



# SOCIOECONOMICS Division



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# SOCIOECONOMICS

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### **EXECUTIVE SUMMARY**

The Socioeconomics Division (SED) implements socioeconomic and policy research under the Office of the Deputy Executive Director for Research. SED generates rice and rice-related statistics, measures the impacts of rice technologies, products, and services, and conducts policy research and advocacy activities in support to the Science-Based Policies in Advancing Rice Communities (SPARC) Program.

In 2018, SED implemented seven projects, five of which were externally-funded. Outputs include improved operational PalayStat website, which contains primary and secondary rice data; updated and restructured rice and rice-related datasets, profile of 42 major rice producing provinces for WS 2016 wet cropping season, and thematic rice production database of 2017 DS. Socioeconomic impacts of combine harvester, adoption of hybrid rice and rice seed production, and production and marketing of Philippine specialty rice were assessed. Policy brief on the effects of Tax Reform for Acceleration and Inclusion (TRAIN) law in the rice sector and books on reducing yield and cost gaps and value chain were also produced. These outputs will encourage R4D managers, scientists, and researchers to have a better understanding of the dynamics of the rice industry.



## PROJECT 1: STATISTICAL SERIES ON THE RICE ECONOMY

#### IA Arida

With enormous thrust on government accountability, policymakers enjoined researchers and developmentalists to present project impacts quantitatively. Statistics also shows the trends in the Philippine rice economy. Understanding rice trends has significant implications on planning and implementation of rice programs. Previous rice statistics will also inform policymakers and researchers on the value of government investments in agriculture.

This project gathered, processed, and updated rice statistics and made them available to primary stakeholders. Studies include: (1) integrating rice statistics databases in the PalayStat system and, (2) updating and restructuring rice and rice-related statistics from available secondary data in handbook and web format.

Generally, the project aimed to make statistical rice series accessible to major rice stakeholders. The specific objectives are the following:

- a. Update the database of provincial rice statistics to include 2017 datasets;
- b. Storage of selected Philippine Statistics Authority (PSA) Public Use Files identified based on the MOA;
- c. Consolidate and restructure datasets to come up with manageable and easy-to-reconstruct data matrices ready to be uploaded in the PalayStat;
- d. Design and develop a coherent database for the restructured statistic datasets;

- e. Construct and develop a subsystem for retrieval and presentation of statistic datasets;
- f. Install and conduct system tests with the developed subsystem to PalayStat; and
- g. Conduct usability tests and demonstrations of PalayStat to intended users.

PalayStat system restructures the PSA provincial rice statistics data in a database format. These updated data include, but not limited to *palay*/rice supply and demand, input-use, production, costs and returns, production losses, and rice marketing. Exactly 22 rice statistical output tables were added to the existing database. Policymakers, scientists, students, and development planners have benefitted from this system through answered data queries.

In 2018, the improved operation of PalayStat system registered 9,234 unique views and 118% increase in user engagement. The system became more accessible and user-friendly through improved search option.

## Integration of other Rice Statistics Databases in the PalayStat System RM Almario, IA Arida, and RF Tabalno

This study developed and initially introduced an interactive web-based information system called the Rice Socioeconomic Information System (RBSEIS) and later the PalayStat. The PalayStat system is designed to provide researchers and policymakers an accessible rice-related information. The system has 9,234 unique views and received "very good" feedback from the users. As PalayStat is an effective tool in providing data, 16 statistical tables from the "Statistical series on the rice industry" were included in the PalayStat time-series database (1970-2014). The database includes *palay*/rice supply and demand, input-use and production, costs and returns, production losses, and *palay*/rice marketing covering 83 provinces in 16 regions. In collaboration with PSA, these datasets are updated annually in national and provincial summaries. Design and accessibility of the PalayStat system was also improved through better dynamic search options and broader search keywords, larger publication database, maps, and other references. With better website design and user-friendly experience, PalayStat aims to be the main one-stop portal for rice researchers on Philippine rice-related information.

### Updating and Restructuring Rice and Rice-Related Statistics

RG Manalili, RF Tabalno, RM Almario, and IA Arida

The need for location-specific rice database is indispensable given the roles of stakeholders in providing responsive and need-based policies and program. Thus, the study primarily aims to continuously provide rice and rice-based statistical data and information to development planners, RD&E researchers, and policymakers to help them decide on rice-related matters.

PhilRice validated, updated, and restructured 2013-2017 datasets from PSA. These were further tabulated and disaggregated at the provincial level. Data accessed ranged from rice production and utilization to market prices.

PalayStat system uploaded the restructured provincial database. In 2018, the system has 22 additional rice statistical tables. Students, policymakers, scientists, and development planners directly accessed these rice statistics through data queries.



#### PROJECT 2:

## ADOPTION AND IMPACT EVALUATION OF RICE R&D PRODUCTS AND DEVELOPMENT PROJECTS

RG Manalili

This project aims to contribute in the effective and efficient monitoring, evaluation, and quantification of the performance of rice R&D products and development programs through ex-ante, monitoring and evaluation activities, and ex-post impact evaluation studies. It helps provide evidence on the usefulness of R&D and production-related services, while providing feedback to researchers and development workers.

In 2018, the project focused on two studies: 1) status and determinants of hybrid rice adoption in the Philippines; and 2) monitoring and evaluation of public hybrid rice seed production.

### Status and Determinants of Hybrid Rice Adoption

RG Manalili, JC Beltran, IA Arida, CP Austria, D Kitongan, RF Tabalno, J Chua, and TJP deLeon

Hybrid rice contributes significantly to increased production. However, its adoption remains low despite evidence at the farm-level showed that it yields more than inbred rice. This study aimed to compare profitability, productivity, and farm management practices of hybrid and inbred rice (high and low-quality seeds) farmers; determine hybrid rice adoption; identify factors influencing farmers' use of hybrid rice; and draw policy recommendations for hybrid rice promotion.

A set of survey questionnaires on socio-demographic characteristics of farmers, yield, input use and other production practices, prices of inputs and output, major problems related to rice production, and government support and subsidies received by farmers was developed. Farmers' perception on hybrid rice cultivation was also included to identify factors affecting its adoption. Farmers were grouped into three categories: hybrid growers, high-quality inbred, and low-quality inbred seed users. Farm level survey was initially conducted in Nueva Ecija and Davao del Sur. Data encoding, processing, and analysis will be done after the development of database encoding system.

Study results complemented the Rice-Based Farm Household Survey 2016 WS data. Initial results showed that hybrid rice adoption in 2016 WS was at 10%; high-quality inbred seed adoption, 48%; and low-quality inbred seed, 42%. Apayao had the highest number of hybrid rice adopters. Average yield of hybrid rice was 3.59t/ha at the national level, which is 8% higher than high-quality seeds and 22% higher than the low-quality seeds.

### Monitoring and Evaluation of Public Hybrid Rice Seed Production

RG Manalili, JC Beltran, IA Arida, CP Austria, D Kitongan, RF Tabalno, J Chua, TJP deLeon

This study aimed to monitor and evaluate the public hybrid rice seed production in selected provinces of the Philippines. A survey questionnaire was developed and a survey was conducted in Kalinga where 25 public hybrid rice seed growers and 22 inbred rice seed growers were interviewed for the 2018 DS crop.

Initial results showed a lower average yield owing to brown planthoppers. It was also noted that only one seed grower had produced public hybrid seeds specifically PSB Rc 72H in WS 2018 owing to lack of parental seeds. Hybrid seed production is also risky in the wet season owing to typhoons and flooding. Fifty-two farmers have committed to produce F1 seeds for the 2019 DS covering 102ha.

Other activities such as data encoding, processing, and analysis will be done in 2019.

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).

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