Managing Water and Fertilizer for Sustainable Agricultural Intensification

A guide to the best management practices for water and fertilizers to enhance production, improve profitability and resource efficiency, and reduce environmental impacts.

Water and nutrients are both essential for agricultural production.

3,000 LITRES OF WATER PER DAY
The amount required to grow food for 1 person

70% of water withdrawals attributed to agriculture

Fertilizer’s influence on yield depends on the water available to crops, and water’s impact on yield depends on nutrients’ availability to crops.

50% OF FOOD GROWN
Amount of today’s food grown thanks to fertilizer use

180 MILLION TONNES
Amount of fertilizer nutrients used each year

How can we optimize and synchronize water and nutrient management to contribute to food security and nutrition, farmer profitability and protection of ecosystems?

TEACHING ‘4R’ NUTRIENT STEWARDSHIP
Applying nutrients from the right source, at the right rate, time & place

OPTIMIZING WATER MANAGEMENT
To improve water productivity and reduce nutrient losses

STEWARDING OUR SOILS
To maintain healthy soils that can supply the water and nutrients crops need

IMPROVING CROPS
To create plant varieties with higher capability to use water and nutrients efficiently

What will help us achieve this?

Integrated research
Integrated research on the management of soil water and soil fertility can achieve the SDGs of ending hunger and improving water use efficiency.

Adopting best management practices
Build capacity in water, soil and nutrient management and technologies like fertigation, precision farming, and conservation agriculture.

Policy reforms & incentives
Farmers need to be enabled and encouraged to use water and fertilizer most efficiently.

Download the report at: www.fertilizer.org