 3=Airblast sprayer 4=Granular applicator 5=Aerial applicator 6=Other, specify	l. Price of product per kilogram or liter (in USD)
21	.../.../... (Day/Month/Year)											
22	.../.../... (Day/Month/Year)											
23	.../.../... (Day/Month/Year)											
24	.../.../... (Day/Month/Year)											
25	.../.../... (Day/Month/Year)											
26	.../.../... (Day/Month/Year)											
27	.../.../... (Day/Month/Year)											
28	.../.../... (Day/Month/Year)											
29	.../.../... (Day/Month/Year)											
30	.../.../... (Day/Month/Year)											

GROWING AREA B

Product number	a. Timing of product application	b.Type of product 1=Fungicide 2=Insecticide 3=Fertilizer 4=Herbicide 5=Miticides/ acaricides 6=Rodenticides 7=Nematicides/ molluscicides 8=Plant growth regulator/harvest aids/adjuvants	c. Brand product name	d. Dosage	e. Unit of quantity 1=Kilogram/ hectare 2=Liter/ hectare	f. Amount of H ₂ O solved in liters per hectare	g. Pest/disease/ weed targeted	h. Level of pest/ disease/ weed pressure 1=Low pressure 2=Medium pressure 3=High pressure	i. Percentage of the area treated against pests/ diseases/ weeds (in %)	j. Percentage of crop free of pests/ diseases/ weeds at harvest (in %)	k. Equipment type 1=Hand operated sprayers (e.g. knapsack), 2=Motorized boom sprayer 3=Airblast sprayer 4=Granular applicator 5=Aerial applicator 6=Other,specify	l. Price of product per kilogram or liter (in USD)
1	.../.../... (Day/Month/Year)											
2	.../.../... (Day/Month/Year)											
3	.../.../... (Day/Month/Year)											
4	.../.../... (Day/Month/Year)											
5	.../.../... (Day/Month/Year)											
6	.../.../... (Day/Month/Year)											
7	.../.../... (Day/Month/Year)											
8	.../.../... (Day/Month/Year)											
9	.../.../... (Day/Month/Year)											
10	.../.../... (Day/Month/Year)											

GROWING AREA B (continued)

Product number	a. Timing of product application	b. Type of product 1=Fungicide 2=Insecticide 3=Fertilizer 4=Herbicide 5=Miticides/ acaricides 6=Rodenticides 7=Nematicides/ molluscicides 8=Plant growth regulator/harvest aids/adjuvants	c. Brand product name	d. Dosage	e. Unit of quantity 1=Kilogram/ hectare 2=Liter/ hectare	f. Amount of H ₂ O solved in liters per hectare	g. Pest/disease/ weed targeted	h. Level of pest/ disease/ weed pressure 1=Low pressure 2=Medium pressure 3=High pressure	i. Percentage of the area treated against pests/ diseases/ weeds (in %)	j. Percentage of crop free of pests/ diseases/ weeds at harvest (in %)	k. Equipment type 1=Hand operated sprayers (e.g. knapsack), 2=Motorized boom sprayer 3=Airblast sprayer 4=Granular applicator 5=Aerial applicator 6=Other, specify	l. Price of product per kilogram or liter (in USD)
11	.../.../... (Day/Month/Year)											
12	.../.../... (Day/Month/Year)											
13	.../.../... (Day/Month/Year)											
14	.../.../... (Day/Month/Year)											
15	.../.../... (Day/Month/Year)											
16	.../.../... (Day/Month/Year)											
17	.../.../... (Day/Month/Year)											
18	.../.../... (Day/Month/Year)											
19	.../.../... (Day/Month/Year)											
20	.../.../... (Day/Month/Year)											

GROWING AREA B (continued)

Product number	a. Timing of product application	b. Type of product 1=Fungicide 2=Insecticide 3=Fertilizer 4=Herbicide 5=Miticides/ acaricides 6=Rodenticides 7=Nematicides/ molluscicides 8=Plant growth regulator/harvest aids/adjuvants	c. Brand product name	d. Dosage	e. Unit of quantity 1=Kilogram/ hectare 2=Liter/ hectare	f. Amount of H ₂ O solved in liters per hectare	g. Pest/disease/ weed targeted	h. Level of pest/ disease/ weed pressure 1=Low pressure 2=Medium pressure 3=High pressure	i. Percentage of the area treated against pests/ diseases/ weeds (in %)	j. Percentage of crop free of pests/ diseases/ weeds at harvest (in %)	k. Equipment type 1=Hand operated sprayers (e.g. knapsack), 2=Motorized boom sprayer 3=Airblast sprayer 4=Granular applicator 5=Aerial applicator 6=Other, specify	l. Price of product per kilogram or liter (in USD)
21	.../.../... (Day/Month/Year)											
22	.../.../... (Day/Month/Year)											
23	.../.../... (Day/Month/Year)											
24	.../.../... (Day/Month/Year)											
25	.../.../... (Day/Month/Year)											
26	.../.../... (Day/Month/Year)											
27	.../.../... (Day/Month/Year)											
28	.../.../... (Day/Month/Year)											
29	.../.../... (Day/Month/Year)											
30	.../.../... (Day/Month/Year)											

PART IV: FARMING PRACTICES - AFTER HARVEST

242. Please fill out the unique code, given by the interviewer (has to be the same as in Q1):

UNIQUE CODE: XX X XXX

Country code (See country codes Q2)

Farm type (1=RF and 2=BF)

Respondent number (Unique respondent number)

A. Harvest timing & quality per crop - SOYBEAN

243. When was the harvest period for each growing area for soybean?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

244. What is the shelled yield (marketable yield) that has been achieved for each growing area for soybean?

→ Please write down the shelled yield for each growing area.

	Growing area A	Growing area B
Shelled yieldton/haton/ha

245. Please indicate the moisture content in percentage of the grain at harvest for each growing area of soybean?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

246. What percentage of the harvest of soybean of each growing area is used for each purpose?

→ Please note down what applies for each growing area. The sum of the percentages should add up to 100%.

	Growing area A	Growing area B
1. Feeding livestock % %
2. Harvest sold % %
	100%	100%

IF Q246 2.HARVEST SOLD > 0% (entirely or partly)

247. What is the price per ton per buyer that has been obtained for each growing area for soybean?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

248. What is the protein content of this yield for each growing area for soybean?

→ Please write down the protein content for each growing area.

	Growing area A	Growing area B
Protein content%%

249. What is the oil content of this yield for each growing area for soybean?

→ Please write down the oil content for each growing area.

	Growing area A	Growing area B
Oil content%%

250. What is the weight of 1000 harvested soybean seeds for each growing area for soybean?

→ Please write down the weight of 1000 harvested soybean seeds for each growing area.

	Growing area A	Growing area B
Weight of 1000 harvested soybean seedskgkg

251. What is the percentage of grains damaged at harvest (total lost - not marketable) for each growing area for soybean?

→ Please write down the percentage of grains damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of grains damaged at harvest%%

B. Harvest timing & quality per crop - CEREALS (WHEAT)

252. When was the harvest period for each growing area for wheat?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

253. What is the grain yield (marketable yield) that has been achieved for each growing area for wheat?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

254. Please indicate the moisture content in percentage of the grain at harvest for each growing area of wheat?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

255. What percentage of the harvest of wheat of each growing area is used for each purpose?

→ Please note down what applies for each growing area. The sum of the percentages should add up to 100%.

	Growing area A	Growing area B
1. Home consumption% %
2. Feeding own livestock % %
3. Harvest sold % %
	100%	100%

IF Q255 3.HARVEST SOLD > 0% (entirely or partly)

256. What is the price per ton per buyer that has been obtained for each growing area for wheat?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

257. What is the weight of 1000 harvested grains for each growing area for wheat?

→ Please write down the grain weight for each growing area.

	Growing area A	Growing area B
Weight of 1000 harvested grainskgkg

258. What is the protein percentage of this yield for each growing area for wheat?

→ Please write down the protein content for each growing area.

	Growing area A	Growing area B
Protein content%%

259. What is the percentage of grains damaged at harvest (total lost - not marketable) for each growing area for wheat?

→ Please write down the percentage of grains damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of grains damaged at harvest%%

C. Harvest timing & quality per crop - CEREALS (BARLEY)

260. When was the harvest period for each growing area for barley?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

261. What is the grain yield (marketable yield) that has been achieved for each growing area for barley?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

262. Please indicate the moisture content in percentage of the grain at harvest for each growing area of barley?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

263. What percentage of the harvest of barley of each growing area is used for each purpose?

→ Please note down what applies for each growing area. The sum of the percentages should add up to 100%.

	Growing area A	Growing area B
1. Feeding livestock % %
2. Harvest sold % %
	100%	100%

IF Q263 2.HARVEST SOLD > 0% (entirely or partly)

264. What is the price per ton per buyer that has been obtained for each growing area for barley?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

265. What is the weight of 1000 harvested grains for each growing area for barley?

→ Please write down the grain weight for each growing area.

	Growing area A	Growing area B
Weight of 1000 harvested grainskgkg

266. What is the protein content of this yield for each growing area for barley?

→ Please write down the protein content for each growing area.

	Growing area A	Growing area B
Protein content%%

267. What is the percentage of grains damaged at harvest (total lost - not marketable) for each growing area for barley?

→ Please write down the percentage of grains damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of grains damaged at harvest%%

D. Harvest timing & quality per crop - GRAPE

268. When was the harvest period for each growing area for grape?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

269. What is the grape yield (marketable yield) that has been achieved for each growing area?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

270. What is the price per ton per buyer that has been obtained for each growing area for grape?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

271. What is the sugar content for each growing area for grape?

→ Please write down the sugar content for each growing area.

	Growing area A	Growing area B
Sugar content%%

272. What is the percentage of fruits damaged at harvest (total lost - not marketable) for each growing area for grape?

→ Please write down the percentage of fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of fruits damaged at harvest%%

E. Harvest timing & quality per crop - CORN

273. When was the harvest period for each growing area for corn?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

274. What is the grain yield (marketable yield) that has been achieved for each growing area for corn?

→ Please write down the grain yield for each growing area.

	Growing area A	Growing area B
Grain yieldton/haton/ha

275. Please indicate the moisture content in percentage of the grain at harvest for each growing area of corn?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

276. What percentage of the harvest of corn of each growing area is used for each purpose?

→ Please note down what applies for each growing area. The sum of the percentages should add up to 100%.

	Growing area A	Growing area B
1. Feeding livestock % %
2. Harvest sold % %
	100%	100%

IF Q276 2.HARVEST SOLD > 0% (entirely or partly)

277. What is the price per ton per buyer that has been obtained for each growing area for corn?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

278. What is the grain weight of 1000 harvested grains for each growing area for corn?

→ Please write down the grain weight for each growing area.

	Growing area A	Growing area B
Weight of 1000 harvested grainskgkg

279. What is the average starch content for each growing area for corn?

→ Please write down the average starch content for each growing area.

	Growing area A	Growing area B
Average starch content%%

280. What is the percentage of grains damaged at harvest (total lost - not marketable) for each growing area for corn?

→ Please write down the percentage of grains damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of grains damaged at harvest%%

F. Harvest timing & quality per crop - COTTON

281. When was the harvest period for each growing area for cotton?

→ Please write down the harvest period for each growing area.

Harvest period	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

282. What is the fibre/lint yield (marketable yield) that has been achieved for each growing area for cotton?

→ Please write down the fibre/lint yield for each growing area.

	Growing area A	Growing area B
Fibre/lint yieldton/haton/ha

283. What is the seed yield (marketable yield) that has been achieved for each growing area for cotton?

→ Please write down the seed yield for each growing area.

	Growing area A	Growing area B
Seed yieldton/haton/ha

284. What is the price per ton FIBRE yield per buyer that has been obtained for each growing area for cotton?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

285. What is the price per ton SEED yield per buyer that has been obtained for each growing area for cotton?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

286. What is the fibre/lint quality (like fibre strength, fineness, ...) for each growing area for cotton?

→ Please select the fibre quality that applies best. (SR)

	Growing area A	Growing area B
Good quality	1	1
Medium quality	2	2
Low quality	3	3
Don't know / no answer	99	99

2860. What is the percentage of cotton fruits damaged at harvest (total lost - not marketable) for each growing area for cotton?

→ Please write down the percentage of cotton fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of cotton fruits damaged at harvest%%

G. Harvest timing & quality per crop - RICE

287. When was the harvest period for each growing area for rice?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

288. What is the number of tillers per hill at harvest for each growing area for rice?

→ Please indicate the number of tillers per hill.

	Growing area A	Growing area B
Number of tillers per hilltillers/hilltillers/hill

289. What is the grain yield (marketable yield) that has been achieved for each growing area for rice?

→ Please write down the grain yield for each growing area.

	Growing area A	Growing area B
Grain yieldton/haton/ha

290. Please indicate the moisture content in percentage of the grain at harvest for each growing area of rice?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

291. What percentage of the harvest of rice of each growing area is used for each purpose?

→ Please note down what applies for each growing area. The sum of the percentages should add up to 100%.

	Growing area A	Growing area B
1. Home consumption% %
2. Harvest sold % %
	100%	100%

IF Q291 2.HARVEST SOLD > 0% (entirely or partly)

292. What is the price per ton per buyer that has been obtained for each growing area for rice?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

293. What is the milling rate (amount of polished white rice obtained from unhusked white rice) in percentage for each growing area for rice?

→ Please write down the milling rate for each growing area.

	Growing area A	Growing area B
Milling rate%%

294. What is the head rice recovery (percentage whole grains of milled rice that can be obtained from a given quantity of clean rough rice - paddy) in percentage for each growing area for rice?

→ Please write down the head rice recovery for each growing area.

	Growing area A	Growing area B
Head rice recovery%%

295. What is the level of broken (percentage of grains broken in the milling process) in percentage for each growing area for rice?

→ Please write down the level of broken for each growing area.

	Growing area A	Growing area B
Level of broken%%

296. What is the level of chalkiness (percentage of chalky grains through lose packing of amiloplasts) in percentage for each growing area for rice?

→ Please write down the level of chalkiness for each growing area.

	Growing area A	Growing area B
Level of chalkiness%%

297. What is the percentage of colored grains and contaminants for each growing area for rice?

→ *Please write down the percentage of colored grains and contaminants for each growing area.*

	Growing area A	Growing area B
Percentage of colored grains and contaminants%%

H. Harvest timing & quality per crop - POTATO

298. When was the harvest period for each growing area for potato?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

299. What is the tuber yield (marketable yield) that has been achieved for each growing area for potato?

→ Please write down the tuber yield for each growing area.

	Growing area A	Growing area B
Tuber yieldton/haton/ha

300. What is the price per ton per buyer that has been obtained for each growing area for potato?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

301. What is the starch content per potato for each growing area?

→ Please write down the starch content per potato for each growing area.

	Growing area A	Growing area B
Starch content per potato%%

302. What is the percentage of decay for each growing area for potato?

→ Please write down the percentage of decay for each growing area.

	Growing area A	Growing area B
Percentage of decay%%

303. What is the percentage of shrink loss for each growing area for potato?

→ Please write down the percentage of shrink loss for each growing area.

	Growing area A	Growing area B
Percentage of shrink loss%%

304. What is the sugar content of the potatoes for each growing area?

→ Please write down the sugar content per potato for each growing area.

	Growing area A	Growing area B
Sugar content%%

I. Harvest timing & quality per crop - OILSEED RAPE

305. When was the harvest period for each growing area for oilseed rape?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

306. What is the seed yield (marketable yield) that has been achieved for each growing area for oilseed rape?

→ Please write down the seed yield for each growing area.

	Growing area A	Growing area B
Seed yieldton/haton/ha

307. Please indicate the moisture content in percentage of the grain at harvest for each growing area of oilseed rape?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

308. What is the price per ton per buyer that has been obtained for each growing area for oilseed rape?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

309. Have you been meeting the requirements of the crushers in terms of oil content for each growing area for oilseed rape?

→ Please tick what applies for each growing area.

	Growing area A	Growing area B
Yes	1	1
No	2	2

310. Have you been meeting the requirements of the crushers in terms of glucosinolate content for each growing area for oilseed rape?

→ Please tick what applies for each growing area.

	Growing area A	Growing area B
Yes	1	1
No	2	2

311. What is the percentage of grains damaged at harvest (total lost - not marketable) for each growing area for oilseed rape?

→ Please write down the percentage of grains damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of grains damaged at harvest%%

312. What is the percentage of pod shattering at harvest for each growing area for oilseed rape?

→ Please write down the percentage of pod shattering at harvest for each growing area.

	Growing area A	Growing area B
Percentage of pod shattering%%

J. Harvest timing & quality per crop - SUNFLOWER

313. When was the harvest period for each growing area for sunflower?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

314. What is the seed yield (marketable yield) that has been achieved for each growing area for sunflower?

→ Please write down the seed yield for each growing area.

	Growing area A	Growing area B
Seed yieldton/haton/ha

315. Please indicate the moisture content in percentage of the grain at harvest for each growing area of sunflower?

→ Please indicate the moisture content in percentage of the grain at harvest for each growing area.

	Growing area A	Growing area B
Moisture content in percentage of the grain at harvest%%

316. What is the price per ton per buyer that has been obtained for each growing area for sunflower?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

317. What is the oil content for each growing area for sunflower?

→ Please write down the oil content for each growing area.

	Growing area A	Growing area B
Oil content%%

318. What is the percentage of sunflower kernels damaged at harvest (total lost - not marketable) for each growing area for sunflower?

➔ *Please write down the percentage of sunflower kernels damaged at harvest for each growing area.*

	Growing area A	Growing area B
Percentage of sunflower kernels damaged at harvest%%

K. Harvest timing & quality per crop - SUGARCANE

319. When was the harvest period for each growing area for sugarcane?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

320. What is the total tons of cane per hectare that has been achieved for each growing area for sugarcane?

→ Please write down the total tons of canes per hectare for each growing area.

	Growing area A	Growing area B
Total tons of canes per hectare ton/ha ton/ha

321. What is the TRS (total recovered sugar) for each growing area for sugarcane?

→ Please write down the TRS for each growing area.

	Growing area A	Growing area B
TRS ton/ha ton/ha

322. What is the use of the sugarcane harvest in percentage for each growing area?

→ Please write down the percentage of usage. Please write down others if needed.

	Growing area A	Growing area B
1. Ethanol production	...%	...%
2. Refined sugar production	...%	...%
96. Other. Specify 1:%	...%
97. Other. Specify 2:%	...%
98. Other. Specify 3:%	...%
Don't know / no answer	99	99

323. What is the price per ton per buyer that has been obtained for each growing area for sugarcane?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

324. What is the nitrogen (N) content for each growing area for sugarcane?

→ Please write down the nitrogen content of sugar cane for each growing area.

	Growing area A	Growing area B
Nitrogen (N) content%%

325. What is the percentage of canes damaged at harvest (total lost - not marketable) for each growing area for sugarcane?

→ Please write down the percentage of canes damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of canes damaged at harvest%%

L. Harvest timing & quality per crop - TOMATO

326. When was the harvest period for each growing area for tomato?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

327. Please indicate the number of harvests per year for each growing area for tomato?

→ Please write down the number of harvests for each growing area.

	Growing area A	Growing area B
Number of harvests per year Harvests/year Harvests/year

328. What is the yield (marketable yield) that has been achieved for each growing area for tomato?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

329. What is the price per ton per buyer that has been obtained for each growing area for tomato?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

330. What is the percentage of tomato fruits damaged at harvest (total lost - not marketable) for each growing area for tomato?

→ Please write down the percentage of tomato fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of tomato fruits damaged at harvest%%

M. Harvest timing & quality per crop - PEPPER

331. When was the harvest period for each growing area for pepper?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

332. Please indicate the number of harvests per year for each growing area for pepper?

→ Please write down the number of harvests for each growing area.

	Growing area A	Growing area B
Number of harvests per year Harvests/year Harvests/year

333. What is the yield (marketable yield) that has been achieved for each growing area for pepper?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

334. What is the price per ton per buyer that has been obtained for each growing area for pepper?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

335. What is the percentage of pepper fruits damaged at harvest (total lost - not marketable) for each growing area for pepper?

→ Please write down the percentage of pepper fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of pepper fruits damaged at harvest%%

N. Harvest timing & quality per crop - WATERMELON

336. When was the harvest period for each growing area for watermelon?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

337. What is the yield (marketable yield) that has been achieved for each growing area for watermelon?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

338. What is the price per ton per buyer that has been obtained for each growing area for watermelon?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

3380. What is the percentage of watermelon fruits damaged at harvest (total lost - not marketable) for each growing area for watermelon?

→ Please write down the percentage of watermelon fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of watermelon fruits damaged at harvest%%

O. Harvest timing & quality per crop - BANANA

339. When was the harvest period for each growing area for banana?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

340. In which months does the harvest peak for each growing area for banana?

→ Please circle the harvest peak months for each growing area. (MR)

	Growing area A	Growing area B
January	1	1
February	2	2
March	3	3
April	4	4
May	5	5
June	6	6
July	7	7
August	8	8
September	9	9
October	10	10
November	11	11
December	12	12
Don't know / no answer	99	99

341. What is the yield per hectare or the number of boxes per hectare (standard box of 18,14 kg box) that has been achieved for each growing area for banana?

→ Please write down the banana yield for each growing area.

	Growing area A	Growing area B
1. Banana yield in boxes per hectareboxes/haboxes/ha
2. Banana yield in ton per hectareton/haton/ha

342. What is the ratio as number of boxes per bunch (standard box of 18,14 kg box) for each growing area for banana?

→ Please write down the number of boxes per bunch for each growing area.

	Growing area A	Growing area B
Number of boxes per bunchboxes/bunchboxes/bunch

343. What is the price per box per buyer that has been obtained for each growing area for banana?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/box	a. ...%	b.\$/box
Buyer 2:	a. ...%	b.\$/box	a. ...%	b.\$/box
Buyer 3:	a. ...%	b.\$/box	a. ...%	b.\$/box
Buyer 4:	a. ...%	b.\$/box	a. ...%	b.\$/box
Buyer 5:	a. ...%	b.\$/box	a. ...%	b.\$/box

344. Which percentage of the yield of each growing area for banana is exported and which percentage is used for local market?

→ Please give the percentage of the yield that is exported and the percentage that is used for the local market. The sum should be 100%.

	Growing area A	Growing area B
1. Percentage exportable fruits	...%	...%
2. Percentage for local market	...%	...%
	100%	100%

345. What is the percentage fruit losses for each growing area for banana?

→ Please write down the percentage fruit losses for each growing area.

	Growing area A	Growing area B
Percentage fruit losses%%

346. What is the number of leaves at harvest for each growing area for banana?

→ Please write down the number of leaves for each growing area.

	Growing area A	Growing area B
Number of leaves at harvestleavesleaves

347. What is bunch weight in kilogram for each growing area for banana?

→ Please write down the bunch weight in kilogram for each growing area.

	Growing area A	Growing area B
Bunch weightkgkg

348. What is for each growing area for banana the ratooning, i.e. the number of harvests per year?

→ Please write down the ratooning for each growing area.

	Growing area A	Growing area B
Ratooning (number of harvests per year)harvest(s) per yearharvest(s) per year

P. Harvest timing & quality per crop - APPLE

349. When was the harvest period for each growing area for apple?

→ Please write down the harvest period for each growing area.

Harvest period	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

350. In which months does the harvest peak for each growing area for apple?

→ Please circle the harvest peak months for each growing area. (MR)

	Growing area A	Growing area B
January	1	1
February	2	2
March	3	3
April	4	4
May	5	5
June	6	6
July	7	7
August	8	8
September	9	9
October	10	10
November	11	11
December	12	12
Don't know / no answer	99	99

351. A. What is the yield (immediately after harvest) that has been achieved for each growing area for apple?

→ Please write down the apple yield for each growing area.

	Growing area A	Growing area B
Apple yield (after harvest)ton/haton/ha

B. What is the yield (after storage) that has been achieved for each growing area for apple?

→ Please write down the apple yield for each growing area.

	Growing area A	Growing area B
Apple yield (after storage)ton/haton/ha

352. A. Could you please indicate the after storage harvest in ton/ha for each of the **apple** sizes that apply for each growing area for apple?

→ Please write down the harvest in ton/ha for each apple size that applies.

Size in millimeter	Growing area A	Growing area B
60-65ton/haton/ha
65-70ton/haton/ha
70-75ton/haton/ha
75-80ton/haton/ha
80-85ton/haton/ha
rotton/haton/ha
totalton/haton/ha

B. Could you please indicate the after storage harvest in ton/ha for each of the **pear** sizes that apply for each growing area for pear?

→ Please write down the harvest in ton/ha for each pear size that applies.

Size in millimeter	Growing area A	Growing area B
45-50ton/haton/ha
50-55ton/haton/ha
55-60ton/haton/ha
60-65ton/haton/ha
65-70ton/haton/ha
70-75ton/haton/ha
75-80ton/haton/ha
80-85ton/haton/ha
rotton/haton/ha
totalton/haton/ha

353. What is the price per ton per buyer that has been obtained for each growing area for apple?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

354. Which percentage of the yield of each growing area for apple can be sold and which percentage is used in the processing industry ?

→ Please give the percentage of the yield that can be sold and the percentage that is used in the processing industry. The sum should be 100%.

	Growing area A	Growing area B
1. Percentage salable product	...%	...%
2. Percentage for processing industry	...%	...%
	100%	100%

3540. What is the percentage of apple fruits damaged at harvest (total lost - not marketable) for each growing area for apple?

→ Please write down the percentage of apple fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of apple fruits damaged at harvest%%

Q. Harvest timing & quality per crop - STONE FRUIT

355. When was the harvest period for each growing area for stone fruit?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

356. In which months does the harvest peak for each growing area for stone fruit?

→ Please circle the harvest peak months for each growing area. (MR)

	Growing area A	Growing area B
January	1	1
February	2	2
March	3	3
April	4	4
May	5	5
June	6	6
July	7	7
August	8	8
September	9	9
October	10	10
November	11	11
December	12	12
Don't know / no answer	99	99

357. What is the stone fruit yield (marketable yield) that has been achieved for each growing area for stone fruit?

→ Please write down the stone fruit yield for each growing area.

	Growing area A	Growing area B
Stone fruit yieldton/haton/ha

358. What is the price per ton per buyer that has been obtained for each growing area for stone fruit?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

359. Which percentage of the yield of each growing area for stone fruit can be sold and which percentage is used in the processing industry ?

→ Please give the percentage of the yield that can be sold and the percentage that is used in the processing industry. The sum should be 100%.

	Growing area A	Growing area B
1. Percentage salable product	...%	...%
2. Percentage for processing industry	...%	...%
	100%	100%

3590. What is the percentage of stone fruits damaged at harvest (total lost - not marketable) for each growing area for stone fruit?

→ Please write down the percentage of stone fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of stone fruits damaged at harvest%%

R. Harvest timing & quality per crop - COFFEE

360. When was the harvest period for each growing area for coffee?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

361. In which months does the harvest peak for each growing area for coffee?

→ Please circle the harvest peak months for each growing area. (MR)

	Growing area A	Growing area B
January	1	1
February	2	2
March	3	3
April	4	4
May	5	5
June	6	6
July	7	7
August	8	8
September	9	9
October	10	10
November	11	11
December	12	12
Don't know / no answer	99	99

362. What is the coffee yield (marketable yield) that has been achieved for each growing area for coffee?

→ Please write down the coffee yield for each growing area.

	Growing area A	Growing area B
Coffee yieldton/haton/ha

363. What is the price per ton per buyer that has been obtained for each growing area for coffee?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

3630. What is the percentage of coffee fruits damaged at harvest (total lost - not marketable) for each growing area for coffee?

→ Please write down the percentage of coffee fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of coffee fruits damaged at harvest%%

S. Harvest timing & quality per crop - COCOA

364. When was the harvest period for each growing area for cocoa?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

365. In which months does the harvest peak for each growing area for cocoa?

→ Please circle the harvest peak months for each growing area. (MR)

	Growing area A	Growing area B
January	1	1
February	2	2
March	3	3
April	4	4
May	5	5
June	6	6
July	7	7
August	8	8
September	9	9
October	10	10
November	11	11
December	12	12
Don't know / no answer	99	99

366. What is the yield (marketable yield) that has been achieved for each growing area for cocoa?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

367. What is the price per ton per buyer that has been obtained for each growing area for cocoa?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

368. What is the percentage of cocoa damaged at harvest (total lost - not marketable) for each growing area for cocoa?

→ Please write down the percentage of cocoa damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of cocoa damaged at harvest%%

369. What is the weight of the dried cocoa yield at the end of the post-harvest process (with humidity close to 8%) for each growing area for cocoa?

→ Please write down the weight of dried cocoa yield for each growing area.

	Growing area A	Growing area B
Weight dried yieldton/haton/ha

T. Harvest timing & quality per crop - CAULIFLOWER FOR PROCESSING INDUSTRY

370. When was the harvest period for each growing area for cauliflower?

→ Please write down the harvest period for each growing area.

	Growing area A		Growing area B	
	A	From .../.../... (Day/Month/Year)	A	From .../.../... (Day/Month/Year)
Harvest period	B	Until .../.../... (Day/Month/Year)	B	Until .../.../... (Day/Month/Year)

371. How many times do you pick each variety on each cauliflower field?

→ Please write down the number of harvests for each variety for each field.

	Growing area A		Growing area B	
	Variety	Number of harvests	Variety	Number of harvests
Number of harvests variety 1:				
Number of harvests variety 2:				
Number of harvests variety 3:				
Number of harvests variety 4:				
Number of harvests variety 5:				

372. What is the yield (marketable yield - bolted cauliflower) that has been achieved for each growing area for cauliflower?

→ Please write down the yield for each growing area.

	Growing area A	Growing area B
Yieldton/haton/ha

373. What is the total yield in ton per hectare for the total production of cauliflower for the processing industry?

→ Please write down the total yield for the total production of cauliflower for the processing industry.

Total yieldton/ha
-------------	-------------

374. What is the price per ton per buyer that has been obtained for each growing area for cauliflower?

→ Please write down the percentage of the yield that each buyer bought and the price they have paid. The sum of the percentages cannot exceed 100%.

	Growing area A		Growing area B	
Buyer 1:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 2:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 3:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 4:	a. ...%	b.\$/ton	a. ...%	b.\$/ton
Buyer 5:	a. ...%	b.\$/ton	a. ...%	b.\$/ton

375. What is the percentage of cauliflower fruits damaged at harvest (total lost - not marketable) for each growing area for cauliflower?

→ Please write down the percentage of cauliflower fruits damaged at harvest for each growing area.

	Growing area A	Growing area B
Percentage of cauliflower fruits damaged at harvest%%

PART V - OTHER INPUTS - AFTER HARVEST

376. Please fill out the unique code, given by the interviewer (has to be the same as in Q1):

UNIQUE CODE: XX X XXX

Country code (See country codes Q2)

Farm type (1=RF and 2=BF)

Respondent number (Unique respondent number)

A. Input costs

377. What is the estimated revenue in **dollars per **hectare** for each growing area of [TARGET CROP]?**

→ Please write down in **\$/ha**.

	Growing area A	Growing area B
Estimated revenue	... \$/ha	... \$/ha
Don't know / no answer	99	99

IF Q377=99 (don't know) for growing area A or B

378. Could you please indicate the estimated revenue for [TARGET CROP] in general?

→ Please write down the general estimated revenue in **\$/ha**.

Estimated revenue	... \$/ha
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379. How would you rate your profitability for each growing area for [TARGET CROP]?

→ Please circle what applies. (SR)

	Growing area A	Growing area B
Very high	5	5
High	4	4
Average	3	3
Low	2	2
Very low	1	1
Don't know / no answer	99	99

380. What is your total input cost for each growing area of [TARGET CROP] from first field preparation until harvest? Please consider **trees/seeds, fertilizers, pesticides, labor, machinery, water use, fuel, electricity, gas.**

→ Please write down in **\$/ha**.

	Growing area A	Growing area B
Total input cost	... \$/ha	... \$/ha

381. And how would you split this out in percentages for each category in terms of importance of the total input cost for each growing area for [TARGET CROP]?

→ Please indicate the percentage for each category. The sum should add up to 100%.

	Growing area A	Growing area B
1. Trees/Seeds	... %	... %
2. Fertilizers	... %	... %
3. Pesticides	... %	... %
4. Labor	... %	... %
5. Machinery	... %	... %
6. Water use	... %	... %
7. Fuel	... %	... %
8. Electricity	... %	... %
9. Gas	... %	... %
Don't know / no answer	99	99

382. Please describe per growing area the type of machinery used and indicate the amount of labor used for each operation performed during the season for [TARGET CROP].

→ Please fill out the table. If not applicable, please leave the row open.

- A. Number of hours spent by all workers for that operation (e.g. if 5 workers worked 8 hours for clearing the field, this represents 40 hours)
- B. Number of people that were involved in this operation
- C. Type of machinery that was used for each operation (e.g. 2 tractors and 1 plough)
- D. Number of machinery hours

	Growing area A			
	a. Number of hours spent by all workers	b. Number of people involved	c. Type of machinery used	d. Number of machinery hours
1. Clearing				
2. Ploughing				
3. Digging				
4. Ridging				
5. Ripping				
6. Land levelling				
7. Greenhouse management operations				
8. Applying fertilizers				
9. Mulching				
10. Sowing or planting				
11. Scouting for pests and diseases				
12. Applying pesticides				
13. Irrigating				
14. Pruning				
15. Weeding (mechanical)				
16. Harvesting				
17. Post-harvest handling (incl. dipping)				
18. Processing (incl. sorting)				
19. Transport				
96. Other major operation 1: Specify:				
97. Other major operation 2: Specify:				
98. Other major operation 3: Specify:				

	Growing area B			
	a. Number of hours spent by all workers	b. Number of people involved	c. Type of machinery used	d. Number of machinery hours
1. Clearing				
2. Ploughing				
3. Digging				
4. Ridging				
5. Ripping				
6. Land levelling				
7. Greenhouse management operations				
8. Applying fertilizers				
9. Mulching				
10. Sowing or planting				
11. Scouting for pests and diseases				
12. Applying pesticides				
13. Irrigating				
14. Pruning				
15. Weeding (mechanical)				
16. Harvesting				
17. Post-harvest handling (incl. dipping)				
18. Processing (incl. sorting)				
19. Transport				
96. Other major operation 1: Specify:				
97. Other major operation 2: Specify:				
98. Other major operation 3: Specify:				

B. Abiotic stress

IF TREES = DURING PRUNING

383. During and right after planting of [TARGET CROP], did you face an external stress problem that impacted your planting operations or crop development (e.g. emergence)?

→ Please tick what applies. (SR)

Yes	1
No	2

IF Q383=1 (if problem) AND IF TREES = DURING PRUNING

384. Which kind of external stress problems were you faced with during and right after planting of [TARGET CROP]?

→ Please tick all that applies. Note down other if not in list. (MR)

Excess of rain	1
Lack of rain	2
Heat	3
Frost	4
Wind	5
Hail	6
Destruction by animals	7
Lack of beneficial insects (e.g. pollinators)	8
96. Other. Specify 1: ...	96
97. Other. Specify 2: ...	97
98. Other. Specify 3: ...	98
Don't know / no answer	99

385. During the season of [TARGET CROP], did you face an external stress problem that impacted your crop operations or crop development (e.g. flowering, fruit development, etc.)?

→ Please tick what applies. (SR)

Yes	1
No	2

IF Q385=1 (if problem)

386. Which kind of external stress problems were you faced with during the season of [TARGET CROP]?

→ Please tick all that applies. Note down other if not in list.

Excess of rain	1
Lack of rain	2
Heat	3
Frost	4
Wind	5
Hail	6
Destruction by animals	7
Lack of beneficial insects (e.g. pollinators)	8
96. Other. Specify 1: ...	96
97. Other. Specify 2: ...	97
98. Other. Specify 3: ...	98
Don't know / no answer	99

IF Q385=1 (if problem)

387. What was the impact on the [TARGET CROP]?

→ Please tick what applies, multiple answers possible. Note down other if not in list.

Reduced yield	1
Reduced yield quality	2
No impact	90
96. Other. Specify 1: ...	96
97. Other. Specify 2: ...	97
98. Other. Specify 3: ...	98
Don't know / no answer	99

388. Would you say the rain level during the season was ...?

→ Please tick what applies. (SR)

A lot less than usual	1
Somewhat less than usual	2
The same as usual	3
Somewhat more than usual	4
A lot more than usual	5
Don't know / no answer	99

C. Irrigation

389. What is the main water source of each growing area of [TARGET CROP]?

→ Please tick what applies. Note down other if not in list. (SR)

	Growing area A	Growing area B
Irrigated	1	1
Rain-fed	2	2
Swamp/wetland	3	3
98. Other. Specify 1:
Don't know / no answer	99	99

IF Q389=1 (if irrigation)

390. What is the number of days you have been irrigating each growing area of [TARGET CROP]?

→ Please write down the number of days.

	Growing area A	Growing area B
Number of days of irrigation	...days	...days

IF Q389=1 (if irrigation)

391. What is the average amount of hours per day you have been irrigating each growing area of [TARGET CROP]?

→ Please write down the average amount of hours per day.

	Growing area A	Growing area B
Average amount of hours per day	...hours/day	...hours/day

IF Q389=1 (if irrigation)

392. What is the amount of liters that is discharged per hour on each growing area of [TARGET CROP]?

→ Please write down the average amount of liters per hour.

	Growing area A	Growing area B
Average amount of liters per hour	...L/hour	...L/hour

IF Q389=1 (if irrigation) AND IF DIFFICULTY TO GIVE AN ANSWER PER GROWING AREA

393. What is the number of days you have been irrigating in total?

→ Please write down the number of days.

Number of days of irrigationdays
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IF Q389=1 (if irrigation) AND IF DIFFICULTY TO GIVE AN ANSWER PER GROWING AREA

394. What is the average amount of hours per day you have been irrigating in total?

→ Please write down the average amount of hours per day.

Average amount of hours per dayhours/day
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IF Q389=1 (if irrigation) AND IF DIFFICULTY TO GIVE AN ANSWER PER GROWING AREA

395. What is the amount of liters that is discharged per hour in total?

→ Please write down the average amount of hours per day.

Average amount of liters per hourL/hour
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ONLY FOR BELGIUM: IF Q389=1 (if irrigation)

396. When do you irrigate each growing area of cauliflower?

➔ Please tick what applies. (MR)

	Growing area A	Growing area B
In the morning	1	1
At noon	2	2
In the evening	3	3
Don't know / no answer	99	99

PART VI - FEEDBACK

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

398. Have you followed the recommended protocol for each growing area of [TARGET CROP]?

→ Please tick what applies. (SR)

	Growing area A	Growing area B
Yes	1	1
No	2	2

399. Please explain why you follow or do not follow the protocol.

→ Please write down why you have or have not followed the protocol.

Growing area A	Growing area B

400. What are or would be the benefits to your farm when using the recommended protocol for each growing area of [TARGET CROP]?

→ Please note the benefits.

Growing area A	Growing area B

IF Q398=1 (follow the recommended protocol)

401. What are or would be the disadvantages to your farm when using the recommended protocol for each growing area of [TARGET CROP]?

→ Please note the disadvantages.

Growing area A	Growing area B

402. Generally, what do you think is the most important to achieve a good crop yield or quality?

→ Please note the most important aspects.

403. What are the main problems that you face as a farmer with growing and selling crops?

→ Please note the main problems.

IF REFERENCE FARM

404. Next to the crop protection program, what additional services did you receive from Syngenta?

→ Please note additional services.

IF BENCHMARK FARM

405. Next to the crop protection program, what additional services did you receive from a crop input supplier?

→ Please note additional services.

This completes the data collection guide. Thank you for your cooperation!