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.

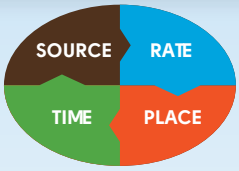
50% OF FOOD GROWN

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?

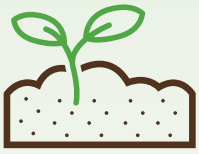


TEACHING '4R' NUTRIENT STEWARDSHIP

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

International Fertilizer Industry Association

IWMI International Water Management Institute

IPNI International Plant Nutrition Institute

International Potash Institute