

Soil Fertility Toolkit

Soil quality assessment and managing soils productivity



Why does soil quality matter?

How can the Soil Fertility Toolkit help in keeping soils productive?

Why a soil fertility toolkit?

Every year large areas of fertile soils are lost due to ignorant land management. Also in many regions, soils are overexploited leading to a decline in crops yields. Already farmers complain about the loss of productive capacity of their land and producer organizations worry about the continuity of their products. Consequently, there is a need for a tool to assist farmers and producer organizations in identifying best bets for soil fertility improvement.

With the soil fertility toolkit we aim to i) increase awareness on current soil quality, threats and opportunities, ii) build capacity on sustainable land management and iii) provide concrete actions for soil quality management.

What is the toolkit?

The toolkit uses a tree-step approach to get to a better soil quality management:

- assessment (what is the current status of the soil)
- analysis (what has been done in the past, what are plans for the future, what resources are available)
- recommendations (match plans and resources, such that soil quality improves or is maintained)

The toolkit has an integrated approach by including multiple aspects of soil quality, including:

- nutrients
- organic matter
- erosion
- acidification
- soil related pests and diseases
- soil physical quality



Large areas of fertile soils are lost...



...because of ignorant land management.



The soil fertility toolkit can help to keep soils productive.

The toolbox consists of 3 parts:

1. A tangible toolkit for on-site assessment of soil quality. It includes easy-to-use measurements and guidelines for field assessment of soil quality.
2. A digital toolkit to assess the future development of soil quality and provide tailor-made recommendations to counteract negative trends. The digital toolkit uses data from the field measurements and uses databases on soil properties, climate, crop properties and fertilizer composition. The digital toolkit prioritises current soil threats and actions, based on costs and benefits of soil quality management actions.
3. A training and support programme, which includes
 - awareness on soil fertility
 - sustainable soil management actions
 - how to use the toolkit



The digital toolkit provides insight in future trends of soil fertility.

For who?

The toolkit is currently being developed for farmers, producer organisations, and advisory organisations for smallholder farmers. The Dutch ministry of Economic Affairs supports the development of the toolkit.

Summary

Ignorant land use can lead to overexploitation of soil and losses of fertile soils. The consequences are a severe drop in crop yields.

The soil fertility toolkit can help to identify threats for soil fertility and help to define actions that improve and maintain soil quality. With this the soil's productivity can increase and be sustained in the future.



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