This questionnaire refers only to maize production in flat to gently sloping areas. Maize grown in hilly areas is not covered in this questionnaire.

Information requirement for developing fertilizer recommendation for maize using the *Nutrient Expert for Maize* (Philippines) software

SETTINGS – Site Profile

Region: _____ *Province:* _____ *Municipality:* _____

Barangay: _____ *Var. type:* [_] Hybrid [_] OPV [_] Traditional

Maize Growing Season: [_] dry [_] wet

NE User's Name: _____ *NE User's contact (phone/email):* _____

Site Name: _____

A. Current Nutrient Management Practice

Name of Farmer and/or Location: _____

Field size: _____ [_] ha [_] sqm

1. What is the yield of maize for a typical season in the past 3 to 5 years? Provide total amount of harvested grain per hectare (measured at shelling).

   Weight of harvest: _____ [_] cavan [_] sack [_] ton

   1 local unit = _____*kg*

   Moisture content (if known): _____ (%)

2. How much fertilizer does the farmer apply to their maize field? Specify no. of fertilizer application, timing or schedule of each application (i.e., days after planting), fertilizer source and amount applied.

Inorganic fertilizer

Split Application Number	**Days after planting (DAP)**	**Fertilizer name** (e.g., urea, 14-14-14, etc.)	**Number of bags per ha**
1			
2			
3			
4			

Note: 1 bag of fertilizer = 50 kg

Organic fertilizer (e.g., chicken manure)

Organic fertilizer source	Weight of full bag (kg)	Number of bags per ha

Please indicate NPK content of organic fertilizer, if known:

N: _____ % P_2O_5: _____ % K_2O: _____ %

B. Planting Density

1. Farmer's current planting density:

   a. What is the distance between rows? ____ (cm)

   b. What is the distance between plants in a row? _____ (cm)

   c. How many plants per hill? [_] 1 [_] 2

C. SSNM Rates

1. Estimate attainable yield

NOTE: Always click the "ESTIMATE" button

1.1. Maize growing season:

[_] dry [_] wet

1.2. Water availability source

If **dry season**: [_] irrigated [_] rainfed

If **wet season**: [_] fully rainfed [_] rainfed with supplemental irrigation

1.3. Flooding problems

[_] Often [_] Seldom [_] Never

(Often = 2 or 3 out of 5 times; Seldom = 1 out of 5 times)

1.4. Drought problems

[_] Often [_] Seldom [_] Never

(Often = 2 or 3 out of 5 times; Seldom = 1 of 5 times)

1.5. Soil depth (from surface to rock layer or parent material)

[_] deep (50 cm or more) [_] shallow (less than 50 cm)

1.6. Presence of soil-related problems or constraints (note: answer can be more than one)

[_] acidity - Soil pH: ____ (If pH is below 5.3, liming is recommended)

Deficiency of secondary nutrients and micronutrients

[_] Boron [_] Copper [_] Iron [_] Manganese [_] Magnesium [_] Zinc

Problem soils

[_] sloping (>8% slope) [_] saline soils [_] acid sulfate soils [_] degraded soils

[_] No presence of soil-related problems

2. What do the farmers do with maize residues after harvest?

[_] Remove all the above ground residues from the field

[_] Retain stover in the field and burn

[_] Retain stover in the field and incorporate

[_] Compost stover for incorporation to next crop

3. Will the farmer apply Organic Fertilizer?

[_] YES [_] NO

If the answer is YES,

Organic fertilizer source	**Weight of full bag (kg)**	**Number of bags per ha**

4. Crop grown before the selected season for maize (i.e., crop in the previous season)

Note: Please click the "YES" button

4.1. **Previous** crop grown on the same field in the previous season:

[_] maize [_] rice [_] cassava [_] Others: _____

4.2. Water availability (source of water):

[_] irrigated [_] fully rainfed [_] rainfed with supplemental irrigation

4.3. Yield of the **previous** crop:

Weight of harvest: _____ [_] cavan [_] sack [_] ton

Moisture content (if known): _____ %

(Note: Weight of harvest for the same field size specified in Current NM Practice)

4.4. Residue management of the **previous** season:

Previous Crop *(choose one only)*	**Residue Management**
[_] Maize	[_] Removed all above ground residues from the field
	[_] Retained stover in field for incorporation to next crop
	[_] Retained stover in field and burned
	[_] Composted stover for incorporation to next crop
[_] Rice	[_] Removed all above ground residues from the field
	[_] Retained stubble but removed straw from field
	[_] Returned straw from pile after threshing and spread in field before the next season
[_] Other (specify) _____	[_] Removed all above ground residues from field
	[_] Retained crop residues for incorporation to next crop
[_] Fallow	

4.5. How much fertilizer did the farmer apply to their previous crop?

Inorganic fertilizer

Fertilizer name (e.g., urea, 14-14-14, etc.)	**Number of bags applied (for the field size specified in Current NM Practice)**

Organic fertilizer (e.g., chicken manure)

Organic fertilizer source	Weight of full bag (kg)	Number of bags per field
Vermicast		
Chicken Manure		

Please indicate NPK content of organic fertilizer, if known:

N: _____ % P_2O_5: _____ % K_2O: _____ %

5. Estimate yield response to N, P, and K

Note: Please click "ESTIMATE YIELD RESPONSE TO FERTILIZER" button

5.1. Soil Type: [_] CLAYEY [_] LOAMY [_] SANDY

5.2. Soil color and organic matter content:

[_] reddish or yellowish color

[_] grayish or brownish

[_] very dark soil with high organic matter and high fertility

5.3. Application of manure and/or compost:

[_] YES [_] NO

5.3.a. If Yes, since when have farmers been applying manure/compost?

[_] 3 years or less [_] more than 3 years

5.3.b. If Yes, what is the rate of manure or compost that farmers apply?

[_] less than 2 t/ha [_] 2 t/ha or more

5.4. Has your soil been analyzed for P and K in the past 3-5 years?

[_] Yes [_] No

5.4.a. If yes, choose the level of soil **OM**:

[_] low [_] medium [_] high

5.4.b. If yes, choose the level of soil **P**:

[_] low [_] medium [_] high

5.4.c. If yes, choose the level of soil **K**:

[_] deficient [_] sufficient

5.5. Is your soil known to be of volcanic origin and contain allophone?

[_] Yes [_] No

6. Will you apply Bio-N?

[_] Yes [_] No

D. Simple Profit Analysis

1. Seed rate: _____ kg/ha
2. Cost of seeds: PHP _____ /kg
2. Farm gate price of corn: PHP _____ /kg
3. Local std. moisture content: ___14___ %
4. Cost of Bio-N: PHP _____

E. Net Profit Analysis

Labor Cost: PHP_____ /manday

1. Land Preparation
    1.a. Method: [_] man-animal [_] mechanized
    1.b. What is the total cost of land preparation for the entire field? PHP_____ /field
2. Planting
    2.a. Method: [_] manual [_] mechanized
    2.b. What is the total cost of planting the entire field? PHP_____ /field
3. Crop cultivation (Hilling up, etc.)
    3.a. What ids the total cost of crop cultivation practices for the entire field?
    PHP_____ /field
4. Weed Management
    4.a. Method: [_] manual weeding [_] use of herbicides
    4.b. What is the total cost (labor cost and material
    inputs) of weed management for the entire field? PHP_____ /field
5. Pest and Disease Management
    5.a. Method: [_] use of biological control [_] use of agrichemicals
    5.b. What is the total cost (labor cost and material input) of pest and
    disease management for the entire field? PHP_____ /field
6. Fertilizer Application
    6.a. How many man-days are needed in **one application** of
    inorganic fertilizers for the entire field? _____ manday/field
    6.b. If organic fertilizer is applied, how many man-days are needed per ton of organics?
    _____ manday/ton

7. Harvest

    7.a. Mode of payment [_] wages [_] harvest sharing

    7.b.1. If **wages**, how many man-days are needed to harvest the entire field?

    _____man-day/field

    7.b.2. If **harvest sharing**, how many percent goes to the harvester?

    _____%

8. Post-harvest operations (e.g., hauling, drying, shelling, etc.)

    8.a. What is the cost of post-harvest operations per ton of harvest?

    PHP _____/ton

9. Irrigation and Land Rental

    9.a. Cost of irrigation for the entire field: PHP_____/field

    9.b. Land rental (if any) for the entire field: PHP_____/field

    9.c. Interests on loans for capital, if any: PHP_____/field

10. Other operations and inputs

    10.a. Costs of other field inputs: PHP_____/field

    10.b. Costs of other field operations: PHP_____/field