



Multi-stress tolerant Green Super Rice in the Philippines

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Summary

Green Super Rice lines are tolerant to variety of stresses such as diseases, drought and insects. Due to climate change, the Philippines has become one of the most disaster-prone countries in the world, for example, natural hazards such as droughts, floods and typhoons. In order to cope with these recurrent, adaptive crop cultivation strategies are needed.

Thus, multi-stress tolerant rice lines and varieties are tested by research institutes and implemented across the Philippines. This technology describes the benefits of the cultivation of Green Super Rice (GSR) varieties in the Philippines, compared to local traditional varieties.

Description

1. Benefits of cultivation Green Super Rice (GSR) varieties

Green Super Rice lines are multi-stress tolerant, inbred, non-GMO rice lines developed by Chinese researchers of the Chinese Academy of Agricultural Sciences in 2011. They are conventionally bred non-GMO varieties and are currently being developed and tested in Africa and South Asia, including by the government of the Philippines. Research rice lines are those currently undergoing the screening process

of the National Seed Industry Council (NSIC). In the context of the project, these were cultivated in a manner that is supervised and monitored by the Department of Agriculture in collaboration with IRRI-GSR project.

Varieties or registered varieties, on the other hand, are those that have passed the NSIC screening process and are authorized for commercial release/use.

Green Super Rice lines are tolerant to different types of stresses, including abiotic stresses (e.g. drought, salinity, alkalinity, iron toxicity), diseases (e.g. blast, bacterial-leaf-blight, sheath blight, bacterial leaf streak and false smut), and insects (e.g., brown planthopper, green leafhopper, stem borer) and could thus be used across a variety of hazard backdrops and agro-ecosystems.

In February 2017, the GSR line known as GSR 8, was approved as a new variety with the registered name 'Rc480' and is now available for commercial use.

It has also been noted by the Government certifying body as the 'standout' variety in this newly approved batch of 25 varieties. Table 1 summarizes the different traits of Green Super Rice lines.