



IKEA Foundation



Focus group discussion questions

1. Which vegetables do you grow? Farmers to mention the vegetables and record the number of mentions (votes)
2. Select 5 vegetables that are highly ranked according to the **votes**
3. What are the main reasons for vegetable preferences (**votes**)
 - a) Have medicinal value
 - b) Have nutritional value
 - c) Highly marketable
 - d) Household consumption etc
 - e) Drought tolerant
 - f) Pest resistant
 - g) Disease resistant
 - h) Has prolonged harvesting.
4. Area allocated for vegetables (**range**)
0-0.5 Acres, 0.5-1 acre, 1.5-2 acres, above 2 acres
5. Why? Farmers to give reasons (**mention no. of votes**)
6. Preferred agronomic traits
 - i. House hold consumption
 - ii. High yield
 - iii. Early maturity
 - iv. Nutritional value
 - v. Requires little water to grow
 - vi. Has good taste
 - vii. Tolerant to cold
 - viii. Tolerant to drought
 - ix. Rich in fiber
 - x. Generates income
 - xi. Seed production
 - xii. Soil fertility improvement



IKEA Foundation



- xiii. Regeneration (comes up after harvest)
 - xiv. Prolonged harvest
 - xv. Climate adaptability (vegetable grows well in both drought and high rainfall seasons)
7. What are the challenges encountered when growing vegetables (**Votes**)
- i. Drought/poor rainfall
 - ii. High cost of fertilizer
 - iii. Too much rainfall/flooding
 - iv. Pests
 - v. Diseases
 - vi. Poor seed quality
 - vii. Low soil fertility
 - viii. Lack of seeds
8. Which types pesticides were used for the last 2 cropping seasons? (**List the names or types**)
- Chemicals (**name them**)
 - Bio-naturals (**organic**)
9. What pests affecting vegetables (**famers to mention**)
10. What diseases affects vegetables (**Famers to mention**)
11. What was the application frequency of the pesticides/organic methods during the last 2 cropping seasons?
12. For each selected vegetables, is it a hybrid or local variety (**votes**)
- a) What were the seed sources for the last season? **Famers to list.**
13. Willingness to adopt Vegetable Integrated Push Pull Technology. (**VIPPT**) (**votes**)
14. Willingness to adopt Black Soldier Fly Innovation (**BSF**) (**Votes**)
15. Willingness to adopt both **VIPPT AND BSF** (**Votes**).



IKEA Foundation



Participatory selection of different vegetables in different sites in different agroecologies.

Date _____ Country _____

County/District _____

Sub-County/Parish _____ Village _____

Name of the respondent _____

Phone Contact: _____

Gender of the main responded: (Tick one) 1. [] Male, 2. [] Female

Age of the farmer _____

GPS reading of the area (automatically captured) _____

1. What is the main occupation (derives most income) of the household head
 - a) Agriculture self-employed
 - b) Agriculture wage labour
 - c) Non-agric. self-employment (including business/trade e.t.c.)
 - d) Non-agric. wage labour
 - e) Salaried worker
 - f) Other, (specify)

2. Total area of land for crop production _____ m²/ acres
 Land size for vegetable production _____ m²/acres

3. Which vegetables do you grow? (Select all that apply)

- | | | |
|--------------------------------|---------------------------|---------------------------------|
| a) Tomato | b) Cabbage | c) spinach |
| d) Kales /Sukuma wiki | e) Carrot | f) coriander |
| g) Night shade/nakati/Osuga | h) Cowpea/kunde/boo | i) Sageti/spider plant/Dek |
| j) Terere/dodo/amaranthus | k) Onions | l) Jute malo/mrenda/ okra/Apoth |
| m) Brinjals/egg plants /Entula | n) Cucumber | o) Capsicum |
| p) Pumpkin leaves/Susa | q) Crotalaria/Mitoo/Miroo | |



IKEA Foundation



1. CROP PRODUCTION INFORMATION FOR VEGETABLES GROWN BY THE HOUSEHOLDS DURING CROPPING SEASON FOR THE PAST 2 YEARS

Agricultural Practices and Varieties Cultivated vegetables

Preferred vegetable	Preferred agronomic traits (Code A)	Are these (5 ranked) vegetables grown individually or in farmer groups? (Code B)	What are the uses of the selected vegetables (Code C)	Rank how the vegetables tolerate the major constraints/challenges (Code D) (High =2 medium =1, low = 0)	How many varieties/types of the selected vegetables are grown (<i>Indicate whether traditional or commercial hybrid</i>)
1.					
2.					
3.					
4.					
5.					

CODE A

- | | | |
|---------------------------------|----------------------------------|--------------------|
| 1. Plant height (Tall, Short) | 2. vine/Creeper | 3. High yield |
| 4. Early maturity (in 1 months) | 5. Good taste | 9. Seed production |
| 7. Size of the leave (small) | 8. Board leaves | |
| 10. Weed competitiveness | 11. Highly perishable (0-3 days) | |
| 13. Root Length (mass) | 14. Produce Fruits | |



IKEA Foundation



15. Prolonged harvesting month (0-3) months

From CODE B

If yes, give the *name* of the group, _____

Size (no. of members), _____

Location/area codes _____

CODE C

- 1. Household consumption 2. Market sales 3. Seed production
- 4. Both Household consumption and Market sales 5. Medicinal value
- 6. Nutritional value 7. Others specify

CODE D

Preferred vegetable	What were the seed sources for the last season?	Has anyone sold or shared seeds with other farmers? Provide examples if so Yes=1, No =0	What are the major pests affecting the vegetables (for each vegetable?)	What are the major diseases affecting the vegetables	How did you control the pest and diseases? (<i>Famers to mention control methods</i>) Chemical method Yes=0 No =0 Organic Methods Yes =1 No=0
1.					
2.					



IKEA Foundation



3.					
4.					
5.					

1. Drought tolerant 2. Has less pest problems 3. Has less disease problems 4. Low soil fertility 5. Tolerance to cold temperature

a. If yes to chemicals, what was the application frequency of the pesticides in the last 2 seasons?

once twice more than thrice am not sure

b. If yes, to organic methods, specify?



IKEA Foundation



2. Push-Pull Technology (PPT) Awareness and Adoption

Enumerator read: Now I would wish to ask you some questions regarding push-pull technology awareness (use table below): Start by explaining to the farmer what push-pull technology is (i.e. PPT is a cropping system in which maize or other cereals are intercropped with a perennial fodder legume (Desmodium) that repel (pushes stemborer pests and stimulates an abortive germination of Striga weed. In this design, a border perennial fodder grass (Napier or Brachiaria) that attracts (pulls) stemborers away from the cereal crop, and thus the name ‘push-pull’ surrounds the maize field-plot)

1. Is your household aware of/ heard about Push-pull technology (PPT)
1=Yes 0=No
2. How did you first learn about PPT?

3. When did your household start planting PPT? _____
4. How many farmers do you know who are consistently using PPT in your village _____
5. Is your household currently using PPT? **YES -1, NO =0**
6. How many Plots did you cultivate under PPT in **2022-2023**? _____
7. Do you grow vegetables with maize currently? If yes, which vegetables?

8. For those farmers who do not practice PPT, would you wish to adopt the technology? **YES -1, NO =0**
9. What vegetables would you want to plant in PPT?

10. For those farmers who practice PPT, would you wish to adopt BSF innovations
YES -1, NO =0
11. For those farmers who practice PPT, would you wish to adopt VIPPT and BSF Innovations **YES -1, NO =0**
12. Have you received training on PPT in the past 3 years? 1= Yes 0=No
13. If YES, how many trainings did you attend in the last 3 years?. _____
14. How was the training conducted? (**multiple responses**)
1=Field days 2= Farmer Field Schools (FFS) 3=Demonstration plots
4=Direct (classroom) training seminar by extension staff 5=On-farm training directly
6. icipe station
15. Who conducted the training? (**Multiple responses**).



IKEA Foundation

- a) Icipe staff b) NGO/CBO c) Fellow farmer d) Govt extension
- e) The national research organization (trials/demos/field days)
- f) Radio/TV g) Farmer Coop/Union h) Other Research Centre (trials/demos/field days)
- i) Farmer group j) You tube/social media k) Farmers field school
- l) Other, Specify _____

16. Do you feel that the training influenced your decision to adopt PPT? 1= Yes 0=No

17. Who else in your household attended PPT training in the past 3 years?

- i. Head ii) spouse iii) Son iv) Daughter v) Farm worker
- vi) Other (specify) _____

In the household, who decided on using/adopting PPT?

- 1=Husband
- 2= wife
- 3=Jointly (1+2)
- 4=Other household members
- 5=Other, specify _____

3. Understanding Black Soldier Fly (BSF)

READ TO THEM THIS STATEMENT. *Black Soldier Fly farming can result in production of many products including dried larvae, which can be used in animal feed formulation, and frass, which can be used as organic fertilizer for growing crops*

Enumerator to read: I would wish to ask you about BSF Innovations

18. Do you have any idea about BSF innovations Yes=1, No=0

19. If yes, how long have you been practicing it?

Period (years) []

20. What are the benefits of BSF?

- i. _____
- ii. _____
- iii. _____
- iv. _____
- v. _____

21. What are Bsf Products?



IKEA Foundation



- i. _____
- ii. _____
- iii. _____
- iv. _____

22. How much of the products do you get from BSF?

- BSF Larvae (kg) _____
- BSF Frass (kg) _____

23. Have you ever grown/been growing crops and vegetables using BSF Frass?

Yes =1 No = 0

24. If yes, which crops and vegetables have been grown using BSF frass

Crops: _____

Vegetables (*from the above ranked*) _____

25. For those farmers who do not practice BSF, would you wish to adopt the innovation? **YES = 1, NO = 0**

26. For those farmers practicing BSF, would you like to adopt PPT technology? **YES = 1 NO = 0**

27. For those famers practicing BSF, would you like to adopt VIPPT? **YES =1, NO = 0**

28. What did you do with crop residues from previous season on your farm?

- 1) Retained in the farm, 5) Used for making compost,
- 2) Burned down, 6) Sold,
- 3) Used as fuel (e.g., firewood) 7) Used as construction material,
- 4) Fed to livestock, 8) Others, specify _____

Crop management information: Pesticides, Fertilizer and Manure Use in Main season 2022 -2023

29. Did you use pesticides during crop production period? 1=Yes 0=N0

- a. If yes, give names of the pesticide _____
- b. If Yes,How much did it cost Ksh. _____

30. Did you use herbicides during crop production period? 1=Yes 0=N0

- a. If yes,How much did it cost Ksh. _____

31. In the past planting season, did you use manure or fertilizer on the farm?

Manure [] Compost [] Fertilizer [] All []

32. Which planting fertilizer was used on the farm?

- i. DAP
- ii. Urea
- iii. NPK
- iv. NPK + micronutrients (Boron, Zinc, e.t.c)
- v. CAN



IKEA Foundation

vi. Others (specify)

a. How much did it cost (KSh) _____



3. Livestock products and utilization by famers

Livestock kept	Product	Did household produce [Product]? 1=yes; 0=no	Unit1=Litre2=Kg 3=pieces 4=Other (specify	Amount produced in last year (per day)	Quantity consumed home in last year (per day)	Quantity sold in last year (per day)	Average price (specify currency)
Cow							
Sheep							
Goat							
Chicken							
Pigs							
Donkey							
Rabbit							
Others							
Others							

33. Climate Change and Variability



IKEA Foundation



Enumerator read: **Now I would wish to ask about the climate variability that the household might have observed**

In the past 2 years, have you experienced any changes in climate (such as season onset, rainfall scarcity or temperature increase (prolonged drought)) or climate-related factors (such as pests, weeds or diseases) that may have affected your farm? (**Multiple responses**)

0=No;

1=Yes (**H1**)

Changes	Did you experience? 0=No; 1=Yes	Specify the change if YES in H2
H1	H2	H3
1 = Changes in seasonal onset (specify...)		1=Late onset 2=Early onset
2=Changes in length of rainy seasons (specify...)		1=Shorter 2=Longer
3 = More rainfall than expected		
4 = Less rainfall than expected		
5 = Higher rainfall variability		
6 = Higher temperature than expected		
7 = Lower temperature than expected		
8 = More frequent extreme events (floods)		
9= More frequent extreme events/prolonged droughts		
10 = Higher pest and disease invasion/attack		
11=Emergence of new pests and diseases		
11 = Higher weed pressure (more weeds)		
12 = New weeds (not previously prevalent in region)		
13 = Other, specify...		



IKEA Foundation

