

## The System of Rice Intensification (SRI)

### A strategic opportunity for tackling the growing pressure on Egypt's water resources while sustainably intensifying national rice production

The System of Rice Intensification (SRI) is an agroecological crop management strategy based on scientifically-validated principles that enhance plants' performance by providing them with the best conditions for achieving their full genetic potential. Evaluations of SRI in over 60 countries have shown that its methods enhance crop yield while reducing water consumption and lowering methane emissions, both per hectare and even more per kg of rice produced. SRI is a win-win-win approach to curbing global warming potential.

#### PRODUCE MORE RICE FOR CONSUMERS



#### REDUCE GHGs EMISSIONS



#### REDUCE PRESSURE ON LIMITED WATER RESOURCES



#### LOWER COSTS AND INCREASE FARMER INCOMES



SRI methods were introduced into Egypt in 2008 when Dr. Waled El-Khoby, now Professor and Head of Research at the Rice Research and Training Center at Sakha, first evaluated these methods there. Egypt already has achieved the highest national average rice yields globally, 9.5 t/ha.

Under SRI management, an average yield of 10.7 t/ha was reached with standard improved varieties and 13.9 t/ha with hybrid varieties, increases of 12.5% and 46%, respectively. These yield increases were attained with a 35% reduction in irrigation water use and with costs of production lower by one-third.

Although further experimentation and evaluation have shown very positive outcomes from implementing SRI methods in Egypt, most rice farmers in this country still follow conventional methods which consume a great amount of water, aggravating the already scarce situation for water resources in Egypt. One of the major constraints to widespread adoption of SRI methods in Egypt is the limited availability of well-trained extension workers who can disseminate SRI ideas and practices through national technology transfer programs.

SRI methods are based on sound agronomic principles that get translated into locally-adapted agricultural practices by farmers and researchers. These principles of SRI are:

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



With the support of local SRI expertise and the international SRI network, spreading SRI practices in the rice sector can become a mainstream component of agriculture in Egypt, alleviating the growing pressure on Egypt's water resources while sustainably intensifying national rice production.

**SRI methods have been validated in over 60 countries and are used on at least 7 million hectares globally. Already 10 countries have included SRI methods in their NDCs as a strategy for mitigation and/or adaptation**



United Nation's Framework Convention on Climate Change



First visit of an African rice scientist from the Gambia to SRI trials at the Sakha Rice Research and Training Center, 2008



Visitors from the Ivory Coast observing SRI trials at the Sakha Rice Research and Training Center's farm, 2022

COP27 presents a strategic opportunity for Egypt to promote SRI methods and the benefits that it can bring, as demonstrated through prior research and practice in Egypt. A panel discussion on the System of Rice Intensification for Food Security and Climate Resilience will be held at the Sustainable Agriculture of the Americas Pavilion, hosted by the Inter-American Institute for Cooperation in Agriculture (IICA). Implementers and policymakers from various countries will present their experience with SRI methods.

Dr Mahmoud Mohieldin, UN Climate Change High-Level Champion for Egypt, has suggested that we prioritize meeting the increasing demand for food, water, and energy by 2030 by using climate-friendly methods and reiterated that COP27 will be a conference of action. SRI methods address both food security and water saving needs while reducing the agriculture sector's contribution to global warming. SRI presents an attractive opportunity to the Government, farmers, and the private sector to meet multiple objectives by upscaling the implementation of SRI extension.



**SRI-2030**