2019

PHILRICE R&D HIGHLIGHTS

TECHNOLOGY MANAGEMENT AND SERVICES DIVISION

Contents

DIVISION

Technology Management and Services

Division Head: Lea D. Abaoag

Executive Summary

The Technology Management and Services Division (TMSD) helps raise the productivity and income of rice farmers by promoting high-impact rice and rice-based technologies through science-based training and other appropriate technology management modalities. "Training design and development" and "Training delivery and evaluation" complement each other in ensuring that the training courses and other knowledge sharing activities of the division are relevant to the needs of the target participants and responsive to the changing rice production landscape. The Technology Assessment and Mature Technology Identification project ensures that PhilRice-developed technologies to be promoted are appropriate and acceptable to the target technology users.

This year, TMSD designed and conducted training programs and knowledge-sharing activities for farmers, extension professionals, and other rice stakeholders. These included two batches of modified season-long Rice Specialists' Training Course (RSTC) with 29 participants (12 male, 17 female) and 10 customized training courses. These customized training courses catered to 364 farmers, extension workers, students, educators, and other professionals (238 male, 126 female) across the country. RSTC participants obtained an average gain in knowledge (GIK) of 60.47% and gave the training an average 62.72% excellent rating. Participants in the customized training courses got an average of 56% GIK and gave a 54.19% excellent rating. These highly positive evaluation ratings showed that the training courses achieved its major objectives and provided a meaningful learning experience for the trainees.

Twenty gender-sensitive training modules were designed and tested as part of customized training programs in 2019. In general, all training courses in which the modules were used, were given excellent ratings for relevance, usefulness, and overall quality. Ten PowerPoint Presentations on the updated version of the *PalayCheck* System for Irrigated Lowland Rice were also produced and used as courseware materials in the series of training courses.

Aside from training courses, farmers' field days or *Lakbay Palay* events were conducted during the wet and dry cropping seasons, which accommodated 3,175 farmers and stakeholders at PhilRice CES. Lakbay Palay did not only serve as an avenue to promote high-yielding and cost-reducing technologies;

it also became an opportunity for PhilRice to educate the farmers and other stakeholders on the salient features of the Rice Trade Liberalization Law and on how the Filipino farmers can benefit from the Rice Competitiveness Enhancement Fund.

TMSD also catered to requests for rice experts to serve as resource persons or to provide technical advice on specialized rice topics, usually from local government units and partner government and private agencies. Through the 48 answered requests for technical dispatch, an additional 1,915 farmers and seed growers, extensionists and extension intermediaries, policymakers, and other stakeholders were reached. Of the total stakeholders reached, 1159 were male and 756 were female.

A division-based learning farm was also maintained and managed to serve as an actual laboratory and demonstration area where trainees can practice their learning from the lectures. This area also served as a venue for demonstrating PhilRice technologies.

To determine which topics should be included in the future conduct of training programs, and to know of other strategies to be employed for a more successful conduct of such activities, a training needs assessment (TNA) and a tracer study were administered among the participants of the training courses. TNA, which surveyed 364 farmers and farmer leaders (79% of which were male and 21% were female), showed that training courses on pest and disease management (15%), production of inbred/hybrid seeds (14%), and general rice production (9%) and integrated rice-based farming (9%), and rice machine operation (8%) are in-demand. Aside from these courses, female farmers are also interested in the *PalayCheck* System and effects of climate change on rice.

Five technologies were assessed: the Varietal Mixture (VarMix) Technology, Leaf Color Computing (LCC) Application, Brown Rice Machine, Kwebo, and Capillary Irrigation System. Coordination with the members of TWG on technology assessment was conducted to update the processes in the assessment of PhilRice-developed technologies and discuss their roles from proposal making to technology generation and development. Results of the technology validation activities and draft of the manual on assessment of newly PhilRice-developed technologies will be completed in the early quarter of 2020.

These activities all contributed to more widespread promotion and awareness of science-based rice technologies and the development and improvement of our rice stakeholders' - farmers, extension workers, and other extension intermediaries - knowledge and skills in farming. Improved knowledge and skills is hoped to result in an increase in adoption of various technologies and broadened opportunities in rice farming. Eventually, this will translate into increased productivity, cost-effectiveness, and profitability of rice farming.

PROJECT 1

Training Design and Development

EP Angeles

This project focused on the conceptualization, development, and updating of PhilRice-TMSD's training programs through two studies. This project specifically focused on the first two phases of the training process – planning through training needs assessment or TNA (TMS 101-001) and training design and development (TMS 101-002). Through these studies, training programs and their corresponding modules and courseware are kept relevant to the needs of the intended participants and responsive to PhilRice's mandate and the changing rice production landscape. Relevant and effective training programs help to develop or enhance the knowledge, skills, and other capacities of these intended groups, especially rice extension intermediaries and farmer leaders as main end-users of technologies and disseminators of information. This is hoped to translate into faster and more widespread reach of reliable information on rice and, ultimately, increased productivity and income of rice farmers. By increasing capacities of these main beneficiaries, PhilRice hopes to contribute to building a more productive, competitive, and resilient rice industry sector.

To do this, the project designed and developed relevant and gender-sensitive training programs, including modules and courseware, for extension intermediaries and farmers in target areas. An alternate TNA was conducted and showed that respondents (men and women farmers and farmer leaders) have interest in joining customized training courses on pest and disease management (15%), production of inbred/hybrid seeds (14%), and general rice production (9%) and integrated rice-based farming (9%), and rice machine operation (8%). Aside from these courses, female farmers, who compose 21% of the respondents, are also interested in the *PalayCheck* System and effects of climate change on rice. Twenty gender-sensitive training modules were designed and tested. In general, all training courses, in which the modules were used, were given excellent ratings for relevance, usefulness, and overall quality by the training participants. Ten PowerPoint Presentations on the updated version of the *PalayCheck* System for Irrigated Lowland Rice were produced as courseware. In addition, 14 training forms while all training-related materials were uploaded in an online database.

Training Needs Assessment

RRC De Joya, EP Angeles

This study was conducted to improve and maintain the relevance of training programs being handled by the TMSD to the needs of its target participants. For this year, the TNA determined what types of training courses and topics are most preferred by farmers, extension workers, and other stakeholders. In doing so, the study team used the Training Course Evaluation Form (for short courses), usually distributed at the end of every training course conducted, as the training needs assessment tool. Participants of TMSD-managed training courses from June 2018 to August 2019 who accomplished the training evaluation forms in full, complete with their personal information, were qualified as respondents in this study. With this, the study collected valid responses from 364 individuals (79% of which were male and 21% were female) composed of farmers, extension workers, and other stakeholders from 43 provinces in the Philippines.

Results showed that the respondents are most interested in joining a customized training course on the identification and management of rice pest and diseases. Other topics, which emerged in the top five responses were rice machine operations, rice production, seed growers training, and mushroom production. The results of this TNA shall serve as one of the guides to be used by the training curriculum and module developers in setting the content and style of delivery of the training programs in the future.

Module and Courseware Development

EP Angeles, RRC De Joya, JAM Daligdig, KM Del Castillo, VB Isidro, and JBA Cali

Training modules used in training programs implemented by the TMSD should be constantly updated to ensure its relevance to the changing needs of its target clients. This study aimed to develop, update, and test training modules and courseware designed for rice stakeholders in target areas as well as maintain a database for all training-related materials. For 2019, the study focused on customized modules for rice extensionists from partner agencies and farmers and farmer leaders. The choice of module to design and the specific focus and style of delivery of each were determined based on results of the training needs analysis in 2018, the demand from requesting parties and partners, and lessons learned from implementation of similar previous courses.

PROJECT 1

In consultation with both male and female members of the training management team, subject matter specialists (SMS), and training facilitators; 20 gender-sensitive training modules were designed and tested as part of 7 customized training programs implemented in 2019. In general, all training courses in which the modules were used, were given excellent ratings for relevance, usefulness, and overall quality by the training participants. This study also managed the production of necessary courseware materials that were needed to facilitate learning activities of the module. Ten PowerPoint Presentations on the updated version of the *PalayCheck* System for Irrigated Lowland Rice were produced after a series of consultation workshops and review sessions with SMS. In addition, various materials and collaterals such as output templates, banners, videos, photos, case studies, graphical figures, and infographics were produced and 14 training forms were updated in support of the training programs. All content and materials produced were uploaded in an online database to ensure back up and storage and easy retrieval of files.

PROJECT 2

Training Delivery and Evaluation

LD Abaoag

This project capacitated the agricultural extension workers, farmer leaders, and other farmer intermediaries on rice and rice-based technologies. The first three studies under this project, namely: (a) Enhancing the technical capability of the extension workers and other farmer intermediaries on rice and rice-based production technologies, (b) Enhancing technology awareness and learning through mass-based technology promotion, and (c) Enhancing learning and awareness through the learning farm were all directed to the conduct of various methodologies to be employed to facilitate the transfer of knowledge among the farmers, extension workers, and other stakeholders. The fourth study, titled, "Improving training delivery and relevance through tracer study," complements the first three studies as it serves as an evaluation tool through which the project team can determine the extent to which the activities have achieved the intended output.

Conducting training is one of the core functions of the division. For this year, the first study conducted two batches of the modular Rice Specialists' Training Course (RSTC) to develop extension workers and to increase the number of project implementers who can conduct training and briefing on the use of high-quality seeds. The first installment of the course was joined in by 29 participants (12 male, 17 female) from the Agricultural Training Institute (ATI) regional centers and the Department of Agriculture (DA) field offices of priority provinces. The conduct of the first module for the second batch of the RSTC has also started with 20 male and 6 female participants from training centers of the Technical Education and Skills Development Authority (TESDA). Ten specialized training courses also catered to 292 participants composed of farmers, extension workers, students, educators, and other professionals from different provinces in the Philippines.

The study successfully achieved its major goals as results showed that an average rating of 60.47% and 56% gain in knowledge (GIK) was achieved from the conduct of the first batch of RSTC and 10 specialized training courses, respectively. This is high compared with the study's initial target of 30% GIK rating for the RSTC and 25% GIK for other training courses. As for the participants' evaluation on the overall conduct of the training courses, a 54.19% excellent rating was achieved by the RSTC while an average of 62.72% excellent rating was attained by the specialized courses.

Regular conduct of farmers' field days and forum, also known as *Lakbay Palay*, is among the activities being employed by PhilRice since 2012 to promote

high-yielding and cost-reducing technologies, establish strong linkages with the LGUs and other technology promotion partners, and provide immediate solutions to the farmers' field problems. This institutional activity, usually done twice a year towards the end of each cropping season, has brought in thousands of interested farmers and different extension intermediaries from different provinces throughout the country. For this year's *Lakbay Palay*, the Central Experiment Station of PhilRice accommodated 3,175 farmers and stakeholders - 66% of which were male (2,108) and 34% were female (1,067). There were 1,521 individuals from the different provinces of the Philippines who participated in the 2019 DS *Lakbay Palay*, which was held on April 11-12, while the remaining 1,654 attended the 2019 WS *Lakbay Palay* on October 3-4. Field tours, exhibit viewings, and consultations with experts were conducted to address the participants' concerns, and promote adoption of the featured technologies. Results showed that *Lakbay Palay* in the dry and wet season gained positive rating from the respondents.

In support to the training courses being conducted by the Institute, a division-based learning farm was maintained and managed to serve as an actual laboratory and demonstration area where trainees can practice their learning from the lectures. The learning farm also served as a venue for demonstrating technologies developed by the Institute during 2019 DS and WS *Lakbay Palay*. By providing experiential learning opportunities to the trainees and the *Lakbay Palay* participants, enhancement and retention of the knowledge shared during discussions were further facilitated.

As for the tracer study, results showed that #RiceUpPH: Help Transform our Rice Farming Communities contributed to the participants' personal development as they've become more confident and passionate about the practice of their respective professions. They were also provided with better work opportunities as they were continuously tapped for their technical skills and expertise. As a result, they were able to share relevant data and information to more than 4,000 farmers, extension workers, and other stakeholders. All information gathered from this study will serve as one of the project team's guides on designing and implementing future training programs.

Enhancing the Technical Capacity of the Men and Women Extension Workers and Other Farmer Intermediaries on Rice and Rice-Based Production Technologies

LD Abaoag, EP Angeles, KM del Castillo, VB Isidro, RRC de Joya, JAM Daligdig, and MET Bautista

This study capacitated men and women agricultural extension workers, farmer leaders, and other farmer intermediaries on rice and rice-based technologies through holistic gender-sensitive training course offerings.

Two batches of the modular RSTC were conducted under this study, with the objective of developing extension workers who can conduct training courses and briefings on the use of high-quality seeds. The first installment of the course was joined in by 29 participants (12 of which were male, 17 female) from the Agricultural Training Institute (ATI) regional centers and the Department of Agriculture (DA) field offices of priority provinces. The conduct of the first module for the second batch of the RSTC had also started with 20 male and 6 female participants from the training centers of the TESDA. Ten specialized training courses catering to 292 participants composed of farmers, extension workers, students, educators, and other professionals were also conducted.

Evaluation methods were employed to determine courses' effectiveness. Pre- and post-test examinations and evaluation of the overall implementation of courses using a questionnaire were used.

Evaluation showed that an average of 60.47% and 56% GIK rating was achieved in the first batch of RSTC and 10 specialized training courses, respectively. This is high compared with the study's initial target of 30% GIK rating for the RSTC and 25% GIK for the other training courses. The RSTC achieved a 54.19% excellent rating in the overall evaluation, while the specialized courses attained an average of 62.72% excellent rating.

Enhancing technology awareness and learning through mass-based technology promotion

LD Abaoag

Farmers' field days and forum, dubbed as *Lakbay Palay* since 2012, is regularly conducted to promote high-yielding and cost-reducing technologies, establish strong linkages with the LGUs and other technology promotion partners, and provide immediate solutions to the farmers' field problems.

The Central Experiment Station of PhilRice accommodated 3,175 farmers and stakeholders. There were 1,521 participants in the Lakbay Palay DS, which was held on April 11-12, while the other 1,654 were from the Lakbay Palay WS implemented on October 3-4. Of the participants, 66% were male (2,108) and 34% were female (1,067). Field tours, exhibits, and consultations with experts were conducted to address the participants' concerns and promote adoption of the featured technologies.

Evaluation showed that *Lakbay Palay* in the DS and WS received an average of 58% excellent rating in terms of the quality and relevance. Among other components of the event such as the food, venue, sequencing of activities, and performance of the speakers and the facilitators, facilitators' way of handling the event received the highest evaluation, while food served got the lowest rating.

Field tour station managers discuss PhilRice technologies.

Enhancing learning and awareness through the learning farm

MJ Manalang, LD Abaoag, KM Del Castillo, JA Dela Cruz, RB Fulgencio, JA Patayan, and BB Alfonso

The learning farm showcased yield-enhancing and cost-reducing technologies of inbred and hybrid rice varieties. Several training programs offered by the division used the farm as training ground especially on the practicum side. It also demonstrated farm machinery developed by PhilRice during *Lakbay Palay*.

This study established 1.9ha demonstration field during 2019 DS and 1.5ha during WS, showcasing the following: mechanized crop establishment for public hybrids, nationally/regionally-recommended varieties and newly-released inbred rice varieties, manually and mechanically-transplanted hybrid seed production, varietal trial, and participatory technology demonstration on farmers' practice and recommended technologies.

All varieties tested were suitable to be used for mechanical rice transplanter. In 2019 DS, results showed that NSIC Rc 402 yielded the highest (9.2t/ha) among the varieties tested; followed by Rc 204H (8.9t/ha). NSIC Rc 250H (7.8 t/ha) recorded the lowest grain yield. In 2019 WS, NSIC Rc 506 (8.1 t/ha) and Rc 222 (6.9 t/ha) produced the highest grain yield. NSIC Rc 72H (3.6 t/ha) was the lowest yielder.

Among the trainees, 65% male (217) and 35% female (115) used the learning field as venue for Agro-ecosystem analysis (AESA), field inspection, rouging, primordial dissection, hands-on training on methods of seedling establishment, crop establishment, crop care, and farm machinery operations.

Improving training delivery and relevance through tracer study

RA Pineda, LD Abaoag, and JBA Cali

"Tracing" pertains to physically locating training participants and respondents. Training, as a form of intervention, must document changes in former trainees' lives after their training and the knowledge sharing process they extended to their immediate communities.

Modular course design is a new approach in conducting training courses, in which training curriculums are presented and subdivided into different modules. The participants can freely choose, which course module to attend, provided they enroll in the first module. In 2016, Project IPaD launched the training on

#RiceUpPH: Help Transform our Rice Farming Communities, a modular course showcasing three modules. Training participants were traced to document the significant changes, whether positive or negative, intended or not, and the causes of the identified changes in their lives brought about by the training course.

Based on results, the training helped the respondents to be more confident, and were given more opportunities related to their work and personal development. They also became more passionate, appreciative, performed more than what is expected, developed sense of fulfillment, and focused towards helping more in their respective profession.

All the respondents shared their learning after the training. On average, they reached more than 4,000 clienteles. The top three learnings they shared from Module 1 were inspirational talk (God is the center of life), commitment to work, and leadership; while from Module 2, they mostly shared technical topics such as *PalayCheck*, pest management (IPM, AESA), web applications, and mushroom production. Graduates served as intermediaries and were continuously tapped for their technical expertise and skills.

PROJECT 3

Technology Assessment and Mature Technology Identification

JV Pascual, LD Abaoag, and GCR Perez

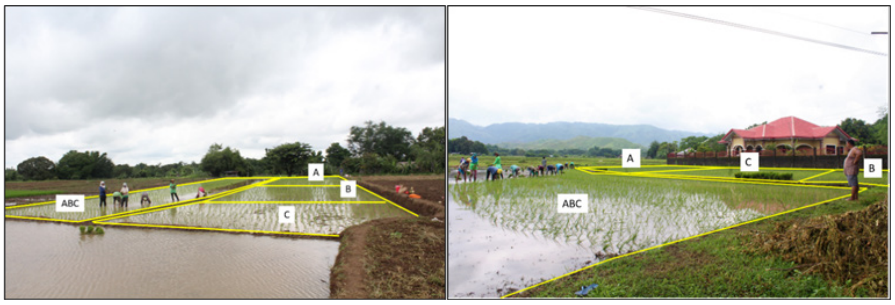
The project aimed to develop and implement an institutional system for the identification and evaluation of newly-developed technologies to ensure its appropriateness and acceptability before promotion and commercialization. The technology assessment process consolidated efforts in identifying, assessing, and evaluating the readiness and maturity of institute's research and development outputs based on the classification of technologies. It also developed gender-responsive methods and procedures in assessing the technologies, conducted table and field validation of newly-developed technologies, and determined performance based on local-specific conditions.

The project also aimed to create and strengthen an interdisciplinary technical working group (TWG) composed of men and women from different divisions of PhilRice to lead the analysis and evaluation of a specific technology through a thorough examination of the technology validation results. The Technology Assessment (TA) team, together with the TWG, determined the degree of maturity of PhilRice's technologies using the STEEP (Social acceptability, Technical feasibility, Economic viability, Environmental soundness, and Political/legal acceptability) criteria; listing the gaps, risks, and gender issues associated with each technology evaluated; identifying recommended set of interventions to answer the identified gaps, risks, and issues of each technology assessed; and recommending action on a particular technology whether to endorse for promotion/commercialization, as is or with refinements, or for further R&D work.

Five technologies were assessed: Varietal Mixture (VarMix) Technology, Leaf Color Computing (LCC) Application, Brown Rice Machine, Kwebo, and Capillary Irrigation System.

The VarMix Technology was classified as a process, LCC App as a diagnostic tool, while the rest were classified as a product. Field validation was implemented to assess the performance of VarMix technology in 2019 WS to enhance yield and mitigate effects of climate change in stress-prone areas. VarMix on-field trials were established during 2019 WS in three municipalities of Iloilo (Sta. Barbara, Oton, and San Miguel) and in Lupao, Nueva Ecija. Pieces of feedbacks

were gathered among farmers in terms of performance on yield stability and resistance to both biotic (pest and disease) and abiotic (limited source of water) stresses. Table and field validations for the LCC App, Brown Rice Machine, Kwebo, and Capillary Irrigation (Capillarigation) System were done by determining their performance based on local-specific conditions and the gaps and risks associated with each technology.



Establishment of VarMix field trials in Lupao, Nueva Ecija, 2019 WS

Drone shots of the established VarMix on-field trials in Lupao, Nueva Ecija

Farmer-cooperators of VarMix field trials in Lupao, Nueva Ecija

VarMix technology farm walk in Lupao, Nueva Ecija, 2019 WS




Technology generators and members of the TA team brief the farmer-cooperators in Cabanatuan City and Zaragoza, Nueva Ecija with the procedures on using LCC App

LCC App briefing for the senior high school students of Aliaga, Nueva Ecija

Farmer-cooperators of LCC App field trials in Nueva Ecija

Evaluating the prototype of Kwebo as typhoon-resistant multipurpose farm structure

Field trials of Capillarigation System used in irrigating rice-based crops

Pilot-testing of village-type-brown-rice-machine in Zaragoza, Nueva Ecija

Technology Validation of PhilRice Developed Technologies

GCR Perez, LD Abaoag, and JV Pascual

This study demonstrated and validated PhilRice-developed technologies as one of the references in determining products that are ready for promotion and/or commercialization. It aimed to list all technologies ready for assessment; gather information about the technologies through reports and other documents; and determine the specific technology's field performance. It also aimed to gather feedback and information from intended users and consolidate the results as basis for technology analysis and evaluation.

Five technologies were assessed: (1) Varietal Mixture (VarMix) Technology, (2) Leaf Color Computing Application, (3) Brown Rice Machine, (4) Kwebo, and (5) Capillary Irrigation System. Coordination with the technology generators were conducted to acquire information, reports and other documents related to technology development.

To further determine the performance of these technologies based on local-specific conditions and to identify gaps and risks associated with their use, the Technology Assessment (TA) team validated the technologies on farmers' fields. Field trials of LCC App, VarMix Technology, and Brown Rice Machine were established in various sites identified by the TA team. Inteded technology users and stakeholders were surveyed and interviewed on the technologies' performance and effects to their communities. Kwebo and the Capillary Irrigation (Capillarigation) System were also validated on-field during 2019 DS by *Lakbay Palay* participants.

All information acquired by the TA team from the documents gathered and from on-field trials, surveys, and interviews were consolidated and relayed to the technology generators to further improve the technology. Results were also analyzed and evaluated using the STEEP criteria.

Analysis and Evaluation of PhilRice-Developed Technologies

JV Pascual, LD Abaoag, and GCR Perez

This study analyzed and assessed PhilRice's newly-developed technologies through an institutionalized process by determining the readiness and maturity of research outputs or technologies. It aimed to determine the technical background of the developed technologies, and revive and strengthen the functions of interdisciplinary technology assessment team TWG that will consist

of experts from PhilRice divisions. The study also reviewed and evaluated the consolidated results of the table and field validation of technologies using the STEEP criteria. The results will serve as basis of the TA team and the TWG in forming a recommendation of whether to endorse a particular technology for: (1) promotion/commercialization as is, (2) with refinements, or (3) for further R&D work.

Five technologies were assessed: Varietal Mixture (VarMix) Technology, Leaf Color Computing Application, Brown Rice Machines, Kwebo, and Capillary Irrigation System. These technologies are still undergoing technology validation. Information on the performance of the technology and feedback from the intended technology users are being gathered. Results of the technology validation will be consolidated, analyzed, and evaluated using the form developed by the project team. STEEP indicators will be used in assessing the technologies.

The TA team has already coordinated and scheduled a meeting with the experts from PhilRice division to revive the TWG on Technology Assessment and Mature Technology Identification. The TWG will lead the analysis and evaluation of the technologies and update the processes involved in technology assessment.

Abbreviations and acronyms

AYT - Advanced Yield Trial
ABE - Agricultural and Biosystems Engineering
AEW - Agricultural Extension Worker
ATI – Agriculture Training Institute
AESA - Agro-ecosystem Analysis
AC - Amylose Content
BLB - Bacterial Leaf Blight
BLS -Bacterial Leaf Streak
BCA - Biological Control Agent
BS - Breeder Seeds
BPH -Brown Planthopper
BPI - Bureau of Plant Industry
CGMS - Cytoplasmic Genic Male Sterility
COF - Commercial Organic Fertilizer
CDA - Cooperative Development Authority
DAS - Days After Sowing
DAT - Days After Transplanting
DF - Days to Flowering
DM- Days to Maturity
DAR - Department of Agrarian Reform
DA-RFOs - Department of Agriculture-Regional Field Offices
DoF - Department of Finance
DOLE - Department of Labor and Employment
DTI - Department of Trade and Industry
DSR - Direct-seeded Rice
DS - Dry Season
FBS – Farmers' Business School
FC - Farmers' Cooperative
FSM - Farming Systems Models
FAA - Fish Amino Acid
FGD - Focused Group Discussion
FSP - Foundation Seed Production
FRK - Farm Record Keeping
GABA - Gamma-aminobutyric Acid
GT - Gelatinization Temperature
GAD - Gender and Development
GYT - General Yield Trial
GCA - Genetic Combining Ability
GIS - Geographic information system
GEMS - Germplasm Management System
GAS - Golden Apple Snail
GL - Grain Length
GQ - Grain Quality
GW - Grain Weight
GY - Grain Yield
GLH - Green Leafhopper
GOT - Grow Out Test
HR - Head Rice
HRA - Heat Recovery Attachment
HIPS – Highly-intensified Production System
HQS - High-quality Rice Seeds
HON - Hybrid Observational Nursery
HPYT - Hybrid Preliminary Yield Trial
ICT - Information and Communication Technology
IEC - Information Education Communication
IBNM - Inorganic-based Nutrient Management
ICM - Integrated Crop Management
IPM - Integrated Pest Management
JICA - Japan International Cooperation Agency
IRRI - International Rice Research Institute
IA - Irrigators' Association
KP - Knowledge Product
KSL - Knowledge Sharing and Learning
LCC - Leaf Color Chart
LFT - Local Farmer Technicians
LGU - Local Government Units
LPS - Low Pressure Steam-operated
LE-CYPRO - Lowland ecotype Cyperus rotundus
MFE - Male Fertile Environment
MSE - Male Sterile Environment
MAS - Marker-assisted Selection
MRL - Maximum Root Length
MR - Milled Rice
MER - Minimum Enclosing Rectangle
MOET - Minus-One Element Technique
MC - Moisture Content
MAT - Multi-Adaptation Trials

MCRTP - Multi-crop Reduced Till Planter
MET - Multi-environment Trial
MYT - Multi-location Yield Trial
NAAP - National Azolla Action Program
NCT - National Cooperative Test
NFA - National Food Authority
NRAM - National Rice Awareness Month
NSIC - National Seed Industry Council
NSQCS - National Seed Quality Control Services
N - Nitrogen
NBSP - Nucleus and Breeder Seed Production Project
NFGP - Number of Filled Grains Panicle
ON - Observation Nursery
OSIS - One-Stop Information Shop
OBNM - Organic-based Nutrient Management
PL - Panicle Length
PW - Panicle Weight
PVS - Participatory Varietal Selection
PWD - Person with Disabilities
PHilMech - Philippine Center for Postharvest Development and Mechanization
PRISM - Philippine Rice Information System
PhilRice - Philippine Rice Research Institute
PSA - Philippine Statistics Authority
PTC - PhilRice Text Center
P - Phosphorus
PVS - Plant Variety Selection
K - Potassium
QTL - Quantitative Trait Loci
RCBD - Randomized Complete Block Design
RSP - Registered Seed Production
RBB - Rice Black Bug
RCEF - Rice Competitiveness Enhancement Fund
RCEP - Rice Competitiveness Enhancement Program
RCM - Rice Crop Manager
RHGEPS - Rice Hull Gasifier Engine Pump System
RPH - Rice Planthopper
RSTC - Rice Specialists' Training Course
RTV - Rice Tungro Virus
RBFHS - Rice-based Farming Household Survey
KQ - Kernel Quality
SV - Seedling Vigor
ShB - Sheath Blight
ShR - Sheath Rot
SMS - Short Messaging Service
SNP - Single Nucleotide Polymorphism
SWRIP- Small Water Reservoir Irrigation Project
SRB - Stabilized Rice Bran
SUCs - State Universities and Colleges
SB - Stem Borer
TESDA - Technical Education and Skills Development Authority
TDF - Technology Demonstration Farm
TRV - Traditional Rice Varieties
TOT - Training of Trainers
TPR - Transplanted Rice
URBFS - Upland Rice-Based Farming
WS - Wet Season
WCV - Wide Compatibility Variety
YSB - Yellow Stem Borer

Editorial team

We are a government corporate entity (Classification E) under the Department of Agriculture. We were created through Executive Order 1061 on 5 November 1985 (as amended) to help develop high-yielding and cost-reducing technologies so farmers can produce enough rice for all Filipinos.

With a "Rice-Secure Philippines" vision, we want the Filipino rice farmers and the Philippine rice industry to be competitive through research for development in our central and seven branch stations, coordinating with a network that comprises 59 agencies strategically located nationwide.

We have the following certifications: ISO 9001:2008 (Quality Management), ISO 14001:2004 (Environmental Management), and OHSAS 18001:2007 (Occupational Health and Safety Assessment Series).

PHILRICE CENTRAL EXPERIMENT STATION Maligaya, Science City of Muñoz, 3119 Nueva Ecija
Tel: (44) 456 -0277 • Direct line/Telefax: (44) 456-0354

BRANCH STATIONS:

PhilRice Batac, MMSU Campus, Batac City, 2906 Ilocos Norte
Telefax: (77) 772-0654; 670-1867; Tel: 677-1508 Email: batac.station@philrice.gov ph
PhilRice Isabela, Malasin, San Mateo, 3318 Isabela
Mobile: 0908-875-7955; 0927-437-7769; Email: isabela.station@philrice.gov.ph
PhilRice Los Baños, UPLB Campus, College, 4030 Laguna
Tel: (49) 536-8620; 501-1917; Mobile: 0920-911-1420; Email: losbanos.station@philrice.gov.ph
PhilRice Bicol, Batang Ligao City, 4504 Albay
Tel: (52) 284-4860; Mobile: 0918-946-7439; Email: bicol.station@philrice.gov.ph
PhilRice Negros, Cansilayan, Murcia, 6129 Negros Occidental
Mobile: 0949-194-2307; 0927-462-4026; Email: negros.station@philrice. gov.ph
PhilRice Agusan, Basilisa, RTRomualdez, 8611 Agusan del Norte
Telefax: (85) 343-0768; Tel: 343-0534; 343-0778; Email: agusan.station@philrice.gov.ph
PhilRice Midsayap, Bual Norte, Midsayap, 9410 North Cotabato
Telefax: (64) 229-8178; 229-7241 to 43 Email: midsayap.station@philrice.gov.ph

SATELLITE STATIONS:

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Tel/Fax: (02) 920-5129

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