Summary
This series of six workshops covers a range of topics related to soil quality and fertility management. For example, multiple workshops focus on learning plant families as a basis for understanding the importance of crop rotation and soil management planning. Other sessions introduce the concepts of crop rotation, soil nutrients, and teach the importance of giving soils an opportunity to “rest” in crop rotation planning. Most of the workshops are appropriate for beginning- to intermediate-level farmers.

Who made this guide?
These teaching resources were developed by the International Rescue Committee in Charlottesville and enhanced in collaboration with the Institute for Social and Economic Development (ISED). From 2015-2017, ISED partnered with refugee farmer training programs throughout the country to support the design of new and shareable teaching resources for culturally and linguistically diverse farmers. To access the whole list of newly developed teaching resources for refugee farmer training program, follow this link to New Entry’s ‘New American Resource Library’. For more in-depth explanations of the teaching approaches and activities used in these materials, you can refer to this Refugee Farmer Teaching Handbook.
### Audience (TA or Tot)
TA (Technical Assistance for farmers)

### Language and Literacy Level
Most are appropriate for those with low/no literacy

### Farmer Experience
Ranges from beginning to intermediate

### Pre-Prerequisites
None

### Region or Climate
Any

### Program Structure
Any

### Season
Any

### Time
Sessions range from 20 minutes to 1 hour

### Staff and Interpreters

### Additional Supplies Needed
Multiple lessons use pictures of vegetables or paper printed with vegetable names, and a white/chalk board

### Background Material

#### TEACHING MATERIALS INCLUDED

1. **Crop Rotation – Creating a Bed Map (30 minutes)**
   Main message: Crops should be rotated so that the same family is not planted in the same bed as the previous year.

2. **Heavy Lifting – Rest and Recuperation for your Soil (30 – 60 minutes)**
   Main message: Don’t plant too many things, too frequently in a bed without letting it rest and replenish its soil fertility.

3. **Of Beads and Soil Nutrients (30 – 60 minutes)**
   Main message: Rotate crops so different crops take different things out of the soil.

4. **Categorization: Heavy Feeders, Light Feeders, Givers (20 minutes)**
   Main message: Different plants take different nutrients out of the soil. This is important to know to manage soil fertility.

5. **Plant Families: Find your Family Member (30 – 45 minutes)**
   Main message: Plants come in families like people come in families, and share some similar characteristics.

6. **Plant Families: Pin the Vegetable on the Family (20 minutes)**
   Main message: Plants come in families like people come in families, and share some similar characteristics.

#### CORE SKILLS IN THESE LESSONS

- Crop rotation
- Decision making/crop planning
- Basic colors in English
- Counting in English
- Reading a table
SUGGESTED ACTIVITIES AND LEARNING OBJECTIVES

**Crop Rotation – Creating a Bed Map**
- Farmers will create a bed map to follow for the season.
  - Learning objectives:
    - Understand why it is important to rotate crops.
    - Know that crops are members of different families.

**Heavy Lifting – Rest and Recuperation for your Soil**
- Farmers will complete a weight lifting activity to understand how different crops affect soil fertility.
  - Learning objectives:
    - Understand that their soil/beds can get tired just like muscles can get tired from being used too much.
    - Understand that there is an impact on their soil fertility if they plant multiple things in one bed throughout the season.
    - Understand that decisions they make in how they treat the soil and what they put into it will directly affect the output of the soil in production of vegetables.

**Of Beads and Soil Nutrients**
- Farmers will complete an activity using colored beads representing key soil nutrients to learn how different crops uptake nutrients from the soil.
  - Learning objectives:
    - Understand that crops take out different nutrients from the soil.
    - Know which crops take the most nutrients out of the soil.
    - Understand how rotating crops can positively influence soil fertility.
    - Be reminded of the term heavy feeder, light feeder or giver.

**Categorization: Heavy Feeders, Light Feeders, Givers**
- In groups, farmers will practice categorizing crops correctly on a board/wall in front of the rest of the class.
  - Learning objectives:
    - Practice using a table layout.
    - Know different crops use up different amounts of nutrients from the soil.
    - Gain exposure to the concept of plant families.
**Plant Families: Find your Family Member**
- In this activity, farmers are assigned crops in different families and asked to find related people/vegetables in the room.
- Learning objectives:
  - Know that plants come in families with some similar characteristics.
  - Know 3-4 crops that are related to each other.
  - Understand why knowing which plants are in the same family might be important for crop planning and soil fertility management.

**Plant Families: Pin the Vegetable on the Family**
- In teams, farmers will practice categorizing crops by family on a board/wall in front of the room.
- Learning objectives:
  - Practice categorizing crops into correct plant families.
  - Know 3-4 crops that are related to each other.