

CBI Uganda Climate-Smart Coffee Project

Farmer Training Module – Manure/Compost Application

Regions: Buganda (Robusta) • Western (Arabica)

Delivered by: extension agents, lead/peer farmers, or SME trainers/agronomists

August 2026

CBI



Transforming Trade Together

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A. Module Snapshot

Item	Detail
Practice	Manure/ compost application. Preparing, measuring, and incorporating fully decomposed organic manure into the soil around a coffee tree.
Core message	Manure/ compost is food for your soil. It provides a complete, balanced meal of nitrogen, phosphorus, and potassium that feeds the soil bacteria, improves water retention, and thickens root networks. Coffee trees fed with proper manure yield large and heavy cherries that command premium prices.
Session length	~60 minutes in the field, at a real coffee garden.
Deliverer	Agronomist, Extension agent, lead/ peer farmer, or SME trainer.
Materials	1. A hoe and a 20-litre basin (the tools needed). 2. Well-decomposed manure or /compost pre-gathered. 3. Two cherries to cut (big vs. small) and a knife. 4. Illustrated Poster(s) 5. The Uganda Sustainable Coffee Toolkit Sustainability Charts 3 ("Feed the Tree Well"), Charts 16b - Protect and Conserve your Soils, and Chart 11b - the Business Case 6. Flip chart or paper with markers or pens
Key visual	Stand between a well-fed tree and a hungry tree — or use the Manure poster to illustrate best practice versus doing nothing.
Commitment	VSLA-embedded commitment (preferred) AND/OR written pledge card (see Section F).

B. Introduction / Overview

When we invest in climate-smart coffee, everyone wins.

- For farmers, it stops missed income by locking in soil moisture and nutrients and boosting productivity.
- For SMEs and exporters, it secures a loyal, climate-resilient supply chain with predictable volumes and high-quality beans.
- For international buyers, it guarantees a reliable stream of fully traceable, EU-compliant coffee that meets consumer demand.

True sustainability means connecting the farmer's profitability directly to the security of the global market.

This training module focuses on manure and compost application - one of the most income-relevant and climate-smart practices a farmer can adopt.

- Coffee is a "heavy feeder": every harvest carries nutrients out of the soil, so they must be actively put back.
- A well fed tree grows strong, resists disease and drought, flowers heavily, and produces many big berries with a big bean inside, meaning more weight and a better grade at the weighing scale, and higher farmer income.

This training content is aligned with the Uganda Sustainable Coffee Toolkit and Charts and the MAAIF Robusta and Arabica Technical Handbooks.

Note for facilitators — lead with income, not agronomy

- Lead with: feed the soil → strong tree → big, heavy berries → more weight + better grade at the scale → farmer income.
- These are the benefits that drive a farmer's decision.
- Then bring in: the nutrient detail (nitrogen, phosphorus, potassium), disease resistance, and drought protection as supporting points — not the opening.
- Keep the language visual; the poster carries the technical list.

This training module has been designed with a "missed income" framework. The missed income concept was co-created with coffee farmers where farmers revealed that their primary motivations are concrete household goals like school fees and financial independence. While farmers traditionally viewed mulching only as weed control, reframing it around how much money they quietly lose each season—through the loss of topsoil and moisture in their soils, resulting in poor quality or low cherry weight—triggered a powerful shift from apathy to urgency. Grounded in behavioural economics and Social and Behaviour Change (SBC) principles, this approach leverages loss aversion: the reality that people are twice as motivated to avoid a loss as they are to achieve a gain. By framing farms without manure/ compost as "income walking off the land," the training makes the invisible, cumulative cost of inaction feel immediate, personal, and emotionally proximate, capturing farmer attention far better than standard agronomic best practices.

Farmer Spotlight — [Name], [Village, Subcounty, District]

What this farmer did: [manure/compost practice adopted]

Result: [harvest-weight comparison, income change, or soil-health evidence]

SME homework: Identify one local manure champion per region. Prepare a one-page spotlight (photo + 3 sentences) to share during training. Optional, but significantly boosts credibility.

C. Facilitator session plan: the 5-part arc (2 hours)

Part 1: Reflect (10 min)

Stand the group between a well-fed tree and a weak, hungry tree (or hold up the Manure poster).

Let farmers answer first; do not correct yet.

Ask

- o What difference did you see between the two farmers/their trees—the leaves, the flowers, the berries, and the size?
- o Who do you think earned more? Why?
- o If we picked from both trees, which one fills the basin faster? Whose coffee weighs more for the buyer?
- o Have you ever opened a small berry and found a small bean inside? What causes that?
- o In your village, whose coffee produces well year after year, and what do they do to their soil?

Peer-farmer version (If the session is facilitated by a lead farmer)

- Open with your own story
- Show your own trees before and after you started feeding the soil and the change in your harvest weight at the scale.

Part 2: Discussion on benefits, myths & gender (20 min)

Ask:

- What stops you from using manure or compost?
- What have you heard about it?

Let the myths come out, then answer each one a farmer raises by name. (Full responses in the appendix.)

Then state the poster's benefits plainly:

- o Manure feeds the soil with nutrients (nitrogen, phosphorus, and potassium).
- o It protects trees in drought by holding moisture.
- o It improves the tree's ability to fight disease.
- o It reduces the cost of fertilizers over time.

Gender triggers

Ask the group questions first, then reinforce:

- o For the men here:
- o What would it mean to have strong plants that resist disease, flower heavily, and produce consistently season after season?
- o For the women here:
- o When berries are small, what happens to the weight on the scale and the family's income?
- o What would more and bigger berries mean for you?
- o For youth
- o What would more and bigger berries mean for you?
- o What would more income mean to you?

Reinforce after the group responds

- o Men: disease/pest resistance, strong plants, good aroma, consistent premium production, and more flowers.

- o Women: More and bigger berries mean protected income: “Small berries mean a small bean weight at the scale.
- o Youth: More and bigger berries mean increased and protected income.

Part 3: Missed-income comparison (20 min)

Hold up the illustrated story poster and walk through the two farmers’ experiences.

Run the interactive income calculation with a lead farmer from the group.

Simple math

1 acre of coffee = 450 trees

For each ecological zone, we anticipate 2 seasons.

- Season 1 = 2 Kgs per tree of FAQ
- Season 2 = 5 kgs per tree of FAQ

If a farmer has 2 acres

Their average income is (Number of trees x average kgs per tree x Price per kg) x 2 acres

- $(450 \times 3.5 \times 12000) \times 2 = \text{UGX } 37,800,000$

Ask the farmers

- Who has 2 acres?
- How much are they making at the end of every season?
- How much money are they leaving on the table? Each year
- How much have they left on the table for a 10 year period?

Then the poster’s link question and the goal question.

Ask

- o If feeding your soil gave you a heavier, better-grade harvest, what is the one thing that extra money would go toward?

Part 4: Demonstrate + practise (30 min)

Before demonstrating

Ask

- What manure or compost do you have available on your farm or nearby?”

Let farmers name what they have first, then confirm or supplement from the approved list.

State the rules aloud first (Annex 1): the rate (one 20-litre basin / 3–5 kg per tree), the stem clearance (about one foot from the stem), and never against the trunk.

Demonstrate at a real tree, narrating each step:

- a. Pull the mulch back from the stem; check the soil is moist.
- b. Remove the weeds around the tree.
- c. Measure one 20-litre basin (3–5 kg) of well-decomposed manure/compost, “one basin, one tree.”
- d. Form a ring around the tree, 1–2 inches deep, about one foot from the stem, out to the leaf edge (canopy spread).
- e. Mix it lightly into the topsoil with the hoe.
- f. Never touch the trunk; it causes collar rot and attracts ants.
- g. Replace the mulch over the top to hold moisture.

Farmers practise in pairs: each pair feeds one tree.

Agent checks 3 points and corrects on the tree:

- Is it well-decomposed (dark, soil-like — not fresh dung)?
- Is the ring about one foot off the stem, not against the trunk?
- Was it mixed into the topsoil and the mulch replaced?

Common mistakes to watch:

- fresh/un-rotted manure,
- piled against the trunk;
- left sitting on top and not incorporated;
- mulch not replaced.

Note: Peer/farmer version: demonstrate on the champion's own garden, referencing last season's harvest-weight difference to link back to the missed-income framing.

Part 5: Commit and agree to monitoring (15 min)

This is a distinct step, not part of the demonstration. Every farmer leaves with a specific commitment.

- Each farmer states (or writes) how many trees they will feed; how much manure/compost (basins); which type (own farmyard/compost/exchange); and by what date in the dry-season feeding window.
- Agree as a group: who will ask, "Who has fed their trees?"
- The facilitator records commitments and sets the follow-up date.

Bonus session: Questions and Answers (20 min)

In this session, the farmers can engage with the facilitators with their questions about any other CSC practices.

End of Session: "Feed your soil, and it will feed your future."

Annexes

1. Technical must-knows (MAAIF-aligned)

Remember the line:

“Well-rotted → one basin per tree → ring one foot off the stem → mix it in → never on the trunk → cover with mulch → feed in the dry season.”

Must-know	Rule of thumb	Visual / demo cue
What to use	Well-decomposed organic manure or compost. Strength is in the mixture—animal manure + green and dry plant matter + household waste. Must be fully rotted! Use a fork hoe to shovel.	Hold up dark, soil-like rotted manure beside a handful of fresh dung. Ask: “Which one is ready?”
Rate	About one 6-12 kg basin per established tree: “one basin, one tree.” Note: Agronomist/Extension Agent to confirm; may differ for Robusta vs. Arabica and by tree age.	Show the filled 6-12 kg basin at the demo tree.
Stem clearance	Apply in a ring about one foot (≥ 10 cm) from the stem—never against the trunk. Touching the trunk causes collar rot and attracts ants.	Show one forearm’s length from the stem. The Uganda Sustainable Coffee Toolkit “Feed the Tree Well” chart 3 illustrates placement.
Depth & ring	Form a ring 1 inch deep out to the leaf edge (canopy spread). Shoveling with a fork hoe.	Trace the ring on the soil with the hoe before applying.
Incorporate	Cover the manure with the topsoil; don’t leave it sitting on top. Then replace the mulch to hold moisture.	Cover the topsoil gently with the hoe; lay mulch back over.
Timing	Apply prior to the dry season or the onset of the rainy season. Note: Agronomist/Extension Agent to confirm exact months per district (Buganda and Western).	Tie to the local coffee/rain calendar.
Why feed at all	Coffee is a heavy feeder: every harvest carries nutrients out of the soil, so they must be put back. Monoculture depletes soil fastest.	Point to a tired, low-yielding tree vs. a fed one. Add photos that demonstrate this clearly.
What NOT to do	Don’t use fresh/unrotted manure. Don’t pile it against the trunk. Don’t burn rubbish to “make manure.”	Show a manure-on-trunk error, then correct it.
Application interval	At least once a year depending on the availability	

Types of manure & fertiliser

Selection depends on the soil’s nutrient status, the crop stage, and management practices.

Ask farmers what they have first, then match from this list:

- o Organic: crop residues such as maize stalks, rich in nitrogen, phosphorus, and potassium.
- o Farmyard: decomposed animal manure from cattle, chickens, pigs, sheep, and rabbits; varying nutrient content; especially good for nitrogen.
- o Compost: decomposed plant and animal waste; builds organic matter and releases nutrients slowly. Made by heap or pit composting.
- o Commercial Organic: ready-to-use fertilizers supplying macro- and micronutrients (e.g., organic compounds and seaweed-based fertilizers).
- o Inorganic (kept for completeness; the session and demo center on organic manure/compost): urea (46% N, rapid nitrogen), superphosphates (SSP, CSP, TSP—phosphorus), and NPK compounds (balanced); other straight fertilizers—ammonium nitrate and ammonium sulfate.

Note:

7. Always check with the latest recommendations by MAAIF or NaCORI.
8. Ensure soil testing is conducted by qualified suppliers before adding manure: Check with SME for recommendations.

Best-practice tip:

- Good compost = a mixture, well-decomposed: animal/farmyard manure (cow, pig, chicken, goat). + green plant matter + dry plant matter + household waste.
- Weak compost comes from poor mixing.
- Made in a heap or a pit.
- Nutrient value depends on the inputs.

2. Commitment & follow-up

Commitment is a distinct step in the session (Part 5). During this engagement, utilize community structures, i.e., lead farmers, group leaders, internal inspectors, extension farmers, and cooperative agents to get commitments from the farmers.

Follow-up visit checklist

- Has manure/compost been applied to the pledged trees?
- Was it well-decomposed (dark, soil-like)?
- Is the ring about one foot off the stem (not on the trunk)?
- Was it mixed into the topsoil and the mulch replaced?
- Was roughly one basin (3–5 kg) per tree used?
- Any myths or barriers encountered?
- Next follow-up date agreed upon?

3. Reinforcement kit

3.1. Manure illustrative story poster or video

Fed tree ✓	Hungry tree ✗
Strong tree, resists disease and drought	Weak tree, hit hard by pests and dry spells
Flowers heavily	Few flowers
Many big, heavy berries; big bean inside	Small, few berries, small bean inside
Heavyweight + better grade at the scale	Lightweight + lower grade = less money
Soil fertility is maintained, with lower input costs over time	Soil starves, costs rise, yield falls quietly

Poster integration tip: Use together with the Trenching and Mulching illustrated posters to show how the three practices complement each other. Use alongside the Uganda Sustainable Coffee Toolkit Charts.

Note: Confirm seasonal variations in the relevant district, as timing differs in the different agroecological coffee-growing zones across Uganda.

4. Trainer preparation notes

This section is trainer preparation material, not plenary content.

Study Annex 4 before your session so you can answer objections confidently as they arise in Part 1-2. This content is best covered in a Trainer-of-Trainers (ToT) session, not read aloud to farmers.

4.1. Barrier and enabler responses (COM-B framework)

The COM-B framework organizes barriers into three domains:

- o Motivation: beliefs about whether feeding the soil is worth it (dirty, soil already fertile, results too slow, pests).
- o Capability: knowledge and skill (correct rate, decomposition, placement, composting).
- o Opportunity: availability of manure, labour, and tools.

Barrier (what farmers say)	COM-B domain	Facilitator response
"Manure is dirty/unpleasant to handle."	Motivation	Use it when it is fully decomposed, when it is crumbly and looks and smells like dark soil. You use a basin and a hoe so you barely touch it. The reward is worth it because it gives you bigger, heavier cherries.
"My soil is already fertile."	Motivation	Coffee is a heavy feeder; every harvest takes nutrients out of the soil. Even good soil gets tired. Feeding adds back nutrients lost and nourishes the coffee grown in it. Point to the cherry-weight difference.
"Results take too long."	Motivation	Investing today brings gains next season: healthy leaves, more flowers. Putting back into the soil today will give you bigger returns next season.
"Manure attracts pests."	Motivation	Raw manure is the problem, but fully "cooked" (or decomposed) manure is a feast for the soil and boosts natural predators. Use well-decomposed manure, work it into the soil, and cover with mulch. Refer hard cases to the agronomist. (Named in Masaka.)
"It is too labour-intensive."	Capability / Opportunity	Start with the most important trees - targeted feeding - instead of trying to manure the entire farm at once, focus on 50 to 100 of your weakest or newly pruned trees each season to reduce the labour load into manageable steps. Create the compost as a VSLA group and feed each other's gardens — group work cuts individual time. One basin, one tree, mixed in — that's the job.
"Compost has few nutrients."	Capability	Weak compost comes from poor mixing. Good compost mixes animal manure + green + dry plant matter + household biodegradable waste, well-rotted — the strength is in the mixture. Good composting traps moisture, unlocks hidden soil nutrients, and builds a lasting foundation for better harvests!

Barrier (what farmers say)	COM-B domain	Facilitator response
"I have no livestock / no manure."	Opportunity	Make compost from farm and household biodegradable waste; use crop residues (such as banana trash and coffee husks) right inside the garden; work in a group to capitalise on your neighbours' biodegradable waste collection; or set up a manure exchange with a livestock-keeping neighbour.

Note: Consider a dedicated Trainer of Trainers (ToT) session to build agents' confidence in handling barriers and objections. Agents who have practised responses out loud perform significantly better in the field than those who have only read a table.

4.3. Adaptation and gender notes

Gender triggers

Reinforce after the participatory questions in Part 2, don't deliver as statements.

Group	Triggers to use
Men	Strong plants that resist disease and pests; good aroma; consistent, premium production; more flowers; long-term soil and farm value.
Women	More and bigger cherries = heavier weight + better grade = protected family income. "Small cherries mean a low weight on the scale — the coffee was not fed."
Youth	Paid group-work (co-composting, manure-exchange runs); short WhatsApp/ TikTok demo clips; framing soil-feeding as modern, science-backed farming that grows income.

5. Facilitator self-check + M&E

5.1. Facilitator self-check (after each session)

Question	✓ / ✗
Did I open from the two trees / the farmers' own words, not a lecture?	
Did farmers talk more than I did in Moves 1-2?	
Did I answer every myth a farmer raised — by name?	
Did I run the interactive income calculation with a lead farmer?	
Did I make the missed income concrete (shillings + a goal like school fees)?	
Did I cut a big vs. small berry to show bean weight?	
Did I ask farmers what manure/compost they have before listing options?	
Did every farmer practise feeding a real tree with hands-on correction?	
Did I use gender-specific trigger questions (not just statements)?	
Did each farmer commit (trees, basins, type, date)?	
Did I record commitments and agree on the VSLA check-in + follow-up date?	

3 or fewer ticks → review the session plan before the next training.

5.2. Adoption indicators (for SME M&E)

Indicator	Lead or Lag?
Number of farmers attending the session	Lead
Number of farmers making a specific commitment	Lead
% of farmers who have fed pledged trees at follow-up	Lag
Quality at follow-up (well-rotted, one foot off stem, incorporated)	Lag
% using ~one basin (3–5 kg) per tree	Lag
Berry/bean-weight comparison (fed vs. hungry, same farmer)	Lag
Number forming co-composting groups or manure-exchange agreements	Lag

*Lead versus Lag indicators

- Lead indicators: reach and intention are immediate (lead indicators).
- Lag indicators: Practice uptake, quality, and top-up show real behaviour change; weight lag indicators more heavily when assessing module effectiveness in the pilot.