

A SIMPLE FARMER'S GUIDE

Understanding Regenerative and Circular Farming

A guide for farmers, prepared by your extension officer

Based on the AAC Pilot A training curriculum

Sylvia's Basket Farm, Ndeiya, Kiambu County — Advancing Agricultural Circularity (AAC)

How to use this guide: This booklet explains, in plain language, what regenerative and circular farming means, why soil matters most, how the different farm "loops" work, and why you may want to try these ideas on your own farm. Your extension officer will walk through each part with you and answer your questions.



Chapter 1: What Is Regenerative and Circular Farming?

What is Circular Farming?

Circular farming asks one simple question:

"What useful things are leaving my farm as waste, cost or risk — and how can I bring them back to work for me?"

On many farms, things that could still be useful are lost. Manure is left to rot in the rain. Crop leftovers are burned. Rainwater runs off the land instead of soaking in. Old seed is thrown away instead of saved.

A circular farm tries to close these gaps. Manure becomes compost. Crop residue becomes mulch or animal feed. Rainwater is caught and stored. Good seed is saved and reused. Nothing useful is wasted if it can still serve the farm.

What is Regenerative Farming?

Regenerative farming asks a different, but related question:

"How can my farming make my soil, water, plants, animals and family better off, year after year — instead of weaker?"

Most farming takes something from the land every season. Regenerative farming tries to give back at least as much as it takes — so the land is healthier next season than it is today.

How the two ideas work together

Circular farming and regenerative farming meet on the same farm. For example:

- Manure and crop leftovers (circular) become mature compost that feeds soil life (regenerative).
- Saved rainwater (circular) keeps soil moist so roots and soil organisms can thrive (regenerative).
- Good seed selection (circular) builds crops that are better adapted to your land over time (regenerative).

Put simply: a circular and regenerative farm wastes less, and gets stronger — not weaker — every season.

This results in increased productivity and reduced external inputs that translates to increased income for the farmer. In addition, the food grown using regenerative agriculture is more nutritious, ensuring families are healthier and more productive.

Chapter 2: The Five Principles of Regenerative Farming

These five ideas guide almost every regenerative practice. You do not need to apply all five at once. Start with one, and add more over time.

1. Disturb the soil as little as possible

Soil is full of tiny living things — worms, fungi and bacteria — that build soil structure and feed your plants. Every time we plough or dig more than necessary, we destroy their homes and slow down their work. Dig only where you must, and keep disturbance to a minimum.

2. Keep the soil covered, always

Bare soil dries out fast in the sun, gets washed away by rain, and becomes too hot for soil life. Covering soil with mulch, crop residue, or growing plants protects it — the same way a blanket protects a sleeping child from the cold.

3. Keep living roots in the soil as long as possible

Living roots feed the soil organisms underground and help hold soil together. Where possible, avoid leaving land bare and empty for long periods between crops — plant cover crops or the next crop as soon as you reasonably can.

4. Grow many different kinds of plants

A farm with only one crop is an easy target for pests and disease, and it feeds only one type of soil organism. Growing different crops together, or in rotation, confuses pests, feeds more types of soil life, and protects you if one crop fails.

5. Bring animals back onto the land

Animals such as rabbits, sheep or chickens — when properly managed — contribute manure and movement that help build soil and cycle nutrients. Animals are a part of a healthy farm system, not separate from it.

Remember: These five principles work best together, and they all point back to one thing — a healthier, more alive soil.

Chapter 3: Soil — The Foundation of Regenerative Farming

Why we start with soil

Everything that happens above the ground — your crops, your harvest, your income — depends on what is happening below the ground, in the soil. If the soil is not healthy, no amount of fertiliser will fully fix the problem.

Soil is alive

Good soil is not just "dirt." It is like a small, busy city of living workers — worms, fungi and tiny organisms you cannot see with your eyes. These workers build the soil's structure, hold water, and unlock nutrients for your plants. If the soil is compacted, waterlogged, or has no living organisms in it, these workers cannot do their job — even if nutrients are present.

Four simple questions to ask about your own soil

You do not need a laboratory to begin understanding your soil. Ask these four questions, and look for the answers with your own eyes and hands:

1. Can water get in? — Pour some water onto the soil. Healthy soil soaks it in steadily. Unhealthy soil lets water pool on top or run off quickly.
2. Can air get in? — Healthy soil crumbles easily in your hand. Unhealthy soil is hard, like a brick, and does not crumble.
3. Can roots grow deep? — Dig up a plant carefully and look at its roots. Long, spreading, healthy-looking roots are a good sign. Short, twisted or blackened roots are a warning sign.
4. Are there living things in the soil? — After rain, look for earthworms and small insects in the top soil. Their presence is a sign that soil life is active.

Four Simple Questions to Ask Your Soil

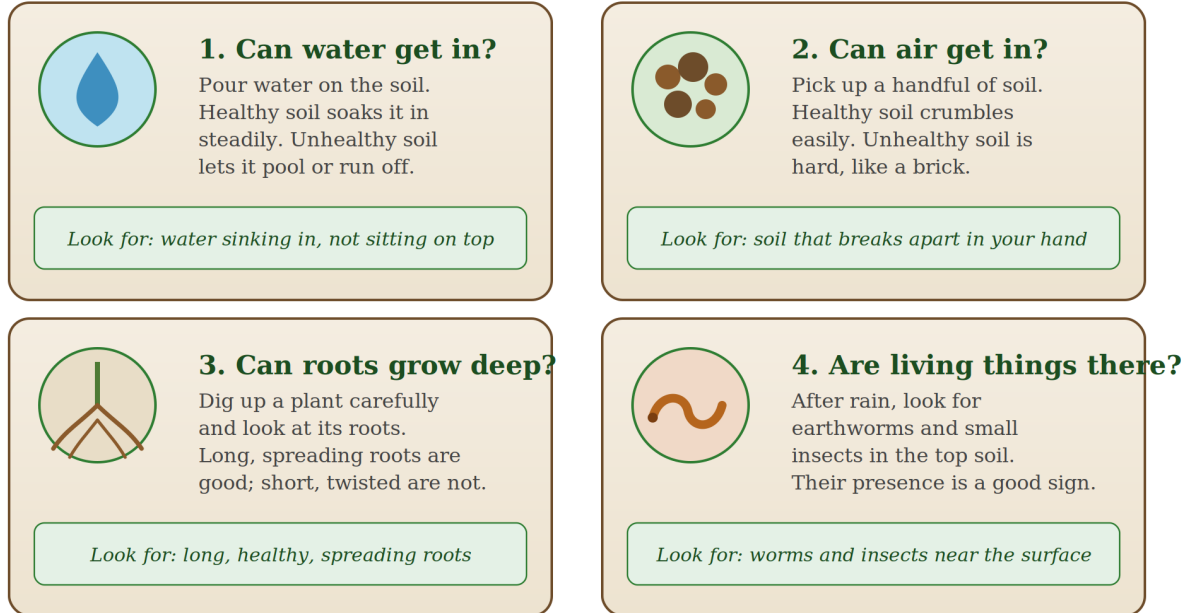


Figure 1: The four questions to ask your own soil — no laboratory needed.

The most important lesson

Feed the soil, not just the plant. A bag of fertiliser can feed a plant for a season. But only healthy, living soil can keep feeding your plants season after season, with less and less help from you over time. This is why soil comes first, before any of the loops described in the next chapter.

Chapter 4: The Farm Loops — Circular Farming in Practice

A "loop" is simply a cycle where something that could be wasted is instead brought back into use on the farm. Below are the main loops your extension officer will show you on a real farm.

One Farm, Many Loops Working Together

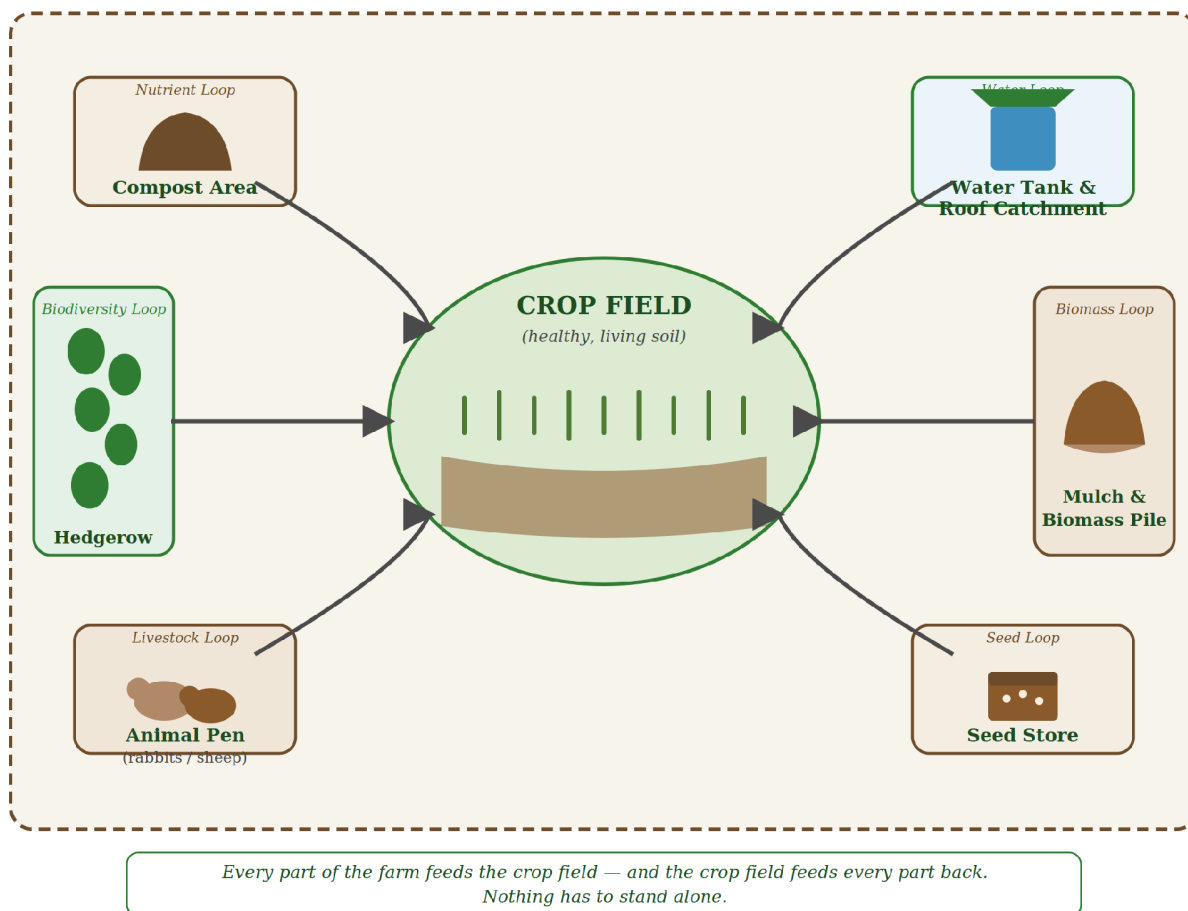


Figure 2: One farm, many loops — every part of the farm feeds the crop field, and the crop field feeds every part back.

The Nutrient Loop (Manure and Compost)

Manure and crop leftovers can become valuable fertiliser — but only if they are properly composted first.

- Raw, fresh manure placed near vegetables can carry disease and is not safe.
- Good compost needs dry material (like straw or dry leaves), fresh green material (like manure or fresh weeds), water, air and time.
- You will know compost is ready when it smells like earth (not manure), has cooled down, and you can no longer easily recognise the original materials.

The Nutrient Loop: Nothing Goes to Waste

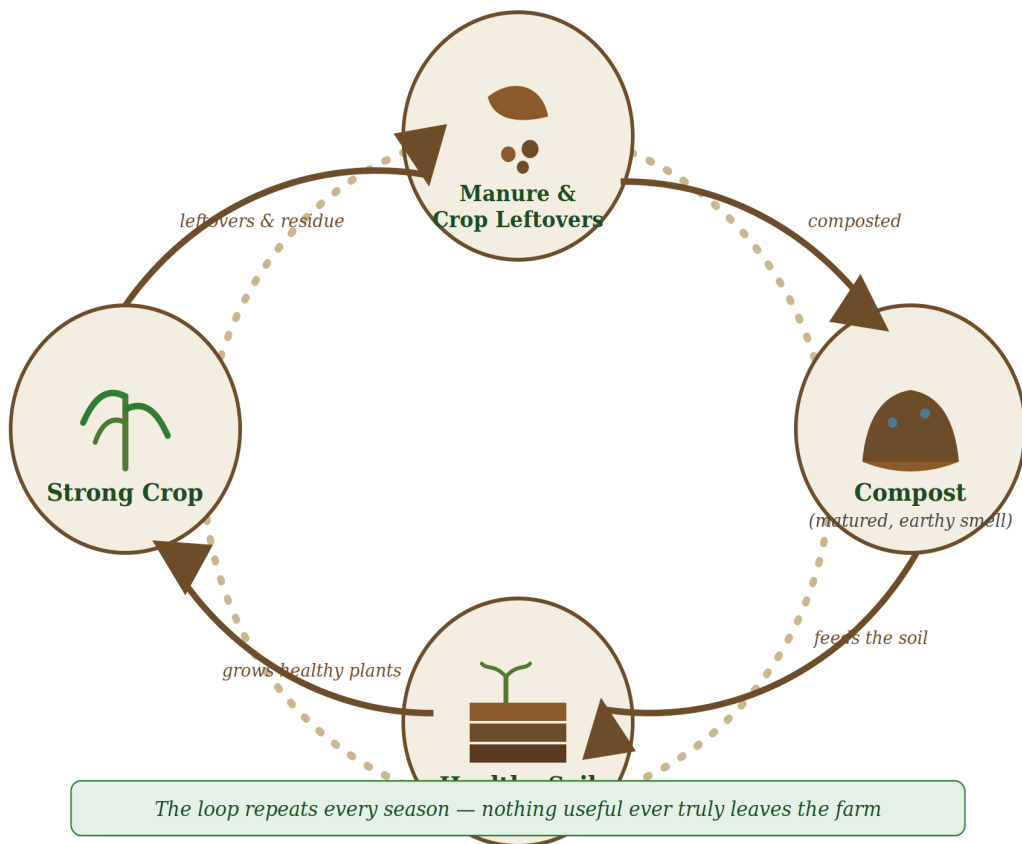


Figure 3: The nutrient loop — manure and crop leftovers become compost, compost feeds the soil, and the soil grows the next crop.

The Water Loop

Water is often lost before crops can even use it — through runoff, evaporation, leaking pipes or bare soil.

- Catch rainwater from your roof where possible, and repair any leaks first.
- Covered, mulched soil holds far more water than bare soil.
- Fix small losses before investing in a bigger tank — it is usually the cheaper and faster win.

The Seed Loop

The seed you plant next season carries the memory of this season's best plants.

- Select seed from your healthiest, most productive plants — not from leftover or damaged produce.
- Dry, label and store seed away from moisture, heat and pests.
- Before planting a full field, test a small sample of seed to see how many actually germinate.

The Biodiversity and Pest Loop

Not every insect on your farm is harmful, and healthier plants naturally resist pests better than weak, stressed plants.

- Grow a mix of crops, and where possible add flowering plants or hedges — they attract insects that help control pests naturally.
- Observe first before spraying anything. Some insects you see are helpful, not harmful.

The Livestock Loop

Animals such as rabbits and sheep can support your farm, but they also come with responsibilities.

- Animals need clean housing, reliable feed, water and care — not just space.
- Manure must be collected and handled safely, and kept away from vegetables until it is properly composted.

The Energy and Biomass Loop

Leftover plant material — mulch, prunings and crop waste — has real value if it is not burned away.

- Use dry leaves, straw and prunings as mulch to protect and feed the soil.
- Where suitable, leftover woody material can also be added to compost rather than burned.

The Home-made Inputs Loop (Compost Teas and Sprays)

Home-made preparations such as compost tea or plant sprays can be helpful, but they are not magic.

- They work best alongside healthy soil, not instead of it.
- Always test any new preparation on a small area first before using it on your whole farm.

Chapter 5: Why Does This Matter to Me?

You may be asking: why should I consider changing how I farm? Here are the practical reasons other farmers have found valuable.

1. It can save you money

When you make good use of what is already on your farm — manure, crop residue, saved seed — you can reduce how much you spend on fertiliser, sprays and new seed every season.

2. It can save water and reduce your workload

Covered, healthy soil holds more water for longer. This can mean less time spent carrying or paying for water, especially during dry spells.

3. It reduces your risk

A farm that depends on many small loops — good soil, saved seed, compost, some livestock — is less exposed than a farm that depends only on buying expensive inputs each season. If prices rise or the rains fail, a circular farm has more to fall back on.

4. Your land gets stronger, not weaker, over time

Instead of soil that gradually wears out season after season, regenerative practices build soil that keeps improving — so the same piece of land can support your family, and your children, for longer.

5. It protects your health and your customers' trust

Properly matured compost and safely handled manure reduce the risk of contaminating your vegetables. This also allows you to speak honestly and confidently to buyers about how your food is grown.

6. You do not need to change everything at once

You do not need to transform your whole farm this season. Choose one small, low-cost, easy step — such as starting a proper compost heap, saving seed from your best plants, or fixing one water leak — and build from there.

A final word: Regenerative and circular farming is not a fixed package you must adopt all at once. It is a direction. Every small step that reduces waste and builds healthier soil moves your farm in that direction.

Your First Steps

- Look at your own soil this week — can water get in? Can roots grow deep?
- Start, or improve, one compost heap using dry material, green material, water, air and time.
- Cover any bare soil you have with mulch or a growing crop.
- Select and properly store seed from your healthiest plants this season.
- Choose one water loss on your farm and fix it this month.

Talk to your extension officer about which of these first steps makes the most sense for your farm.

Summary

