Green Super Rice (GSR) Lines

The new lines of rice that are highly adaptable in unfavorable areas with multiple stresses in most lowland rainfed areas of the country. These lines can perform well in drought-prone fields, saline or flooded and poor soils.

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Source of Information:
Myrna Cantila / Jorgea Galindo, GSR Annual Report 2013

Department of Agriculture XI is a member of Southern Mindanao Agriculture and Resources Research and Development Consortium
With the Philippine Government’s goal of increasing rice productivity in the country, through the Department of Agriculture Rice Program, it collaborated a research project of the Food and Agriculture Organization of the United Nations (FAO), particularly in Bicol and Caraga called FAO-AMICAF — utilizing climate ready lines called –GREEN SUPER RICE or GSR.

This is an offshoot of a global research funded by the Bill & Melinda Gates Foundation (BGMF), based at IRRI for Asia, recently came up with climate change-ready lines that are proving to be working well in these stress-prone rainfed areas.

The GSR has potential in out-yielding the Philippine varieties that were approved and recommended in areas where drought, saline, submergence as well as infertile soils are separately dominant, and are called, “multi-trait lines “.

Tests proved that despite after one or two cropping tests only, their outstanding performance were documented, thus, verification trials were done, particularly in rainfed areas toward their introduction and dissemination.

In the country, there are about 735,000 hectares of stress prone area from Region 1 to Region XIII in Caraga Region in Mindanao.

Through the Rice R&D Team of the DA-Davao Region, two pilot sites for On—Station and On-Farm Projects were implemented in DA XI Central Experiment Station and in Barangay Concepcion, Asuncion, Davao del Norte.

**GSR PRODUCTION GUIDE**

- Five GSR lines :
  1. 1GSR IR1-Y4-Y1;
  2. 5 GSR R1-5-S14-S2;
  3. 8 GSR-IR-8-S6-S3-Y2;
  4. 11 IR 83140-B-11-
  5. 12 GSR IR1-12 – D10 – S1 – D1 B
- Farmers Choice - Rc 224

### Land Preparation

Prepare the land thoroughly using carabao-drawn plow.

### Planting

Plant at a distance of 20 cm between rows, and 20 cm between hills.

### Transplanting

- Transplant 17 days after sowing. Apply 4 bags organic fertilizer and 1 bag complete fertilizer. Apply post emergence herbicide 7 days after transplant.
- Apply ammonium sulphate 48 days after transplanting.
- At 15 days after transplanting and wider cracks/crevices observed high presence of WSB egg masses and adult but with high population of natural enemies such as wild parasitoids of WSB cocinellid beetles, spiders and predators. Most of the WSB egg masses collected were parasitized as it was dissected.

- At 49 days after transplanting, spray with vermitca and apply with 200 trichocards.

At wet season planting of the 5 lines, Five GSR lines : 1GSR IR1-Y4-Y1; 5 GSR R1-5-S14-S2; 8 GSR-IR-8-S6-S3-Y2; 11 IR 83140-B-11- B ; 12 GSR IR1-12 – D10 – S1 – D1 and Farmers Choice - Rc 224 were established in Sitio San Miguel, Barangay Concepcion, Asuncion, Davao del Norte.

At dry season, four GSR lines were established 1 GSR IR1-Y4-Y1; 5 GSR R1-5-S14-S2; 8 GSR-IR-8-S6-S3-Y2; 11IR 83140-B-11- B and Farmers Choice (Rc 224).

Results of the Dry Season planting of on-farm showed that GSR 8 is the high yielding among the lines with 8.26 tons/ha and RC 224 was the lowest at 5.10 tons/ha.

Preference analysis was done before the harvest for farmers to choose and identify their acceptance on the physical attributes/characteristics of each line, while Sensory Evaluation was pursued after harvest to investigate the acceptability of rice grits and when cooked as to taste, color and other sensory parameters.

GSR 5 was most preferred by the farmer followed by GSR 1,8,RC224 and GSR 11,respectively according to physical characteristics of the lines.

On Sensory, GSR 8 most acceptable followed by GSR 5 at 1.75 & 2.71, respectively and RC 224 was the least accepted.

Initial results revealed 3 best performing lines such as the GSR 8, 5 & 1, considering yield, preference analysis and sensory evaluation, as of Davao del Norte condition.