LESSON PLAN: USE OF COVER CROPS IN COFFEE FARMING

TOTAL TIME: 1 hour 30 minutes

TRAINEES: Farmers

TRAINER: Farmer Trainer

VENUE: Farm / School

OBJECTIVES

LESSON OBJECTIVES

- OBJECTIVE 1: Explain what cover crops are and their importance in coffee farming.
- OBJECTIVE 2: Identify types of cover crops suitable for different regions.
- OBJECTIVE 3: Explain the planting time and management practices of cover crops.

MATERIALS

- Cover crop seeds
- Coffee farm for practical planting demonstration

Time	Content Outline

5 Min	**OPENING:**
	INTRODUCTIONS:
	    o Instructor
	    o Participants
	    o Guests
	
	REVIEW the objectives of the lesson:
	    ▪ We are going to learn how to plant a coffee tree and practice planting.
	
	ACTIVITY: Energizer
	Choose an energizer which is appropriate for your audience.

15 Min	**OBJECTIVE 1: Explain what cover crops are and their importance in coffee farming**

	Ask: What are cover crops? What is their importance in coffee farming?
	Expected answers:
	Cover crops are plants grown mainly to:
	- protect the soil, - improve soil fertility, - reduce soil erosion, - rather than for harvesting.
	In coffee farming, they help to:
	- conserve soil, - reduce weeds, - increase nitrogen in the soil.
30 min	**OBJECTIVE 2: Explain types of cover crops suitable for different areas and their characteristics**
	Explain: Types of cover crops suitable for different regions:

Cover crop	District
Arikisi pintoi	Rwamagana, Gatsibo, Kamonyi
Mucuna	Bugesera, Kayonza, Kirehe, Nyagatare, Rwamagana, gatsibo, Kamonyi
Inkori	Bugesera, Kayonza, Kirehe, Nyagatare
Desmodiyumu.	Rwamagana, Gatsibo, Kamonyi
Mimoza	Huye, Nyanza, Gisagara
Veci	Nyamasheke, Rutsiro, Rubavu, Burera, Gakenhe, Rurindo

Explain characteristics of some cover crops

	Arachis pintoi • Perennial plant • Good soil cover • Fixes nitrogen from the air • Grows well under shade **Vetch (Veci)** • Creeping plant (1–2 m long) • Excellent soil cover • Adds nitrogen (100–150 kg/ha) • Reduces harmful soil nematodes **Mimosa** • Long-lasting plant • Can compete with coffee for nutrients • Should be planted with adequate spacing **Desmodium** • Covers more than 80% of soil surface • Reduces weeds **Mucuna** • Covers soil within 6–8 weeks • Nitrogen fixation: 60–150 kg/ha • Requires monitoring because it climbs coffee trees **Inkori** • Fast growing • Suppresses weeds and erosion • Adds nitrogen (60–90 kg/ha)
20 Min	**OBJECTIVE 3: Explain how to plant and manage cover crops** **Ask:** How should cover crops be planted?

	Expected answers: • Prepare the soil properly • Broadcast seeds evenly • Plant between coffee rows • Avoid deep cultivation near coffee roots **Ask:** What is the best time to plant cover crops? Why? **Note:** Discuss with trainees the best planting period. **Expected answers:** • At the beginning of the rainy season so they germinate quickly and cover the soil • During establishment of young coffee because young coffee has small canopies and soil needs protection from erosion **Explain seed rate examples:** • Mucuna: 25–30 kg/ha • Arachis pintoi: 5–10 kg/ha **Ask:** How should cover crops be managed so they do not affect coffee trees? **Expected answers:** • Monitor growth to prevent overgrowth • Cut or control them when necessary • Maintain proper spacing between cover crops and coffee trees
10 Min	**CONCLUSION** ▪ Review key lessons learned. ▪ What are the benefits of using cover crop in coffee plantation? ▪ How to manage cover crop? **QUESTIONS AND ANSWERS**

	NEXT STEPS
	• Thank farmers for participating in the training. • Together, agree on the date and time for the next P2P farm training session.