



DA-PhilRice-IRRI Collaboration For rice research and development

NextGen

Accelerating the development and adoption of next-generation (NextGen) rice varieties for major ecosystems in the Philippines

The NextGen rice project is an initiative under the rice sector strategy of the Philippine Department of Agriculture (DA). It is being implemented jointly with the International Rice Research Institute (IRRI).

NextGen aims to use recent advances in plant breeding, such as the use of molecular biology, stratified multi-environmental testing (MET), and improved computational power to make the country's rice breeding program more efficient. The use of modern breeding tools and other attendant technologies will help make the next generation of high-yielding and climate change-resilient varieties available within a shorter period.

Stress-proof rice that yields more

The Philippines has made progress in increasing its production as exhibited by the 5.8% increase in total production from 2010 to 2011, now at 16.7 million tons.

Climate change has brought in biotic and abiotic stresses that affect favorable rice production systems. This means that developing better rice varieties should not only make rice production sustainable, but also adaptive to varied conditions. Good quality seed of these new varieties must be immediately made available to farmers.



DA-PhilRice-IRRI Collaboration For rice research and development

NextGen

Accelerating the development and adoption of next-generation (NextGen) rice varieties for major ecosystems in the Philippines

The NextGen rice project is an initiative under the rice sector strategy of the Philippine Department of Agriculture (DA). It is being implemented jointly with the International Rice Research Institute (IRRI).

NextGen aims to use recent advances in plant breeding, such as the use of molecular biology, stratified multi-environmental testing (MET), and improved computational power to make the country's rice breeding program more efficient. The use of modern breeding tools and other attendant technologies will help make the next generation of high-yielding and climate change-resilient varieties available within a shorter period.

Stress-proof rice that yields more

The Philippines has made progress in increasing its production as exhibited by the 5.8% increase in total production from 2010 to 2011, now at 16.7 million tons.

Climate change has brought in biotic and abiotic stresses that affect favorable rice production systems. This means that developing better rice varieties should not only make rice production sustainable, but also adaptive to varied conditions. Good quality seed of these new varieties must be immediately made available to farmers.



Better and more adaptable rice varieties should also exhibit location-specific performance, including in areas considered marginal. The project's potential impacts include increased availability of quality seed to farmers, increased rice yields, and sufficient rice supply.

Objectives

- Develop high-yielding rice varieties that have resistance to or tolerance for multiple biotic and abiotic stresses.
- Strengthen and upgrade the rice breeding and research pipelines in the Philippines and enhance skills and interaction among scientists of partner institutions (IRRI, PhilRice, and UPLB).
- Accelerate the varietal breeding process through marker-assisted selection (MAS).
- Establish joint multilocation testing schemes at key sites for breeding lines and varieties in major Philippine ecosystems.
- Produce and disseminate newly-released inbred and hybrid rice varieties through high-quality seed production.
- Upgrade national capacity on plant breeding, molecular techniques, participatory adaptive research, seed production, and ensuring seed health.

Updates

- From 2014 to 2016, the National Seed Industry Council (NSIC) approved 45 rice varieties for release to farmers. These varieties are included in the 2016 and upcoming 2017 participatory varietal selection (PVS) trials. Farmers are able to choose specific varieties for their targeted ecosystems through the PVS trials.
- In 2016, 148 and 212 PVS trials were conducted for the dry and wet seasons, respectively, covering irrigated inbreds and hybrids; varieties for rainfed/drought-prone, saline, flood-prone, and cool elevated areas; and other special purposes. Best performing varieties were identified based on yield, preferential analysis, and sensory evaluation.

Partners

Department of Agriculture
DA-Philippine Rice Research Institute (PhilRice)
University of the Philippines Los Baños
International Rice Research Institute

Contact

Georgina Vergara (g.vergara@irri.org)
Thelma Padolina (tf.padolina@philrice.gov.ph)
Oliver Manangkil (oe.manangkil@philrice.gov.ph)

November 2016

Better and more adaptable rice varieties should also exhibit location-specific performance, including in areas considered marginal. The project's potential impacts include increased availability of quality seed to farmers, increased rice yields, and sufficient rice supply.

Objectives

- Develop high-yielding rice varieties that have resistance to or tolerance for multiple biotic and abiotic stresses.
- Strengthen and upgrade the rice breeding and research pipelines in the Philippines and enhance skills and interaction among scientists of partner institutions (IRRI, PhilRice, and UPLB).
- Accelerate the varietal breeding process through marker-assisted selection (MAS).
- Establish joint multilocation testing schemes at key sites for breeding lines and varieties in major Philippine ecosystems.
- Produce and disseminate newly-released inbred and hybrid rice varieties through high-quality seed production.
- Upgrade national capacity on plant breeding, molecular techniques, participatory adaptive research, seed production, and ensuring seed health.

Updates

- From 2014 to 2016, the National Seed Industry Council (NSIC) approved 45 rice varieties for release to farmers. These varieties are included in the 2016 and upcoming 2017 participatory varietal selection (PVS) trials. Farmers are able to choose specific varieties for their targeted ecosystems through the PVS trials.
- In 2016, 148 and 212 PVS trials were conducted for the dry and wet seasons, respectively, covering irrigated inbreds and hybrids; varieties for rainfed/drought-prone, saline, flood-prone, and cool elevated areas; and other special purposes. Best performing varieties were identified based on yield, preferential analysis, and sensory evaluation.

Partners

Department of Agriculture
DA-Philippine Rice Research Institute (PhilRice)
University of the Philippines Los Baños
International Rice Research Institute

Contact

Georgina Vergara (g.vergara@irri.org)
Thelma Padolina (tf.padolina@philrice.gov.ph)
Oliver Manangkil (oe.manangkil@philrice.gov.ph)

November 2016