



TAKING CARE OF OUR SOIL

Created by Global Gardens Boise, ID

Summary

This is a PowerPoint presentation introducing some basic concepts related to soil fertility and fertilizers. At Global Gardens, we have a number of challenges related to soil fertility. This ppt provides an overview of what is in soil and how it becomes depleted over time. The presentation then reviews what cover cropping and fertilization methods can be used to keep soil fertile and healthy. Options for hands-on activities and engagement to add to the ppt are below.

Who made this guide?

This teaching resource was developed by Global Gardens 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	Fairly advanced, could be adapted to be more visual or just provide guidance for discussion.
Farmer Experience	Any
Pre-Requisites	None
Region or Climate	Made for Idaho, adaptable for anywhere
Program Structure	Farm incubator program for refugee farmers
Season	We present this during winter classes
Time	1 hour
Staff and Interpreters	One staff, interpreters as needed
Additional Supplies Needed	PowerPoint setup. Add hands on materials such as a variety of soil samples, fertilizer and cover crop seed samples.
Background Material	Trainer should have a basic knowledge of soil science.

TEACHING MATERIALS INCLUDED

1. Power point "Taking Care of Our Soil"



CORE SKILLS IN THIS LESSON

- Adding amendments
- Cover crop identification and application
- Crop rotation planning
- Soil texture types
- Fertilizer usage
- Cover crop types
- Cover crop ID & management
- Mapping core skill

SUGGESTED TEACHING METHODS

Learning objectives

1. Understand that living soil contains many nutrients, micronutrients, and microorganisms that help plants grow.
2. Understand that these things are depleted over time and that farmers must add them back into the soil.
3. Understand ways to add nutrients and organic matter to the soil, including composting, use of cover crops, and use of other kinds of organic fertilizer.
4. Understand the timing involved in adding a cover crop rotation to your farm.

Peer teaching

- It is mentioned that farmers from different parts of the world with different soils may have a harder time understanding the need to invest in these practices. Therefore, if you have a farmer from the same cultural background who has been using some of these practices, it would be ideal to have this person teach and explain the importance of using fertilizer and cover crops. If they have a plot, they could show where and how they are using these practices.

Mapping

- You could add in a mapping activity to help farmers plan a cover cropping or crop rotation schedule. Even if they are not using the plan themselves, they can demonstrate their understanding by moving pictures of cover crops and different crops around on some 'maps' intended to represent their plot through a few different seasons (as represented in slides 41-47)

Reflection questions

- You can start off by asking questions: "What makes good soil?" "Has anyone used fertilizers before?" "Has anyone used cover cropping before?" You can then end the class in a similar way, as the ppt suggests: "What will you do differently?" "What new practices do you want to try this coming season?"

Hands on demonstration

- If in the field, farmers can practice hand spreading and using the backpack spreader in order to gain familiarity with these techniques. As mentioned, bringing in different soil types and touching clay heavy vs. sand heavy soil would be a great addition to the class.

TEACHING TIPS AND VARIATIONS

- The presentation could use some improvements in making it more visual and adding hands-on components, but is a good starting point for basic info to be covered. The presentation initially came from University of Idaho Extension and has been adapted by us.
- As a hand on component, I have used soil samples including soil from their gardens, sand/silt/clay comparison, commercially available compost, and fertilizer packages that give percentages of NPK. A cover crop seed comparison would also be a good hands-on activity.
- In the field, we follow up with cover crop demonstration plots. We still have a very hard time getting farmers to plan for cover crops and are taking spaces out of production on a rotating basis to allow for cover cropping.
- Farmers who come from Africa may be used to well fertilized soil and don't have a lot of experience using fertilizers. Therefore, it can be difficult to explain the need to invest the money and time for fertilizer. Also, their plots are relatively small and the length of our growing season is limited, so taking space out of production to put into cover crops is a challenge.