

Dr. Pham Tuan Anh



PRACTICAL SOIL RESTORATION FOR FARMERS AND COMMUNITIES



PART 1. LOOKING AGAIN AT YOUR OWN LAND

“
You do not need to do everything at once.
Every plot has its own condition, so the
important thing is to choose one suitable
action to start with, observe the changes,
and adjust gradually over time.
”



This guide draws on observations from real farming practice and suggests a few simple ways farmers can begin caring for their soil again.

Soil restoration does not begin with techniques; it begins with observation.
No complex machinery is needed – just pay closer attention to what is happening beneath your feet.



Bare soil, little grass, or no
cover after harvest



Soil color becomes
paler than before



Soil compacts easily underfoot
or cracks in dry weather



During heavy rain, water runs
off instead of soaking in



Crops respond poorly
despite heavy fertilization



Few earthworms, decaying roots,
or the familiar smell of loose soil

If two or three of these signs appear together, the soil is usually weakening.

A very simple way to monitor change is to photograph the same spot in the garden each season. Record when fertilizer is applied and when the plot is watered; after several seasons, you will clearly see whether the soil is improving or deteriorating.

PART 2. THINGS YOU CAN START DOING NOW

1. Do not leave the soil "bare"

Bare soil is one of the main reasons soil weakens quickly. You can protect it in very simple ways:

- Keep grass and cut it short instead of pulling it out
- Use straw, coffee husks, and branches or leaves as mulch

You do not need perfect coverage at first. Covering about 30-50% of the surface already begins to protect the soil.

A simple rule to remember:



keep soil
covered



keep organic
matter



do not burn
crop residues



mix
evenly



keep moderately
moist



turn after
2-3 weeks

2. Return to the soil what has been taken away

Many materials once considered "waste" are actually among the best foods for soil.

Residues such as coffee husks, crop stalks, and manure can be composted directly on the farm.

Over time, they become organic fertilizer that loosens the soil and improves moisture retention.

No complex technique is required:



3. Gradually adjust fertilizer and irrigation

There is no need for sudden changes.
Start with small trials:



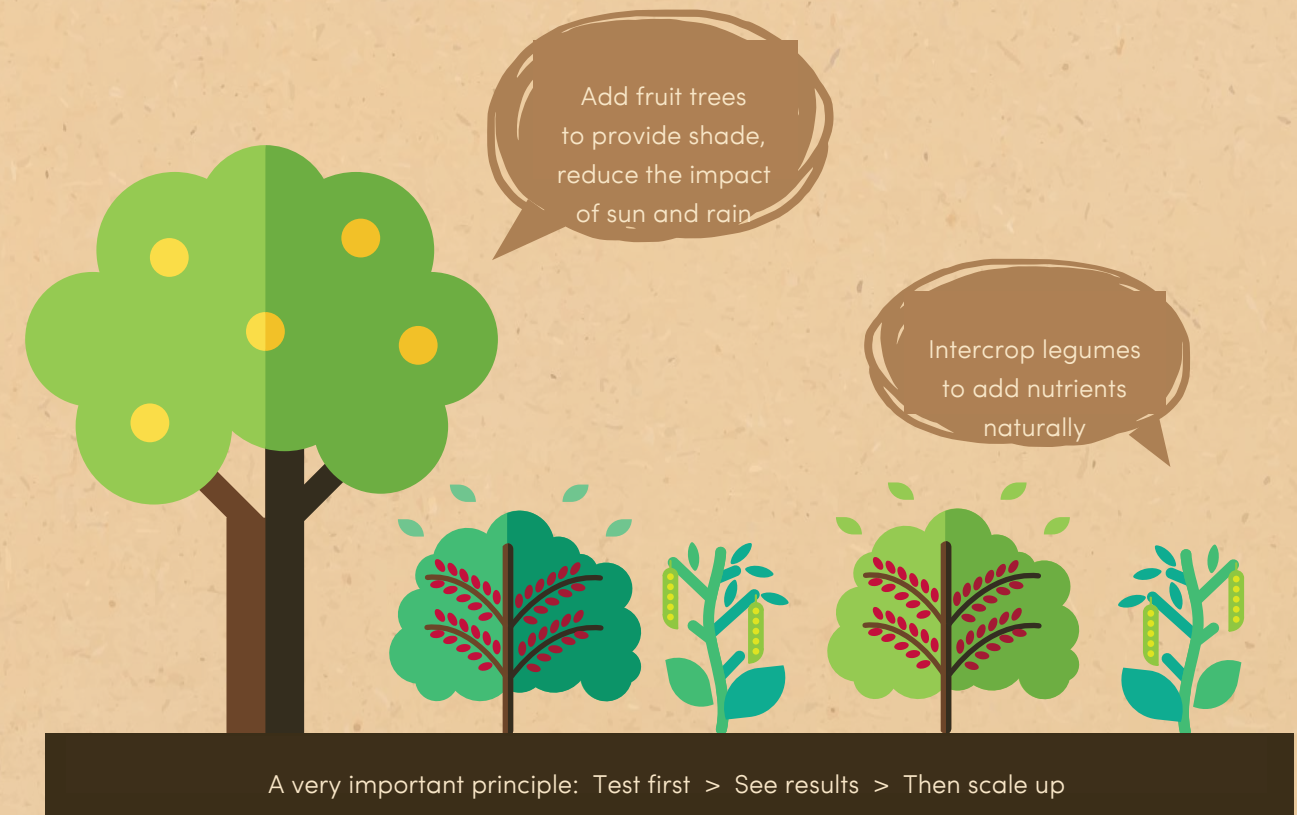
In many cases, crops continue to grow well as soil condition improves.
For irrigation:

- Check moisture in the soil layer 10-15 cm below the surface
- If it is still moist, irrigation is not yet needed

Watering at the right time is often more important than watering more.

PART 3. WHEN THE SOIL STARTS GETTING HEALTHIER

After a few seasons, when the soil begins to change, you can keep improving it.
There is no need to apply everything across a large area at once.



PART 4. WORKING TOGETHER FOR GREATER IMPACT



Working alone is difficult, but it becomes easier when many people act together. Within the same area, if many households conserve soil and water:

- Erosion is significantly reduced
- Soil improves faster
- Costs also decline

You can start with simple actions:

Form a small group
of 5-10 households

Share
experiences

Run trials together on
nearby plots

Cooperatives or businesses can support farmers by:

- Collecting crop residues
- Composting organic materials centrally
- Supplying compost back to farmers at lower cost

When people work together, the benefits extend beyond individual farms to the entire area.

PART 5. WHEN HEALTHIER SOIL BECOMES VISIBLE

To make soil care more than a matter of perception, use a simple monitoring method. You can score "soil health" based on what you can see:

Criterion	Score 1 (Poor)	Score 3 (Average)	Score 5 (Good)
Organic matter (OM)	Pale soil, no earthworms	Soil begins to loosen	Dark soil, many worms, decaying roots
Cover (COV)	Completely bare soil	50% of area covered	Entire surface covered
Infiltration (INF)	Runoff and ponding	Slow infiltration after 5-10 min	Immediate rapid infiltration

From these criteria, a simple composite Soil Health Index (SHI) can be calculated:

SHI = (OM + COV + INF) / 3

- Suggested interpretation:
- SHI < 2: soil is weakening
 - SHI 2-3: intermediate condition
 - SHI > 3: soil is improving or healthy

This index is not intended to replace detailed measurements. It serves as a screening tool for tracking trends in soil condition over time. Scores should primarily be used to monitor changes in your own plot, not to compare it with other places, so absolute precision is unnecessary.

Note: In some cases, one very low criterion can become a limiting factor for the whole soil system even when other criteria score highly. Pay particular attention to the lowest-scoring indicators.

- The important thing is to monitor each season:
- Is the soil improving?
 - Does it retain moisture better?
 - Are the crops healthier?

When change can be seen, soil care is easier to sustain.

These simple indicators can also be standardized for broader use. Applied consistently, "soil health" can become a baseline criterion for assessing product sustainability and an input indicator for certification, technical support, or product-pricing mechanisms.

For example, a minimum SHI threshold could be used as a condition for accessing support programs or as an additional criterion in sustainable product certification systems.

With this approach, what happens in the soil is not only observed but recorded as part of production assessment and management.

PART 6. SHARING RISK SO FARMERS CAN ACT WITH CONFIDENCE

This is a very important part.

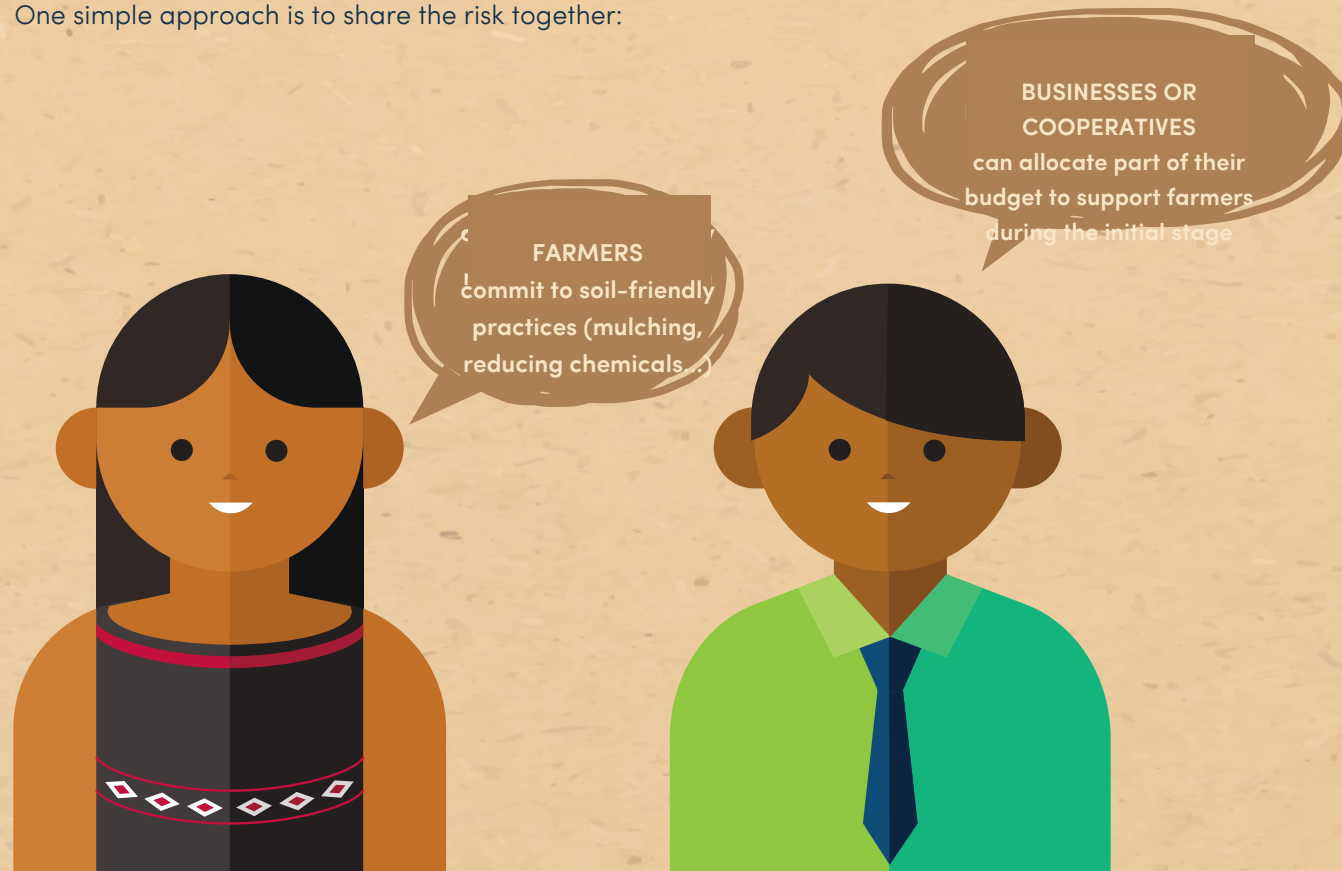
In practice, many people know what is good for the soil but hesitate because they fear:

- Higher costs
- Lower yields at the beginning

Therefore, mechanisms are needed so that no one has to bear the risk alone.

How can this be done?

One simple approach is to share the risk together:

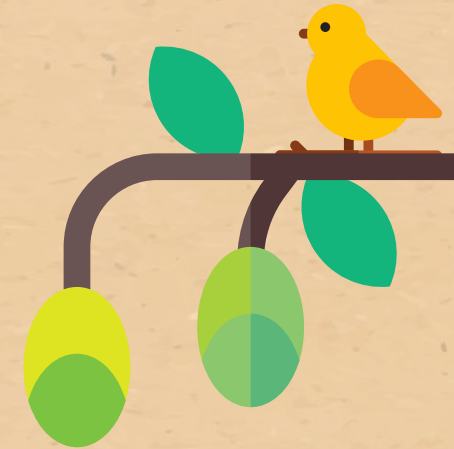


If the soil improves:

- Farmers may receive rewards
- Products may receive better prices
- Access to finance may improve

If it has not improved yet:

- Support can continue while practices are adjusted



Most importantly

Soil care is no longer a "risky" undertaking. It becomes a long-term investment in which risks and responsibilities are shared.

Looking further ahead

When soil improves:



And importantly: your land becomes more valuable over time.



Start with observation

Next come small changes

And gradually it becomes a familiar practice

**When many people act together, and when these changes are recorded:
Soil care is no longer difficult; it becomes a natural part of farming.**



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mekongrg@gmail.com

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