



Food and Agriculture  
Organization of the  
United Nations

# Sustainable crop production intensification

Sustainable crop production intensification (SCPI) aims to produce more from the same area of land while reducing negative environmental impacts, conserving natural resources and enhancing healthy ecosystem services. This eco-friendly approach to farming combines farmers' traditional knowledge with modern technologies adapted to the needs of small-scale producers.

## What FAO does

FAO's approach to SCPI is founded on a set of science-based environmental, institutional and social principles. It provides adoptable and adaptable farming practices and technologies that support the development of resilient crop production systems.

### ENVIRONMENTAL PRINCIPLES

FAO promotes management practices such as: minimum soil disturbance and permanent organic soil cover through conservation agriculture; increased on-farm species diversity through conservation and sustainable use of plant genetic resources; use of quality seeds of best-adapted varieties which are accessible to farmers; integrated pest management; and plant nutrition based on sustainable water and soil management (i.e. integration of nitrogen-fixing legumes and trees to cropping systems).

### INSTITUTIONAL PRINCIPLES

FAO fosters cooperation and integration among government ministries and other key stakeholders to develop multi-sector and multi-stakeholder policy frameworks and strategies for SCPI. It builds partnerships and enhances information exchange with global and regional organizations (research and development, finance, trade, environmental governance) that can offer valuable support to



sustainable agricultural development. It also provides policy guidance, institutional support and decision support tools required in the transition towards more sustainable crop production systems. It also hosts international instruments and fora, which provide opportunities for countries to share experiences and build collaboration.

### SOCIAL PRINCIPLES

FAO's farmer-centered approach – known as farmer field schools – incorporates sustainable natural resource management practices into their production systems. FAO also promotes technological innovation through dissemination of information, tools and capacity building on ecosystem-based approaches to crop production adapted to the specific agro-ecological and socio-economic conditions of farmers.

Contributes to FAO's Strategic  
Objectives 2, 3 and 5



Make agriculture, forestry and fisheries  
more productive and sustainable

Reduce rural poverty

Enable inclusive and efficient  
agricultural and food systems

## Background

Climate change, environmental degradation and stagnating yields threaten crop production and world food security. It is now recognized that the enormous gains in agricultural production and productivity achieved through the green revolution were often accompanied by negative effects on agriculture's natural resource base, so serious that they jeopardize its productive potential in the future. It is also clear that current food production and distributions systems are failing to feed the world.

In most developing countries there is little room for expansion of arable land. The declining quality and increased competition for the land and water resources available for crop production has major implications for the future. Resource degradation reduces the effectiveness of inputs, such as fertilizer and irrigation. Given the current and increasing future challenges to our food supply and to the environment, sustainable intensification

of agricultural production is emerging as a major priority for policymakers and international development partners. Environmental, institutional and social principles should be taken into consideration.

### ENVIRONMENTAL PRINCIPLES

SCPI is based on an eco-systems approach to production and incorporates management practices that include maintaining healthy soil to enhance crop nutrition; cultivating a wider range of species and varieties in association, rotations and sequences; using well adapted, high-yielding varieties and good quality seeds; integrated management of insect pests, diseases and weeds; and efficient water management.

### INSTITUTIONAL PRINCIPLES

Implementing these environmental principles into large-scale programmes requires institutional support at both national and local levels. Strengthening institutional linkages is key to improving the formulation of policies and strategies for SCPI, and to enable scaling up of pilot studies, farmers' experiences, and local and traditional knowledge.

### SOCIAL PRINCIPLES

To support the adoption of SCPI by farmer's rural participatory advisory services, from both traditional and non-traditional sources, must be strengthened. Mobilizing social capital for SCPI will require people's participation in local decision-making, ensuring decent and fair working conditions in agriculture, and the recognition of the critical role of women in agriculture.



## CONTACT US

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## MORE INFORMATION

[www.fao.org/ag/save-and-grow](http://www.fao.org/ag/save-and-grow)