



# Promoting sustainable plant production through optimization and minimization

NSP Factsheet - 2022

## SUSTAINABLE PLANT PRODUCTION AT FAO

Sustainable plant production refers to producing more with less agrichemical inputs, lower emissions of greenhouse gas (GHG), and better management of nutrients.

Sustainable plant production systems must promote greater resilience to climate change and protect biodiversity through integrated approaches (such as agroecology). The farmer's needs, knowledge and constraints are also part of the core of the solution while acknowledging the need for a multiplicity of options to be available to respond to complex and heterogeneous production environments.

This is pursued by promoting the integration, demonstration, validation and dissemination of sustainable plant production systems; incorporating innovative technologies; and applying the principles of Optimization and Minimization.

## WHY OPTIMIZATION AND MINIMIZATION?

Through optimization of agricultural production systems, FAO promotes the transformation to MORE efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment and a better life, leaving no one behind.

- **Optimization** refers to optimizing positive aspects of plant production systems to achieve their optimal functionality, optimal productivity and optimal profitability.
- **Minimization** refers to minimizing negative aspects of plant production systems to achieve minimal losses of crop yield and biodiversity, minimal use of agrichemical inputs, and minimal GHG emissions.

FAO also supports countries, family farmers and small producers to integrate sustainable agricultural practices, technologies, policies and other innovations for increased crop, livestock and forestry productivity that optimize structure, functionality and service of agricultural production systems while minimizing agricultural inputs

## GLOBAL ACTIONS AND INITIATIVES



### ONE COUNTRY ONE PRIORITY PRODUCT (OCOP) INITIATIVE

Major initiative of the Food and Agriculture Organization of the United Nations (FAO) to support its Members promote their distinctive food and agricultural priority products.

### GLOBAL ACTION FOR FALL ARMYWORM (FAW) CONTROL

Major initiative of the Food and Agriculture Organization of the United Nations (FAO) to help Members fight against transboundary pests and diseases to ensure food security.

### GLOBAL INITIATIVE ON AGROECOLOGY

The Scaling up Agroecology Initiative celebrated three years of joint action, cooperation and investment within and beyond the United Nations (UN) system, to bring agroecology to scale.



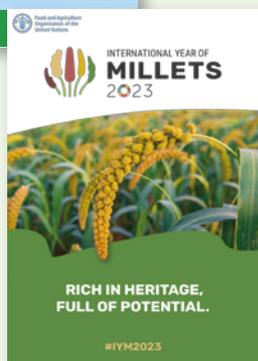


## GLOBAL EVENTS

- Fourth NSP Seminar on Sound Fertilization for Food Security (6 July 2022)
- First Global Conference on Sustainable Plant Production (2-4 November 2022)
- First FAO Roundtable Forum on Sustainable Seed Systems (8 December 2022)

## UN OBSERVANCES

- First Celebrations of International Day of Plant Health (12 May 2022)
- Launch Event of the International Year of Millets (6 December 2022)



## CORE ACTIVITIES

### Sustainable Seed Systems Management:



- Distribution of quality seeds of staple crops provided to farmers in 48 Members. Quality seeds worth over USD 83 million procured and distributed in countries across the Sahel, Horn of Africa, in the Democratic Republic of the Congo, Ukraine, Pakistan and Yemen.
- In Afghanistan, seed assistance reached 6 million people. In Ukraine, seed kits for 12 vegetable species provided to over 20 000 farmers and seed potatoes provided to 17 700 households.

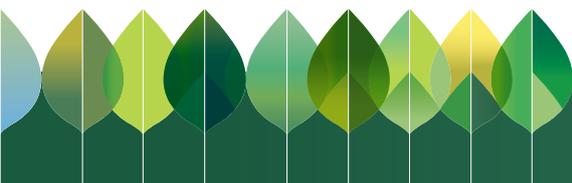
### Sustainable Cropping Systems Management:

- For Agroecology, FAO became a member of the Coalition for Food System Transformation through Agroecology. The Scaling Up Agroecology Initiative supported knowledge generation on the available levers to upscale Agroecology.
- For Green Cities, resilient and sustainable city region food systems and urban horticultural production were promoted during the Africities Summit, the World Urban Forum, the International Horticultural Congress, the Milan Urban Food Policy Pact Global Forum and the UN world climate conference COP27.



### Sustainable Agricultural Mechanization:

- Innovative business models for agri machinery hire services and supported formulation and revision of agricultural mechanization strategies in Africa (Zambia, Togo, Mali, Sierra Leone, United Republic of Tanzania and Southern Africa sub-region).
- Technical support to field programmes, for procurement of agricultural tools, equipment and machinery were provided (259 requests from 62 countries).



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