

Appendices

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Appendix 1: Description of the dependent (Knowledge) and independent variables imported into the multiple linear regression model (N=156), Ogun state, Nigeria, 2019.

Dimension	Description	Min	Max	Mean/SD
Knowledge	Knowledge of farmers	3.00	14.00	9.35(±2.86)
Independent variables				
Gender	Measured using dummy variable, 0 is given to male and 1 to female.	0	1	0.23(±0.42)
Age	The age of the responded, measured as a continuous variable.	1	5	2.41(±1.35)
Education	A total number of years that the respondent has spent in school, measured as a continuous variable.	1	6	2.44 (±1.41)
Farming experience	A total number of farming experience, measured as a continuous variable	2	40	14.62 (±8.716)
Household size	The number of members per household, measured as a	1	15	8.40 (±2.61)

	continuous variable			
Total hectares of land	The total hectares of farmland, measured as a continuous variable	1	10	3.23 (± 1.22)
Extension workers train on pesticide usage	Training given by extension workers to farmers on pesticide usage, measured as ordinal	1	3	1.71 (± 0.86)
Trainings on danger of pesticides is important	The importance of training on the danger of pesticides, measured as dummy variable where 0 is assigned to no while 1 assigned to yes	0	3	1.17 (± 0.49)
Distributor of pesticides	Distributor of pesticides as a source of information on pesticides important to farmers before purchasing pesticides	0	3	2.05 (± 0.73)
Government agencies	Government agencies as a source of information on	0	3	1.82 (± 0.77)

	pesticides important to farmers before purchasing pesticides, measured as continuous variable			
Other farmers	Other farmers as a source of information on pesticides important to farmers before purchasing pesticides, measured as a continuous variable	0	3	2.78 (± 0.57)
Label of pesticides	Label of pesticides as a source of information on pesticide important to farmers before purchasing pesticides, measured as a continuous variable	0	3	2.12 (± 0.83)
Previous knowledge	Previous knowledge as a source of information on pesticide important to farmers before	0	3	2.83 (± 2.83)

purchasing
pesticides,
measured as a
continuous
variable

Appendix 2: Descriptive result of personal protective equipment

Item	Mean	SD
Coverall	2.08	0.94
Respirator	2.63	0.74
Nose mask	1.66	0.85
Gloves	1.70	0.86
Hat	2.31	0.89
Boots	2.21	0.94

Appendix 3: Descriptive result of reason for not wearing personal protective equipment

Item	Mean	SD
It makes me uncomfortable	1.35	0.71
It is too heavy	1.96	0.99
It is too expensive	1.24	0.95
It is not important	1.51	0.84

Appendix 4: Descriptive result of attitude of farmers towards usage of pesticides measured as continuous variable

Item	Mean	SD
Do you think pesticide is indispensable for high crop yield?	1.25	0.599
How many types of pesticides have you apply on your farmland within the last two years?	2.01	0.71
Do you read and understand instruction written on labels?	1.65	0.65
Do you think spraying of pesticides has an adverse effect on soil and water	1.67	0.702
Do you think trainings on the danger of pesticides is important?	1.17	0.493
Do you prefer to make use of labelled pesticides instead of those without the label?	1.05	0.221
Have the instructions written on the label been helpful?	2.01	0.902
Are you aware that some pesticides are banned for use?	1.64	0.51
How important is price for your decision to select pesticides?	2.67	0.991

Appendix 5: Study Questionnaire



Czech University of Life Sciences Prague
**Faculty of Tropical
AgriSciences**

INTRODUCTION

Dear Sir/Madam,

I would like to ask you to fill in the following questionnaire. I am a student at the Czech University of Life Science in Prague, and I am conducting this study to learn more about the *pesticides handling knowledge and practices of smallholder farmers in Ogun state, Nigeria*.

All the data are collected anonymously. The filling would only take a few minutes. I would appreciate very much if you would fill in and help me to conduct this research.

Thank You!

Name of LGA

Name of Community

SECTION A: HOUSEHOLD HEADS SOCIO-DEMOGRAPHIC AND FARM CHARACTERISTICS

1. Gender
(a) Male (b) Female
2. Age
(a) < 29 (b) 30-39 (c) 40-49 (d) 50-59 (e) ≥60
3. Educational level
(a) None formally (b) Primary (c) Secondary (d) Diploma ND/HND (e) NCE (f) Bsc (g) Post-graduate
4. How many years of farming experience do you have? _____

5. What is your household size?

Children >15 years	Adults (16-59) years	Retired (60+) years	Total
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6. How many hectares is your farmland? _____

7. Did you receive governmental support in the last five years? (a) Yes (b) No

8. How often do you get credit? (a) Never (b) Seldom (c) Sometimes (d) Very often

9. Do you make use of pesticides? _____ (a) Never (b) Rarely (c) often (d) very often

10. If you make use of pesticides, what is the quantity you apply? (a) small quantity (b) medium quantity (c) large quantity

11. In what quantity do you purchase pesticides? (a) In large quantity for future use (b) I only purchase what I need

12. Has the government provided you with free pesticides in the last five years? (a) Yes (b) No

13. Please answer the following questions if you make use of pesticides.

Crops cultivated	Number of times applied in farming season				Brand of Pesticide used	Most dangerous pest
	Seldom (1-3 times in a month)	Sometimes (1-2 days in a week)	Often (3-6 days in a week)			
Fruits						
Vegetables						
Cocoa						
Kolanut						
Maize						
Others						

14. Do you prefer to make use of labelled pesticides instead of those without the label? (a) Yes (b) No

SECTION B: USE OF PESTICIDES

Please tick the correct answer according to your opinion

	Agree	Disagree	I don't know
Eating while spraying pesticide is not a problem			
Empty bottles of pesticides can be used for storage of drinking water			
There is no problem with children spraying pesticides			
Washing hands after spraying is important			
The direction of the wind whilst spraying is not important			
Following the instructions written on labels is important			
Some pesticides are extremely dangerous to health			
The dosage of pesticides must be precisely calculated before application			
Inhaling pesticides could lead to sickness			
Pesticides may be stored in the rooftop of the bedroom			
Excessive use of pesticides can cause damage to the soil			
Stirring of pesticides with bare hands could lead to skin irritation			
Blowing sprayer nozzle with the mouth is not a problem			
Showering immediately after spraying pesticide is necessary			
Buckets used for bathing can also be used in mixing pesticides			

SECTION C: INFORMATION OF FARMERS REGARDING USAGE OF PESTICIDE

1. Are you aware that some pesticides are banned for use? (a) Yes (b) No
2. Do you think pesticide is indispensable for high crop yield? (a) Yes (b) No (c) I don't know
3. How many types of pesticides have you apply on your farmland within the last two years?
4. Do you read and understand instruction written on labels (a) Yes (b) No (c) Sometimes
5. Have the instructions written on the label been helpful? (a) Yes (b) No
6. Do extension workers train you on pesticides usage? (a) Often (b) Rarely (c) Never
7. Do you think trainings on the danger of pesticides is important? (a) Yes (b) No
8. Which of sources of information about pesticides are important to you?

	Not important	Less important	Neutral	Very important	Very important
Extension officers/workers					
Distributor of pesticides					
Government agencies					
Other farmers					
The label of pesticides					
The media (radio, television, internet)					
Previous knowledge					
Others please specify					

9. Do you think spraying of pesticides has an adverse effect on soil and water (a) agree (b) disagree (c) I don't know

SECTION D: HANDLING PRACTICES OF FARMERS

Where did you store pesticides?

Living area within reach of children	
Living area without reach of children	
Open shed just with pesticides	
Refrigerator with other food items	
Refrigerator without other food items	
Animal house	

Others please specify _____

What do you do with empty pesticides containers?

Discard on-farm	
Dispose in trash containers	
Re-use for other purposes	
Incinerate on farm	
Bring to hazardous waste collection sites	
Selling of empty containers	

Others please specify _____

What do you do with unused leftover (mixed, diluted) pesticides if you have some?

Dispose in the field	
Apply on other crops	
Dispose in sewer	
Bring to hazardous waste collection sites	

Please tick the correct boxes

How often do you use personal protective equipment?

Protective Equipment	Always	Sometimes	Never
Coverall			
Respirators			
Nose mask			
Gloves			
Hats			
Boots			

Others please specify _____

If you do not use, what is the reason?

Reasons	Very important reason	Most important reason	Less important reason
It makes me uncomfortable			
It is too heavy			
It is too expensive			
It is not important			

Appendix 6: Photo documentation of interview conducted

