

PESTICIDE USE IN BANGLADESH: (MAIN) SURVEY

Time started: _____

Interviewer: _____

Survey ID: _____

The purpose of this questionnaire is to investigate the use of pesticides by farmers, and the health & environmental effects of pesticide use. It is for research purposes only. Please answer the questions to be best of your knowledge. Answers will be kept completely confidential and will only be presented in a summary format.

Part 1: Area and Property Information: (To be answered by everyone or anyone who may have the information)

1. Name of the Respondent _____
2. Village: _____
3. Thana: _____
4. District: _____
5. Division: _____
6. How would you define the farm ownership?
 1. ☐ Own the farm
 2. ☐ Rental arrangement
 3. ☐ Sharecropper
 4. ☐ Lease from Govt.
 5. ☐ Agricultural Labor(if yes, please go to Q 14)
 6. ☐ I don't know
 7. ☐ Other (specify) _____
7. What is the approximate farm size?
 1. ☐ less than 0.5 acre
 2. ☐ 0.5 to less than 1 acre
 3. ☐ 1 to less than 1.5 acres
 4. ☐ 1.5 to less than 2.5 acres
 5. ☐ 2.5 to less than 5 acres
 6. ☐ 5 to less than 7.5 acres
 7. ☐ 7.5 to more than 7.5 acres
8. Please provide information about the crop(s) produced on this farm in the following table:

Crop name	Production (kg/year)	Area (acre)	Price (Tk/kg)	Code of the Principal Market*	Irrigation Cost	Equipment Rental	Seed Cost
1.							
2.							
3.							
4.							
5.							

*1. Self consumption; 2. Directly to the Local Market; 3. Intermediaries; 4. Other towns within the District; 5. Other Districts; 6. Dhaka; 7. Exports (Please specify)
9. What is the wage rate/day with meal _____ without meal _____

10. Labor provided by hired laborers, family members including unpaid workers:

Crop name	Wage bill of hired laborer (In Taka)	Family1 (days)	Family2 (days)	Family3 (days)	Family4 (days)	Family5 (days)
1.						
2.						
3.						
4.						
5.						

11. If this farmland were to be sold in the market today, approximately how much do you think the land would be worth? _____ (Taka)
12. What is the estimated worth of all farm machinery and equipment (in its present condition)? _____ (Taka)

Part 2: Personal General Information: (To be answered by the respondent)

14. How many people, including yourself, live in your immediate household? (A *household* is defined to comprise all usual residents, i.e., all with continuous residency for 6 months or longer during which they sleep here and share common facilities).
 # of persons _____

15. How many of these household members, including yourself, are female?
 # of persons _____

16. What is the total monthly (cash) expenditure of the household?

Amount (Taka)	
---------------	--

17. What is the approximate average monthly value of all household or homegrown products (including those received in barter or as payments) used ONLY for household consumption?

Amount (Taka)	
---------------	--

18. What is the total yearly (cash) income of the household from all sources (including remittances)?

Amount (Taka)	
---------------	--

19. Are you the pesticide applicator? 1. ☐ Yes 2. ☐ No

20. Gender 1. ☐ Male 2. ☐ Female

21. Age Years _____

22. What is the highest education level you have completed?

1. ☐ Can't read or write
2. ☐ Can read but not write
3. ☐ Primary (≤ 5 years of schooling)
4. ☐ Junior high school (6-10 years of schooling)
5. ☐ Secondary and Higher Secondary (11-12 years of schooling)
6. ☐ Above HSC (More than 12 years of schooling)

23. What is your job?

- | | |
|---|--|
| 1. <input type="checkbox"/> Owner/Manager/Lessee only | (Complete Part 3 only, page 4) |
| 2. <input type="checkbox"/> Worker/applicator only | (Complete Part 4 only, page 14) |
| 3. <input type="checkbox"/> Owner/Manager/Lessee & Applicator | (Complete Part 5 only, page 25) |

PART 3: OWNER/MANAGER/LESSEE SECTION:
TO BE COMPLETED BY OWNER/MANAGER/LESSEE ONLY
(NON-APPLICATOR)

Application:

24. How long have you been working in this farm? ____ months ____ years
25. Are there any family members working on this farm with you?
 1. ☐ Yes → 25.1 If **YES**, how many? ____
 2. ☐ No
26. Are you responsible for the decision of applying pesticides on the farm (when to apply, how to apply, and which pesticides to use)?
 1. ☐ Yes
 2. ☐ No → 26.1 If **NO**, who is responsible for these decisions? _____
27. Are you responsible for purchasing pesticides? 1. ☐ Yes 2. ☐ No
 27.1 If **YES**, do you test pesticides before purchasing? 1. ☐ Yes 2. ☐ No
 27.2 If **YES**, please indicate by what method:

Method	Color coding of pesticide		
1. By touching	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red
2. By smelling	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red
3. By tasting	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red
4. Other method	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red

28. Log record of pesticides and fertilizers used per season: Owner/Manager/Supervisor

Crop	Area of application (acres)	Chemical name	Commercial name	Perceived toxicity	Price/unit (Taka/kg)	Dose (mg/l)	Prescribed dose?	Quantity of application (kg)	# of applications	Mode/ Method of application	Time of application
1				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
2		Nitrogen									
		Phosphorus									
		Potassium									
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
		Nitrogen									
		Phosphorus									
		Potassium									

[Note: Require interviewers to carry extra copies of the above table for more crops to be attached to the survey].

28. Log record of pesticides and fertilizers used per season: Owner/Manager/Supervisor

Crop	Area of application (acres)	Chemical name	Commercial name	Perceived toxicity	Price/unit (Taka/kg)	Dose (mg/l)	Prescribed dose?	Quantity of application (kg)	# of applications	Mode/ Method of application	Time of application
3				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
4		Nitrogen									
		Phosphorus									
		Potassium									
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
		Nitrogen									
		Phosphorus									
		Potassium									

[Note: Require interviewers to carry extra copies of the above table for more crops to be attached to the survey].

29. Do you mix different brands of pesticides before application?

1. ☐ Yes 2. ☐ No

29.1 If **YES**, do you mix the required quantity of each brand in the same water?

1. ☐ Yes 2. ☐ No

29.2 If **YES**, please specify the brand and mixture you use for each crop:

Crop	Diluent amount (i.e. water)	Brand name	Amount (i.e. gm or ml)	
			You mix	Prescribed quantity
Crop #1	10 liter			
Crop #2	10 liter			
Crop #3	10 liter			

29.3 What is the main reason why you mix the pesticides this way?

1. ☐ Unsure about the quality of pesticides
2. ☐ Uncertain about the effectiveness of pesticides for a particular pest
3. ☐ Imitating other applicators
4. ☐ Following the suggestion of others
5. ☐ Other reason (please specify) _____

30. Have/did you change the dosage of pesticides per unit of land compared to the dosage you used for the same unit of land 5 years ago?

1. ☐ Increased 2. ☐ Decreased 3. ☐ Same

30.1 By how much? ----- (%)

30.2 Why did you change the dosage?

1. ☐ Everybody else increased
 2. ☐ Insects do not die anymore at low dosage
 3. ☐ Suppliers say so
 4. ☐ Just to make sure that it works
 5. ☐ I do not know
 6. ☐ others (please specify)

31. Do you use any pesticides which you have used for one crop, but according to the label was prescribed for another crop: ☐ Yes ☐ No

If yes:

Name of Pesticide	Crop for which being used	Target crop specified on the label

31.1 Please give a reason for such practice:

1. ☐ Acting on your own 5. ☐ Suggested by Companies
 2. ☐ Suggested by friends/neighbors 6. ☐ Suggested by Ministry of Agri. officials
 3. ☐ Imitating others 7. ☐ Suggested by NGOs
 4. ☐ Suggested by Retailers 8. ☐ Other (please specify) _____

Knowledge:

32. On a scale of 1-5, how much risk do you think applicators are exposed to while using pesticides on this farm?

1. ☐ No risk at all
 2. ☐ Some small risks
 3. ☐ A medium amount of risk

4. ☐ A large and significant amount of risk
5. ☐ Dangerous and very toxic risks
6. ☐ I don't know
33. On a scale of 1-5, how would you gauge, on average, the health of the applicators/workers that you manage?
1. ☐ Excellent health
2. ☐ Good health
3. ☐ Fair health
4. ☐ Small health problems
5. ☐ Serious health problems
6. ☐ I don't know
34. Do you currently practice any Integrated Pest Management (IPM) techniques to reduce the need of using pesticides?
1. ☐ Yes 2. ☐ No
- 34.1 If **YES**, which methods do you use:
1. ☐ Organic production 2. ☐ Biological control 3. ☐ Smoke
4. ☐ Light trap 5. ☐ Rotation of crop 6. ☐ Manual clearing
7. ☐ Enemy Plants 8. ☐ Other (please specify) _____
9. ☐ Do not know
- 34.2 If **NO**, did you ever adopt the IPM system, but are not currently practicing it?
1. ☐ Yes, I am an ex-IPM practitioner
2. ☐ No, I never practiced IPM
- 34.3 Why did you never adopt or abandon the practice?
1. ☐ Pesticide system is cheaper
2. ☐ Requires lots of labor
3. ☐ Was getting less crop (quantity and quality wise)
4. ☐ Other neighboring farmers did not participate
5. ☐ Practicing IPM is a big hassle
6. ☐ Doesn't work
7. ☐ Imitating others
8. ☐ Other (please specify) _____
35. How many hours in a day do you spend in the field? ----- hours

36. Of the workers you manage, where are most of them from?

1. ☐ Full time workers from local areas
2. ☐ Migrant workers from far distances
3. ☐ Seasonal workers from local areas
4. ☐ Temporary workers from local areas
5. ☐ I don't know

Protection:

37. Have you ever received basic training on safe handling and applying pesticides?

1. ☐ Yes
2. ☐ No

37.1 If **YES**, did that training also include training on how to use protective equipment and clothing? 1. ☐ Yes 2. ☐ No

37.2 Who were your main sources of information for each:

	NGO	Ag. Ministry officials	Farmers	Pesticide suppliers or companies	Others
Safe handling					
Use (crop, dose, etc.)					
Protective equipment & clothing					

37.3 If no basic training, do you have access to someone who provides such training?

1. ☐ Yes
2. ☐ No

37.3.1 If **YES**, who? _____

38. When purchasing pesticides, are you usually supplied with information on the pesticide, such as pamphlets or instructions, describing safety issues or procedures?

1. ☐ Yes
2. ☐ No

38.1 If **YES**, do you read and understand the instructions in the pamphlets?

1. ☐ Yes
2. ☐ No

39. Approximately how much do you spend annually on protective clothing for workers using pesticides? _____ (Taka)

39.1 In the past five years? _____ (Taka)

40. How many applicators do you typically use during the season? _____

41. What equipment do you provide for the worker to wear while applying pesticides?
(Please go through all items)

Item	If NO, why not?	Do they use it or not?	NO, why not?	Is it in good condition?	How often are these accessories replaced?	Who recommended they use it? NGOs/ Agri. Ministry Official/ Pesticide Suppliers/ Companies and others
<input type="checkbox"/> Nothing	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	-	-	-	-	-
<input type="checkbox"/> Boots/ Shoes	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Hat/Head Cover	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Glasses	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Full-sleeve Shirt/Kurta	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Gloves	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Mask	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Full-length lungi/ trousers	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Other: _____	1. <input type="checkbox"/> Cost 2. <input type="checkbox"/> Not available 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No 3. <input type="checkbox"/> I don't know	1. <input type="checkbox"/> Uncomfortable 2. <input type="checkbox"/> Inappropriate 3. <input type="checkbox"/> Unnecessary 4. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		

42. Do you provide basic training for applying pesticides?

1. ☐ Yes → 42.1 If **YES**, does that training also include training on how to use protective equipment and clothing? 1. ☐ Yes 2. ☐ No
2. ☐ No → 42.2 If **NO**, do applicators have access to someone who does provide training?
1. ☐ Yes → 42.3 If **YES**, who? _____
2. ☐ No

43. How does the applicator mix the pesticides in water?
1. ☐ with bare hands
 2. ☐ with hands, wearing gloves
 3. ☐ with a stick/spoon and bare hands
 4. ☐ with a stick/spoon and wearing gloves
44. When the applicator mixes/uses the pesticide solution, does the liquid come into contact with any part of his/her body? 1. ☐ Yes 2. ☐ No
- 44.1 If **YES**, which part?
1. ☐ Hands
 2. ☐ Feet
 3. ☐ Other part (Please specify)_____
45. How does the applicator clean the nozzle of the sprayer?
1. ☐ Blowing air on it with the mouth, without washing it off
 2. ☐ Blowing air on it with the mouth, after washing it off
 3. ☐ Cleaning it with an implement/thin wire, without washing it off
 4. ☐ Cleaning it with an implement/thin wire, after washing it off
 5. ☐ Other methods
46. Does the applicator take a bath right after spraying? 1. ☐ Yes 2. ☐ No
47. Does the applicator change clothes right after spraying? 1. ☐ Yes 2. ☐ No

Interval:

48. How long is it after application general workers re-enter the field? ___ days

Social feedback:

49. Have there been any social actions against pesticide use in the past 5 years in your area? 1. ☐ Yes 2. ☐ No

49.1 If **YES**, please check all that apply:

	Procession	Campaign	Protest Meeting
1. Never			
2. A few			
3. Many			
4. I don't know			

50. On a scale of 1-5, what would you say is the local unemployment rate among workers?
1. ☐ Very low
 2. ☐ Low
 3. ☐ Average
 4. ☐ High
 5. ☐ Very high

Health:

51. If you could account for every worker, approximately how many days in total were lost due to workers being sick last year? _____ days

52. Have any workers died in the past 3 years while working on this farm?

1. ☐ Yes 2. ☐ No

52.1 If **YES**, how many as a consequence of pesticide use? Please clarify.

53. Do you think that pesticide use and/or exposure, overall, has any negative short-term impacts on worker health?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
No effect	Little effect	Some effects	Large effects	Fatal effects	I don't know
Why?					

54. Do you think that pesticide use and/or exposure, overall, has any negative long-term impacts on worker health (i.e. cancer)?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
No effect	Little effect	Some effects	Large effects	Fatal effects	I don't know
Why?					

We are now going to ask you a question about alternative pesticides. Suppose that you were able to have access to a pesticide that was just as effective as the one(s) you are using now, but it did not have any short- or long- term health effects. Thinking about the health effects you now experience with your current use of pesticides, how much would you be willing to pay for the use of the safer pesticide? Please also understand that to pay for this alternative, you would have less money for other items.

How much extra would you be willing to pay for the use of a safer pesticide:

_____ % ☐ I don't know

Environment:

55. Have you ever heard or witnessed any of the pesticide-related accidents below in your local area?

55.1 Water contamination: 1. ☐ Yes 2. ☐ No

55.2 If **YES**, please describe _____

55.3 Air contamination: 1. ☐ Yes 2. ☐ No

55.4 If **YES**, please describe _____

55.5 Death of fish, frogs, birds, etc: 1. ☐ Yes 2. ☐ No

55.6 If **YES**, please describe _____

PART 4: APPLICATOR SECTION:
TO BE COMPLETED BY THE PERSON WHO APPLIES PESTICIDES ONLY

56. How long have you been working in this farm? _____ months _____ years
57. Are there any family members working on this farm with you?
1. ☐ Yes 2. ☐ No
- 57.1 If **YES**, how many? _____
58. How would you classify your employment?
1. ☐ Migrant worker from a far distance
2. ☐ Seasonal worker from the local area
3. ☐ Temporary worker from the local area
4. ☐ Full time from the local area
59. How long have you been applying pesticides? _____ months _____ years
60. Are you responsible for the decision of applying pesticides on the farm (when to apply, how to apply, and which pesticides to use)? 1. ☐ Yes 2. ☐ No
- 60.1 If **NO**, who is responsible for these decisions? _____

Knowledge:

61. On a scale of 1-5, how much risk do you think you are exposed to while using pesticides on this farm?
1. ☐ No risk at all
2. ☐ Some small risks
3. ☐ A medium amount of risk
4. ☐ A large and significant amount of risk
5. ☐ Dangerous and very toxic risks
6. ☐ I don't know
62. Do you currently practice any Integrated Pest Management (IPM) techniques to reduce the need of using pesticides?
1. ☐ Yes 2. ☐ No
- 62.1 If **YES**, which methods do you use:
1. ☐ Organic production 2. ☐ Biological control 3. ☐ Smoke 4. ☐ Light trap
5. ☐ Rotation of crop 6. ☐ Manual clearing 7. ☐ Enemy Plants
8. ☐ Other (please specify) _____ 9. ☐ Do not know

Protection:63. What do you typically wear while applying pesticides? (*Please go through all items*)

Item	Are you provided with this?	Do you use it?	If you do not wear it, why not?	Is it in good condition?	How often is it replaced?	Who recommended to use it? NGOs/ Agri. Ministry Official/ Pesticide Suppliers/ Companies and others
<input type="checkbox"/> Nothing	-	-	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	-	-	-
<input type="checkbox"/> Shoes	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Hat/Head Cover	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Glasses	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Full sleeve shirt/kurta	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Full-length lungi/ trousers	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Gloves	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Mask	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Other: _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		

64. Have you ever received basic training for applying pesticides?

1. ☐ Yes 2. ☐ No64.1 If **YES**, did that training also include training on how to use protective equipment and clothing? 1. ☐ Yes 2. ☐ No

64.2a Who were your main sources of information for each:

	NGO	Ag. Ministry officials	Farmers	Pesticide suppliers or companies	Others
Safe handling					
Use (crop, dose, etc.)					
Protective equipment & clothing					

64.2b If no basic training, do you have access to someone who provides such training?

1. ☐ Yes 2. ☐ No

64.2b.1 If **YES**, who? _____

64.3 Please indicate the main source of the following instructions that you may have received:

	NGO	Agri. Ministry Official	Pesticide Suppliers	Companies	Others	Never heard this before
Read the labels on the bottle/package and follow the instructions (if you cannot read, please get help from others who can read).						
Do not mix pesticide with bare hands. Mix them with a stick. While mixing, wear hand gloves and glasses/eye shield.						
While cleaning the sprayer's nozzle do not place your mouth on it or blow on it. Use thin wire for cleaning the nozzle.						
Before spraying pesticides take all precautionary measures such as wearing hand gloves, head cover, face shield, full sleeve shirt/kurta, full length trousers/pajamas, and shoes.						
Do not spray pesticides against the wind. Determine wind direction first and then spray. Do not spray when it is windy. You must wear head cover and face shield while spraying in the upwind direction.						
Do not eat or drink or smoke while spraying pesticides. The reaction may be toxic or even fatal.						
Do not wash pesticide bottle or pesticide sprayer in the pond/canal/dighi/bill/haor/river.						

Pesticides from the bottle or sprayer will contaminate the water of the pond/canal/dighi/bill/haor/river and will be dangerous/deadly for the fish, cattle, birds and people.						
Wash and clean the sprayer and your clothes at a far distance from the pond/canal/river/dighi/bill/haor. Be careful so that this water does not contaminate any water body i.e. pond/canal/dighi/bill/haor/river.						
After applying the pesticides on your field, display a signboard or red flag or use an empty pesticide bottle, so that everybody sees and understands that you sprayed pesticides on that field. Do not let any children or domestic cattle or poultry birds enter into that field within 7 days of pesticide application.						
Do not keep other things in the pesticide bottle or package. Do not keep pesticides in any bottle or package used for keeping food or medicine.						
Tear up the pesticide package or break the bottle into pieces and then bury them under the ground. Then flag the area as containing buried pesticides.						
Keep the pesticide under lock and key so that they are out of the reach of children. Do not keep other things or medicine where you keep pesticides. Keep the children and domestic cattle and poultry birds out of the immediate area.						
In the event of an accident, provide first aid to the patient following the instructions on the label of that particular pesticide bottle. Take the patient and the pesticide bottle/package to the doctor as soon as possible.						

65. If you have not received any training, do you have access to someone who provides such training? 1. ☐ Yes 2. ☐ No

65.1 If **YES**, who? _____

66. Please provide the following information:

Instruction:	Yes	No
Do you read the labels on the bottle/package?		
If you cannot read, do you get help from others who can read?		
Do you follow the instructions given on the label?		
Do you mix pesticides:		
With bare hands		
With hands and wearing gloves		
With a stick, but bare hands		
With a stick and wearing hand gloves		
Do you wear glasses/eye shield while mixing pesticides?		
Do you clean the sprayer's nozzle:		
by blowing air through it with your mouth		
by using a thin wire		
Before spraying do you wear the following:		
Hand gloves		
Head cover		
Face shield		
Full sleeve shirt/kurta		
Full length trousers/lungi		
Do you determine the wind direction first and then spray?		
Do you spray when it is windy?		
Do you eat or drink or smoke while spraying pesticides?		
Do you wash the pesticide bottle or pesticide sprayer:		
in the pond/canal/dighi/bill/haor/river		
in a distant place far from pond/canal/dighi/bill/haor/river		
Do you display a signboard or red flag or an empty pesticide bottle in the sprayed area after an application in order to warn others?		
Do you keep medicine or food items in pesticide bottles after washing them out?		
Do you keep pesticide bottles in the same place where you keep your medicine or food items?		
Do you tear up/break empty pesticide bottles/packages and bury them under the ground?		
Do you display a sign indicating that pesticide bottles/packages are buried here?		

Interval:

67. How long after application do you re-enter the field? _____ days

Social feedback:

68. Have there been any social actions against pesticide use in the past 5 years in your area? 1. ☐ Yes 2. ☐ No

68.1 If **YES**, please check all that apply:

	Procession	Campaign	Protest Meeting
1. Never			
2. A few			
3. Many			
4. I don't know			

69. On a scale of 1-5, what would you say is the local unemployment rate?

1. ☐ Very low
2. ☐ Low
3. ☐ Average
4. ☐ High
5. ☐ Very high

Health

The next section is related to health. Please recall the best you can about any problems that you may have experienced.

70. Height cm _____

71. Weight kg _____

72. Do you smoke? 1. ☐ Yes (**Please go to question 72.1**)
 2. ☐ No (**Please go to question 73.**)
 3. ☐ No, but ex-smoker (**Please continue with question 72.1**)

72.1 What kind?

- | | |
|--|--|
| 1. <input type="checkbox"/> Pipe | 3. <input type="checkbox"/> Cigarettes without filter |
| 2. <input type="checkbox"/> Cigarettes with filter | 4. <input type="checkbox"/> Other (please specify) _____ |

72.2 How many cigarettes do you smoke per day? _____

- | | |
|---|---|
| 1. <input type="checkbox"/> 1 - 5 | 4. <input type="checkbox"/> 2 - 4 boxes |
| 2. <input type="checkbox"/> 6 - 10 | 5. <input type="checkbox"/> 4 - 6 boxes |
| 3. <input type="checkbox"/> 1 - 2 boxes | |

72.3 How old were you when you started smoking regularly? ____ (years old)

- | | |
|-------------------------------------|--|
| 1. <input type="checkbox"/> 11 - 15 | 4. <input type="checkbox"/> 26 - 30 |
| 2. <input type="checkbox"/> 16 - 20 | 5. <input type="checkbox"/> More than 30 |
| 3. <input type="checkbox"/> 21 - 25 | |

72.4 If you are an ex-cigarette smoker, for how many years have you stopped smoking regularly?

- | | | |
|--|--|---|
| 1. <input type="checkbox"/> Less than 1 year | 2. <input type="checkbox"/> 1 - 3 years | 3. <input type="checkbox"/> 3 - 5 years |
| 4. <input type="checkbox"/> 5 - 10 years | 5. <input type="checkbox"/> More than 10 years | |

73. If you do not smoke, does anyone else in your household smoke?
 1. ☐ Yes 2. ☐ No
74. Have you ever had any of the following symptoms **after applying pesticides** during the last year?
- | | |
|--|---|
| 1. <input type="checkbox"/> Eye irritation | 6. <input type="checkbox"/> Fever |
| 2. <input type="checkbox"/> Headache | 7. <input type="checkbox"/> Convulsion |
| 3. <input type="checkbox"/> Dizziness | 8. <input type="checkbox"/> Shortness of breath |
| 4. <input type="checkbox"/> Vomiting | 9. <input type="checkbox"/> Skin irritation |
| 5. <input type="checkbox"/> Diarrhea | 10. <input type="checkbox"/> Other (Please specify) _____ |
- ☐ No (**Please go to question 86.**)
75. How long did that (those) symptoms last? (in days). (**Check and write down the number of days the symptom lasted**)
- | | |
|--------------------------------|----------------------------------|
| 1. Eye irritation _____ (days) | 6. Fever _____ |
| 2. Headache _____ | 7. Convulsion _____ |
| 3. Dizziness _____ | 8. Shortness of breath _____ |
| 4. Vomiting _____ | 9. Skin irritation _____ |
| 5. Diarrhea _____ | 10. Other (please specify) _____ |
76. How sure or confident are you that the symptoms you experienced were caused by exposure to pesticides?
- | | |
|--|--------------------------------|
| | % confidence of the respondent |
| 1. <input type="checkbox"/> Not sure | (0 – 20%) |
| 2. <input type="checkbox"/> Little | (20 – 40%) |
| 3. <input type="checkbox"/> Rather | (40 – 60%) |
| 4. <input type="checkbox"/> Very | (60 – 80%) |
| 5. <input type="checkbox"/> Extremely | (80 – 100%) |
| 6. <input type="checkbox"/> I don't know | |
77. Which symptom bothered you the most?
- | | |
|--|---|
| 1. <input type="checkbox"/> Eye irritation | 6. <input type="checkbox"/> Fever |
| 2. <input type="checkbox"/> Headache | 7. <input type="checkbox"/> Convulsion |
| 3. <input type="checkbox"/> Dizziness | 8. <input type="checkbox"/> Shortness of breath |
| 4. <input type="checkbox"/> Vomiting | 9. <input type="checkbox"/> Skin irritation |
| 5. <input type="checkbox"/> Diarrhea | 10. <input type="checkbox"/> Other (Please specify) _____ |
78. Did the symptom (illness) cause you to spend the day in bed?
1. ☐ Yes → 78.1 How many days? _____ 2. ☐ No

79. Did the symptom (illness) prevent you from going out to work?
1. ☐ Yes → 79.1 How many days did this illness prevent you from going to work? _____
2. ☐ No → 79.2 Did you feel tired or less productive as usual?
1. ☐ Yes 2. ☐ No
80. Did you lose any income because of not working?
1. ☐ Yes 2. ☐ No
- 80.1 If **YES**, how much income did you lose?
- Income for _____ days
- _____ weeks
- _____ months
81. Did this symptom (illness) prevent you from daily activities except working?
1. ☐ Yes → 81.1 How many days? _____ (days)
2. ☐ No
82. Did you eat differently (more vegetables, take vitamins, etc.), or take anything else to relieve the symptoms?
1. ☐ Yes → 82.1 How much money did you spend in total? _____ (Taka)
2. ☐ No
83. Did you take any medicine to relieve the symptoms or cure the disease?
1. ☐ Yes → 83.1 How much did it cost you _____ (Taka)
2. ☐ No → 83.2 Please explain why? _____
84. Did you go to the doctor (or health care persons)
1. ☐ Yes → 84.1 What was doctor's diagnosis? _____
- 84.2 How much did this visit cost you in total (doctor, prescriptions, etc?) _____ (Taka)
2. ☐ No → 84.3 Please explain why? _____
85. Did you go to a hospital or a health care station?
1. ☐ Yes → 85.1 How many nights did you stay in? _____
- 85.2 How much did you pay in total? _____ (Taka)
2. ☐ No → 85.3 Please explain why? _____

86. Do you know of anyone else who lost work time due to being sick last year? _____ days

87. Did you know of anyone who died in the past 3 years while working on this farm?

1. ☐ Yes 2. ☐ No 3. ☐ I don't know

87.1 If **YES**, how many as a consequence of pesticide use? _____

88. Do you think that pesticide use and/or exposure, overall, has any negative short-term impacts on your health?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
No effect	Little effect	Some effects	Large effects	Fatal effects	I don't know
Why?					

89. Do you think that pesticide use and/or exposure, overall, has any negative long-term impacts on your health (i.e. cancer)?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
No effect	Little effect	Some effects	Large effects	Fatal effects	I don't know
Why?					

Environment:

91. Have you ever heard witnessed any of the pesticide-related accidents below in your local area?

91.1 Water contamination: 1. ☐ Yes 2. ☐ No

91.2 If **YES**, please describe _____

91.3 Air contamination: 1. ☐ Yes 2. ☐ No

91.4 If **YES**, please describe _____

91.5 Death of fish, frogs, birds, etc: 1. ☐ Yes 2. ☐ No

91.6 If **YES**, please describe _____

PART 5: OWNER/MANAGER/LESSEE & APPLICATOR SECTION:
TO BE COMPLETED BY OWNER/MANAGER/LESSEE & APPLICATOR ONLY

Application:

92. How long have you been working in this farm? ____ months ____ years
93. Are there any family members working on this farm with you?
 1. ☐ Yes → 93.1 If **YES**, how many? ____
 2. ☐ No
94. How long have you been applying pesticides? ____ months ____ years
95. Are you responsible for the decision of applying pesticides on the farm (when to apply, how to apply, and which pesticides to use)?
 1. ☐ Yes
 2. ☐ No → 95.1 If **NO**, who is responsible for these decisions? _____
96. Are you responsible for purchasing pesticides? 1. ☐ Yes 2. ☐ No
- 96.1 If **YES**, do you test pesticides before purchasing? 1. ☐ Yes 2. ☐ No
- 96.2 If **YES**, please indicate by what method:

Method	Color coding of pesticide		
1. By touching	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red
2. By smelling	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red
3. By tasting	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red
4. Other method	<input type="checkbox"/> Green	<input type="checkbox"/> Yellow	<input type="checkbox"/> Red

97. Log record of pesticides and fertilizers used per season: Owner/Manager/Supervisor/Applicator

Crop	Area of application (acres)	Chemical name	Commercial name	Perceived toxicity	Price/unit (Taka/kg)	Dose (mg/l)	Prescribed dose?	Quantity of application (kg)	# of applications	Mode/ Method of application	Time of application
1				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
2		Nitrogen									
		Phosphorus									
		Potassium									
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
		Nitrogen									
		Phosphorus									
		Potassium									

[Note: Require interviewers to carry extra copies of the above table for more crops to be attached to the survey].

97. Log record of pesticides and fertilizers used per season: Owner/Manager/Supervisor/Applicator

Crop	Area of application (acres)	Chemical name	Commercial name	Perceived toxicity	Price/unit (Taka/kg)	Dose (mg/l)	Prescribed dose?	Quantity of application (kg)	# of applications	Mode/ Method of application	Time of application
3				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
4		Nitrogen									
		Phosphorus									
		Potassium									
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
				<input type="checkbox"/> Slightly hazardous <input type="checkbox"/> Moderately hazardous <input type="checkbox"/> Highly hazardous <input type="checkbox"/> Extremely hazardous			1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No				
		Nitrogen									
		Phosphorus									
		Potassium									

[Note: Require interviewers to carry extra copies of the above table for more crops to be attached to the survey].

98. Do you mix different brands of pesticides before application?

1. ☐ Yes 2. ☐ No

98.1 If **YES**, do you mix the required quantity of each brand in the same water?

1. ☐ Yes 2. ☐ No

98.2 If **YES**, please specify the brand and mixture you use for each crop:

Crop	Diluent amount (i.e. water)	Brand name	Amount (i.e. gm or ml)	
			You mix	Prescribed quantity
Crop #1	10 liter			
Crop #2	10 liter			
Crop #3	10 liter			

98.3 What is the main reason why you mix the pesticides this way?

1. ☐ Unsure about the quality of pesticides
2. ☐ Uncertain about the effectiveness of pesticides for a particular pest
3. ☐ Imitating other applicators
4. ☐ Following the suggestion of others
5. ☐ Other reason (please specify) _____

99. Have/did you change the dosage of pesticides per unit of land compared to the dosage you used for the same unit of land 5 years ago?

1. ☐ Increased 2. ☐ Decreased 3. ☐ Same

99.1 By how much? ----- (%)

99.2 Why did you change the dosage?

1. ☐ Everybody else increased
2. ☐ Insects do not die anymore at low dosage
3. ☐ Suppliers say so
4. ☐ Just to make sure that it works
5. ☐ I do not know
6. ☐ others (please specify)

100. Do you use any pesticides which you have used for one crop, but according to the label was prescribed for another crop: ☐ Yes ☐ No

If yes:

Name of Pesticide	Crop for which being used	Target crop specified on the label

100.1 Please give a reason for such practice:

1. ☐ Acting on your own
2. ☐ Suggested by friends/neighbors
3. ☐ Imitating others
4. ☐ Suggested by Retailers
5. ☐ Suggested by Companies
6. ☐ Suggested by Ministry of Agri. officials
7. ☐ Suggested by NGOs
8. ☐ Other (please specify) _____

Knowledge:

101. On a scale of 1-5, how much risk do you think you are exposed to while using pesticides on this farm?

1. ☐ No risk at all
2. ☐ Some small risks
3. ☐ A medium amount of risk
4. ☐ A large and significant amount of risk
5. ☐ Dangerous and very toxic risks
6. ☐ I don't know

102. On a scale of 1-5, how would you gauge, on average, the health of the applicators/workers that you manage?
1. ☐ Excellent health
 2. ☐ Good health
 3. ☐ Fair health
 4. ☐ Small health problems
 5. ☐ Serious health problems
 6. ☐ I don't know
103. Do you currently practice any Integrated Pest Management (IPM) techniques to reduce the need of using pesticides?
1. ☐ Yes
 2. ☐ No
- 103.1 If **YES**, which methods do you use:
1. ☐ Organic production
 2. ☐ Biological control
 3. ☐ Smoke
 4. ☐ Light trap
 5. ☐ Rotation of crop
 6. ☐ Manual clearing
 7. ☐ Enemy Plants
 8. ☐ Other (please specify) _____
 10. ☐ Do not know
- 103.2 If **NO**, did you ever adopt the IPM system, but are not currently practicing it?
1. ☐ Yes, I am an ex-IPM practitioner
 2. ☐ No, I never practiced IPM
- 103.3 Why did you never adopt or abandon the practice?
1. ☐ Pesticide system is cheaper
 2. ☐ Requires lots of labor
 3. ☐ Was getting less crop (quantity and quality wise)
 4. ☐ Other neighboring farmers did not participate
 5. ☐ Practicing IPM is a big hassle
 6. ☐ Doesn't work
 7. ☐ Imitating others
 8. ☐ Other (please specify) _____
104. How many hours in a day do you spend in the field? ----- hours
105. Of the workers you manage, where are most of them from?
1. ☐ Full time workers from local areas
 2. ☐ Migrant workers from far distances
 3. ☐ Seasonal workers from local areas

4. ☐ Temporary workers from local areas
 5. ☐ I don't know

Protection:

106. Have you ever received basic training on safe handling and applying pesticides?

1. ☐ Yes 2. ☐ No

106.1 If **YES**, did that training also include training on how to use protective equipment and clothing? 1. ☐ Yes 2. ☐ No

106.2 Who were your main sources of information for each:

	NGO	Ag. Ministry officials	Farmers	Pesticide suppliers or companies	Others
Safe handling					
Use (crop, dose, etc.)					
Protective equipment & clothing					

106.3 If NO basic training, do you have access to someone who provides such training?

1. ☐ Yes 2. ☐ No

106.3.1 If **YES**, who? _____

107. When purchasing pesticides, are you usually supplied with information on the pesticide, such as pamphlets or instructions, describing safety issues or procedures?

1. ☐ Yes 2. ☐ No

107.1 If **YES**, do you read and understand the instructions in the pamphlets?

1. ☐ Yes 2. ☐ No

108. Approximately how much do you spend annually on protective clothing for workers using pesticides? _____ (Taka)

108.1 In the past five years? _____ (Taka)

109. How many applicators do you typically use during the season? _____

110. What do you typically wear while applying pesticides? (*Please go through all items*)

Item	Do you use it?	If you do not wear it, why not?	Is it in good condition?	How often is it replaced?	Who recommended to use it? NGOs/ Agri. Ministry Official/ Pesticide Suppliers/ Companies and others
<input type="checkbox"/> Nothing	-	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	-	-	-
<input type="checkbox"/> Shoes	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Hat/Head Cover	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Glasses	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Full sleeve shirt/kurta	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Full-length lungi/ trousers	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Gloves	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Mask	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		
<input type="checkbox"/> Other: _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No	1. <input type="checkbox"/> Not available 2. <input type="checkbox"/> Uncomfortable 3. <input type="checkbox"/> Inappropriate 4. <input type="checkbox"/> Unnecessary 5. <input type="checkbox"/> Other _____	1. <input type="checkbox"/> Yes 2. <input type="checkbox"/> No		

111. Please indicate the main source of the following instructions that you may have received:

	NGO	Agri. Ministry Official	Pesticide Suppliers	Companies	Others	Never heard this before
Read the labels on the bottle/package and follow the instructions (if you cannot read, please get help from others who can read).						
Do not mix pesticide with bare hands. Mix them with a stick. While mixing, wear hand gloves and glasses/eye shield.						
While cleaning the sprayer's nozzle do not place your mouth on it or blow on it. Use thin wire for cleaning the nozzle.						
Before spraying pesticides take all precautionary measures such as wearing hand gloves, head cover, face shield, full sleeve shirt/kurta, full length trousers/pajamas, and shoes.						
Do not spray pesticides against the wind. Determine wind direction first and then spray. Do not spray when it is windy. You must wear head cover and face shield while spraying in the upwind direction.						
Do not eat or drink or smoke while spraying pesticides. The reaction may be toxic or even fatal.						
Do not wash pesticide bottle or pesticide sprayer in the pond/canal/dighi/bill/haor/river.						
Pesticides from the bottle or sprayer will contaminate the water of the pond/canal/dighi/bill/haor/river and will be dangerous/deadly for the fish, cattle, birds and people.						
Wash and clean the sprayer and your clothes at a far distance from the pond/canal/river/dighi/bill/haor. Be careful so that this water does not contaminate any water body i.e. pond/canal/dighi/bill/haor/river.						
After applying the pesticides on your field, display a signboard or red flag or use an empty pesticide bottle, so that everybody sees and understands that you sprayed pesticides on that field. Do not let any children or domestic cattle or poultry birds enter into that field within 7 days of pesticide application.						

Do not keep other things in the pesticide bottle or package. Do not keep pesticides in any bottle or package used for keeping food or medicine.						
Tear up the pesticide package or break the bottle into pieces and then bury them under the ground. Then flag the area as containing buried pesticides.						
Keep the pesticide under lock and key so that they are out of the reach of children. Do not keep other things or medicine where you keep pesticides. Keep the children and domestic cattle and poultry birds out of the immediate area.						
In the event of an accident, provide first aid to the patient following the instructions on the label of that particular pesticide bottle. Take the patient and the pesticide bottle/package to the doctor as soon as possible.						

112. Please provide the following information:

Instruction:	Yes	No
Do you read the labels on the bottle/package?		
If you cannot read, do you get help from others who can read?		
Do you follow the instructions given on the label?		
Do you mix pesticides:		
With bare hands		
With hands and wearing gloves		
With a stick, but bare hands		
With a stick and wearing hand gloves		
Do you wear glasses/eye shield while mixing pesticides?		
Do you clean the sprayer's nozzle:		
by blowing air through it with your mouth		
by using a thin wire		
Before spraying do you wear the following:		
Hand gloves		
Head cover		
Face shield		
Full sleeve shirt/kurta		
Full length trousers/lungi		
Do you determine the wind direction first and then spray?		
Do you spray when it is windy?		
Do you eat or drink or smoke while spraying pesticides?		
Do you wash the pesticide bottle or pesticide sprayer:		
in the pond/canal/dighi/bill/haor/river		

in a distant place far from pond/canal/dighi/bill/haor/river		
Do you display a signboard or red flag or an empty pesticide bottle in the sprayed area after an application in order to warn others?		
Do you keep medicine or food items in pesticide bottles after washing them out?		
Do you keep pesticide bottles in the same place where you keep your medicine or food items?		
Do you tear up/break empty pesticide bottles/packages and bury them under the ground?		
Do you display a sign indicating that pesticide bottles/packages are buried here?		

113. When you mix/use the pesticide solution, does the liquid come into contact with any part of your body? 1. ☐ Yes 2. ☐ No

113.1 If **YES**, which part?

1. ☐ Hands
 2. ☐ Feet
 3. ☐ Other part (Please specify)_____

114. Do you take a bath right after spraying? 1. ☐ Yes 2. ☐ No

115. Do you change clothes right after spraying? 1. ☐ Yes 2. ☐ No

Interval:

116. How long is it after application before you re-enter the field? __ days

Social feedback:

117. Have there been any social actions against pesticide use in the past 5 years in your area? 1. ☐ Yes 2. ☐ No

117.1 If **YES**, please check all that apply:

	Procession	Campaign	Protest Meeting
1. Never			
2. A few			
3. Many			
4. I don't know			

118. On a scale of 1-5, what would you say is the local unemployment rate among workers?

1. ☐ Very low
 2. ☐ Low
 3. ☐ Average
 4. ☐ High
 5. ☐ Very high

Health

The next section is related to health. Please recall the best you can about any problems that you may have experienced.

119. Height cm _____

120. Weight kg _____

121. Do you smoke? 1. ☐ Yes (*Please go to question 121.1*)

2. ☐ No (*Please go to question 122.*)

3. ☐ No, but ex-smoker (*Please continue with question 121.1*)

121.1 What kind?

1. ☐ Pipe

3. ☐ Cigarettes without filter

2. ☐ Cigarettes with filter

4. ☐ Other (please specify) _____

121.2 How many cigarettes do you smoke per day? _____

1. ☐ 1 - 5

4. ☐ 2 - 4 boxes

2. ☐ 6 - 10

5. ☐ 4 - 6 boxes

3. ☐ 1 - 2 boxes

121.3 How old were you when you started smoking regularly? ____ (years old)

1. ☐ 11 - 15

4. ☐ 26 - 30

2. ☐ 16 - 20

5. ☐ More than 30

3. ☐ 21 - 25

121.4 If you are an ex-cigarette smoker, for how many years have you stopped smoking regularly?

1. ☐ Less than 1 year

4. ☐ 5 - 10 years

2. ☐ 1 - 3 years

5. ☐ More than 10 years

3. ☐ 3 - 5 years

122. If you do not smoke, does anyone else in your household smoke?

1. ☐ Yes

2. ☐ No

123. Have you ever had any of the following symptoms after applying pesticides during the last year?

1. ☐ Eye irritation

6. ☐ Fever

2. ☐ Headache

7. ☐ Convulsion

3. ☐ Dizziness

8. ☐ Shortness of breath

4. ☐ Vomiting

9. ☐ Skin irritation

5. ☐ Diarrhea

10. ☐ Other (Please specify) _____

☐ No (*Please go to question 135.*)

124. How long did that (those) symptoms last? (in days). (**Check and write down the number of days the symptom lasted**)

- | | |
|--------------------------------|----------------------------------|
| 1. Eye irritation _____ (days) | 6. Fever _____ |
| 2. Headache _____ | 7. Convulsion _____ |
| 3. Dizziness _____ | 8. Shortness of breath _____ |
| 4. Vomiting _____ | 9. Skin irritation _____ |
| 5. Diarrhea _____ | 10. Other (please specify) _____ |

125. How sure or confident are you that the symptoms you experienced were caused by exposure to pesticides?

% confidence of the respondent

- | | |
|--|-------------|
| 1. <input type="checkbox"/> Not sure | (0 – 20%) |
| 2. <input type="checkbox"/> Little | (20 – 40%) |
| 3. <input type="checkbox"/> Rather | (40 – 60%) |
| 4. <input type="checkbox"/> Very | (60 – 80%) |
| 5. <input type="checkbox"/> Extremely | (80 – 100%) |
| 6. <input type="checkbox"/> I don't know | |

126. Which symptom bothered you the most?

- | | |
|--|---|
| 1. <input type="checkbox"/> Eye irritation | 6. <input type="checkbox"/> Fever |
| 2. <input type="checkbox"/> Headache | 7. <input type="checkbox"/> Convulsion |
| 3. <input type="checkbox"/> Dizziness | 8. <input type="checkbox"/> Shortness of breath |
| 4. <input type="checkbox"/> Vomiting | 9. <input type="checkbox"/> Skin irritation |
| 5. <input type="checkbox"/> Diarrhea | 10. <input type="checkbox"/> Other (Please specify) _____ |

127. Did the symptom (illness) cause you to spend the day in bed?

1. ☐ Yes → 127.1 How many days? _____
2. ☐ No

128. Did the symptom (illness) prevent you from going out to work?

1. ☐ Yes → 128.1 How many days did this illness prevent you from going to work? _____
2. ☐ No → 128.2 Did you feel tired or less productive as usual?
1. ☐ Yes 2. ☐ No

129. Did you lose any income because of not working?

1. ☐ Yes 2. ☐ No

129.1 If **YES**, how much income did you lose?

Income for _____ days _____ weeks _____ months

130. Did this symptom (illness) prevent you from daily activities except working?
1. ☐ Yes → 130.1 How many days? _____ (days)
2. ☐ No
131. Did you eat differently (more vegetables, take vitamins, etc.), or take anything else to relieve the symptoms?
1. ☐ Yes → 131.1 How much money did you spend in total? _____ (Taka)
2. ☐ No
132. Did you take any medicine to relieve the symptoms or cure the disease?
1. ☐ Yes → 132.1 How much did it cost you _____ (Taka)
2. ☐ No → 132.2 Please explain why? _____
133. Did you go to the doctor (or health care persons)
1. ☐ Yes → 133.1 What was doctor's diagnosis? _____
- 133.2 How much did this visit cost you in total (doctor, prescriptions, etc)? _____ (Taka)
2. ☐ No → 133.3 Please explain why? _____
134. Did you go to a hospital or a health care station?
1. ☐ Yes → 134.1 How many nights did you stay in? _____
- 134.2 How much did you pay in total? _____ (Taka)
2. ☐ No → 134.3 Please explain why? _____
135. If you could account for every worker, approximately how many days in total were lost due to workers being sick last year? _____ days
136. Have any workers died in the past 3 years while working on this farm?
1. ☐ Yes 2. ☐ No
- 136.1 If **YES**, how many as a consequence of pesticide use? Please clarify.
- _____

137. Do you think that pesticide use and/or exposure, overall, has any negative short-term impacts on health?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
No effect	Little effect	Some effects	Large effects	Fatal effects	I don't know
Why?					

138. Do you think that pesticide use and/or exposure, overall, has any negative long-term impacts on health (i.e. cancer)?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
No effect	Little effect	Some effects	Large effects	Fatal effects	I don't know
Why?					

139. We are now going to ask you a question about alternative pesticides. Suppose that you were able to have access to a pesticide that was just as effective as the one(s) you are using now, but it did not have any short- or long- term health effects. Thinking about the health effects you now experience with your current use of pesticides, how much would you be willing to pay for the use of the safer pesticide? Please also understand that to pay for this alternative, you would have less money for other items.

How much extra would you be willing to pay for the use of a safer pesticide:

_____ % ☐ I don't know

Environment:

140. Have you ever heard or witnessed any of the pesticide-related accidents below in your local area?

140.1 Water contamination: 1. ☐ Yes 2. ☐ No

140.2 If **YES**, please describe _____

140.3 Air contamination: 1. ☐ Yes 2. ☐ No

140.4 If **YES**, please describe _____

140.5 Death of fish, frogs, birds, etc: 1. ☐ Yes 2. ☐ No

140.6 If **YES**, please describe _____

PART 6: INTERVIEWER DEBRIEFING QUESTIONS:**(TO BE FILLED OUT BY THE INTERVIEWER ONLY)**

141. Do you think that it was easy for the respondent to answer the questions concerning his/her pesticide use?

1. ☐ Yes 2. ☐ No

142. Do you think that it was easy for the respondent to answer the questions concerning their health?

1. ☐ Yes 2. ☐ No

143. Are you certain that the interviewee was answering to the questions honestly and truly?

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Very Uncertain	Moderately Uncertain	Neutral	Moderately Certain	Very Certain

144. Time finished: _____

145. Data entry operator: _____

END