

# Teach and Text\_4 brassicas

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## SURVEY IDENTIFICATION INFORMATION QUESTIONNAIRE DESCRIPTION

### HOUSEHOLD IDENTIFICATION

No sub-sections, No rosters, Questions: 12, Static texts: 2, Variables: 2.

### HOUSEHOLD INFORMATION

No sub-sections, Rosters: 1, Questions: 15.

### FARM CHARACTERISTICS

No sub-sections, No rosters, Questions: 18, Variables: 4.

### BRASSICA PRODUCTION

Sub-sections: 1, Rosters: 3, Questions: 82, Static texts: 3, Variables: 6.

### BOK CHOY PRODUCTION

Sub-sections: 1, Rosters: 3, Questions: 80, Static texts: 3, Variables: 6.

### YARD-LONG BEAN PRODUCTION

Sub-sections: 1, Rosters: 3, Questions: 80, Static texts: 3, Variables: 6.

### PEST AND DISEASE CONTROL KNOWLEDGE

Sub-sections: 3, No rosters, Questions: 24, Static texts: 7.

### IPM AND PESTICIDE PERCEPTIONS

No sub-sections, No rosters, Questions: 10, Static texts: 1.

### GPS PLOT DATA

No sub-sections, Rosters: 3, Questions: 6.

### APPENDIX A — VALIDATION CONDITIONS AND MESSAGES

### APPENDIX B — INSTRUCTIONS

### APPENDIX C — CATEGORIES

### LEGEND

*SURVEY IDENTIFICATION INFORMATION*  
*QUESTIONNAIRE DESCRIPTION*

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**Basic information**

*Title* Teach and Text\_4 brassicas

# HOUSEHOLD IDENTIFICATION

STATIC TEXT

*The primary respondent should be the person mainly in charge of vegetable production. This does not need to be the head of the household.*

Interview date	DATE: CURRENT TIME date .....
VARIABLE "May"	STRING month
VARIABLE date.Value.Year - 1	DOUBLE lastyear
In which province are you?	SINGLE-SELECT province 01 <input type="radio"/> Banteay Meanchey 02 <input type="radio"/> Siem Reap
In which district are you?	SINGLE-SELECT: CASCADING district 01 <input type="radio"/> Monkul Borei 02 <input type="radio"/> Phreahnet Phreah 03 <input type="radio"/> Pouk 04 <input type="radio"/> Krong Siem Reap 05 <input type="radio"/> Angkor Thom 06 <input type="radio"/> Soutr Nikom 07 <input type="radio"/> Prasat Bakong
In which commune are you?	SINGLE-SELECT: CASCADING commune 01 <input type="radio"/> Ou Prasat 02 <input type="radio"/> Soe 03 <input type="radio"/> Chamnaom 04 <input type="radio"/> Rohat Tuek 05 <input type="radio"/> Russei Kraok 06 <input type="radio"/> Chopvary 07 <input type="radio"/> Phreahnet Phreah 08 <input type="radio"/> Chhnou Meanchey 09 <input type="radio"/> Keo Por 10 <input type="radio"/> Khnat 11 <input type="radio"/> Sangkat Krobeiy riel 12 <input type="radio"/> Leang Dai 13 <input type="radio"/> Dom Daek 14 <input type="radio"/> Samrong 15 <input type="radio"/> Chansar 16 <input type="radio"/> Kantraing

Village name	SINGLE-SELECT: CASCADING <span style="float: right;">village</span> 01 <input type="radio"/> Phnom Prasat 02 <input type="radio"/> Chamkarlouk 03 <input type="radio"/> Phnomthomcheung 04 <input type="radio"/> Rachamkar Chek 05 <input type="radio"/> Plov damrei Loeu 06 <input type="radio"/> Osoe 07 <input type="radio"/> Tabun 08 <input type="radio"/> Srae Prey 09 <input type="radio"/> Bos Tanloab 10 <input type="radio"/> Ka Svay 11 <input type="radio"/> Neang Ket 12 <input type="radio"/> Chop 13 <input type="radio"/> Roul Chrouk 14 <input type="radio"/> Prasat 15 <input type="radio"/> Chakkreiy 16 <input type="radio"/> Poy Kdoeung  <a href="#">And 27 other symbols [1]</a>
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Enumerator name	TEXT <span style="float: right;">enumerator</span>  .....
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Please record the GPS position of the household	GPS <span style="float: right;">GPS</span>  N -----  W -----  A -----
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STATIC TEXT

Good morning/afternoon. My name is %enumerator% and I am from Battambang University. Together with the World Vegetable Center, we are doing a survey among 800 farmers growing Chai Sim, Pakchoy, and yard long bean. The purpose of this study is to better understand pest and disease problems in vegetable production, how farmers manage these problems, how they get their information, and how new training methods might help farmers to protect their crops. In some villages the district offices of agriculture and NGOs will inform farmers about new ways to deal with vegetable pests and diseases. We do not know yet if your village will be chosen for this. If your village is selected, you would either be invited for a training session or get information via the phone. You might also get informed in both ways. This program will only provide information and you will be free to decide what to do with it. One year from now we will return to all households to ask them about their situation again. Comparing the situation now and in one year, we will understand if the new information campaign works well. We will ask you some basic information about your household and your farm. We will ask about your production of chai sim, bok choy, and yard-long bean; your knowledge about the different pests and diseases; and your opinion about the different methods. The interview will take ca. 45 minutes. Your name, the position of your house and your phone number will be used to contact you for the information campaign, if it is implemented in this village, and to revisit you for the study. We treat all data that could be used to identify you in confidential manner. We will not use it for any other purpose than described above and we will not share it with any external party or organization without your consent. All other information is for research only. The information will only be analyzed together with the data of all other farmers. The results of the study will be made available to the public. The data set will be publicly available but all personal data that could be used to identify you, like names, address, and phone numbers will be deleted before. If you decide to not participate in this study, you are free to do so now or at any later point without any consequences. Your participation is fully voluntary. This form [hand over the form] describes what I just explained to you. You can keep it and contact the persons listed in the end of the page, if you have questions later on. We would highly appreciate if you could participate in this study. I would like you to answer questions truthfully, in your best possible way, and to the best of your knowledge. If you don't know the answer to some of my questions, you can simply tell me.

DO NOT READ OUT: Did you hand out the information sheet?	SINGLE-SELECT <span style="float: right;">info_sheet</span> 01 <input type="radio"/> Yes 00 <input type="radio"/> No
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<p>Do you understand what we will do with the information and are you willing to participate in this survey?</p> <p>I Hand the farmer the information leaflet for him/her to keep. E info_sheet==1</p>	<p>SINGLE-SELECT participation</p> <p>01 <input type="radio"/> Yes 00 <input type="radio"/> No</p>
<p>Please sign here to confirm that you are willing to participate in the study and that you have received the information sheet.</p> <p>E participation == 1</p>	<p>PICTURE signature</p>
<p>Did you grow chai sim, chinese cabbage, chinese kale, pakchoy, or yardlong bean since October %lastyear%?</p> <p>E participation == 1 V1 \$justzero M1 The answer cannot be no/none and another option at the same time.</p>	<p>MULTI-SELECT growsveg</p> <p>00 <input type="checkbox"/> No, none of them 01 <input type="checkbox"/> Grows chai sim/chinese cabbage/chinese kale 02 <input type="checkbox"/> Grows pakchoy 03 <input type="checkbox"/> Grows yardlong bean</p>
<p>Do you intend to grow chai sim, chinese cabbage, chinese kale, pakchoy, or yardlong bean between October an next May?</p> <p>E participation == 1</p>	<p>SINGLE-SELECT grownextyear</p> <p>01 <input type="radio"/> Yes 00 <input type="radio"/> No</p>

## HOUSEHOLD INFORMATION

E participation == 1

<p>Please enter the household ID</p>	<p>TEXT hhid SCOPE: IDENTIFYING</p> <p>.....</p>
<p>Are you the main person in the household responsible for vegetable production?</p> <p>I If "No", ask to change respondent; if responsible available, correct to "Yes".</p>	<p>SINGLE-SELECT B1a</p> <p>00 <input type="radio"/> No 01 <input type="radio"/> Yes</p>
<p>What is your phone number?</p> <p>I Please enter 9999999999 if nobody in the household owns a phone. V1 self.Length == 9    self.Length == 10 M1 The phone number should have 9 or 10 digits, starting with a zero.</p>	<p>TEXT B2</p> <p>.....</p>
<p>Who lives in this household? Can you please tell me their names? <u>Please start with yourself.</u></p> <p>I Household members are: Persons regularly sharing meals and living under the same roof for the last 6 months. Include servants who primarily eat and sleep in your house. Do not include servants and g <a href="#">And 49 other symbols [1]</a></p>	<p>LIST B3</p> <p>.....</p>

HOUSEHOLD INFORMATION

### Roster: HOUSEHOLD ROSTER

generated by list question B3

HHroster

<p>What is the sex of %rosteritle%?</p>	<p>SINGLE-SELECT B4</p> <p>00 <input type="radio"/> Male 01 <input type="radio"/> Female</p>
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<p>Which relationship does %rosteritle% have to the household head?</p> <p>V1 /*----- validation to make sure only one person is reported to be the household head -----*/ B5==1? /// Is this person the hous <a href="#">And 193 other symbols [1]</a></p> <p>M1 There must be only one person in the household designated as head.</p> <p>V2 /* Check that head has different gender than spouse(s) * / // if head is current person, and does at least one spouse exist? B5==1 &amp;&amp; HHroster.Any(x=&gt;x.B5==2) ? // if so, check that there is no <a href="#">And 142 other symbols [1]</a></p> <p>M2 The head and his/her spouse typically have different genders. Please confirm.</p> <p>V3 /* Check that spouse has different gender than head * / // if head is current person, and does at least one spouse exist? B5==2 &amp;&amp; HHroster.Any(x=&gt;x.B5==1) ? // if so, check whether spouse has d <a href="#">And 115 other symbols [1]</a></p> <p>M3 Spouse typically has a different genders than his/her spouse (the head of household). Please confirm.</p> <p>V4 /*Check that there are at most 2 parent*/ // if current person is father/mother? B5==6? //Check that there are no more than 2 (HHroster.Count(x=&gt;x.B5==6)&lt;=2) //if not, no problem :true</p> <p>M4 Household head has at most 1 father and mother.</p> <p>V5 /* Checks if no household head was listed. Note: this runs at the end so it does not trigger errors constantly * / // Check that all information has been filled HHroster.All(x=&gt;x.B5!=null) ? // <a href="#">And 113 other symbols [1]</a></p> <p>M5 No household member was identified as the household head. Please confirm.</p>	<p>SINGLE-SELECT B5</p> <p>01 <input type="radio"/> Household head</p> <p>02 <input type="radio"/> Spouse</p> <p>03 <input type="radio"/> Son/daughter</p> <p>04 <input type="radio"/> Son in law/daughter in law</p> <p>05 <input type="radio"/> Grandson/ganddaughter</p> <p>06 <input type="radio"/> Parent</p> <p>07 <input type="radio"/> Parent in law</p> <p>08 <input type="radio"/> Brother/sister</p> <p>09 <input type="radio"/> Brother in law/sister in law</p> <p>10 <input type="radio"/> Nephew/niece</p> <p>11 <input type="radio"/> Cousins</p> <p>12 <input type="radio"/> Other family member</p> <p>13 <input type="radio"/> Non-family member</p>
<p>Please specify the relation %rosteritle% has to the household head</p> <p>E B5==12    B5==13</p>	<p>TEXT B5a</p> <p>.....</p>
<p>How old is %rosteritle%</p> <p>I Only enter completed years. Infants that are less than 12 month old are recorded as "0".</p> <p>V1 self.InRange(0,120)</p> <p>M1 Please enter a valid age.</p>	<p>NUMERIC: INTEGER B6</p> <p>-----</p>
<p>For how many years did %rosteritle% attend a school or another form of formal education?</p> <p>E B6&gt;=18 &amp;&amp; @rowcode==1</p> <p>V1 (B6 - B7) &gt; 4</p> <p>M1 Compared to the age these are too many years of education.</p> <p>V2 self&lt;16</p> <p>M2 Please confirm that this person spend more than 15 years in &lt;u&gt;formal education&lt;/u&gt;, e.g. due to university education.</p>	<p>NUMERIC: INTEGER B7</p> <p>-----</p>
<p>Are you able to read Khmer?</p>	<p>SINGLE-SELECT B8</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>Do you own a phone, which you regularly use to access the internet?</p>	<p>SINGLE-SELECT B9</p> <p>01 <input type="radio"/> Yes</p> <p>00 <input type="radio"/> No</p>
<p>Which of the following messaging apps do you use?</p> <p>E B9==1    B9==2</p> <p>V1 \$justzero</p> <p>M1 The answer cannot be no/none and another option at the same time.</p>	<p>MULTI-SELECT B9a</p> <p>01 <input type="checkbox"/> Facebook/Messenger/Messenger Light</p> <p>02 <input type="checkbox"/> WhatsApp</p> <p>03 <input type="checkbox"/> Line</p> <p>04 <input type="checkbox"/> Viber</p> <p>00 <input type="checkbox"/> None of them</p>

Does anybody else in your household regularly use his or her phone to access the internet?	MULTI-SELECT: LINKED	B9b
F @rowcode>1		
Do you own a cellphone without internet access?	MULTI-SELECT	B10
E B9==0	01 <input type="checkbox"/> Yes 00 <input type="checkbox"/> No	
Which of the following items does your household own?	MULTI-SELECT: YES/NO	B11
	01 <input type="checkbox"/> / <input type="checkbox"/> Motorbike 02 <input type="checkbox"/> / <input type="checkbox"/> Bicycle 03 <input type="checkbox"/> / <input type="checkbox"/> Car 04 <input type="checkbox"/> / <input type="checkbox"/> Tractor 05 <input type="checkbox"/> / <input type="checkbox"/> Power tiller/plough 06 <input type="checkbox"/> / <input type="checkbox"/> Mechanized water pump 07 <input type="checkbox"/> / <input type="checkbox"/> Refrigerator 08 <input type="checkbox"/> / <input type="checkbox"/> TV 09 <input type="checkbox"/> / <input type="checkbox"/> Radio 10 <input type="checkbox"/> / <input type="checkbox"/> Sewing machine 11 <input type="checkbox"/> / <input type="checkbox"/> Solar panel	

## FARM CHARACTERISTICS

E participation == 1

Unit of land measurement	SINGLE-SELECT	C1b
	02 <input type="radio"/> Hectare 03 <input type="radio"/> Rai 04 <input type="radio"/> Square meter	
How much agricultural land do you own?	NUMERIC: DECIMAL	C1a
I Include all owned land: do not include rented-in land, but include owned land that is leased to others. W1 C1e<=150000 M1 The total agricultural land is larger than 15 hectares. Please confirm.	-----	
How many %C1b% do you rent in?	NUMERIC: DECIMAL	C1c
W1 C1e<=150000 M1 The total agricultural land is larger than 15 hectares. Please confirm.	-----	
How much do you pay for this per year? (in total, for last 12 month)	NUMERIC: INTEGER	C1d
E C1c>0	-----	
VARIABLE ((C1a?? 0) + (C1c?? 0)) *(area_conversion[(int)C1b].conversion)	DOUBLE	C1e
For how many years have you been in charge of commercial vegetable production?	NUMERIC: INTEGER	C2
V1 self<=(HHroster[1].B6 -14) M1 In this case the repsondent would have been responsible before being 14 years old. Please confirm.	-----	

<p>How many different kinds of vegetables have you been growing commercially since May %lastyear%? Please do not include grain legumes or starchy roots and tubers like yams or potatoes.</p>	<p>NUMERIC: INTEGER</p> <p>c3</p> <p>-----</p>
<p>On how many %C1b% were you growing vegetables during most of the last wet season, from May to October?</p> <p>I If the household was not growing vegetables during the season, enter 0</p> <p>V1 C4b1 &lt;= C1e</p> <p>M1 This is larger than the available agricultural land, based on the earlier questions.</p>	<p>NUMERIC: DECIMAL</p> <p>c4b</p> <p>-----</p>
<p>VARIABLE</p> <p>(C4b?? 0) *(area_conversion[(int)C1b].conversion)</p>	<p>DOUBLE</p> <p>c4b1</p>
<p>On how many %C1b% were you growing vegetables during most of the recent cool dry season, from November to February?</p> <p>I If the household was not growing vegetables during the season, enter 0</p> <p>V1 C4a1 &lt;= C1e</p> <p>M1 This is larger than the available agricultural land, based on the earlier questions.</p>	<p>NUMERIC: DECIMAL</p> <p>c4a</p> <p>-----</p>
<p>VARIABLE</p> <p>(C4a?? 0) *(area_conversion[(int)C1b].conversion)</p>	<p>DOUBLE</p> <p>c4a1</p>
<p>On how many %C1b% were you or are you growing vegetables during most of the last hot dry season, in March to May this year?</p> <p>I If the household was not growing vegetables during the season, enter 0</p> <p>V1 C4c1 &lt;= C1e</p> <p>M1 This is larger than the available agricultural land, based on the earlier questions.</p>	<p>NUMERIC: DECIMAL</p> <p>c4c</p> <p>-----</p>
<p>VARIABLE</p> <p>(C4c?? 0) *(area_conversion[(int)C1b].conversion)</p>	<p>DOUBLE</p> <p>c4c1</p>
<p>How keen are you to always use the latest technologies in vegetable production?</p>	<p>SINGLE-SELECT</p> <p>c5</p> <p>01 <input type="radio"/> Very keen</p> <p>02 <input type="radio"/> Not so keen, I prefer to wait and see</p> <p>03 <input type="radio"/> Not keen, I like the technology I am using now</p> <p>04 <input type="radio"/> Other</p>
<p>Please define the other view on innovation</p> <p>E C5==4</p>	<p>TEXT</p> <p>c5a</p> <p>-----</p>
<p>Over the last 6 months, how many farmers have asked for your advice on vegetable production?</p> <p>I Please do not double count if the same farmer asks for advice more than once.</p> <p>W1 self&lt;10</p> <p>M1 Please probe: Are these different farmers or does it include the same farmers asking again?</p>	<p>NUMERIC: INTEGER</p> <p>c6</p> <p>-----</p>
<p>In the last year, how many training courses on vegetable production have you attended?</p>	<p>NUMERIC: INTEGER</p> <p>c7</p> <p>-----</p>



<p>What was the content of the classes?</p> <p>E C7&gt;=1</p>	<p>MULTI-SELECT <span style="float: right;">c7a</span></p> <p>01 <input type="checkbox"/> Control of pest and diseases</p> <p>02 <input type="checkbox"/> Production methods (mulching, irrigation, etc.)</p> <p>03 <input type="checkbox"/> Consumer safety, hygienic production</p> <p>04 <input type="checkbox"/> Safe pesticide handling</p> <p>05 <input type="checkbox"/> Organic production</p> <p>06 <input type="checkbox"/> Grafting</p> <p>07 <input type="checkbox"/> Post-harvest handling</p> <p>08 <input type="checkbox"/> Marketing</p> <p>09 <input type="checkbox"/> Other</p>
<p>Please define the other content of the training</p> <p>E C7a.Contains(9)</p>	<p>TEXT <span style="float: right;">c7b</span></p> <p>.....</p>
<p>Who provided the trainings?</p> <p>E C7&gt;=1</p>	<p>MULTI-SELECT <span style="float: right;">c7c</span></p> <p>01 <input type="checkbox"/> Pesticide dealer</p> <p>02 <input type="checkbox"/> Private buyers (e.g. trader, collector, or processor)</p> <p>03 <input type="checkbox"/> Provincial government extension PDAFF</p> <p>04 <input type="checkbox"/> GDA (General Directorate of Agriculture)</p> <p>05 <input type="checkbox"/> GIZ</p> <p>07 <input type="checkbox"/> Other NGO</p> <p>08 <input type="checkbox"/> Other</p> <p>09 <input type="checkbox"/> Don't know</p>
<p>Please name the other NGO or NGOs providing training.</p> <p>E C7c.Contains(7)</p>	<p>TEXT <span style="float: right;">c7d</span></p> <p>.....</p>
<p>Please name the other organization providing training.</p> <p>I Please include NGOs in the dedicated field. (You have to choose "Other NGO" to see that field).</p> <p>E C7c.Contains(8)</p>	<p>TEXT <span style="float: right;">c7e</span></p> <p>.....</p>

## BRASSICA PRODUCTION

E participation == 1 && growsveg.Contains(1) && !growsveg.Contains(2)

<p>Which of the three crops chai sim, chinese cabbage, and chinese cale did the household grow since last October?</p>	<p>MULTI-SELECT <span style="float: right;">brassica</span></p> <p>01 <input type="checkbox"/> Chai sim</p> <p>02 <input type="checkbox"/> Chinese cabbage</p> <p>03 <input type="checkbox"/> Chinese kale</p>
<p>Which of the three crops was grown on the largest area since October?</p> <p>V1 (self==1 &amp;&amp; brassica.Contains(1))   (self==2 &amp;&amp; brassica.Contains(2))   (self==3 &amp;&amp; brassica.Contains(3))</p> <p>M1 This does not fit the answer above.</p>	<p>SINGLE-SELECT <span style="float: right;">brassica_b</span></p> <p>01 <input type="radio"/> Chai sim</p> <p>02 <input type="radio"/> Chinese cabbage</p> <p>03 <input type="radio"/> Chinese kale</p>
<p>Who is the main person deciding which inputs to use in %brassica_b% production?</p> <p>I Always ask about the final decision maker (even if the decision might be discussed between two or more people first).</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED <span style="float: right;">E1a</span></p>

<p>Who is the main person deciding what %brassica_b% variety to grow?</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>E1b</p>
<p>Who is the main person deciding how to control %brassica_b% pests and diseases?</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>E1c</p>
<p>Who is the main person deciding to whom to sell the %brassica_b%?</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>E1f</p>
<p>Which seed did you normally use to grow %brassica_b%?</p>	<p>SINGLE-SELECT</p> <p>E2</p> <p>00 <input type="radio"/> Don't know</p> <p>01 <input type="radio"/> Seed produced on my own farm</p> <p>02 <input type="radio"/> Seed from fellow farmer (no seed pack)</p> <p>03 <input type="radio"/> Bought unlabeled seed</p> <p>04 <input type="radio"/> Bought labeled pack of hybrid seed</p> <p>05 <input type="radio"/> Bought labeled pack of non-hybrid seed</p> <p>06 <input type="radio"/> Bought labeled pack - Don't know if it is hybrid</p> <p>07 <input type="radio"/> Other</p>
<p>Please specify the source of seed.</p> <p>E E2==7</p>	<p>TEXT</p> <p>E2a</p> <p>.....</p>
<p>When choosing the seed, what did you look for?</p> <p>E E2 != 0 &amp;&amp; E2 != 1</p>	<p>MULTI-SELECT</p> <p>E2b</p> <p>01 <input type="checkbox"/> Taste</p> <p>02 <input type="checkbox"/> Look of fruit/product</p> <p>03 <input type="checkbox"/> Shelf life of fruit/product</p> <p>04 <input type="checkbox"/> Yield potential</p> <p>05 <input type="checkbox"/> Disease resistance</p> <p>06 <input type="checkbox"/> Open pollinated (can reuse seed)</p> <p>07 <input type="checkbox"/> Hybrid seed</p> <p>08 <input type="checkbox"/> Product brand</p> <p>09 <input type="checkbox"/> Price</p> <p>10 <input type="checkbox"/> No other seed available</p> <p>11 <input type="checkbox"/> Other</p>
<p>Please define what you looked for in the seed.</p> <p>E E2b.Contains(11)</p>	<p>TEXT</p> <p>E2b1</p> <p>.....</p>
<p>What kind of irrigation did you use for your %brassica_b% during the last 12 months? (Multiple answers possible)</p> <p>V1 self.ContainsOnly(0)    !self.Contains(0)</p> <p>M1 You cannot choose "No irrigation" and another option at the same time.</p>	<p>MULTI-SELECT</p> <p>E3</p> <p>00 <input type="checkbox"/> No irrigation</p> <p>01 <input type="checkbox"/> Drip irrigation</p> <p>02 <input type="checkbox"/> Furrow irrigation</p> <p>03 <input type="checkbox"/> Sprinkler</p> <p>04 <input type="checkbox"/> Water hose</p> <p>05 <input type="checkbox"/> Other</p>
<p>Please define the irrigation type.</p> <p>E E3.Contains(5)</p>	<p>TEXT</p> <p>E3a</p> <p>.....</p>

<p>Did you use mulching during the last 12 months? If yes, which materials did you use?</p> <p>V1 self.ContainsOnly(0)    !self.Contains(0)</p> <p>M1 You cannot say "no mulching" and choose a material at the same time.</p>	<p>MULTI-SELECT E4</p> <p>00 <input type="checkbox"/> No mulching</p> <p>01 <input type="checkbox"/> Plastic foil</p> <p>02 <input type="checkbox"/> Biodegradable plastic</p> <p>03 <input type="checkbox"/> Rice straw</p> <p>04 <input type="checkbox"/> Other organic material</p> <p>05 <input type="checkbox"/> Other</p>
<p>Please define the material used for mulching.</p> <p>E E4.ContainsAny(4, 5)</p>	<p>TEXT E4a</p> <p>.....</p>
<p>Do you grade the %brassica_b% after harvesting?</p>	<p>SINGLE-SELECT E5</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>In how many grades do you sort the harvest?</p> <p>E E5==1</p> <p>W1 self&lt;=4</p> <p>M1 Normally there are no more than 3 grades. Please confirm.</p>	<p>NUMERIC: INTEGER E5a</p> <p>-----</p>

STATIC TEXT

*In the following I will ask you about the different plots where you grew %brassica\_b%. This is to get an idea how much %brassica\_b% you produced over all. Please start by telling me about the largest plot on which you grew %brassica\_b% after October of last year.*

<p>On how many different plots did you grow %brassica_b% after October %lastyear%? Please give a short name or description to each plot, so we can refer to it later. Please start with the largest plot.</p> <p>I This refers to the separate fields that %brassica_b% was grown on, not the number of times it was grown (which will be asked later).</p>	<p>LIST E10a</p> <p>.....</p>
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BRASSICA PRODUCTION

## Roster: BRASSICA PRODUCTION

generated by list question [E10a](#)

Chaisim\_production

<p>How large is this plot?</p> <p>I Enter the size in square meter.</p> <p>V1 E11c&gt;=0</p> <p>M1 The total area of all chai sim plots is more than the land available to the household according to the previous information. The difference is %E11c% square meters.</p>	<p>NUMERIC: DECIMAL E10b</p> <p>-----</p>
<p>Which share of the plot was planted with %brassica_b%?</p> <p>I Enter in percentage. E.g. 100 if it was the only thing grown on the plot, 50 if only half of the plot was used for it, etc..</p> <p>V1 self&gt;0 &amp;&amp; self&lt;=100</p> <p>M1 The value must be between 1 and 100.</p> <p>W2 self&gt;=50</p> <p>M2 Less than half of the plot was used to grow the crop. Please double check to make sure this is correct.</p>	<p>NUMERIC: INTEGER E10c</p> <p>-----</p>
<p>VARIABLE</p> <p>C1e - E10b</p>	<p>DOUBLE E11c</p>
<p>Is this plot on rented land?</p> <p>E C1c&gt;0</p>	<p>SINGLE-SELECT E12</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>

Do you use any of the following to protect the %brassica_b% on this plot?	<p>SINGLE-SELECT E13</p> <p>00 <input type="radio"/> None</p> <p>01 <input type="radio"/> Polyhouse</p> <p>02 <input type="radio"/> Plastic roof with net walls</p> <p>03 <input type="radio"/> Plastic roof, no walls</p> <p>04 <input type="radio"/> Nethouse</p> <p>05 <input type="radio"/> Net roof</p> <p>06 <input type="radio"/> Net tunnels</p> <p>07 <input type="radio"/> Other structure</p>
<p>Please define the structure used.</p> <p>E E13==7</p>	<p>TEXT E13a</p> <p>.....</p>
<p>Is this structure fully enclosed to keep out insects? (Including a a door that is kept closed.)</p> <p>E E13==1    E13==2    E13==4    E13==7</p>	<p>SINGLE-SELECT E13b</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>How often have you planted %brassica_b% on this plot since May %lastyear%? Please include the crop that was already in the field in May %lastyear%, if this was the case. Only include completed cycles (harvested, or failed).</p> <p>I If it was planted before May %lastyear% but harvested during the last 12 months, this should be added to the times that it was planted.</p>	<p>NUMERIC: INTEGER E14</p> <p>-----</p>

## BRASSICA PRODUCTION PRODUCTION CYCLE

STATIC TEXT

*Now I would like to ask you about the last production cycle that you finished.*

On which plot did you finish the last harvest of %brassica_b%?	<p>SINGLE-SELECT: LINKED E15a</p>
<p>When did you plant it?</p> <p>I If the exact day is unknown, enter the approximate day.</p> <p>V1 ((date-self)?.TotalDays)&lt;=457</p> <p>M1 The date is more than 15 months ago. Only include if the plants were still getting harvested during May %lastyear%.</p>	<p>DATE E15</p> <p>.....</p>
<p>When did you first harvest it?</p> <p>I If the farmer did not harvest, enter the date when the plants were destroyed (e.g. by uprooting, or by stopping to irrigate). If the exact day is unknown, enter the approximate day.</p> <p>V1 chaisim_days_to_maturity&gt;=0</p> <p>M1 The harvest date is before the planting date!</p> <p>W2 chaisim_days_to_maturity&gt;25</p> <p>M2 This is a very fast harvest.</p> <p>W3 chaisim_days_to_maturity&lt;=45</p> <p>M3 This is a very late harvest.</p>	<p>DATE E16</p> <p>.....</p>
<p>VARIABLE</p> <p>((E16-E15)?.TotalDays)</p>	<p>DOUBLE chaisim_days_to_maturity</p>
<p>How many times did you harvest?</p> <p>I Enter 0 if no harvest was possible (e.g. due to pests) and the crops were destroyed without harvesting.</p>	<p>NUMERIC: INTEGER E17</p> <p>-----</p>

<p>When did you finish the last harvest?</p> <p>E E17&gt;=1</p> <p>V1 chaisim_max_days_harvest &gt;= E17</p> <p>M1 The number of harvesting days is higher than the days between first and last harvest.</p>	<p>DATE E18</p> <p>.....</p>
<p>VARIABLE</p> <p>((E18-E16)?.TotalDays) + 1</p>	<p>DOUBLE chaisim_max_days_harvest</p>
<p>How many kg %brassica_b% did you sell?</p> <p>E E5==0 &amp;&amp; E17&gt;=1</p>	<p>NUMERIC: DECIMAL E19</p> <p>-----</p>
<p>On average, how much money did you get per kg of %brassica_b%?</p> <p>E E19&gt;=1</p> <p>W1 self&gt;=500 &amp;&amp; self&lt;=3000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p>	<p>NUMERIC: INTEGER E19_1</p> <p>-----</p>
<p>How many kg %brassica_b% of the best grade did you sell?</p> <p>E E5a&gt;=1 &amp;&amp; E17&gt;=1</p>	<p>NUMERIC: INTEGER E19a</p> <p>-----</p>
<p>On average, how much money did you get per kg of %brassica_b% of the highest grade?</p> <p>E E19a&gt;=1</p> <p>W1 self&gt;=500 &amp;&amp; self&lt;=3000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p>	<p>NUMERIC: INTEGER E19a_1</p> <p>-----</p>
<p>How many kg %brassica_b% of the 2nd best grade did you sell?</p> <p>E E5a&gt;=2 &amp;&amp; E17&gt;=1</p>	<p>NUMERIC: INTEGER E19b</p> <p>-----</p>
<p>On average, how much money did you get per kg of %brassica_b% of the 2nd highest grade?</p> <p>E E19b&gt;=1</p> <p>W1 self&lt;=3000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p> <p>V2 self&lt;=E19a_1</p> <p>M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER E19b_1</p> <p>-----</p>
<p>How many kg %brassica_b% of the 3rd best grade did you sell?</p> <p>E E5a&gt;=3 &amp;&amp; E17&gt;=1</p>	<p>NUMERIC: INTEGER E19c</p> <p>-----</p>
<p>On average, how much money did you get per kg of %brassica_b% of the 3rd highest grade?</p> <p>E E19c&gt;=3</p> <p>W1 self&lt;=3000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p> <p>V2 self&lt;=E19b_1</p> <p>M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER E19c_1</p> <p>-----</p>
<p>How many kg %brassica_b% of the 4th best (and worse) grade did you sell?</p> <p>I If the person separates into more than 4 grades please enter the average here.</p> <p>E E5a&gt;=4 &amp;&amp; E17&gt;=1</p>	<p>NUMERIC: INTEGER E19d</p> <p>-----</p>

<p>On average, how much money did you get per kg of %brassica_b% of the 4th (or lower) grade?</p> <p>E E19d&gt;=1</p> <p>W1 self&lt;=3000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p> <p>V2 self&lt;=E19c_1</p> <p>M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER E19d_1</p> <p>-----</p>
<p>How many kg damaged %brassica_b% did you <u>sort out</u> and throw away after harvest?</p> <p>E E17&gt;=1</p>	<p>NUMERIC: INTEGER E19e</p> <p>-----</p>
<p>Which share of all the damages to the harvested %brassica_b% was due to pests and diseases? (Include damages to the %brassica_b% that was sold at lower grade, and damages to %brassica_b% that was thrown away.)</p> <p>V1 (self&gt;=0 &amp;&amp; self&lt;=100)    self== -97</p> <p>M1 The value must be between 0 and 100 percent. If the question is not applicable enter -97 (e.g. if there was no damage).</p>	<p>NUMERIC: INTEGER E20</p> <p>-----</p>
<p>In total, how many kg undamaged %brassica_b% were not harvested (left in the field) during this time you were growing %brassica_b% (i.e. this production cycle)?</p> <p>I Please enter the quantity left in the field because of low prices, unavailability of labour, etc. Enter 0 if all undamaged crops were harvested.</p>	<p>NUMERIC: DECIMAL E21</p> <p>-----</p>
<p>What was the price per kg at the time when you left the %brassica_b% in the field?</p> <p>E E21&gt;0</p> <p>W1 self&lt;=500</p> <p>M1 This is a relatively high price. Make sure to enter the price per kg that prevailed when the farmer decided not to harvest.</p>	<p>NUMERIC: INTEGER E22</p> <p>-----</p>
<p>How many kg more would you have harvested without pests and diseases?</p>	<p>NUMERIC: INTEGER E23</p> <p>-----</p>
<p>Which pest or disease caused the largest damage to your %brassica_b%?</p> <p>I Ask for the pest and diseases and then double check with help of the pictures. The question refers to the production cycle you just discussed.</p>	<p>SINGLE-SELECT E24</p> <p>01 <input type="radio"/> Aphids</p> <p>02 <input type="radio"/> Cabbage worm</p> <p>03 <input type="radio"/> Cabbage head caterpillar</p> <p>04 <input type="radio"/> Cabbage looper</p> <p>05 <input type="radio"/> Diamond back moth</p> <p>06 <input type="radio"/> Imported cabbage worm</p> <p>07 <input type="radio"/> Leaf miner</p> <p>08 <input type="radio"/> Striped flea beetle</p> <p>09 <input type="radio"/> Common armyworm</p> <p>10 <input type="radio"/> Black rot</p> <p>11 <input type="radio"/> Alternaria leaf spot/Black leaf spot</p> <p>12 <input type="radio"/> Clubroot</p> <p>13 <input type="radio"/> Damping off (seedling)</p> <p>14 <input type="radio"/> Downey mildew</p> <p>15 <input type="radio"/> Turnip mosaic virus</p> <p>16 <input type="radio"/> Bacterial leaf spot</p> <p><a href="#">And 1 other symbols [2]</a></p>

<p>Which share (in %) of all pest and diseases damages was due to the worst disease?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E E24&gt;0</p> <p>V1 self&gt;=0 &amp;&amp; self&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p>	<p>NUMERIC: INTEGER E24a</p> <p>-----</p>
<p>Which pest or disease caused the second largest damage to your %brassica_b%?</p> <p>I Ask for the pest and diseases and then double check with help of the pictures.</p> <p>E E24&gt;0</p>	<p>SINGLE-SELECT E24b</p> <p>01 <input type="radio"/> Aphids</p> <p>02 <input type="radio"/> Cabbage worm</p> <p>03 <input type="radio"/> Cabbage head caterpillar</p> <p>04 <input type="radio"/> Cabbage looper</p> <p>05 <input type="radio"/> Diamond back moth</p> <p>06 <input type="radio"/> Imported cabbage worm</p> <p>07 <input type="radio"/> Leaf miner</p> <p>08 <input type="radio"/> Striped flea beetle</p> <p>09 <input type="radio"/> Common armyworm</p> <p>10 <input type="radio"/> Black rot</p> <p>11 <input type="radio"/> Alternaria leaf spot/Black leaf spot</p> <p>12 <input type="radio"/> Clubroot</p> <p>13 <input type="radio"/> Damping off (seedling)</p> <p>14 <input type="radio"/> Downey mildew</p> <p>15 <input type="radio"/> Turnip mosaic virus</p> <p>16 <input type="radio"/> Bacterial leaf spot</p> <p><a href="#">And 1 other symbols [3]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the 2nd worst pest/diseases?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E E24b&gt;0</p> <p>V1 (self + E24a)&gt;=0 &amp;&amp; (self + E24a)&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p> <p>W2 self&lt;=E24a</p> <p>M2 The damage is higher than for the worst pest or disease. Please confirm.</p>	<p>NUMERIC: INTEGER E24c</p> <p>-----</p>
<p>Which pest or disease caused the third largest damage to your %brassica_b%?</p> <p>I Ask for the pest and diseases and then double check with help of the pictures.</p> <p>E E24b&gt;0</p>	<p>SINGLE-SELECT E24d</p> <p>01 <input type="radio"/> Aphids</p> <p>02 <input type="radio"/> Cabbage worm</p> <p>03 <input type="radio"/> Cabbage head caterpillar</p> <p>04 <input type="radio"/> Cabbage looper</p> <p>05 <input type="radio"/> Diamond back moth</p> <p>06 <input type="radio"/> Imported cabbage worm</p> <p>07 <input type="radio"/> Leaf miner</p> <p>08 <input type="radio"/> Striped flea beetle</p> <p>09 <input type="radio"/> Common armyworm</p> <p>10 <input type="radio"/> Black rot</p> <p>11 <input type="radio"/> Alternaria leaf spot/Black leaf spot</p> <p>12 <input type="radio"/> Clubroot</p> <p>13 <input type="radio"/> Damping off (seedling)</p> <p>14 <input type="radio"/> Downey mildew</p> <p>15 <input type="radio"/> Turnip mosaic virus</p> <p>16 <input type="radio"/> Bacterial leaf spot</p> <p><a href="#">And 1 other symbols [4]</a></p>

Which share (in %) of all pest and diseases damages was due to the 3rd worst pest/diseases?	NUMERIC: INTEGER	E24e
I Please name the pest/disease to make sure the farmer refers to the right one.		
E E24d>0		
V1 (self + E24a + E24c)>=0 && (self + E24a + E24c)<=100		
M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.		
W2 self<=E24c		
M2 The damage is higher than for the second worst pest or disease. Please confirm.		

STATIC TEXT

*Nowi would like to ask you for the production cost for this production cycle.*

BRASSICA PRODUCTION / PRODUCTION CYCLE  
**Roster: BRASSICA PRODUCTION COST**  
 generated by fixed list

chaisim\_prod\_cost

- 01 Land preparation
- 02 Planting
- 03 Fertilizer application
- 04 Irrigation
- 05 Weeding
- 06 Pest and disease control
- 07 Harvesting
- 08 Transport and marketing
- 09 Others (define)

Did you have any additional cost in your last production of %brassica_b%?	SINGLE-SELECT	E30a
E @rowcode==9	00 <input type="radio"/> No 01 <input type="radio"/> Yes	

Please define the activity	TEXT	E30
E @rowcode==9 && E30a==1	.....	

How many women from your household worked on %rosteritle%?	NUMERIC: INTEGER	E31
E @rowcode==6	.....	

W1 self<= (HHroster.Count(x=>x.B4==1))  
 M1 It cannot be more than the number of women in the household.

On how many days did the women work?	NUMERIC: DECIMAL	E31a
I If it is different between persons use the average.		
E E31>=1	.....	

On average, how many hours did the women work each day.	NUMERIC: DECIMAL	E31b
E E31>=1	.....	

W1 self<=9  
 M1 This is a long working day for each person. Please double check.



<p>How many men from your household worked on %rosteritle%?</p> <p>E @rowcode==6</p> <p>W1 self&lt;= (HHroster.Count(x=&gt;x.B4==0))</p> <p>M1 It cannot be more people than there are household members.</p>	<p>NUMERIC: INTEGER E32</p> <p>-----</p>
<p>On how many days did the men work?</p> <p>I If it is different between persons use the average.</p> <p>E E32&gt;=1</p>	<p>NUMERIC: DECIMAL E32a</p> <p>-----</p>
<p>On average, how many hours did the men work each day.</p> <p>E E32&gt;=1</p> <p>W1 self&lt;=9</p> <p>M1 This is a long working day for each person. Please double check.</p>	<p>NUMERIC: DECIMAL E32b</p> <p>-----</p>
<p>In total how much did you pay hired women to help with %rosteritle%?</p> <p>E @rowcode!=9    E30a==1</p>	<p>NUMERIC: INTEGER E35</p> <p>-----</p>
<p>In total how much did you pay hired men to help with %rosteritle%?</p> <p>E @rowcode!=9    E30a==1</p>	<p>NUMERIC: INTEGER E37</p> <p>-----</p>
<p>How much did you pay for inputs, machinery rent, or similar things for %rosteritle%?</p> <p>E @rowcode!=9    E30a==1</p>	<p>NUMERIC: INTEGER E39</p> <p>-----</p>
<p>VARIABLE</p> <p>chaisim_prod_cost.Sum(x=&gt;x.E35)+chaisim_prod_cost.Sum(x=&gt;x.E37)+chaisim_prod_cost.Sum(x=&gt;x.E39)</p>	<p>DOUBLE chaisim_total_prod_cost</p>
<p>The total cost of production on the plot was %chaisim_total_prod_cost% according to the entered information. Do you think this is correct? - If not, what might have been wrong?</p>	<p>SINGLE-SELECT chaisim_confirm_total_cost</p> <p>01 <input type="radio"/> Confirm the production cost</p> <p>02 <input type="radio"/> Confirm after revisiting the entries in the table</p> <p>03 <input type="radio"/> After revisiting, the respondent cannot arrive at a satisfactory number</p>
<p>Overall, how often did you spray/apply pesticides to this plot, from land preparation to harvest in the described production cycle?</p> <p>W1 self&lt;=10</p> <p>M1 This is a high value. Please make sure you entered it correctly.</p>	<p>NUMERIC: INTEGER E50</p> <p>-----</p>
<p>Which kind of pesticides did you use?</p> <p>E E50&gt;=1</p>	<p>MULTI-SELECT E51</p> <p>01 <input type="checkbox"/> Synthetic insecticide</p> <p>02 <input type="checkbox"/> Synthetic fungicide</p> <p>03 <input type="checkbox"/> Biopesticide against insects</p> <p>04 <input type="checkbox"/> Biopesticide against diseases</p> <p>05 <input type="checkbox"/> Traditional pesticide/Natural pesticide against insects</p> <p>06 <input type="checkbox"/> Traditional pesticide/Natural pesticide against diseases</p>

How many different %roster% did you use?	NUMERIC: INTEGER ----- SPECIAL VALUES -99 Don't know	E52
In total, how many ml or gram of these pesticides did you use? (This is before mixing them with Water.)	NUMERIC: INTEGER -----	E53
How much did all the %roster% together cost?	NUMERIC: INTEGER -----	E54
VARIABLE ( (@rowcode==1    @rowcode==3    @rowcode==5)?(E52?? 0):0 )	DOUBLE insecticides_count_chaisim	
Do you know any of the active ingredients in the pesticides? E @rowcode==1    @rowcode==2	SINGLE-SELECT 01 <input type="radio"/> Yes 02 <input type="radio"/> No	E55a
Which active ingredients were in the %roster%? E E55a==1	MULTI-SELECT 01 <input type="checkbox"/> betacyfluthrin 02 <input type="checkbox"/> buprofezin 03 <input type="checkbox"/> carbaryl 04 <input type="checkbox"/> carbosulfan 05 <input type="checkbox"/> chlorfluazuron 06 <input type="checkbox"/> cymoxanil 07 <input type="checkbox"/> cypermethin 08 <input type="checkbox"/> deltamethrin 09 <input type="checkbox"/> diflubenzuron 10 <input type="checkbox"/> dinocap 11 <input type="checkbox"/> dinotefuran 12 <input type="checkbox"/> emamectinbenzoate 13 <input type="checkbox"/> fipronil 14 <input type="checkbox"/> flucycloxuron 15 <input type="checkbox"/> flusilazole 16 <input type="checkbox"/> gamma-cyhalothrin  <a href="#">And 17 other symbols [5]</a>	E55b
Please specify the name of the active ingredient E E55b.Contains(90)	TEXT -----	E55c
VARIABLE chaisim_pesticides.Sum(x=>x.insecticides_count_chaisim)	DOUBLE	E51a
You sprayed %E50% times and used %E51a% different pesticides or bio pesticides. How many times did you change between pesticides against insects? E E50>=2 && E51a>=2	NUMERIC: INTEGER -----	E51b

<p>In this production cycle, did you practice any of the following pest control techniques in your %brassica_b% production?</p>	<p>MULTI-SELECT: YES/NO <span style="float: right;">E58</span></p> <p>01 <input type="checkbox"/> / <input type="checkbox"/> Resistant variety</p> <p>02 <input type="checkbox"/> / <input type="checkbox"/> Treat the seeds before sowing with pesticide/bio-pesticide</p> <p>03 <input type="checkbox"/> / <input type="checkbox"/> Used seeds that were already coated with pesticides</p> <p>04 <input type="checkbox"/> / <input type="checkbox"/> Transplant seedling (do not plant seed directly in the field)</p> <p>05 <input type="checkbox"/> / <input type="checkbox"/> Use finely meshed nets to protect seedlings from insects</p> <p>06 <input type="checkbox"/> / <input type="checkbox"/> Bacillus thuringiensis (Bt), against insects</p> <p>07 <input type="checkbox"/> / <input type="checkbox"/> Beauveria bassiana, against insects</p> <p>08 <input type="checkbox"/> / <input type="checkbox"/> Metarhizium anisopliae, against insects</p> <p>09 <input type="checkbox"/> / <input type="checkbox"/> Verticillium lecanii, insects</p> <p>10 <input type="checkbox"/> / <input type="checkbox"/> Neem extract against insects</p> <p>11 <input type="checkbox"/> / <input type="checkbox"/> Trichoderma or Bacillus subtilis (Bs)</p> <p>12 <input type="checkbox"/> / <input type="checkbox"/> Plant barrier crops around the field</p> <p>13 <input type="checkbox"/> / <input type="checkbox"/> Plant trap crops in the field</p> <p>14 <input type="checkbox"/> / <input type="checkbox"/> Leave plant debris on the field or next to it</p> <p>15 <input type="checkbox"/> / <input type="checkbox"/> Use sticky traps</p>
<p>Which medium or soil did you use to raise your seedlings in this production cycle?</p>	<p>MULTI-SELECT <span style="float: right;">E58a</span></p> <p>01 <input type="checkbox"/> Bought seedlings</p> <p>02 <input type="checkbox"/> Soil</p> <p>03 <input type="checkbox"/> Peat</p> <p>04 <input type="checkbox"/> Coconut peat</p> <p>05 <input type="checkbox"/> Compost</p> <p>06 <input type="checkbox"/> Composted manure</p> <p>07 <input type="checkbox"/> Rice hulls</p> <p>08 <input type="checkbox"/> Other</p>
<p>Please define the medium you used to grow the seedlings in.</p>	<p>TEXT <span style="float: right;">E58b</span></p> <p>.....</p>
<p>Did you grow the seedlings on raised seed beds or did you use seedling trays?</p>	<p>SINGLE-SELECT <span style="float: right;">E58c</span></p> <p>01 <input type="radio"/> Seedling trays</p> <p>02 <input type="radio"/> Raised seed beds</p> <p>00 <input type="radio"/> None of the two</p>
<p>What did you grow as barrier crop?</p>	<p>TEXT <span style="float: right;">E58d</span></p> <p>.....</p>
<p>What did you grow as trap crop?</p>	<p>TEXT <span style="float: right;">E58e</span></p> <p>.....</p>
<p>Did you use any kind of pheromone traps in this production cycle?</p>	<p>SINGLE-SELECT <span style="float: right;">E58f</span></p> <p>-97 <input type="radio"/> I do not know what that is</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>Did you follow any production standard in your %brassica_b% production in the last cold season?</p>	<p>MULTI-SELECT <span style="float: right;">E59</span></p> <p>00 <input type="checkbox"/> None</p> <p>01 <input type="checkbox"/> CamGAP</p> <p>02 <input type="checkbox"/> Organic</p> <p>03 <input type="checkbox"/> Other GAP standard</p> <p>04 <input type="checkbox"/> Other (specify)</p>

V1 \$justzero

M1 The answer cannot be no/none and another option at the same time.

Please specify the production standard.	TEXT E59a
E E59.Contains(4)	.....
On average, on how many square meter did you grow %brassica_b% during the time from June to October %lastyear%?	NUMERIC: DECIMAL E61
V1 self<=C4b1 M1 The area is larger than the area for all vegetables during the season, according to what you said in the chapter "Farm Characteristics".	-----
On average, on how many square meter did you grow %brassica_b% during the time from March to May this year?	NUMERIC: DECIMAL E62
V1 self<=C4b1 M1 The area is larger than the area for all vegetables during the season, according to what you said in the chapter "Farm Characteristics".	-----

## BOK CHOY PRODUCTION

E participation == 1 && growsveg.Contains(2)

Who is the main person deciding which inputs to use in bok choy production?	SINGLE-SELECT: LINKED G1a
I Always ask about the final decision maker (even if the decision might be discussed between two or more people first). F B6>=12	
Who is the main person deciding what bok choy variety to grow?	SINGLE-SELECT: LINKED G1b
F B6>=12	
Who is the main person deciding how to control bok choy pests and diseases?	SINGLE-SELECT: LINKED G1c
F B6>=12	
Who is the main person deciding to whom to sell the bok choy?	SINGLE-SELECT: LINKED G1f
F B6>=12	
Which seed did you normally use to grow bok choy?	SINGLE-SELECT G2 00 <input type="radio"/> Don't know 01 <input type="radio"/> Reused seed 02 <input type="radio"/> Seed from fellow farmer (no seed pack) 03 <input type="radio"/> Bought unlabeled seed 04 <input type="radio"/> Bought labeled pack of hybrid seed 05 <input type="radio"/> Bought labeled pack of non-hybrid seed 06 <input type="radio"/> Bought labeled pack - Don't know if it is hybrid 07 <input type="radio"/> Other
Please define the seed used for bok choy.	TEXT G2a
E G2==7	.....

<p>When choosing the seed, what did you look for?</p> <p>E G2 != 0 &amp;&amp; G2 != 1</p>	<p>MULTI-SELECT <span style="float: right;">G2b</span></p> <p>01 <input type="checkbox"/> Taste</p> <p>02 <input type="checkbox"/> Look of fruit/product</p> <p>03 <input type="checkbox"/> Shelf life of fruit/product</p> <p>04 <input type="checkbox"/> Yield potential</p> <p>05 <input type="checkbox"/> Disease resistance</p> <p>06 <input type="checkbox"/> Open pollinated (can reuse seed)</p> <p>07 <input type="checkbox"/> Hybrid seed</p> <p>08 <input type="checkbox"/> Product brand</p> <p>09 <input type="checkbox"/> Price</p> <p>10 <input type="checkbox"/> No other seed available</p> <p>11 <input type="checkbox"/> Other</p>
<p>Please define what you looked for in the seed.</p> <p>E G2b.Contains(11)</p>	<p>TEXT <span style="float: right;">G2b1</span></p> <p>-----</p>
<p>What kind of irrigation did you use for your bok choy during the last 12 months? (Multiple answers possible)</p> <p>V1 self.ContainsOnly(0)    !self.Contains(0)</p> <p>M1 You cannot choose "No irrigation" and another option at the same time.</p>	<p>MULTI-SELECT <span style="float: right;">G3</span></p> <p>00 <input type="checkbox"/> No irrigation</p> <p>01 <input type="checkbox"/> Drip irrigation</p> <p>02 <input type="checkbox"/> Furrow irrigation</p> <p>03 <input type="checkbox"/> Sprinkler</p> <p>04 <input type="checkbox"/> Water hose</p> <p>05 <input type="checkbox"/> Other</p>
<p>Please define the irrigation type.</p> <p>E G3.Contains(5)</p>	<p>TEXT <span style="float: right;">G3a</span></p> <p>-----</p>
<p>Did you use mulching during the last 12 months? If yes, which materials did you use?</p> <p>V1 self.ContainsOnly(0)    !self.Contains(0)</p> <p>M1 You cannot say "no mulching" and choose a material at the same time.</p>	<p>MULTI-SELECT <span style="float: right;">G4</span></p> <p>00 <input type="checkbox"/> No mulching</p> <p>01 <input type="checkbox"/> Plastic foil</p> <p>02 <input type="checkbox"/> Biodegradable plastic</p> <p>03 <input type="checkbox"/> Straw</p> <p>04 <input type="checkbox"/> Other organic material</p> <p>05 <input type="checkbox"/> Other</p>
<p>Please define the material used for mulching.</p> <p>E G4.ContainsAny(4, 5)</p>	<p>TEXT <span style="float: right;">G4a</span></p> <p>-----</p>
<p>Do you grade the bok choy after harvesting?</p>	<p>SINGLE-SELECT <span style="float: right;">G5</span></p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>In how many grades do you sort the harvest?</p> <p>E G5==1</p> <p>W1 self&lt;=4</p> <p>M1 Normally there are no more than 3 grades. Please confirm.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G5a</span></p> <p>-----</p>
<p>STATIC TEXT</p> <p><i>In the following I will ask you about the different plots where you grew bok choy. This is to get an idea how much bok choy you produced over all. Please start by telling me about the largest plot on which you grew bok choy since November last year.</i></p>	
<p>On how many different plots did you grow bok choy since November %lastyear%? Please give a short name or description to each plot, so we can refer to it later. Please start with the largest plot.</p> <p>I This refers to the separate fields that bok choy was grown on, not the number of times it was grown (which will be asked later).</p>	<p>LIST <span style="float: right;">G10a</span></p> <p>-----</p>

How large is this plot?	NUMERIC: DECIMAL G10b
<p>I Enter the size in square meter.</p> <p>V1 G11c&gt;=0</p> <p>M1 The total area of all bok choy plots is more than the land available to the household according to the previous information. The difference is %G11c% square meters.</p>	-----
Which share of the plot was planted with bok choy?	NUMERIC: INTEGER G10c
<p>I Enter in percentage. E.g. 100 if it was the only thing grown on the plot, 50 if only half of the plot was used for it, etc..</p> <p>V1 self&gt;0 &amp;&amp; self&lt;=100</p> <p>M1 The value must be between 1 and 100.</p> <p>W2 self&gt;=50</p> <p>M2 Less than half of the plot was used to grow the crop. Please double check to make sure this is correct.</p>	-----
VARIABLE C1e - G10b	DOUBLE G11c
Is this plot on rented land?	SINGLE-SELECT G12
E C1c>0	00 <input type="radio"/> No 01 <input type="radio"/> Yes
Do you use any of the following to protect the bok choy on this plot?	SINGLE-SELECT G13
	00 <input type="radio"/> None 01 <input type="radio"/> Polyhouse 02 <input type="radio"/> Plastic roof with net walls 03 <input type="radio"/> Plastic roof, no walls 04 <input type="radio"/> Nethouse 05 <input type="radio"/> Net roof 06 <input type="radio"/> Net tunnels 07 <input type="radio"/> Other structure
Please define the structure.	TEXT G13a
E G13==7	-----
Is this structure fully enclosed to keep insects out? (Including a constantly closed door)	SINGLE-SELECT G13b
E G13==1    G13==2    G13==4    G13==7	00 <input type="radio"/> No 01 <input type="radio"/> Yes
How often did you plant bok choy on this plot since May %lastyear%? Please include the crop that was already in the field in May %lastyear%, if this was the case. Only include completed cycles (harvested, or failed).	NUMERIC: INTEGER G14
I If bok choy was planted before May %lastyear% but harvested during the last 12 months, this should be added to the times that bok choy was planted.	-----

BOK CHOY PRODUCTION  
BOK CHOY PRODUCTION CYCLE

STATIC TEXT

Now I would like to ask you about the last production cycle that you finished.

On which plot did you finish the last harvest of bok choy?	SINGLE-SELECT: LINKED	G15a
When did you plant in the field?	DATE	G15
I If the exact day is unknown, enter the approximate day.	.....	
When did you first harvest?	DATE	G16
I If the farmer did not harvest, enter the date when the plants were destroyed (e.g. by uprooting, or by stopping to irrigate). If the exact day is unknown, enter the approximate day.	.....	
V1 bokchoy_days_to_maturity>=0		
M1 The harvest date is before the planting date!		
W2 bokchoy_days_to_maturity>25		
M2 This is a very fast harvest.		
W3 bokchoy_days_to_maturity<=45		
M3 This is a very late harvest.		
VARIABLE (G16-G15)?.TotalDays	DOUBLE	bokchoy_days_to_maturity
How many times did you harvest?	NUMERIC: INTEGER	G17
I Enter 0 if no harvest was possible (e.g. due to pests) and the crops were destroyed without harvesting.	-----	
When did you finish the last harvest?	DATE	G18
E G17>=1	.....	
V1 bokchoy_max_days_harvest >= G17		
M1 The number of harvesting days is higher than the days between first and last harvest.		
VARIABLE ((G18-G16)?.TotalDays) + 1	DOUBLE	bokchoy_max_days_harvest
How many kg bok choy did you sell?	NUMERIC: DECIMAL	G19
E G5==0 && G17>=1	-----	
On average, how much money did you get per kg of bok choy?	NUMERIC: INTEGER	G19_1
E G19>=1	-----	
W1 self>=500 && self<=3000		
M1 The quoted price is outside the usual price range. Please confirm.		
How many kg bok choy of the best grade did you sell?	NUMERIC: INTEGER	G19a
E G5a>=1 && G17>=1	-----	
On average, how much money did you get per kg of bok choy of the highest grade?	NUMERIC: INTEGER	G19a_1
E G19a>=1	-----	
W1 self>=500 && self<=3000		
M1 The quoted price is outside the usual price range. Please confirm.		
How many kg bok choy of the 2nd best grade did you sell?	NUMERIC: INTEGER	G19b
E G5a>=2 && G17>=1	-----	

<p>On average, how much money did you get per kg of bok choy of the 2nd highest grade?</p> <p>E G19b&gt;=1 W1 self&lt;=3000 M1 The quoted price is outside the usual price range. Please confirm. V2 self&lt;=G19a_1 M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G19b_1</span></p> <p>-----</p>
<p>How many kg bok choy of the 3rd best grade did you sell?</p> <p>E G5a&gt;=3 &amp;&amp; G17&gt;=1</p>	<p>NUMERIC: INTEGER <span style="float: right;">G19c</span></p> <p>-----</p>
<p>On average, how much money did you get per kg of bok choy of the 3rd highest grade?</p> <p>E G19c&gt;=1 W1 self&lt;=3000 M1 The quoted price is outside the usual price range. Please confirm. V2 self&lt;=G19b_1 M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G19c_1</span></p> <p>-----</p>
<p>How many kg bok choy of the 4th best (and worse) grade did you sell?</p> <p>I If the person separates into more than 4 grades please enter the average here. E G5a&gt;=4 &amp;&amp; G17&gt;=1</p>	<p>NUMERIC: INTEGER <span style="float: right;">G19d</span></p> <p>-----</p>
<p>On average, how much money did you get per kg of bok choy of the 4th (or lower) grade?</p> <p>E E19d&gt;=1 W1 self&lt;=3000 M1 The quoted price is outside the usual price range. Please confirm. V2 self&lt;=G19c_1 M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G19d_1</span></p> <p>-----</p>
<p>How many kg damaged bok choy did you <u>sort out</u> and throw away after harvest?</p> <p>E G17&gt;=1</p>	<p>NUMERIC: INTEGER <span style="float: right;">G19e</span></p> <p>-----</p>
<p>Which share of all the damages to the harvested bok choy was due to pests and diseases? (Include damages to the bok choy that was sold at lower price, and damages to bok choy that was thrown away.)</p> <p>V1 (self&gt;=0 &amp;&amp; self&lt;=100)    self== -97 M1 The value must be between 0 and 100 percent. If the question is not applicable enter -97 (e.g. if there was no damage).</p>	<p>NUMERIC: INTEGER <span style="float: right;">G20</span></p> <p>-----</p>
<p>In total, how many kg undamaged bok choy were not harvested (left in the field) during this time you were growing bok choy (i.e. this production cycle)?</p> <p>I Please enter the quantity left in the field because of low prices, unavailability of labour, etc. Enter 0 if all undamaged crops were harvested.</p>	<p>NUMERIC: DECIMAL <span style="float: right;">G21</span></p> <p>-----</p>
<p>What was the price per kg at the time when you left the bok choy in the field?</p> <p>E G21&gt;0 W1 self&lt;=500 M1 This is a relatively high price. Make sure to enter the price per kg that prevailed when the farmer decided not to harvest the crops.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G22</span></p> <p>-----</p>



<p>How many kg more would you have harvested without pests and diseases?</p>	<p>NUMERIC: INTEGER <span style="float: right;">G23</span></p> <p>-----</p>
<p>Which pest or disease caused the largest damage to your bok choy?</p> <p>I Ask for the pest and diseases and then double check with help of the pictures. The question refers to the production cycle you just discussed.</p>	<p>SINGLE-SELECT <span style="float: right;">G24</span></p> <p>01 <input type="radio"/> Aphids</p> <p>02 <input type="radio"/> Cabbage worm</p> <p>03 <input type="radio"/> Cabbage head caterpillar</p> <p>04 <input type="radio"/> Cabbage looper</p> <p>05 <input type="radio"/> Diamond back moth</p> <p>06 <input type="radio"/> Imported cabbage worm</p> <p>07 <input type="radio"/> Leaf miner</p> <p>08 <input type="radio"/> Striped flea beetle</p> <p>09 <input type="radio"/> Common armyworm</p> <p>10 <input type="radio"/> Black rot</p> <p>11 <input type="radio"/> Alternaria leaf spot/Black leaf spot</p> <p>12 <input type="radio"/> Clubroot</p> <p>13 <input type="radio"/> Damping off (seedling)</p> <p>14 <input type="radio"/> Downey mildew</p> <p>15 <input type="radio"/> Turnip mosaic virus</p> <p>16 <input type="radio"/> Bacterial leaf spot</p> <p><a href="#">And 1 other symbols [6]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the worst disease?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E G24&gt;0</p> <p>V1 self&gt;=0 &amp;&amp; self&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G24a</span></p> <p>-----</p>
<p>Which pest or disease caused the second largest damage to your bok choy? Please also consider the effort and cost of fighting the pests and diseases.</p> <p>I Ask for the pest and diseases and then double check with help of the pictures.</p> <p>E G24&gt;0</p>	<p>SINGLE-SELECT <span style="float: right;">G24b</span></p> <p>01 <input type="radio"/> Aphids</p> <p>02 <input type="radio"/> Cabbage worm</p> <p>03 <input type="radio"/> Cabbage head caterpillar</p> <p>04 <input type="radio"/> Cabbage looper</p> <p>05 <input type="radio"/> Diamond back moth</p> <p>06 <input type="radio"/> Imported cabbage worm</p> <p>07 <input type="radio"/> Leaf miner</p> <p>08 <input type="radio"/> Striped flea beetle</p> <p>09 <input type="radio"/> Common armyworm</p> <p>10 <input type="radio"/> Black rot</p> <p>11 <input type="radio"/> Alternaria leaf spot/Black leaf spot</p> <p>12 <input type="radio"/> Clubroot</p> <p>13 <input type="radio"/> Damping off (seedling)</p> <p>14 <input type="radio"/> Downey mildew</p> <p>15 <input type="radio"/> Turnip mosaic virus</p> <p>16 <input type="radio"/> Bacterial leaf spot</p> <p><a href="#">And 1 other symbols [7]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the 2nd worst pest/diseases?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E G24b&gt;0</p> <p>V1 (self + G24a)&gt;=0 &amp;&amp; (self + G24a)&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p> <p>W2 self&lt;=G24a</p> <p>M2 The damage is higher than for the worst pest or disease. Please confirm.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G24c</span></p> <p>-----</p>

<p>Which pest or disease caused the third largest damage to your bok choy? Please also consider the effort and cost of fighting the pests and diseases.</p> <p>I Ask for the pest and diseases and then double check with help of the pictures.</p> <p>E G24b&gt;0</p>	<p>SINGLE-SELECT <span style="float: right;">G24d</span></p> <p>01 <input type="radio"/> Aphids</p> <p>02 <input type="radio"/> Cabbage worm</p> <p>03 <input type="radio"/> Cabbage head caterpillar</p> <p>04 <input type="radio"/> Cabbage looper</p> <p>05 <input type="radio"/> Diamond back moth</p> <p>06 <input type="radio"/> Imported cabbage worm</p> <p>07 <input type="radio"/> Leaf miner</p> <p>08 <input type="radio"/> Striped flea beetle</p> <p>09 <input type="radio"/> Common armyworm</p> <p>10 <input type="radio"/> Black rot</p> <p>11 <input type="radio"/> Alternaria leaf spot/Black leaf spot</p> <p>12 <input type="radio"/> Clubroot</p> <p>13 <input type="radio"/> Damping off (seedling)</p> <p>14 <input type="radio"/> Downey mildew</p> <p>15 <input type="radio"/> Turnip mosaic virus</p> <p>16 <input type="radio"/> Bacterial leaf spot</p> <p><a href="#">And 1 other symbols [8]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the 3rd worst pest/diseases?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E G24d&gt;0</p> <p>V1 (self + G24a + G24c)&gt;=0 &amp;&amp; (self + G24a + G24c)&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p> <p>W2 self&lt;=G24c</p> <p>M2 The damage is higher than for the second worst pest or disease. Please confirm.</p>	<p>NUMERIC: INTEGER <span style="float: right;">G24e</span></p> <p>-----</p>

STATIC TEXT

*Nowi would like to ask you for the production cost for this production cycle.*

<p>BOK CHOY PRODUCTION / BOK CHOY PRODUCTION CYCLE</p> <p><b>Roster: BOK CHOY PRODUCTION COST</b></p> <p>generated by fixed list <span style="float: right;">bokchoy_prod_cost</span></p>	
<p>01 Land preparation</p> <p>02 Planting</p> <p>03 Fertilizer application</p> <p>04 Irrigation</p> <p>05 Weeding</p> <p>06 Pest and disease control</p> <p>07 Harvesting</p> <p>08 Transport and marketing</p> <p>09 Others (define)</p>	

<p>Did you have any additional cost in your last production of bok choy?</p> <p>E @rowcode==9</p>	<p>SINGLE-SELECT <span style="float: right;">G30a</span></p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>Please define the activity</p> <p>E @rowcode==9 &amp;&amp; G30a==1</p>	<p>TEXT <span style="float: right;">G30g</span></p> <p>-----</p>

<p>How many women from your household worked on %rosteritle%?</p> <p>E @rowcode==6</p> <p>W1 self&lt;= (HHroster.Count(x=&gt;x.B4==1))</p> <p>M1 It cannot be more than the number of women in the household.</p>	<p>NUMERIC: INTEGER G31</p> <p>-----</p>
<p>On how many days did the women work?</p> <p>I If it is different between persons use the average.</p> <p>E G31&gt;=1</p>	<p>NUMERIC: DECIMAL G31a</p> <p>-----</p>
<p>On average, how many hours did the women work each day.</p> <p>E G31&gt;=1</p> <p>W1 self&lt;=9</p> <p>M1 This is a long working day for each person. Please double check.</p>	<p>NUMERIC: DECIMAL G31b</p> <p>-----</p>
<p>How many men from your household worked on %rosteritle%?</p> <p>E @rowcode==6</p> <p>W1 self&lt;= (HHroster.Count(x=&gt;x.B4==0))</p> <p>M1 It cannot be more people than there are household members.</p>	<p>NUMERIC: INTEGER G32</p> <p>-----</p>
<p>On how many days did the men work?</p> <p>I If it is different between persons use the average.</p> <p>E G32&gt;=1</p>	<p>NUMERIC: DECIMAL G32a</p> <p>-----</p>
<p>On average, how many hours did the men work each day.</p> <p>E G32&gt;=1</p> <p>W1 self&lt;=9</p> <p>M1 This is a long working day for each person. Please double check.</p>	<p>NUMERIC: DECIMAL G32b</p> <p>-----</p>
<p>In total how much did you pay hired women to help with %rosteritle%?</p> <p>E @rowcode!=9    G30a==1</p>	<p>NUMERIC: INTEGER G35</p> <p>-----</p>
<p>In total how much did you pay hired men to help with %rosteritle%?</p> <p>E @rowcode!=9    G30a==1</p>	<p>NUMERIC: INTEGER G37</p> <p>-----</p>
<p>How much did you pay for inputs, machinery rent, or similar things for %rosteritle%?</p> <p>E @rowcode!=9    G30a==1</p>	<p>NUMERIC: INTEGER G39</p> <p>-----</p>
<p>VARIABLE</p> <p>bokchoy_prod_cost.Sum(x=&gt;x.G35)+bokchoy_prod_cost.Sum(x=&gt;x.G37)+bokchoy_prod_cost.Sum(x=&gt;x.G39)</p>	<p>DOUBLE bokchoy_total_prod_cost</p>
<p>The total cost of production on the plot was %bokchoy_total_prod_cost% according to the entered information. Do you think this is correct? - If not, what might have been wrong?</p>	<p>SINGLE-SELECT bokchoy_confirm_total_cost</p> <p>01 <input type="radio"/> Confirm the production cost</p> <p>02 <input type="radio"/> Confirm after revisiting the entries in the table</p> <p>03 <input type="radio"/> After revisiting, the respondent cannot arrive at a satisfactory number</p>

<p>Overall, how often did you spray/apply pesticides to this plot, from land preparation to harvest in the described production cycle?</p> <p>W1 self&lt;=10</p> <p>M1 This is a high value. Please make sure you entered it correctly.</p>	<p>NUMERIC: INTEGER</p> <p>G50</p> <p>-----</p>
<p>Which kind of pesticides did you use?</p> <p>E G50&gt;=1</p>	<p>MULTI-SELECT</p> <p>G51</p> <p>01 <input type="checkbox"/> Synthetic insecticide</p> <p>02 <input type="checkbox"/> Synthetic fungicide</p> <p>03 <input type="checkbox"/> Biopesticide against insects</p> <p>04 <input type="checkbox"/> Biopesticide against diseases</p> <p>05 <input type="checkbox"/> Traditional pesticide/Natural pesticide against insects</p> <p>06 <input type="checkbox"/> Traditional pesticide/Natural pesticide against diseases</p>

BOK CHOY PRODUCTION / BOK CHOY PRODUCTION CYCLE

## Roster: BOK CHOY PESTICIDES

generated by multi-select question [G51](#)

bokchoy\_pesticides

<p>How many different %rosteritle% did you use?</p>	<p>NUMERIC: INTEGER</p> <p>G52</p> <p>-----</p> <p>SPECIAL VALUES</p> <p>-99 Don't know</p>
<p>In total, how many ml or gram of these pesticides did you use? (This is before mixing them with Water.)</p>	<p>NUMERIC: INTEGER</p> <p>G53</p> <p>-----</p>
<p>How much did all the %rosteritle% together cost?</p>	<p>NUMERIC: INTEGER</p> <p>G54</p> <p>-----</p>
<p>VARIABLE</p> <p>((@rowcode==1    @rowcode==3    @rowcode==5)?(G52?? 0):0)</p>	<p>DOUBLE</p> <p>insecticides_count_bokchoy</p>
<p>Do you know any of the active ingredients in the pesticides?</p> <p>E @rowcode==1    @rowcode==2</p>	<p>SINGLE-SELECT</p> <p>G55a</p> <p>01 <input type="radio"/> Yes</p> <p>02 <input type="radio"/> No</p>
<p>Which active ingredients were in the %rosteritle%?</p> <p>E G55a==1</p>	<p>MULTI-SELECT</p> <p>G55b</p> <p>01 <input type="checkbox"/> betacyfluthrin</p> <p>02 <input type="checkbox"/> buprofezin</p> <p>03 <input type="checkbox"/> carbaryl</p> <p>04 <input type="checkbox"/> carbosulfan</p> <p>05 <input type="checkbox"/> chlorfluazuron</p> <p>06 <input type="checkbox"/> cymoxanil</p> <p>07 <input type="checkbox"/> cypermethin</p> <p>08 <input type="checkbox"/> deltamethrin</p> <p>09 <input type="checkbox"/> difubenzuron</p> <p>10 <input type="checkbox"/> dinocap</p> <p>11 <input type="checkbox"/> dinotefuran</p> <p>12 <input type="checkbox"/> emamectinbenzoate</p> <p>13 <input type="checkbox"/> fipronil</p> <p>14 <input type="checkbox"/> flucycloxuron</p> <p>15 <input type="checkbox"/> flusilazole</p> <p>16 <input type="checkbox"/> gammacyhalothrin</p> <p><a href="#">And 17 other symbols [9]</a></p>

<p>Please specify the name of the active ingredient</p> <p>E G55b.Contains(90)</p>	<p>TEXT G55c</p> <p>.....</p>
<p>VARIABLE</p> <p>bokchoy_pesticides.Sum(x=&gt;x.insecticides_count_bokchoy)</p>	<p>DOUBLE G51a</p>
<p>You sprayed %G50% times and used %G51a% different pesticides or bio pesticides. How many times did you change between pesticides against insects?</p> <p>E G50&gt;=2 &amp;&amp; G51a&gt;=2</p>	<p>NUMERIC: INTEGER G51b</p> <p>-----</p>
<p>In this production cycle, did you practice any of the following pest control techniques in your bok choy production?</p>	<p>MULTI-SELECT: YES/NO G58</p> <p>01 <input type="checkbox"/> / <input type="checkbox"/> Resistant variety</p> <p>02 <input type="checkbox"/> / <input type="checkbox"/> Treat the seeds before sowing with pesticide/bio-pesticide</p> <p>03 <input type="checkbox"/> / <input type="checkbox"/> Used seeds that were already coated with pesticides</p> <p>04 <input type="checkbox"/> / <input type="checkbox"/> Transplant seedling (do not plant seed directly in the field)</p> <p>05 <input type="checkbox"/> / <input type="checkbox"/> Use finely meshed nets to protect seedlings from insects</p> <p>06 <input type="checkbox"/> / <input type="checkbox"/> Bacillus thuringiensis (Bt), against insects</p> <p>07 <input type="checkbox"/> / <input type="checkbox"/> Beauveria bassiana, against insects</p> <p>08 <input type="checkbox"/> / <input type="checkbox"/> Metarhizium anisopliae, against insects</p> <p>09 <input type="checkbox"/> / <input type="checkbox"/> Verticillium lecanii, insects</p> <p>10 <input type="checkbox"/> / <input type="checkbox"/> Neem extract against insects</p> <p>11 <input type="checkbox"/> / <input type="checkbox"/> Trichoderma or Bacillus subtilis (Bs)</p> <p>12 <input type="checkbox"/> / <input type="checkbox"/> Plant barrier crops around the field</p> <p>13 <input type="checkbox"/> / <input type="checkbox"/> Plant trap crops in the field</p> <p>14 <input type="checkbox"/> / <input type="checkbox"/> Leave plant debris on the field or next to it</p> <p>15 <input type="checkbox"/> / <input type="checkbox"/> Use sticky traps</p>
<p>Which medium or soil did you use to raise your seedlings in this production cycle?</p> <p>E G58.Yes.Contains(4)</p>	<p>MULTI-SELECT G58a</p> <p>01 <input type="checkbox"/> Bought seedlings</p> <p>02 <input type="checkbox"/> Soil</p> <p>03 <input type="checkbox"/> Peat</p> <p>04 <input type="checkbox"/> Coconut peat</p> <p>05 <input type="checkbox"/> Compost</p> <p>06 <input type="checkbox"/> Composted manure</p> <p>07 <input type="checkbox"/> Rice hulls</p> <p>08 <input type="checkbox"/> Other</p>
<p>Please define the medium you used to grow the seedlings in.</p> <p>E G58a.Contains(8)</p>	<p>TEXT G58b</p> <p>.....</p>
<p>Did you grow the seedlings on raised seed beds or did you use seedling trays?</p> <p>E !G58a.Contains(1)</p>	<p>SINGLE-SELECT G58c</p> <p>01 <input type="radio"/> Seedling trays</p> <p>02 <input type="radio"/> Raised seed beds</p> <p>00 <input type="radio"/> None of the two</p>
<p>What did you grow as barrier crop?</p> <p>E G58.Yes.Contains(12)</p>	<p>TEXT G58d</p> <p>.....</p>

<p>What did you grow as trap crop?</p> <p>E G58.Yes.Contains(13)</p>	<p>TEXT</p> <p>G58e</p> <p>.....</p>
<p>Did you use any kind of pheromone traps in this production cycle?</p>	<p>SINGLE-SELECT</p> <p>G58f</p> <p>-97 <input type="radio"/> I Do not know what that is</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>Did you follow any production standard in your bok choy production in the last cold season?</p> <p>V1 \$justzero</p> <p>M1 The answer cannot be no/none and another option at the same time.</p>	<p>MULTI-SELECT</p> <p>G59</p> <p>00 <input type="checkbox"/> None</p> <p>01 <input type="checkbox"/> CamGAP</p> <p>02 <input type="checkbox"/> Organic</p> <p>03 <input type="checkbox"/> Other GAP standard</p> <p>04 <input type="checkbox"/> Other (specify)</p>
<p>Please specify the production standard.</p> <p>E G59.Contains(4)</p>	<p>TEXT</p> <p>G59a</p> <p>.....</p>
<p>On average, on how many square meter did you grow bok choy during the time from June to October %lastyear%?</p> <p>V1 self&lt;=C4b1</p> <p>M1 The area is larger than the area for all vegetables during the season, according to what you said in the chapter "Farm Characteristics".</p>	<p>NUMERIC: DECIMAL</p> <p>G61</p> <p>-----</p>
<p>On average, on how many square meter did you grow bok choy during the time from March to May this year?</p> <p>V1 self&lt;=C4b1</p> <p>M1 The area is larger than the area for all vegetables during the season, according to what you said in the chapter "Farm Characteristics".</p>	<p>NUMERIC: DECIMAL</p> <p>G62</p> <p>-----</p>

## YARD-LONG BEAN PRODUCTION

E participation == 1 && growsveg.Contains(3)

<p>Who is the main person deciding which inputs to use in yard-long bean production?</p> <p>I Always ask about the final decision maker (even if the decision might be discussed between two or more people first).</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>I1a</p>
<p>Who is the main person deciding what yard-long bean variety to grow?</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>I1b</p>
<p>Who is the main person deciding how to control yard-long bean pests and diseases?</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>I1c</p>
<p>Who is the main person deciding to whom to sell the yard-long bean?</p> <p>F B6&gt;=12</p>	<p>SINGLE-SELECT: LINKED</p> <p>I1f</p>

Which seed did you normally use to grow yard-long bean?	<div>SINGLE-SELECT I2</div> <div> 00 <input type="radio"/> Don't know  01 <input type="radio"/> Reused seed  02 <input type="radio"/> Seed from fellow farmer (no seed pack)  03 <input type="radio"/> Bought unlabeled seed  04 <input type="radio"/> Bought labeled pack of hybrid seed  05 <input type="radio"/> Bought labeled pack of non-hybrid seed  06 <input type="radio"/> Bought labeled pack - Don't know if it is hybrid  07 <input type="radio"/> Other </div>
Please define the seed used for bok choy.	TEXT I2a
E I2==7	.....
When choosing the seed, what did you look for?	<div>MULTI-SELECT I2b</div> <div> 01 <input type="checkbox"/> Taste  02 <input type="checkbox"/> Look of fruit/product  03 <input type="checkbox"/> Shelf life of fruit/product  04 <input type="checkbox"/> Yield potential  05 <input type="checkbox"/> Disease resistance  06 <input type="checkbox"/> Open pollinated (can reuse seed)  07 <input type="checkbox"/> Hybrid seed  08 <input type="checkbox"/> Product brand  09 <input type="checkbox"/> Price  10 <input type="checkbox"/> No other seed available  11 <input type="checkbox"/> Other </div>
E I2 != 0 && I2 != 1	
Please define what you looked for in the seed.	TEXT I2b1
E I2b.Contains(11)	.....
What kind of irrigation did you use for your yard-long bean during the last 12 months? (Multiple answers possible)	<div>MULTI-SELECT I3</div> <div> 00 <input type="checkbox"/> No irrigation  01 <input type="checkbox"/> Drip irrigation  02 <input type="checkbox"/> Furrow irrigation  03 <input type="checkbox"/> Sprinkler  04 <input type="checkbox"/> Water hose  05 <input type="checkbox"/> Other </div>
V1 self.ContainsOnly(0)    !self.Contains(0) M1 You cannot choose "No irrigation" and another option at the same time.	
Please define the irrigation type.	TEXT I3a
E I3.Contains(5)	.....
Did you use mulching during the last 12 months? If yes, which materials did you use?	<div>MULTI-SELECT I4</div> <div> 00 <input type="checkbox"/> No mulching  01 <input type="checkbox"/> Plastic foil  02 <input type="checkbox"/> Biodegradable plastic  03 <input type="checkbox"/> Straw  04 <input type="checkbox"/> Other organic material  05 <input type="checkbox"/> Other </div>
V1 self.ContainsOnly(0)    !self.Contains(0) M1 You cannot say "no mulching" and choose a material at the same time.	
Please define the material used for mulching.	TEXT I4a
E I4.ContainsAny(4, 5)	.....
Do you grade the yard long bean after harvesting?	<div>SINGLE-SELECT I5</div> <div> 00 <input type="radio"/> No  01 <input type="radio"/> Yes </div>

<p>In how many grades do you sort the harvest?</p> <p>E I5==1</p> <p>W1 self&lt;=4</p> <p>M1 Normally there are no more than 3 grades. Please confirm.</p>	<p>NUMERIC: INTEGER</p> <p>I5a</p> <p>-----</p>
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STATIC TEXT

*In the following I will ask you about the different plots where you grew yard-long bean. This is to get an idea how much yard-long bean you produced over all. Please start by telling me about the largest plot on which you grew yard-long bean since November last year.*

<p>On how many different plots did you grow yard-long bean since November %lastyear%? Please give a short name or description to each plot, so we can refer to it later. Please start with the largest plot.</p> <p>I This refers to the separate fields that bok choy was grown on, not the number of times it was grown (which will be asked later).</p>	<p>LIST</p> <p>I10a</p> <p>-----</p>
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YARD-LONG BEAN PRODUCTION

## Roster: YARD LONG BEAN PRODUCTION

generated by list question I10a

bean\_production

<p>How large is this plot?</p> <p>I Enter the size in square meter.</p> <p>V1 I11c&gt;=0</p> <p>M1 The total area of all yard-long bean plots is more than the land available to the household according to the previous information. The difference is %I11c% square meters.</p>	<p>NUMERIC: DECIMAL</p> <p>I10b</p> <p>-----</p>
<p>Which share of the plot was planted with yard long bean?</p> <p>I Enter in percentage. E.g. 100 if it was the only thing grown on the plot, 50 if only half of the plot was used for it, etc..</p> <p>V1 self&gt;0 &amp;&amp; self&lt;=100</p> <p>M1 The value must be between 1 and 100.</p> <p>W2 self&gt;=50</p> <p>M2 Less than half of the plot was used to grow the crop. Please double check to make sure this is correct.</p>	<p>NUMERIC: INTEGER</p> <p>I10c</p> <p>-----</p>
<p>VARIABLE</p> <p>c1e - I10b</p>	<p>DOUBLE</p> <p>I11c</p>
<p>Is this plot on rented land?</p> <p>E c1c&gt;0</p>	<p>SINGLE-SELECT</p> <p>I12</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>Do you use any of the following to protect the yard long bean on this plot?</p>	<p>SINGLE-SELECT</p> <p>I13</p> <p>00 <input type="radio"/> None</p> <p>01 <input type="radio"/> Polyhouse</p> <p>02 <input type="radio"/> Plastic roof with net walls</p> <p>03 <input type="radio"/> Plastic roof, no walls</p> <p>04 <input type="radio"/> Nethouse</p> <p>05 <input type="radio"/> Net roof</p> <p>06 <input type="radio"/> Net tunnels</p> <p>07 <input type="radio"/> Other structure</p>
<p>Please define the structure.</p> <p>E I13==7</p>	<p>TEXT</p> <p>I13a</p> <p>-----</p>



<p>Is this structure fully enclosed to keep insects out? (Including a constantly closed door)</p> <p>E I13==1    I13==2    I13==4    I13==7</p>	<p>SINGLE-SELECT I13b</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>
<p>How often did you plant yard-long bean on this plot since May %lastyear%? Please include the crop that was already in the field in May %lastyear%, if this was the case. Only include completed cycles (harvested, or failed).</p> <p>I If yard-long bean was planted before May %lastyear% but harvested during the last 12 months, this should be added to the times that yard-long bean was planted.</p>	<p>NUMERIC: INTEGER I14</p> <p>-----</p>

## YARD-LONG BEAN PRODUCTION YARD-LONG BEAN PRODUCTION CYCLE

STATIC TEXT

*Now I would like to ask you about the last production cycle that you finished.*

<p>On which plot did you finish the last harvest of yard-long bean?</p>	<p>SINGLE-SELECT: LINKED I15a</p>
<p>When did you plant in the field?</p> <p>I If the exact day is unknown, enter the approximate day.</p>	<p>DATE I15</p> <p>-----</p>
<p>When did you first harvest?</p> <p>I If the farmer did not harvest, enter the date when the plants were destroyed (e.g. by uprooting, or by stopping to irrigate). If the exact day is unknown, enter the approximate day.</p> <p>V1 bean_days_to_maturity&gt;=0</p> <p>M1 The harvest date is before the planting date!</p> <p>W2 bean_days_to_maturity&gt;25</p> <p>M2 This is a very fast harvest.</p> <p>W3 bean_days_to_maturity&lt;90</p> <p>M3 This is a very late harvest.</p>	<p>DATE I16</p> <p>-----</p>
<p>VARIABLE (I16-I15)?.TotalDays</p>	<p>DOUBLE bean_days_to_maturity</p>
<p>How many times did you harvest?</p> <p>I Enter 0 if no harvest was possible (e.g. due to pests) and the crops were destroyed without harvesting.</p>	<p>NUMERIC: INTEGER I17</p> <p>-----</p>
<p>When did you finish the last harvest?</p> <p>E I17&gt;=1</p> <p>V1 bean_max_days_harvest &gt;= I17</p> <p>M1 The number of harvesting days is higher than the days between first and last harvest.</p>	<p>DATE I18</p> <p>-----</p>
<p>VARIABLE ((I18-I16)?.TotalDays) + 1</p>	<p>DOUBLE bean_max_days_harvest</p>
<p>On average, how many kg of yard-long bean did you sell after each harvest?</p> <p>E I5==0 &amp;&amp; I17&gt;=1</p>	<p>NUMERIC: DECIMAL I19</p> <p>-----</p>

<p>On average, how much money did you get per kg of yard long bean?</p> <p>E I19&gt;=1</p> <p>V1 self&gt;=800 &amp;&amp; self&lt;=5000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p>	<p>NUMERIC: INTEGER I19_1</p> <p>-----</p>
<p>On average, how many kg yard-long bean of the best grade did you sell after each harvest?</p> <p>E I5a&gt;=1 &amp;&amp; I17&gt;=1</p>	<p>NUMERIC: DECIMAL I19a</p> <p>-----</p>
<p>On average, how much money did you get per kg of yard-long bean of the highest grade?</p> <p>E I19a&gt;=1</p> <p>V1 self&gt;=800 &amp;&amp; self&lt;=5000</p> <p>M1 The quoted price is outside the usual price range. Please confirm.</p>	<p>NUMERIC: INTEGER I19a_1</p> <p>-----</p>
<p>On average, how many kg yard-long bean of the 2nd best grade did you sell after each harvest?</p> <p>E I5a&gt;=2 &amp;&amp; I17&gt;=1</p>	<p>NUMERIC: DECIMAL I19b</p> <p>-----</p>
<p>On average, how much money did you get per kg of yard long bean of the 2nd highest grade?</p> <p>E I19b&gt;=1</p> <p>V1 self&lt;=5000</p> <p>M1 The quoted prices is unusually high. Please confirm.</p> <p>V2 self&lt;=I19a_1</p> <p>M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER I19b_1</p> <p>-----</p>
<p>On average, how many kg yard-long bean of the 3rd best grade did you sell after each harvest?</p> <p>E I5a&gt;=3 &amp;&amp; I17&gt;=1</p>	<p>NUMERIC: DECIMAL I19c</p> <p>-----</p>
<p>On average, how much money did you get per kg of yard long bean of the 3rd highest grade?</p> <p>E I19c&gt;=1</p> <p>V1 self&lt;=5000</p> <p>M1 The quoted prices is unusually high. Please confirm.</p> <p>V2 self&lt;=I19b_1</p> <p>M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER I19c_1</p> <p>-----</p>
<p>On average, how many kg yard-long bean of the 4th best (and worse) grade did you sell after each harvest?</p> <p>E I5a&gt;=4 &amp;&amp; I17&gt;=1</p>	<p>NUMERIC: DECIMAL I19d</p> <p>-----</p>
<p>On average, how much money did you get per kg of yard long bean of the 4th (or lower) grade?</p> <p>E I19d&gt;=1</p> <p>V1 self&lt;=5000</p> <p>M1 The quoted prices is unusually high. Please confirm.</p> <p>V2 self&lt;=I19c_1</p> <p>M2 The price is higher than for the next better grade. Please confirm.</p>	<p>NUMERIC: INTEGER I19d_1</p> <p>-----</p>
<p>On average, how many kg damaged yard long bean did you <u>sort out</u> and throw away after the each harvest?</p> <p>E I17&gt;=1</p>	<p>NUMERIC: DECIMAL I19e</p> <p>-----</p>

<p>Which share of all the damages to the harvested yard long bean was due to pests and diseases? (Include damages to the yard long bean that was sold at lower price, and damages to yard-long bean that was thrown away.)</p> <p>V1 <math>(self &gt;= 0 \ \&amp;\&amp; \ self &lt;= 100) \    \ self == -97</math></p> <p>M1 The value must be between 0 and 100 percent. If the question is not applicable enter -97 (e.g. if there was no damage).</p>	<p>NUMERIC: INTEGER I20</p> <p>-----</p>
<p>In total, how many kg undamaged yard long bean were not harvested (left in the field) during this time you were growing yard-long bean (i.e. this production cycle)?</p> <p>I Please enter the quantity left in the field because of low prices, unavailability of labour, etc. Enter 0 if all undamaged crops were harvested.</p>	<p>NUMERIC: DECIMAL I21</p> <p>-----</p>
<p>What was the price per kg at the time when you left the yard long bean in the field?</p> <p>E <math>I21 &gt; 0</math></p> <p>W1 <math>self &lt;= 800</math></p> <p>M1 This is a relatively high price. Make sure to enter the price per kg that prevailed when the farmer decided not to harvest.</p>	<p>NUMERIC: INTEGER I22</p> <p>-----</p>
<p>How many kg more would you have harvested without pests and diseases?</p>	<p>NUMERIC: INTEGER I23</p> <p>-----</p>
<p>Which pest or disease caused the largest damage to your yard-long bean?</p> <p>I Ask for the pest and diseases and then double check with help of the pictures. The question refers to the production cycle you just discussed.</p>	<p>SINGLE-SELECT I24</p> <p>01 <input type="radio"/> Bean bug</p> <p>02 <input type="radio"/> Beet armyworm</p> <p>03 <input type="radio"/> Common armyworm</p> <p>04 <input type="radio"/> Thrips</p> <p>05 <input type="radio"/> Bean pod borer</p> <p>06 <input type="radio"/> Spider mite</p> <p>07 <input type="radio"/> Bean fly</p> <p>08 <input type="radio"/> Blue butterfly</p> <p>09 <input type="radio"/> Bean aphid</p> <p>10 <input type="radio"/> Leafhopper</p> <p>11 <input type="radio"/> Bean leaf roller</p> <p>12 <input type="radio"/> Whitefly</p> <p>13 <input type="radio"/> Powdery mildew</p> <p>14 <input type="radio"/> Leaf spot</p> <p>15 <input type="radio"/> Rust</p> <p>16 <input type="radio"/> Damping off (seedling)</p> <p><a href="#">And 4 other symbols [10]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the worst disease?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E <math>I24 &gt; 0</math></p> <p>V1 <math>self &gt;= 0 \ \&amp;\&amp; \ self &lt;= 100</math></p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p>	<p>NUMERIC: INTEGER I24a</p> <p>-----</p>

<p>Which pest or disease caused the second largest damage to your yard-long bean? Please also consider the effort and cost of fighting the pests and diseases.</p> <p>I Ask for the pest and diseases and then double check with help of the pictures.</p> <p>E I24&gt;0</p>	<p>SINGLE-SELECT I24b</p> <p>01 <input type="radio"/> Bean bug</p> <p>02 <input type="radio"/> Beet armyworm</p> <p>03 <input type="radio"/> Common armyworm</p> <p>04 <input type="radio"/> Thrips</p> <p>05 <input type="radio"/> Bean pod borer</p> <p>06 <input type="radio"/> Spider mite</p> <p>07 <input type="radio"/> Bean fly</p> <p>08 <input type="radio"/> Blue butterfly</p> <p>09 <input type="radio"/> Bean aphid</p> <p>10 <input type="radio"/> Leafhopper</p> <p>11 <input type="radio"/> Bean leaf roller</p> <p>12 <input type="radio"/> Whitefly</p> <p>13 <input type="radio"/> Powdery mildew</p> <p>14 <input type="radio"/> Leaf spot</p> <p>15 <input type="radio"/> Rust</p> <p>16 <input type="radio"/> Damping off (seedling)</p> <p><a href="#">And 4 other symbols [11]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the 2nd worst pest/diseases?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E I24b&gt;0</p> <p>V1 (self + I24a)&gt;=0 &amp;&amp; (self + I24a)&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p> <p>W2 self&lt;=I24a</p> <p>M2 The damage is higher than for the worst pest or disease. Please confirm.</p>	<p>NUMERIC: INTEGER I24c</p> <p>-----</p>
<p>Which pest or disease caused the third largest damage to your yard-long bean? Please also consider the effort and cost of fighting the pests and diseases.</p> <p>I Ask for the pest and diseases and then double check with help of the pictures.</p> <p>E I24b&gt;0</p>	<p>SINGLE-SELECT I24d</p> <p>01 <input type="radio"/> Bean bug</p> <p>02 <input type="radio"/> Beet armyworm</p> <p>03 <input type="radio"/> Common armyworm</p> <p>04 <input type="radio"/> Thrips</p> <p>05 <input type="radio"/> Bean pod borer</p> <p>06 <input type="radio"/> Spider mite</p> <p>07 <input type="radio"/> Bean fly</p> <p>08 <input type="radio"/> Blue butterfly</p> <p>09 <input type="radio"/> Bean aphid</p> <p>10 <input type="radio"/> Leafhopper</p> <p>11 <input type="radio"/> Bean leaf roller</p> <p>12 <input type="radio"/> Whitefly</p> <p>13 <input type="radio"/> Powdery mildew</p> <p>14 <input type="radio"/> Leaf spot</p> <p>15 <input type="radio"/> Rust</p> <p>16 <input type="radio"/> Damping off (seedling)</p> <p><a href="#">And 4 other symbols [12]</a></p>
<p>Which share (in %) of all pest and diseases damages was due to the 3rd worst pest/diseases?</p> <p>I Please name the pest/disease to make sure the farmer refers to the right one.</p> <p>E I24d&gt;0</p> <p>V1 (self + I24a + I24c)&gt;=0 &amp;&amp; (self + I24a + I24c)&lt;=100</p> <p>M1 The share of damages caused by all pests and diseases combined must be between 0 and 100.</p> <p>W2 self&lt;=I24c</p> <p>M2 The damage is higher than for the second worst pest or disease. Please confirm.</p>	<p>NUMERIC: INTEGER I24e</p> <p>-----</p>

STATIC TEXT

Nowi would like to ask you for the production cost for this production cycle.

YARD-LONG BEAN PRODUCTION / YARD-LONG BEAN PRODUCTION CYCLE

Roster: YARD LONG BEAN PRODUCTION COST

generated by fixed list

bean\_prod\_cost

- 01 Land preparation
- 02 Planting
- 03 Fertilizer application
- 04 Irrigation
- 05 Weeding
- 06 Pest and disease control
- 07 Harvesting
- 08 Transport and marketing
- 09 Others (define)

<div>Did you have any additional cost in your last production of yard long bean?</div> <div>E @rowcode==9</div>	<div>SINGLE-SELECTI30a</div> <div>00 <input type="radio"/> No</div> <div>01 <input type="radio"/> Yes</div>
<div>Please define the activity</div> <div>E @rowcode==9 &amp;&amp; I30a==1</div>	<div>TEXTI30G</div> <div>.....</div>
<div>How many women from your household worked on %rosteritle%?</div> <div>E @rowcode==6</div> <div>W1 self&lt;= (HHroster.Count(x=&gt;x.B4==1))</div> <div>M1 It cannot be more than the number of women in the household.</div>	<div>NUMERIC: INTEGERI31</div> <div>-----</div>
<div>On how many days did the women work?</div> <div>I If it is different between persons use the average.</div> <div>E I31&gt;=1</div>	<div>NUMERIC: DECIMALI31a</div> <div>-----</div>
<div>On average, how many hours did the women work each day.</div> <div>E I31&gt;=1</div> <div>W1 self&lt;=9</div> <div>M1 This is a long working day for each person. Please double check.</div>	<div>NUMERIC: DECIMALI31b</div> <div>-----</div>
<div>How many men from your household worked on %rosteritle%?</div> <div>E @rowcode==6</div> <div>W1 self&lt;= (HHroster.Count(x=&gt;x.B4==0))</div> <div>M1 It cannot be more people than there are household members.</div>	<div>NUMERIC: INTEGERI32</div> <div>-----</div>
<div>On how many days did the men work?</div> <div>I If it is different between persons use the average.</div> <div>E I32&gt;=1</div>	<div>NUMERIC: DECIMALI32a</div> <div>-----</div>
<div>On average, how many hours did the men work each day.</div> <div>E I32&gt;=1</div> <div>W1 self&lt;=9</div> <div>M1 This is a long working day for each person. Please double check.</div>	<div>NUMERIC: DECIMALI32b</div> <div>-----</div>

<p>In total how much did you pay hired women to help with %rosteritle%?</p> <p>E @rowcode!=9    I30a==1</p>	<p>NUMERIC: INTEGER I35</p> <p>-----</p>
<p>In total how much did you pay hired men to help with %rosteritle%?</p> <p>E @rowcode!=9    I30a==1</p>	<p>NUMERIC: INTEGER I37</p> <p>-----</p>
<p>How much did you pay for inputs, machinery rent, or similar things for %rosteritle%?</p> <p>E @rowcode!=9    I30a==1</p>	<p>NUMERIC: INTEGER I39</p> <p>-----</p>
<p>VARIABLE</p> <p>bean_prod_cost.Sum(x=&gt;x.I35)+bean_prod_cost.Sum(x=&gt;x.I37)+bean_prod_cost.Sum(x=&gt;x.I39)</p>	<p>DOUBLE bean_total_prod_cost</p>
<p>The total cost of production on the plot was %bean_total_prod_cost% according to the entered information. Do you think this is correct? - If not, what might have been wrong?</p>	<p>SINGLE-SELECT bean_confirm_total_cost</p> <p>01 <input type="radio"/> Confirm the production cost</p> <p>02 <input type="radio"/> Confirm after revisiting the entries in the table</p> <p>03 <input type="radio"/> After revisiting, the respondent cannot arrive at a satisfactory number</p>
<p>Overall, how often did you spray/apply pesticides to this plot, from land preparation to harvest in the described production cycle?</p> <p>W1 self&lt;=10</p> <p>M1 This is a high value. Please make sure you entered it correctly.</p>	<p>NUMERIC: INTEGER I50</p> <p>-----</p>
<p>Which kind of pesticides did you use?</p> <p>E I50&gt;=1</p>	<p>MULTI-SELECT I51</p> <p>01 <input type="checkbox"/> Synthetic insecticide</p> <p>02 <input type="checkbox"/> Synthetic fungicide</p> <p>03 <input type="checkbox"/> Biopesticide against insects</p> <p>04 <input type="checkbox"/> Biopesticide against diseases</p> <p>05 <input type="checkbox"/> Traditional pesticide/Natural pesticide against insects</p> <p>06 <input type="checkbox"/> Traditional pesticide/Natural pesticide against diseases</p>

#### YARD-LONG BEAN PRODUCTION / YARD-LONG BEAN PRODUCTION CYCLE

#### Roster: YARD LONG BEAN PESTICIDES

generated by multi-select question [I51](#)

bean\_pesticides

<p>How many different %rosteritle% did you use?</p>	<p>NUMERIC: INTEGER I52</p> <p>-----</p> <p>SPECIAL VALUES</p> <p>-99 Don't know</p>
<p>In total, how many ml or gram of these pesticides did you use? (This is before mixing them with Water.)</p>	<p>NUMERIC: INTEGER I53</p> <p>-----</p>
<p>How much did all the %rosteritle% together cost?</p>	<p>NUMERIC: INTEGER I54</p> <p>-----</p>

VARIABLE ((@rowcode==1    @rowcode==3    @rowcode==5)?(I52?? 0):0 )	DOUBLE insecticides_count_bean
Do you know any of the active ingredients in the pesticides?  E @rowcode==1    @rowcode==2	SINGLE-SELECT I55a 01 <input type="radio"/> Yes 02 <input type="radio"/> No
Which active ingredients were in the %rosteritle%?  E I55a==1	MULTI-SELECT I55b 01 <input type="checkbox"/> betacyfluthrin 02 <input type="checkbox"/> buprofezin 03 <input type="checkbox"/> carbaryl 04 <input type="checkbox"/> carbosulfan 05 <input type="checkbox"/> chlorfluazuron 06 <input type="checkbox"/> cymoxanil 07 <input type="checkbox"/> cypermethin 08 <input type="checkbox"/> deltamethrin 09 <input type="checkbox"/> difubenzuron 10 <input type="checkbox"/> dinocap 11 <input type="checkbox"/> dinotefuran 12 <input type="checkbox"/> emamectinbenzoate 13 <input type="checkbox"/> fipronil 14 <input type="checkbox"/> flucycloxuron 15 <input type="checkbox"/> flusilazole 16 <input type="checkbox"/> gammacyhalothrin  <a href="#">And 17 other symbols [13]</a>
Please specify the name of the active ingredient  E I55b.Contains(90)	TEXT I55c .....
VARIABLE bean_pesticides.Sum(x=>x.insecticides_count_bean)	DOUBLE I51a
You sprayed %I50% times and used %I51a% different pesticides or bio pesticides. How many times did you change between pesticides against insects?  E I50>=2 && I51a>=2	NUMERIC: INTEGER I51b -----

<p>In this production cycle, did you practice any of the following pest control techniques in your year long bean production?</p>	<p>MULTI-SELECT: YES/NO</p> <p>01 <input type="checkbox"/> / <input type="checkbox"/> Resistant variety</p> <p>02 <input type="checkbox"/> / <input type="checkbox"/> Treat the seeds before sowing with pesticide/bio-pesticide</p> <p>03 <input type="checkbox"/> / <input type="checkbox"/> Used seeds that were already coated with pesticides</p> <p>04 <input type="checkbox"/> / <input type="checkbox"/> Transplant seedling (do not plant seed directly in the field)</p> <p>05 <input type="checkbox"/> / <input type="checkbox"/> Use finely meshed nets to protect seedlings from insects</p> <p>06 <input type="checkbox"/> / <input type="checkbox"/> Bacillus thuringiensis (Bt), against insects</p> <p>07 <input type="checkbox"/> / <input type="checkbox"/> Beauveria bassiana, against insects</p> <p>08 <input type="checkbox"/> / <input type="checkbox"/> Metarhizium anisopliae, against insects</p> <p>09 <input type="checkbox"/> / <input type="checkbox"/> Verticillium lecanii, insects</p> <p>10 <input type="checkbox"/> / <input type="checkbox"/> Neem extract against insects</p> <p>11 <input type="checkbox"/> / <input type="checkbox"/> Trichoderma or Bacillus subtilis (Bs)</p> <p>12 <input type="checkbox"/> / <input type="checkbox"/> Plant barrier crops around the field</p> <p>13 <input type="checkbox"/> / <input type="checkbox"/> Plant trap crops in the field</p> <p>14 <input type="checkbox"/> / <input type="checkbox"/> Leave plant debris on the field or next to it</p> <p>15 <input type="checkbox"/> / <input type="checkbox"/> Use sticky traps</p>	I58
<p>Which medium or soil did you use to raise your seedlings in this production cycle?</p>	<p>MULTI-SELECT</p> <p>01 <input type="checkbox"/> Bought seedlings</p> <p>02 <input type="checkbox"/> Soil</p> <p>03 <input type="checkbox"/> Peat</p> <p>04 <input type="checkbox"/> Coconut peat</p> <p>05 <input type="checkbox"/> Compost</p> <p>06 <input type="checkbox"/> Composted manure</p> <p>07 <input type="checkbox"/> Rice hulls</p> <p>08 <input type="checkbox"/> Other</p>	I58a
<p>E I58.Yes.Contains(4)</p>		
<p>Please define the medium you used to grow the seedlings in.</p>	<p>TEXT</p> <p>.....</p>	I58b
<p>E I58a.Contains(8)</p>		
<p>Did you grow the seedlings on raised seed beds or did you use seedling trays?</p>	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Seedling trays</p> <p>02 <input type="radio"/> Raised seed beds</p> <p>00 <input type="radio"/> None of the two</p>	I58c
<p>E !I58a.Contains(1)</p>		
<p>What did you grow as barrier crop?</p>	<p>TEXT</p> <p>.....</p>	I58d
<p>E I58.Yes.Contains(12)</p>		
<p>What did you grow as trap crop?</p>	<p>TEXT</p> <p>.....</p>	I58e
<p>E I58.Yes.Contains(13)</p>		
<p>Did you use any kind of pheromone traps in this production cycle?</p>	<p>SINGLE-SELECT</p> <p>-97 <input type="radio"/> I Do not know what that is</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p>	I58f
<p>Did you follow any production standard in your yard long bean production in the last cold season?</p>	<p>MULTI-SELECT</p> <p>00 <input type="checkbox"/> None</p> <p>01 <input type="checkbox"/> CamGAP</p> <p>02 <input type="checkbox"/> Organic</p> <p>03 <input type="checkbox"/> Other GAP standard</p> <p>04 <input type="checkbox"/> Other (specify)</p>	I59
<p>V1 \$justzero</p> <p>M1 The answer cannot be no/none and another option at the same time.</p>		



<p>Please specify the production standard.</p> <p>E I59.Contains(4)</p>	<p>TEXT I59a</p> <p>.....</p>
<p>On average, on how many square meter did you grow yard-long bean during the time from June to October %lastyear%?</p> <p>V1 self&lt;=C4b1</p> <p>M1 The area is larger than the area for all vegetables during the season, according to what you said in the chapter "Farm Characteristics".</p>	<p>NUMERIC: DECIMAL I61</p> <p>-----</p>
<p>On average, on how many square meter did you grow yard-long bean during the time from March to May this year?</p> <p>V1 self&lt;=C4b1</p> <p>M1 The area is larger than the area for all vegetables during the season, according to what you said in the chapter "Farm Characteristics".</p>	<p>NUMERIC: DECIMAL I62</p> <p>-----</p>

## PEST AND DISEASE CONTROL KNOWLEDGE

E participation==1

STATIC TEXT

*DO NOT READ OUT: These questions should be asked to the person responsible for pest management. If this person is not available, please ask the questions to the primary respondent.*

<p>DO NOT READ OUT: Who are you interviewing?</p> <p>F B6&gt;13</p> <p>W1 self==E1c    self==G1c    self==I1c</p> <p>M1 You did not select the main person responsible for pest and disease control (according to earlier question). Please confirm.</p> <p>V2 self==E1c    self==G1c    self==I1c    @rowcode==1</p> <p>M2 You selected neither the main respondent nor the person responsible for pest and disease control. Please confirm.</p>	<p>SINGLE-SELECT: LINKED D1</p>
---	---------------------------------

STATIC TEXT

E !D1.Contains(1)

*Good morning/afternoon. My name is %enumerator% and I am from Battambang University. Together with the World Vegetable Center, we are doing a survey among 800 farmers growing Chai Sim, Pakchoy, and yard long bean. The purpose of this study is to better understand pest and disease problems in vegetable production, how farmers manage these problems, how they get their information, and how new training methods might help farmers to protect their crops. In some villages the district offices of agriculture and NGOs will inform farmers about new ways to deal with vegetable pests and diseases. We do not know yet if your village will be chosen for this. If your village is selected, you would either be invited for a training session or get information via the phone. You might also get informed in both ways. This program will only provide information and you will be free to decide what to do with it. One year from now we will return to all households to ask them about their situation again. Comparing the situation now and in one year, we will understand if the new information campaign works well. We will ask you some basic information about your knowledge about the different pests and diseases; and your opinion about the different methods. The interview will take ca. 5 minutes. Your name, the position of your house and your phone number will be used to contact you for the information campaign, if it is implemented in this village, and to revisit you for the study. We treat all data that could be used to identify you in confidential manner. We will not use it for any other purpose than described above and we will not share it with any external party or organization without your consent. All other information is for research only. The information will only be analyzed together with the data of all other farmers. The results of the study will be made available to the public. The data set will be publicly available but all personal data that could be used to identify you, like names, address, and phone numbers will be deleted before. If you decide to not participate in this study, you are free to do so now or at any later point without any consequences. Your participation is fully voluntary. This form [hand over the form] describes what I just explained to you. You can keep it and contact the persons listed in the end of the page, if you have questions later on. We would highly appreciate if you could participate in this study. I would like you to answer questions truthfully, in your best possible way, and to the best of your knowledge. If you don't know the answer to some of my questions, you can simply tell me.*

<p>Do you understand what we will do with the information and are you willing to participate in this survey?</p> <p>E !D1.Contains(1)</p> <p>V1 self==1</p> <p>M1 If the respondent does not agree, please change back to asking the main respondent.</p>	<p>SINGLE-SELECT</p> <p>00 <input type="radio"/> No</p> <p>01 <input type="radio"/> Yes</p> <p>D1a</p>
<p>Please sign here to confirm that you are willing to participate in the study and that you have received the information sheet.</p> <p>E D1a == 1</p>	<p>PICTURE</p> <p>D1b</p>
<p>What are your most important sources of information about pest and disease management in vegetable production? Please name up to three and start with the most important one.</p> <p>V1 self.ContainsOnly(0)    !self.Contains(0)</p> <p>M1 You can not select "None" and another option simultaneously.</p>	<p>MULTI-SELECT: ORDERED</p> <p>00 <input type="checkbox"/> None</p> <p>01 <input type="checkbox"/> Fellow male farmer</p> <p>02 <input type="checkbox"/> Fellow female farmer</p> <p>03 <input type="checkbox"/> Pesticide dealer</p> <p>04 <input type="checkbox"/> Buyer/middleman</p> <p>05 <input type="checkbox"/> Visit of government extension officer in the village</p> <p>06 <input type="checkbox"/> Visit of NGO extension officer in the village</p> <p>07 <input type="checkbox"/> Visit of company extension officer in the village</p> <p>08 <input type="checkbox"/> Group meetings (e.g. farmer group, cooperative)</p> <p>09 <input type="checkbox"/> Farmer field days/school by government</p> <p>10 <input type="checkbox"/> Farmer field days/school by NGO</p> <p>11 <input type="checkbox"/> Farmer field days/school by company</p> <p>12 <input type="checkbox"/> Other</p> <p>D2</p>
<p>Please define the information source(s).</p> <p>E D2.Contains(12)</p>	<p>TEXT</p> <p>D2a</p> <p>.....</p>

## PEST AND DISEASE CONTROL KNOWLEDGE PEST AND DISEASE KNOWLEDGE

STATIC TEXT

*Now I would like to ask you a few questions about your understanding of vegetable pests and diseases.*

*The following photos shows insects that either damage or benefit your crop. Can you identify which insects can do damage and which insects are helpful?*

## PEST AND DISEASE CONTROL KNOWLEDGE / PEST AND DISEASE KNOWLEDGE CHAI SIM AND BOK CHOY PESTS

E growsveg.Contains(1) || growsveg.Contains(2)

STATIC TEXT

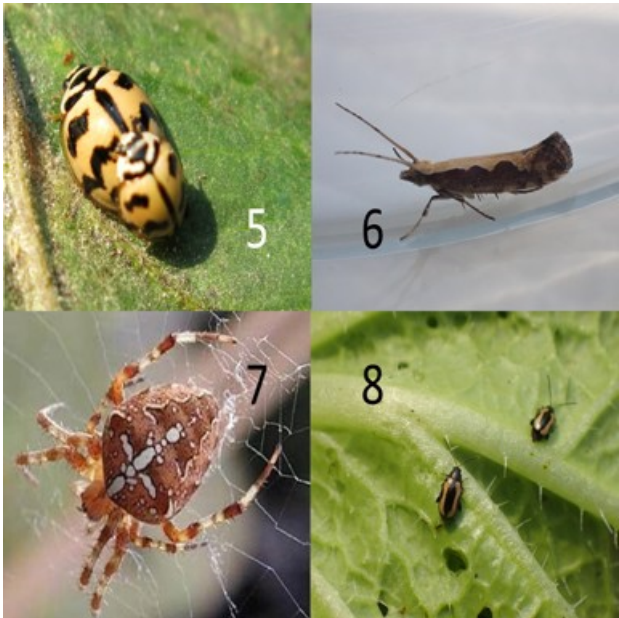
*Can you tell if they do damage or they are helpful?*



Picture 1: Do you know if this insect does damage or if it is helpful?	<div>SINGLE-SELECT</div> <div>01 <input type="radio"/> Can do damage</div> <div>02 <input type="radio"/> Helpful insect</div> <div>00 <input type="radio"/> Don't know</div>	d10a
Picture 2: Do you know if this insect does damage or if it is helpful?	<div>SINGLE-SELECT</div> <div>01 <input type="radio"/> Can do damage</div> <div>02 <input type="radio"/> Helpful insect</div> <div>00 <input type="radio"/> Don't know</div>	d10b
Picture 3: Do you know if this insect does damage or if it is helpful?	<div>SINGLE-SELECT</div> <div>01 <input type="radio"/> Can do damage</div> <div>02 <input type="radio"/> Helpful insect</div> <div>00 <input type="radio"/> Don't know</div>	d10c
Picture 4: Do you know if this insect does damage or if it is helpful?	<div>SINGLE-SELECT</div> <div>01 <input type="radio"/> Can do damage</div> <div>02 <input type="radio"/> Helpful insect</div> <div>00 <input type="radio"/> Don't know</div>	d10d

STATIC TEXT

Can you tell if they do damage or they are helpful?



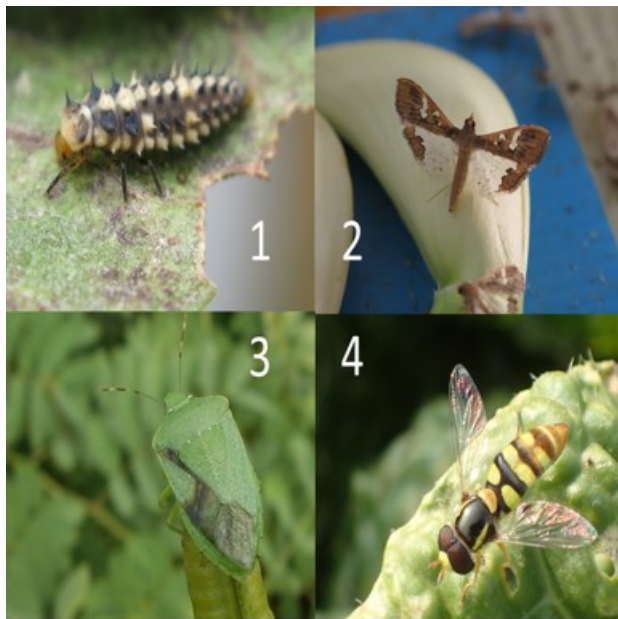
Picture 5: Do you know if this insect does damage or if it is helpful?	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Can do damage</p> <p>02 <input type="radio"/> Helpful insect</p> <p>00 <input type="radio"/> Don't know</p>	d10e
Picture 6: Do you know if this insect does damage or if it is helpful?	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Can do damage</p> <p>02 <input type="radio"/> Helpful insect</p> <p>00 <input type="radio"/> Don't know</p>	d10f
Picture 7: Do you know if this insect does damage or if it is helpful?	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Can do damage</p> <p>02 <input type="radio"/> Helpful insect</p> <p>00 <input type="radio"/> Don't know</p>	d10g
Picture 8: Do you know if this insect does damage or if it is helpful?	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Can do damage</p> <p>02 <input type="radio"/> Helpful insect</p> <p>00 <input type="radio"/> Don't know</p>	d10h

PEST AND DISEASE CONTROL KNOWLEDGE / PEST AND DISEASE KNOWLEDGE  
YARD-LONG BEAN PESTS

E growsveg.Contains(3)

STATIC TEXT

*Can you tell if they do damage or they are helpful?*

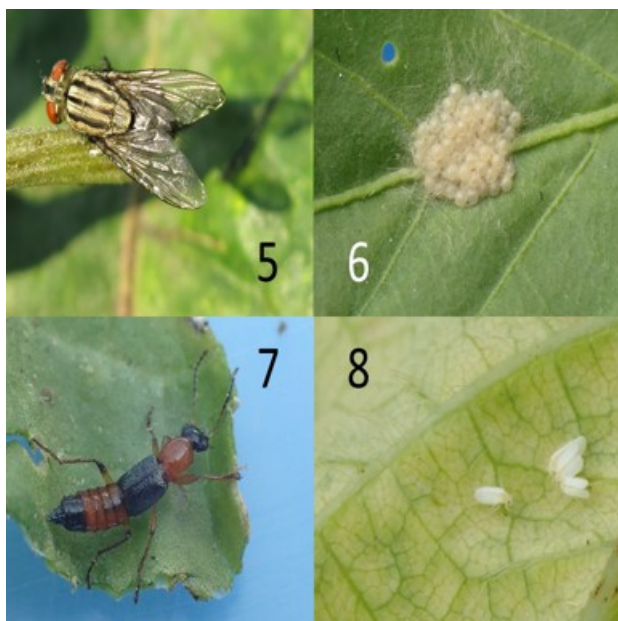


Picture 1: Do you know if this insect does damage or if it is helpful?	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Can do damage</p> <p>02 <input type="radio"/> Helpful insect</p> <p>00 <input type="radio"/> Don't know</p>	d10i
Picture 2: Do you know if this insect does damage or if it is helpful?	<p>SINGLE-SELECT</p> <p>01 <input type="radio"/> Can do damage</p> <p>02 <input type="radio"/> Helpful insect</p> <p>00 <input type="radio"/> Don't know</p>	d10j

Picture 3: Do you know if this insect does damage or if it is helpful?	SINGLE-SELECT d10k 01 <input type="radio"/> Can do damage 02 <input type="radio"/> Helpful insect 00 <input type="radio"/> Don't know
Picture 4: Do you know if this insect does damage or if it is helpful?	SINGLE-SELECT d10l 01 <input type="radio"/> Can do damage 02 <input type="radio"/> Helpful insect 00 <input type="radio"/> Don't know

STATIC TEXT

*Can you tell if they do damage or they are helpful?*



Picture 5: Do you know if this insect does damage or if it is helpful?	SINGLE-SELECT d10m 01 <input type="radio"/> Can do damage 02 <input type="radio"/> Helpful insect 00 <input type="radio"/> Don't know
Picture 6: Do you know if this insect does damage or if it is helpful?	SINGLE-SELECT d10n 01 <input type="radio"/> Can do damage 02 <input type="radio"/> Helpful insect 00 <input type="radio"/> Don't know
Picture 7: Do you know if this insect does damage or if it is helpful?	SINGLE-SELECT d10o 01 <input type="radio"/> Can do damage 02 <input type="radio"/> Helpful insect 00 <input type="radio"/> Don't know
Picture 8: Do you know if this insect does damage or if it is helpful?	SINGLE-SELECT d10p 01 <input type="radio"/> Can do damage 02 <input type="radio"/> Helpful insect 00 <input type="radio"/> Don't know
Do you know what a biopesticide is? If yes, which of the answers is correct?	SINGLE-SELECT d11 00 <input type="radio"/> Don't know 01 <input type="radio"/> All products to control biological pests 02 <input type="radio"/> All pesticides based on natural materials 03 <input type="radio"/> All pesticides that have been traditionally used

<p>Can you name any biopesticides?</p> <p>I Mark all biopesticides from the list that the farmer mentioned. Mark "none" if he does not know any or only mentions other pesticides.</p> <p>E d11!=0</p> <p>V1 self.Containsonly(0)    !self.Contains(0)</p> <p>M1 You cannot select "None" and another option at the same time.</p>	<p>MULTI-SELECT</p> <p>d11a</p> <p>00 <input type="checkbox"/> None</p> <p>01 <input type="checkbox"/> Bacillus thuringiensis/ BT</p> <p>02 <input type="checkbox"/> Beauveria bassiana</p> <p>03 <input type="checkbox"/> Metarhizium anisopliae</p> <p>04 <input type="checkbox"/> Verticillium lecanii</p> <p>05 <input type="checkbox"/> Neem</p> <p>07 <input type="checkbox"/> Trichoderma</p> <p>08 <input type="checkbox"/> Bacillus subtilis</p>
<p>Do you know the term "mode of action"?</p>	<p>SINGLE-SELECT</p> <p>d12</p> <p>01 <input type="radio"/> Yes</p> <p>00 <input type="radio"/> No</p>

## IPM AND PESTICIDE PERCEPTIONS

E participation==1

<p>Next, I would like to understand your opinion about various aspects of pesticide use. I will present you with 12 statements. Please tell me if you agree or disagree with each statement.</p> <p>I Yes means agree. No means disagree.</p>	<p>MULTI-SELECT: YES/NO</p> <p>j1</p> <p>01 <input type="checkbox"/> / <input type="checkbox"/> Pesticides can enter the body through the skin</p> <p>02 <input type="checkbox"/> / <input type="checkbox"/> Herbicides are not dangerous to humans</p> <p>03 <input type="checkbox"/> / <input type="checkbox"/> Empty pesticide containers can be reused for other purposes</p> <p>04 <input type="checkbox"/> / <input type="checkbox"/> Pesticides have negative effects on the health of children</p> <p>05 <input type="checkbox"/> / <input type="checkbox"/> Vegetables from the market may have dangerous levels of pesticides</p> <p>06 <input type="checkbox"/> / <input type="checkbox"/> When spraying pesticides, you are worried about getting cancer</p> <p>07 <input type="checkbox"/> / <input type="checkbox"/> Good pesticides are those that kill all insects immediately</p> <p>08 <input type="checkbox"/> / <input type="checkbox"/> Mixing different pesticides makes the spraying more effective than using a single pesticide</p> <p>09 <input type="checkbox"/> / <input type="checkbox"/> Using pesticides increases farm profits</p> <p>10 <input type="checkbox"/> / <input type="checkbox"/> Commercial vegetable production without pesticides is impossible</p> <p>11 <input type="checkbox"/> / <input type="checkbox"/> Biopesticides are not as effective as chemical pesticides</p> <p>12 <input type="checkbox"/> / <input type="checkbox"/> If there are many pests in the field then one should make the spraying mixture stronger</p>
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STATIC TEXT

*Now I would like to know your position on some issues in controlling pests and diseases that farmers sometimes disagree on. Please tell me if you strongly agree, agree, disagree, strongly disagree, or you think the statement is neither true nor untrue. If you do not know the technique, just tell me and we go to the next question.*

<p>Sticky traps are worth their money.</p>	<p>SINGLE-SELECT</p> <p>j2</p> <p>-99 <input type="radio"/> I do not know about "Sticky traps"</p> <p>01 <input type="radio"/> I strongly disagree with the statement</p> <p>02 <input type="radio"/> I disagree with the statement</p> <p>03 <input type="radio"/> It is neither fully true nor fully wrong (neutral stance)</p> <p>04 <input type="radio"/> I agree with the statement</p> <p>05 <input type="radio"/> I strongly agree with the statement</p>
--	--

It is better to spray against some pests before you can even see them. Once you can see them, you cannot control them anymore.	<p>SINGLE-SELECT 33</p> <p>01 <input type="radio"/> I strongly disagree with the statement</p> <p>02 <input type="radio"/> I disagree with the statement</p> <p>03 <input type="radio"/> It is neither fully true nor fully wrong (neutral stance)</p> <p>04 <input type="radio"/> I agree with the statement</p> <p>05 <input type="radio"/> I strongly agree with the statement</p>
Bio-pesticides control insect pests as good as other pesticides.	<p>SINGLE-SELECT 34</p> <p>-99 <input type="radio"/> I do not know about "bio-pesticides"</p> <p>01 <input type="radio"/> I strongly disagree with the statement</p> <p>02 <input type="radio"/> I disagree with the statement</p> <p>03 <input type="radio"/> It is neither fully true nor fully wrong (neutral stance)</p> <p>04 <input type="radio"/> I agree with the statement</p> <p>05 <input type="radio"/> I strongly agree with the statement</p>
If I can see few insects of any kind in my field after spraying, the pesticide works well.	<p>SINGLE-SELECT 35</p> <p>01 <input type="radio"/> I strongly disagree with the statement</p> <p>02 <input type="radio"/> I disagree with the statement</p> <p>03 <input type="radio"/> It is neither fully true nor fully wrong (neutral stance)</p> <p>04 <input type="radio"/> I agree with the statement</p> <p>05 <input type="radio"/> I strongly agree with the statement</p>
It is better to always use one or two good pesticide than to change between many different ones.	<p>SINGLE-SELECT 36</p> <p>01 <input type="radio"/> I strongly disagree with the statement</p> <p>02 <input type="radio"/> I disagree with the statement</p> <p>03 <input type="radio"/> It is neither fully true nor fully wrong (neutral stance)</p> <p>04 <input type="radio"/> I agree with the statement</p> <p>05 <input type="radio"/> I strongly agree with the statement</p>
Planting plants that keep away the insects between and around the vegetables is a good way to protect the vegetables from insect pests.	<p>SINGLE-SELECT 37</p> <p>-99 <input type="radio"/> I do not know about this method</p> <p>01 <input type="radio"/> I strongly disagree with the statement</p> <p>02 <input type="radio"/> I disagree with the statement</p> <p>03 <input type="radio"/> It is neither fully true nor fully wrong (neutral stance)</p> <p>04 <input type="radio"/> I agree with the statement</p> <p>05 <input type="radio"/> I strongly agree with the statement</p>
Do you prefer biopesticides or chemical pesticides	<p>SINGLE-SELECT 310</p> <p>00 <input type="radio"/> Chemical pesticides</p> <p>01 <input type="radio"/> Biopesticides</p>
<p>Why do you prefer chemical pesticides</p> <p>E 310==0</p>	<p>MULTI-SELECT 310a</p> <p>01 <input type="checkbox"/> Better price</p> <p>02 <input type="checkbox"/> Work better</p> <p>03 <input type="checkbox"/> Better availability</p> <p>04 <input type="checkbox"/> Recommendation by friends/other farmers</p> <p>05 <input type="checkbox"/> Recommendation/training by extension/NGO</p> <p>06 <input type="checkbox"/> Recommendation/training by input dealer</p> <p>07 <input type="checkbox"/> Other</p>

Please define the other reason to prefer chemical pesticides.	TEXT	J10b
E J10a.Contains(7)	.....	

## GPS PLOT DATA

DO NOT READ OUT: How many GPS points are needed to measure the size of the %brassica_b% plot for which you asked for the harvest and the production cost?	NUMERIC: INTEGER	K1
I How many corners does the plot have? E.g. a triangular plot needs 3 points, a rectangular plot 4 points, etc..	-----	
E participation == 1 && growsveg.Contains(1) && !growsveg.Contains(2)	SPECIAL VALUES	
V1 self>=3    self==--99	-99 Plot cannot be measured by GPS	
M1 If the plot can be measured with GPS points it needs to have at least three corners.		

GPS PLOT DATA

### Roster: BRASSICA PLOT GPS DATA

generated by numeric question [K1](#)

Chaisim\_Plot\_GPS

E K1>=3 && K1!=--99

Please mark the GPS location of each corner of the plot.	GPS	Chaisim_GPS
	N	-----
	W	-----
	A	-----
DO NOT READ OUT: How many GPS points are needed to measure the size of the bok choy plot for which you asked for the harvest and the production cost?	NUMERIC: INTEGER	K2
I How many corners does the plot have? E.g. a triangular plot needs 3 points, a rectangular plot 4 points, etc..	-----	
E participation == 1 && growsveg.Contains(2)	SPECIAL VALUES	
V1 self>=3    self==--99	-99 Plot cannot be measured by GPS	
M1 If the plot can be measured with GPS points it needs to have at least three corners.		

GPS PLOT DATA

### Roster: BOKCHOY PLOT GPS DATA

generated by numeric question [K2](#)

bokchoy\_Plot\_GPS

E K2>=3 && K2!=--99

Please mark the GPS location of each corner of the plot.	GPS	Bokchoy_GPS
	N	-----
	W	-----
	A	-----



DO NOT READ OUT: How many GPS points are needed to measure the size of the yard long bean plot for which you asked for the harvest and the production cost?

NUMERIC: INTEGER K3

-----

SPECIAL VALUES  
-99 Plot cannot be measured by GPS

- I How many corners does the plot have? E.g. a triangular plot needs 3 points, a rectangular plot 4 points, etc..
- E participation == 1 && growsveg.Contains(3)
- V1 self>=3 || self==-99
- M1 If the plot can be measured with GPS points it needs to have at least three corners.

GPS PLOT DATA  
Roster: BEAN PLOT GPS DATA  
generated by numeric question [K3](#)

bean\_Plot\_GPS

E K3>=3 && K3!=-99

Please mark the GPS location of each corner of the plot.

GPS Bean\_GPS

N  
-----  
W  
-----  
A  
-----

## APPENDIX A — VALIDATION CONDITIONS AND MESSAGES

### [1] B5: Which relationship does %rosteritle% have to the household head?

Validation Condition:

```
/*-----  
Validation to make sure only one person is  
reported to be the household head  
-----*/  
B5==1? /// Is this person the household head?  
/// If household head, check that there has  
/// not been another household head reported  
(HHroster.Count(x=>x.B5==1)==1)  
/// If not a household head, then no error  
:true
```

Validation Message: There must be only one person in the household designated as head.

Validation Condition:

```
/* Check that head has different gender than spouse(s) */  
  
// if head is current person, and does at least one spouse exist?  
B5==1 && HHroster.Any(x=>x.B5==2) ?  
  
// if so, check that there is no spouse with a gender different than that of the head  
!( HHroster.Any(a=>a.B5==2 && a.B4!=null && a.B4==B4) ) :  
  
// if not, no problem  
true
```

Validation Message: The head and his/her spouse typically have different genders. Please confirm.

Validation Condition:

```
/* Check that spouse has different gender than head */  
  
// if head is current person, and does at least one spouse exist?  
B5==2 && HHroster.Any(x=>x.B5==1) ?  
  
// if so, check whether spouse has different gender than head  
!( HHroster.Any(b=>b.B5==1 && b.B4!=null && b.B4==B4) ) :  
  
// if not, no problem  
true
```

Validation Message: Spouse typically has a different genders than his/her spouse (the head of household). Please confirm.

Validation Condition:

```
/*Check that there are at most 2 parent*/  
  
// if current person is father/mother?  
B5==6?  
  
//Check that there are no more than 2  
(HHroster.Count(x=>x.B5==6)<=2)  
  
//if not, no problem  
:true
```

Validation Message: Household head has at most 1 father and mother.

Validation Condition:

```
/* Checks if no household head was listed.  
Note: this runs at the end so it does not trigger errors constantly */  
  
// Check that all information has been filled  
HHroster.All(x=>x.B5!=null) ?  
// If all information has been filled out, check for a head was listed  
!(HHroster.Count(x=>x.B5==1)==0) :  
true
```

Validation Message: No household member was identified as the household head. Please confirm.

# APPENDIX B — INSTRUCTIONS

[1] B3: Who lives in this household? Can you please tell me their names? <u>Please start with yourself. </u>  
Household members are: Persons regularly sharing meals and living under the same roof for the last 6 months. Include servants who primarily eat and sleep in your house. Do not include servants and guests who only live in the household temporarily.

## APPENDIX C — CATEGORIES

[1] [village: Village name](#)

Categories: 1: Phnom Prasat, 2: Chamkarlouk, 3: Phnomthomcheung, 4: Rachamkar Chek, 5: Plov damrei Loeu, 6: Osoe, 7: Tabun, 8: Srae Prey, 9: Bos Tanloab, 10: Ka Svay, 11: Neang Ket, 12: Chop, 13: Roul Chrouk, 14: Prasat, 15: Chakkrei, 16: Poy Kdoeung, 17: Sreh Kouksrok, 18: Shre h Koeut, 19: Kouk Trach, 20: Kouk Treas, 21: Russei Khang, 22: Thmey, 23: Kom Phem, 24: Tromeng, 25: Prey Krouch, 26: Proma, 27: Kouk Doung, 28: Por Pish, 29: Krosang, 30: Tor Tea, 31: Prey Por, 32: Leang Dai, 33: Bompennreach, 34: Tro Baek, 35: Angkunh, 36: Batdangkor, 37: Svay Chrum, 38: Baekkamploeu, 39: Koukchin, 40: Dondiev, 41: Tropeangthnal, 42: Tatrav, 43: Sophy

[2] [E24: Which pest or disease caused the largest damage to your %brassica\\_b%?](#)

Categories: 1: Aphids, 2: Cabbage worm, 3: Cabbage head caterpillar, 4: Cabbage looper, 5: Diamond back moth, 6: Imported cabbage worm, 7: Leaf miner, 8: Striped flea beetle, 9: Common armyworm, 10: Black rot, 11: Alternaria leaf spot/Black leaf spot, 12: Clubroot, 13: Damping off (seedling), 14: Downey mildew, 15: Turnip mosaic virus, 16: Bacterial leaf spot, 17: Pythium blight

[3] [E24b: Which pest or disease caused the second largest damage to your %brassica\\_b%?](#)

Categories: 1: Aphids, 2: Cabbage worm, 3: Cabbage head caterpillar, 4: Cabbage looper, 5: Diamond back moth, 6: Imported cabbage worm, 7: Leaf miner, 8: Striped flea beetle, 9: Common armyworm, 10: Black rot, 11: Alternaria leaf spot/Black leaf spot, 12: Clubroot, 13: Damping off (seedling), 14: Downey mildew, 15: Turnip mosaic virus, 16: Bacterial leaf spot, 17: Pythium blight

[4] [E24d: Which pest or disease caused the third largest damage to your %brassica\\_b%?](#)

Categories: 1: Aphids, 2: Cabbage worm, 3: Cabbage head caterpillar, 4: Cabbage looper, 5: Diamond back moth, 6: Imported cabbage worm, 7: Leaf miner, 8: Striped flea beetle, 9: Common armyworm, 10: Black rot, 11: Alternaria leaf spot/Black leaf spot, 12: Clubroot, 13: Damping off (seedling), 14: Downey mildew, 15: Turnip mosaic virus, 16: Bacterial leaf spot, 17: Pythium blight

[5] [E55b: Which active ingredients were in the %rosteritle%?](#)

Categories: 1: betacyfluthrin, 2: buprofezin, 3: carbaryl, 4: carbosulfan, 5: chlorflazuron, 6: cymoxanil, 7: cypermethrin, 8: deltamethrin, 9: diflubenzuron, 10: dinocap, 11: dinotefuran, 12: emamectinbenzoate, 13: fipronil, 14: flucycloxuron, 15: flusilazole, 16: gamma-cyhalothrin, 17: imidacloprid, 18: indoxacarb, 19: lambda-cyhalothrin, 20: lufenuron, 21: mancozeb, 22: metalaxyl, 23: methoxyfenozide, 24: permethrin, 25: phosalone, 26: prothiofos, 27: spinosad, 28: sulfur, 29: tebufenozide, 30: thiamethoxam, 31: triadimefon, 32: triflumuron, 90: other(specify)

[6] [G24: Which pest or disease caused the largest damage to your bok choy?](#)

Categories: 1: Aphids, 2: Cabbage worm, 3: Cabbage head caterpillar, 4: Cabbage looper, 5: Diamond back moth, 6: Imported cabbage worm, 7: Leaf miner, 8: Striped flea beetle, 9: Common armyworm, 10: Black rot, 11: Alternaria leaf spot/Black leaf spot, 12: Clubroot, 13: Damping off (seedling), 14: Downey mildew, 15: Turnip mosaic virus, 16: Bacterial leaf spot, 17: Pythium blight

[7] [G24b: Which pest or disease caused the second largest damage to your bok choy? Please also consider the effort and cost of fighting the pests and diseases.](#)

Categories: 1: Aphids, 2: Cabbage worm, 3: Cabbage head caterpillar, 4: Cabbage looper, 5: Diamond back moth, 6: Imported cabbage worm, 7: Leaf miner, 8: Striped flea beetle, 9: Common armyworm, 10: Black rot, 11: Alternaria leaf spot/Black leaf spot, 12: Clubroot, 13: Damping off (seedling), 14: Downey mildew, 15: Turnip mosaic virus, 16: Bacterial leaf spot, 17: Pythium blight

[8] [G24d: Which pest or disease caused the third largest damage to your bok choy? Please also consider the effort and cost of fighting the pests and diseases.](#)

Categories: 1: Aphids, 2: Cabbage worm, 3: Cabbage head caterpillar, 4: Cabbage looper, 5: Diamond back moth, 6: Imported cabbage worm, 7: Leaf miner, 8: Striped flea beetle, 9: Common armyworm, 10: Black rot, 11: Alternaria leaf spot/Black leaf spot, 12: Clubroot, 13: Damping off (seedling), 14: Downey mildew, 15: Turnip mosaic virus, 16: Bacterial leaf spot, 17: Pythium blight

[9] [G55b: Which active ingredients were in the %rosteritle%?](#)

Categories: 1: betacyfluthrin, 2: buprofezin, 3: carbaryl, 4: carbosulfan, 5: chlorflazuron, 6: cymoxanil, 7: cypermethrin, 8: deltamethrin, 9: diflubenzuron, 10: dinocap, 11: dinotefuran, 12: emamectinbenzoate, 13: fipronil, 14: flucycloxuron, 15: flusilazole, 16: gamma-cyhalothrin, 17: imidacloprid, 18: indoxacarb, 19: lambda-cyhalothrin, 20: lufenuron, 21: mancozeb, 22: metalaxyl, 23: methoxyfenozide, 24: permethrin, 25: phosalone, 26: prothiofos, 27: spinosad, 28: sulfur, 29: tebufenozide, 30: thiamethoxam, 31: triadimefon, 32: triflumuron, 90: other(specify)

[10] [I24: Which pest or disease caused the largest damage to your yard-long bean?](#)

Categories: 1: Bean bug, 2: Beet armyworm, 3: Common armyworm, 4: Thrips, 5: Bean pod borer, 6: Spider mite, 7: Bean fly, 8: Blue butterfly, 9: Bean aphid, 10: Leafhopper, 11: Bean leaf roller, 12: Whitefly, 13: Powdery mildew, 14: Leaf spot, 15: Rust, 16: Damping off (seedling), 17: Bean mosaic virus, 18: Fusarium wilt, 19: Choanephora wet blight, 20: Root knot nematode

[11] [I24b: Which pest or disease caused the second largest damage to your yard-long bean? Please also consider the effort and cost of fighting the pests and diseases.](#)

Categories: 1: Bean bug, 2: Beet armyworm, 3: Common armyworm, 4: Thrips, 5: Bean pod borer, 6: Spider mite, 7: Bean fly, 8: Blue butterfly, 9: Bean aphid, 10: Leafhopper, 11: Bean leaf roller, 12: Whitefly, 13: Powdery mildew, 14: Leaf spot, 15: Rust, 16: Damping off (seedling), 17: Bean mosaic virus, 18: Fusarium wilt, 19: Choanephora wet blight, 20: Root knot nematode

[12] [I24d: Which pest or disease caused the third largest damage to your yard-long bean? Please also consider the effort and cost of fighting the pests and diseases.](#)

Categories: 1: Bean bug, 2: Beet armyworm, 3: Common armyworm, 4: Thrips, 5: Bean pod borer, 6: Spider mite, 7: Bean fly, 8: Blue butterfly, 9: Bean aphid, 10: Leafhopper, 11: Bean leaf roller, 12: Whitefly, 13: Powdery mildew, 14: Leaf spot, 15: Rust, 16: Damping off (seedling), 17: Bean mosaic virus, 18: Fusarium wilt, 19: Choanephora wet blight, 20: Root knot nematode

[13] [I55b: Which active ingredients were in the %rosteritle%?](#)

Categories: 1: betacyfluthrin, 2: buprofezin, 3: carbaryl, 4: carbosulfan, 5: chlorflazuron, 6: cymoxanil, 7: cypermethrin, 8: deltamethrin, 9: diflubenzuron, 10: dinocap, 11: dinotefuran, 12: emamectinbenzoate, 13: fipronil, 14: flucycloxuron, 15: flusilazole, 16: gamma-cyhalothrin, 17: imidacloprid, 18: indoxacarb, 19: lambda-cyhalothrin, 20: lufenuron, 21: mancozeb, 22: metalaxyl, 23: methoxyfenozide, 24: permethrin, 25: phosalone, 26: prothiofos, 27: spinosad, 28: sulfur, 29: tebufenozide, 30: thiamethoxam, 31: triadimefon, 32: triflumuron, 90: other(specify)

hiofos, 27 : spinosad, 28 : sulfer, 29 : tebufenozide, 30 : thiamethoxam, 31 : triadimefon, 32 : triflumuron, 90 : other(specify)

Legend and structure of information in this file

Name of section		Enabling condition for this section	Type of question, scope	Variable name
Question title		Answer options		
SECTION 5: OTHER INCOME SOURCES				
E s4_other_sources_which.Contains(98)				
Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur?		MULTI-SELECT SCOPE: PREFILLED		
		s4_re1_leaders_other		
I This refers to family relations		01 <input type="checkbox"/> Community animal health workers		
E s3_time_other > 0		02 <input type="checkbox"/> Private		
V1 s4_re1_leaders_which.Contains(98)		03 <input type="checkbox"/> Government		
M1 Can not be itself		04 <input type="checkbox"/> Livestock keepers association		
V2 (s3_time_other_breeding_advice <= (50 - s3_time_art_insem_advice))    s3_time_other_breeding_advice == 0		05 <input type="checkbox"/> NGO		
M2 This person is not in the list		And 5 other [13]		
F optioncode != s5_ignored_option_code				
Additional information:		Link to full set in appendix		
"I" – Question instruction				
"E" – Enabling condition				
"V1" – Validation condition №1				
"M1" – Message for validation №1				
"F" – Filter in Categorical questions				

Breadcrumbs	
Type or roster	Roster Title
CHAPTER 3 IDENTIFICATION / Roster: generated by fixed list:	LEADER RELATION DETAILS
01	Ward Livestock Officer
02	Village Livestock Officer
99	Other (specify)
List items	