

Soil fertility for food security

A tailor made training on improving the productive capacity of soils



ALTERRA
WAGENINGEN UR



Soil fertility; the backbone of agricultural development

Soil is precious, it needs protection, that much is clear. But how to achieve this? Soil is used to feed billions of people each day, and each day we lose valuable fertile soil around 12 million ha of land are still lost each year because of mismanagement. Despite ample evidence of this alarming trend, mankind seems incapable to halt or reverse this trend. This somehow paradoxical situation made us, applied soil scientists from Wageningen, realize that some key elements of the solution are still missing, urging us to develop a different approach. An approach that starts with people instead of soil!



Large areas of fertile soils are lost...

THE 8 FGI-STEPS

- I: DETERMINATION OF NUTRIENT DEMAND
- II: DETERMINATION OF NUTRIENT AVAILABILITY
- III: PROCESSING OF ISFM PRODUCTS
- IV: BROKERING BETWEEN DEMAND AND SUPPLY
- V: NUTRIENT EXCHANGE FACILITY FOR NUTRIENT TRADE
- VI: CAPACITY BUILDING OF DIFFERENT TARGET GROUPS
- VII: INSTITUTIONAL ARRANGEMENTS FOR SCALING UP AND SCALING OUT.
- VIII: STIMULATING GREEN GROWTH

One of the key components, and in fact one of the few things that can be actively managed, is the correct use of both organic and mineral nutrients. Extensive literature review and local experiences show that proper (i.e. right amount, right type, right placement and right timing) application of organic and mineral nutrients is the best way to restore and recover fragile soils. However, true implementation of this integrated soil fertility management (ISFM) is hampered by fragmented activities and isolated approaches from various stakeholders active in a given region.



...because of ignorant land management

The paradigm behind the fertile grounds initiative (FGI) is that there are additional sources of nutrients available in a specific area than currently being used. This results in low nutrient recoveries and valuable losses. However, in order to make use of these 'hidden' resources a new way of thinking in soil management is required. One of the goals of FGI therefore is to bring together actors in nutrient management to facilitate an optimal arrangement for nutrient trade.

FGI has developed a 8 step approach for better nutrient management based on a match-making approach (see text box).

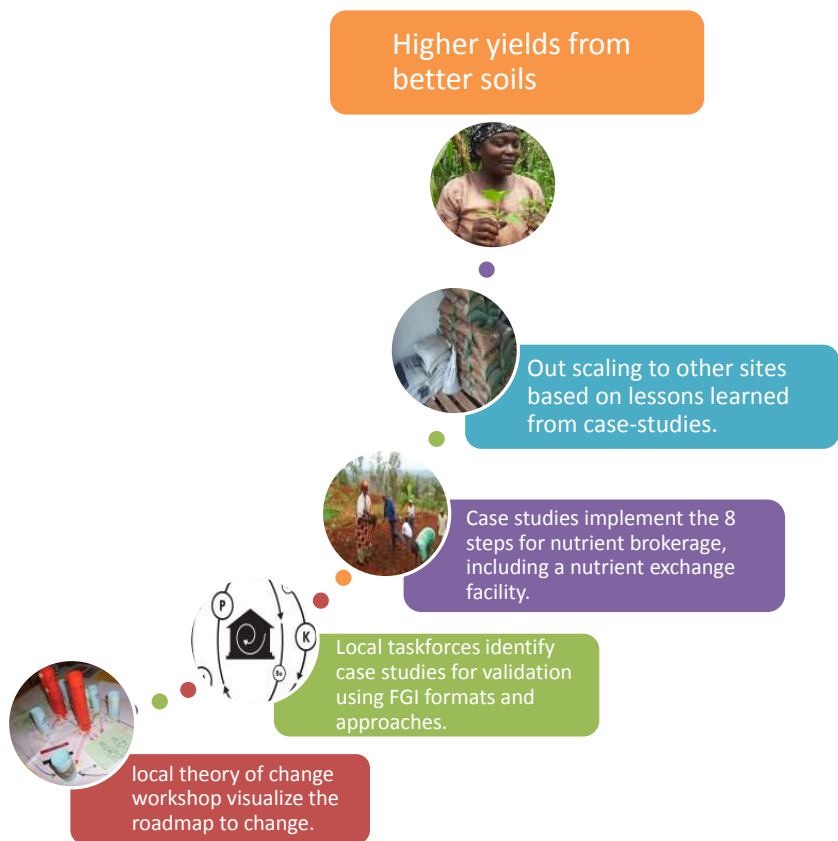


The Fertile Grounds Initiative helps to restore soil fertility by bringing actors in nutrient management together.

A course on setting up your own FGI

Alterra, part of Wageningen University and Research Centre offers together with local partners tailor made trainings on restoring soil fertility by using the FGI principles. During the course participants learn to identify, qualify and quantify the 8 steps of FGI. A typical 10 days course looks like:

- Day 1 and 2: Integrated soil fertility management. Reviewing past activities on soil fertility management, identification of success factors.
- Day 3 and 4: Determining potential nutrient supply and demand using state of the art tools.
- Day 5: Actors in nutrient management, their roles and possible contributions.
- Day 6: Field visit: design your own FGI case.
- Day 7 and 8: Determining the potential FGI case; boundary conditions and affordability.
- Day 9: Workshop with local stakeholders
- Day 10: Conclusions and graduation



For who?

The course was developed actors in nutrient management, e.g. policy makers, scientists and NGO who have experience in rural development and agricultural production systems and are ready to make a difference. The Dutch Science Organization (NWO-NUFFIC) supports the development of the course.

Summary

In this 10 day training course participants learn to broaden their view on soil fertility and food security. Integrated Soil Fertility Management (ISFM) is taken as entry point, but from there-on we take a different route: starting with the people to bring together supply and demand of nutrients. The aim is to create win-win situations by closing nutrient loops for example through the re-use of wastes as a precious product with potential rather than something to be disposed of.

At the end of the training participants are able to:

- Evaluate the soil fertility status for specific farming systems and regions;
- Identify different sources of nutrients in a specific region and determine their use potential;
- Provide crop- and soil specific fertilizer recommendations using the QUEFTS software;
- Design a stakeholder platform for matchmaking between supply and demand of nutrients.



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