

# SRI FOR A FOOD SECURE FUTURE

How the **System of Rice Intensification (SRI)** can support food security worldwide

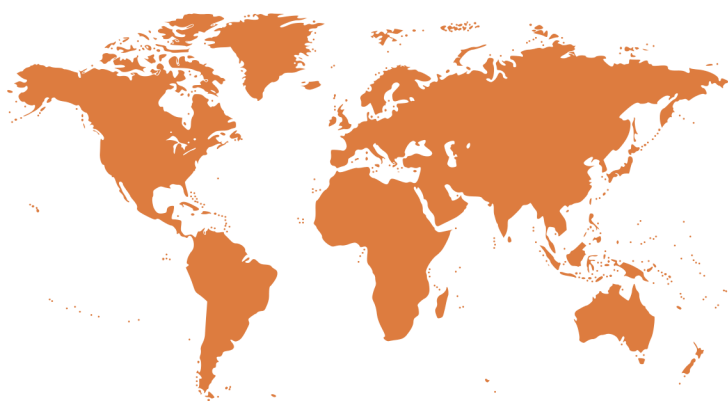


# 3.5 billion

people rely on rice as their primary nutrient source. World population's are estimated to reach 9.6 billion by 2050 with rice remaining a mainstream crop.



Rice production needs to **grow by 25% over the next 25 years** to meet projected future demand.



Rice cultivation covers around 167 million hectares globally and provides the **livelihoods to one billion people**, the majority who are **smallholder farmers**. **Smallholder farmers** can play a significant role towards achieving food security and nutrition, yet it is the smallholder farmers who are particularly vulnerable to negative climate and economic impacts.

Rice cultivation is a contributor to the climate crisis, **responsible for 8-12% of anthropogenic methane emissions**. But rice is also particularly vulnerable to the negative impacts of climate change. Hazardous weather conditions, extreme temperatures, storms, and droughts and increasing occurrences of pests and diseases are all worsening due to climate change.

All this combined with the **increasing scarcity of resources** such as water, rising prices for fertilisers and fuel, and shrinking availability of arable land, collectively creates a challenging set of obstacles for smallholder farmers to overcome with already with limited resources.



A way to increase rice production to meet growing demand, and adapt to increasingly volatile climates is necessary. And **SRI provides an answer...**

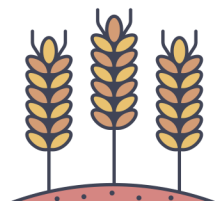
## WHAT IS SRI?

SRI is an agroecological approach to growing rice that allows farmers to **increase yields** while decreasing inputs such as seed, water, and synthetic chemicals. SRI can be applied to any variety of rice and can be adapted to suit both irrigated and rainfed rice cultivation.

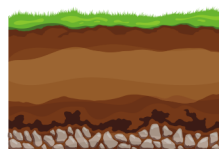
SRI is based on the following four principles:



1. START WITH YOUNG HEALTHY PLANTS



2. OPTIMISE SPACING TO MINIMISE COMPETITION BETWEEN PLANTS



3. BUILD UP HEALTHY FERTILE SOIL



4. APPLY ONLY THE MINIMUM AMOUNT OF WATER NEEDED

# HOW DOES SRI SUPPORT FOOD SECURITY?

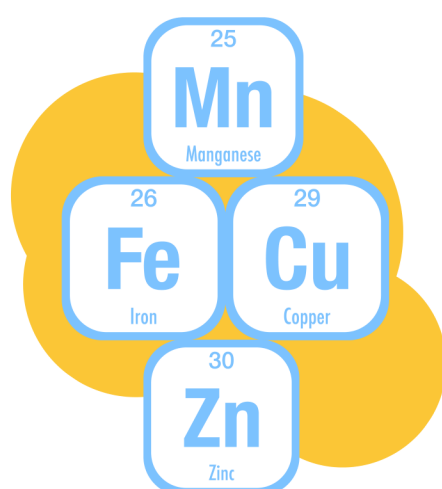


## Increased Yields

SRI increases rice yields on average by **25-50%**, with many examples of 50% or more, and even up to 200%. This increase in yield is achieved while **reducing seed usage by 80-90%**, allowing resource-limited farmers to save seeds and enhance their own households' food security.

## Enhanced Nutrition

SRI improves the quality of micro-nutrients in the rice grain. Beneficial nutrients such as **Iron, Zinc, Copper and Manganese** are all found to **increase** in SRI rice when compared with traditionally cultivated rice. Levels of heavy metals, such as arsenic and lead, are shown to decrease.



## Better Grain Quality

Along with improved micronutrients, SRI paddy rice provides around **10-20% more edible polished rice**. This is because with SRI plants there are fewer unfilled grains and less breakage during the milling process. SRI provides improved food security by more than just increased harvest yields.

## Improved Reliability

SRI plants are better able to withstand climate hazards such as droughts, storms, and extreme temperatures. **Improved resistance** to the impacts of climate change is essential to **produce reliable yields**.



## Strengthened Resilience

SRI reduces reliance on external inputs and allows farmers to make use of already available resources. Increased yields are achieved with **25-50% less water** and up to 100% reduction of synthetic chemicals. With **less dependence on external inputs** SRI improves smallholder resilience against both environmental and economic impacts.

### Improved food security with climate benefits

SRI also reduces the carbon footprint of rice cultivation. Net greenhouse gas emissions are **reduced by an average of 50% per kg** of rice produced.

Methane emissions are reduced by up to **70%** and **carbon sequestered**. Improvements in yields do not have to come at the cost of ignoring emissions.

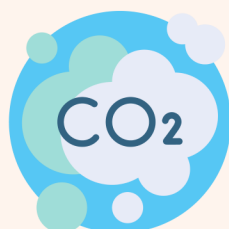
**SRI-2030'S GOAL IS TO ACHIEVE 50 MILLION HECTARES OF SRI BY 2030. BY 2050 THIS WILL...**

PRODUCE AN EXTRA



**1 BILLION TONNES RICE**

REDUCE EMISSIONS BY



**8.5 BILLION TONNES CO2e**

INCREASE FARMER PROFITS BY



**\$1.6 TRILLION**

FIND OUT MORE AT [SRI-2030.ORG](http://SRI-2030.ORG)