BRICS SOLUTIONS AWARDS

Together to Curb Risks and Revive Growth

WINNER CERTIFICATE

The certificate is proudly presented to solution:

Project name:

Sustainable Direct Seeded Rice Technology (KisanKraft Limited)

Nomination:

Green Economy

Country:

India

Svetlana Chupsheva
Director General ASI

Alexander Stuglev
CEO Roscongress Foundation

Sergei Katyrin
President The Russian Chamber of Commerce and Industry

BRICS RUSSIA | 2020

AGENCY FOR STRATEGIC INITIATIVES

BRICS Business Council

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CHAMBER OF COMMERCE AND INDUSTRY OF THE RUSSIAN FEDERATION

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Green Economy Nomination

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SUSTAINABLE DIRECT SEEDED RICE TECHNOLOGY

www.kisankraft.com

Solution: Eco-Friendly, Water Saving Sustainable Direct Seeded Rice (SDSR) technology to grow rice using 50-60% less water with no compromise in the yield and with significantly reduced environmental damage.

Unlike conventional DSR, SDSR requires a new variety for non-puddled non-saturated soils like other dryland crops e.g. maize. SDSR does not require standing water at any stage and is grown with 50-60% less water than traditional wetland rice. It helps farmers to effectively use the rainfall.

SDSR is developed by combing the drought-tolerant ability of upland rice with high yielding ability of lowland rice, using aerobic rice methods. KisanKraft has a variety named KK-Akshat-A1 which was developed with this technology. SDSR can maintain its rapid growth in the soils which are not saturated. KisanKrafts SDSR has been developed using conventional plant breeding techniques and does not use Genetic Engineering methods.

Cultivation method: land must be ploughed twice and brought to a fine tilth before sowing, just like other dryland crops. SDSR can be grown in any kind of soil except black cotton. The season of sowing is as same as wetland rice. Dry seeds are sown directly with a spacing of 20x10 cm requiring only 8-10 kg seeds per acre. Sowing can be done using seed-drills for better efficiency. Irrigation must be given immediately after sowing. There is no need of standing water or puddling, however, if necessary, depending on rainfall and soil-moisture, once in 5-7 days irrigation is required. Weed management in the initial stage can be done using pre-emergent herbicides like Pendimethalin and later it can be done manually or mechanically. KisanKrafts SDSR varieties mature at around 120-135 days after sowing.

Reduced water use to by 50-60%: No puddling, no nursery, no transplanting, no standing water at any stage of crop growth reduces water requirement.
The root system of SDSR variety is robust and grows well in aerated soils.
SDSR is an Eco-friendly Rice methane emission in this method of rice production is almost eliminated and leaching of nutrients into lakes is significantly reduced.
Reduced seed rate of 8-10 kg per acre compared to 25 kg per acre in irrigated rice.
Favorable rainfall is sufficient to grow SDSR just like other crops such as maize, wheat, sorghum, or soybean.
There is no need of standing water at any stage of crop growth. Supplementary irrigation is provided, if necessary, only to keep the soil moist.
Reduced 55% labor cost by eliminating many operations and easy mechanization.
By dryland cultivation conditions, inter-cropping or even mixed cropping with pulses is possible, and absence of puddling preserves the soil structure.
Both changes improve soil health and fertility.
Not having the standing water and therefore water outflow reduces fertilizer requirement.
Not having standing water reduces the outbreak of pests and diseases, which in turn reduces the consumption of pesticides.

These reductions make SDSR the most cost-effective and sustainable method of rice cultivation, without compromising the yield. SDSR is a solution for farmers in water-scarce irrigated rice environments where water availability at the farm level is too low to grow wetland rice. SDSR technology significantly reduces greenhouse gas emissions, thus it is better for the environment.

We have successfully demonstrated SDSR technology for the last three years. Demonstrations were done in farmers fields in 16 states across the country. There were a total of 106 farmer fields involved in this project which is spread over more than 130 acres. The project has effectively covered thousands of farmers who have visited the fields during demonstration activities. These events were also covered in TV and newspapers.

https://www.youtube.com/channel/UCTv5iFqEAHcYKVCiX_IKO6A/videos

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