

The Philippine Agricultural Statistical System¹

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I. Introduction

The basic legal framework of the agricultural statistical system in the Philippines is found in Executive Order Number 116 (EO 116) which was issued on 30 January 1987 which created the Bureau of Agricultural Statistics (BAS) out of the then Bureau of Agricultural Economics (BAEcon). EO 116 mandated the BAS to do the following: 1) collect, compile, and release official agricultural statistics; 2) exercise technical supervision over data collection centers; and 3) coordinate all agricultural statistics and economic research activities of all bureaus, corporations and offices under the Department of Agriculture (DA).

Even while under DA, the former BAS is part of the Philippine Statistical System (PSS) as one of the Major Statistical Agencies (MSAs) engaged in primary data collection and compilation of secondary data. The PSS used to be a fragmented structure composed of four MSAs for data collection, namely: National Statistics Office (NSO); National Statistical Coordination Board (NSCB); the BAS; and Bureau of Labor and Employment Statistics (BLES); the Statistical Research and Training Center (SRTC) and a host of other agencies which conduct some statistical activities in pursuit of their respective functions.

By virtue of Republic Act 10625, otherwise known as the Philippine Statistics Act of 2013, reorganizing the PSS, the MSAs were abolished and were integrated into one statistical body, the Philippine Statistics Authority (PSA). The said Act also created the PSRTI abolishing the former Statistical Research and Training Center (SRTC). RA 10625 was signed into law by President Benigno S. Aquino III on September 12, 2013.

Under RA 10625, the PSA absorbed all functions of the former four MSAs for primary data collection, thus Agricultural Statistics (AgStat) is one of the sectoral statistics being generated within the functional and organizational structure of the PSA. It has since led the production of timely and relevant agricultural statistics through census, surveys, monitoring systems, and special studies conducted at different periods and at different frequencies.

On the other hand, the former Statistical Research and Training Center (SRTC) was abolished and PSRTI was created. As such, it has continued to be the research and training arm of the PSS to cater to the needs and concerns of the PSA and other agencies.

This paper provides a brief overview of the Philippine agricultural statistical system, including the programs of the PSRTI in support of the PSS. To some extent, some areas of concerns were identified for future challenges.

¹ A Country Paper of the Philippines submitted for the Regional Training Course on Communication and Advocacy for Agricultural Statistics, 27 June to 2 July 2016, Daejeon, Republic of Korea.

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II. Brief of the Philippine Agricultural Statistical System

This section presents the important uses of Agstat, its major sources and data users.

A. Uses of Agricultural Statistics

The agricultural sector supplies vital raw materials for the production of commodities and supports other services sector in the Philippine economy. It provides livelihood income to a good segment of society and thus contributes to economic development. These agricultural activities produces statistics that include data and indicators generated from censuses, surveys, and monitoring and administrative systems.

The following are some important uses of Agricultural Statistics:

- evidence based decision making for proper planning
- basis for setting up goals and objectives
- identifying constraints and opportunities/strategies
- monitoring of agricultural projects and programs
- impact evaluation and assessment
- guide for policy making/formulation

The Philippine Development Plan (PDP) is a concrete example of an application of Agricultural and Rural Statistics in national and local development planning. PDP is the country's guide in formulating policies and implementing development programs for the next six years. It contains specific goals, objectives, identification of challenges and strategy formulation, programs and projects geared towards attaining development objectives. It also provides a comparison of the actual attainment vis-à-vis the targets. PDP makes use of Agricultural and Rural Statistics in setting the targets and of course in reporting the accomplishments.

Other examples of the direct uses of Agstat are the following frameworks:

1. The National Accounts Framework – this will not be complete without the agricultural sector statistics which provides the basic data on volume of production and farmgate prices.
2. The Supply Utilization Accounts – this presents a comprehensive picture of the pattern of the country's supply and utilization of specific agricultural commodities. The SUA provides basis for the derivation of self-sufficiency ratio, import dependency ratio and other indices on food supply. Basic data inputs are production, utilization, exports and imports.
3. The Supply Chain Analysis – provides information on the flow of goods from producer to consumer or from farm to table. This makes use of data on production and prices.
4. Capital formation Accounts – measures gross capital formation, changes in inventories and consumption of fixed capital formation and net acquisition of lands by agricultural household.

Figures 1-4 are graphical illustrations of these frameworks:

Figure 1

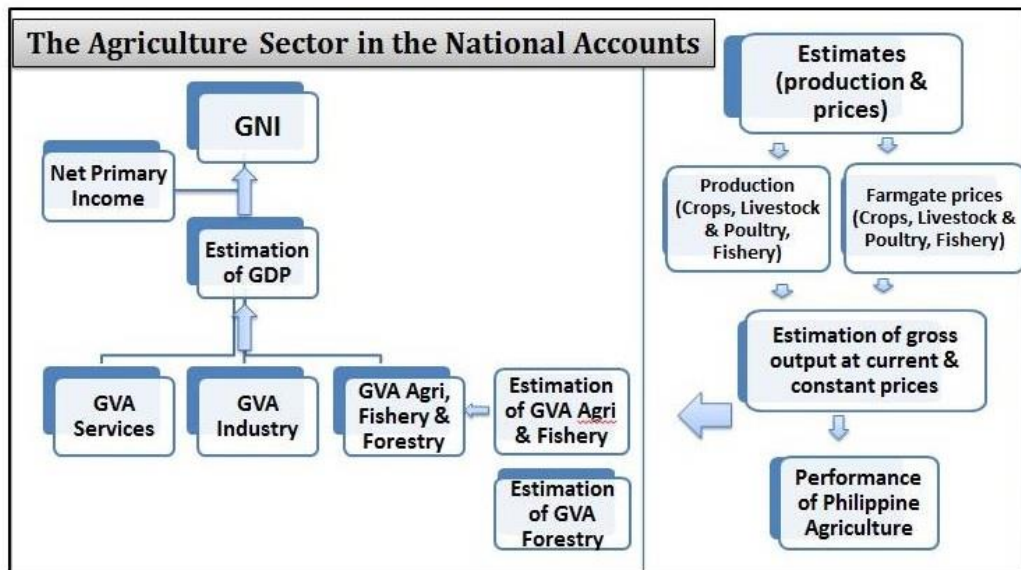


Figure 2

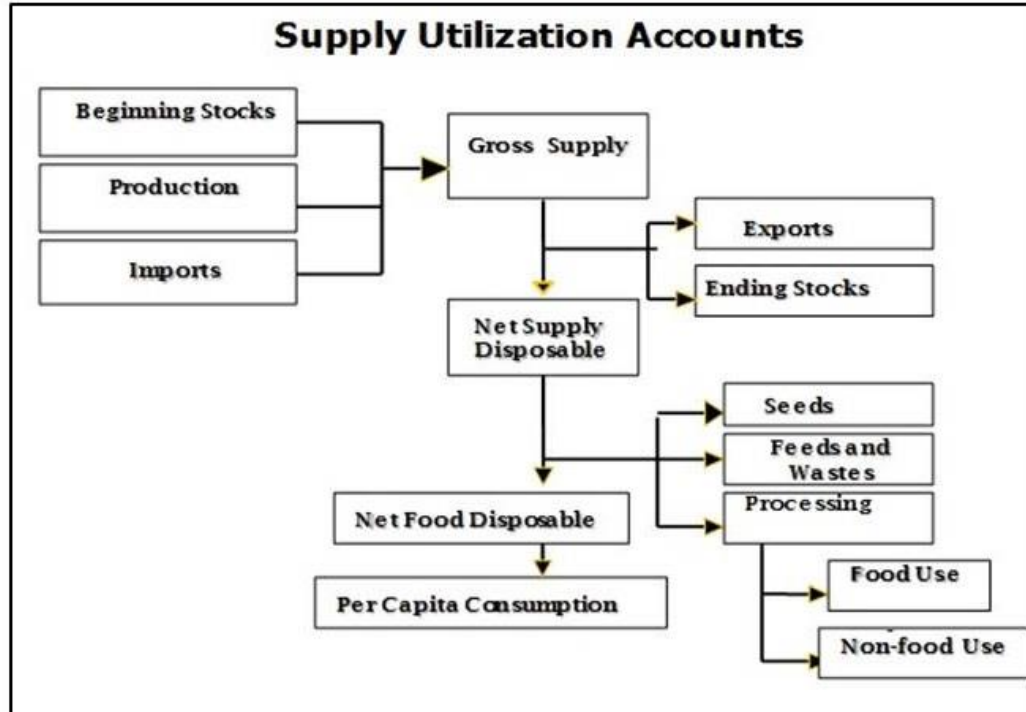


Figure 3

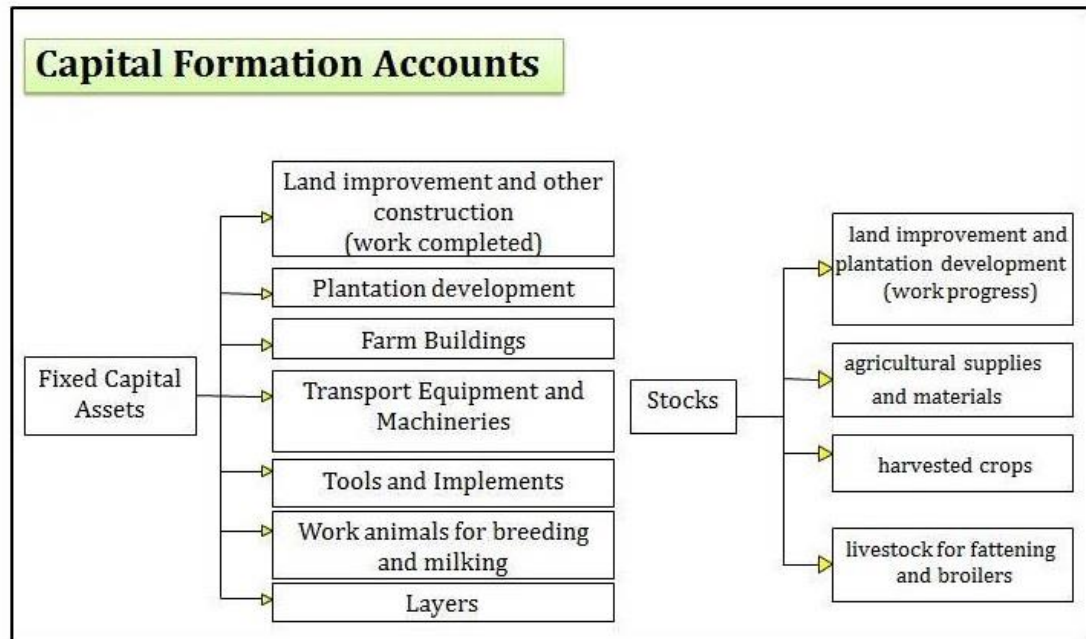
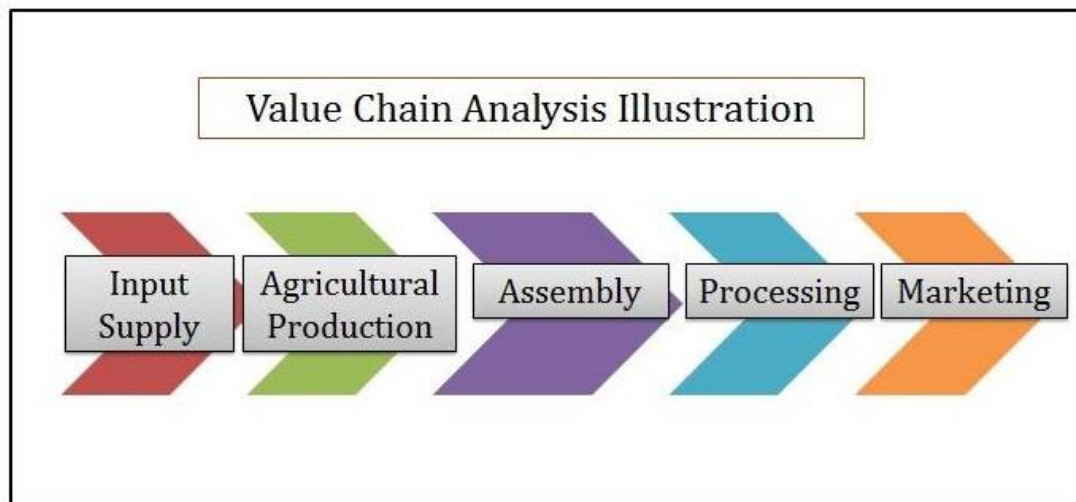


Figure 4



B. Major Sources of Agricultural Statistics

Agricultural statistics data are collected through censuses, surveys, and/or administrative systems such as reporting, registration, surveillance and monitoring systems administered by National Government Agencies (NGAs) and Local Government Units (LGUs) either as their primary function or a by-product of their administrative or regulatory functions.

Some agricultural statistics generated from censuses, surveys and administrative systems are as follows:

- Agricultural structure and resources (e.g. land use, irrigation system, demographic of farmers/fisherfolks/operators, etc.; agricultural and fishery production, e.g., agricultural crops, livestock and poultry, fishery, agricultural services, cost and returns of production and stock/inventories;
- Agricultural marketing, e.g. prices and margins, domestic and foreign trade, supply and value chain, infrastructure and facilities;
- Farmers'/fisherfolks' welfare/household economics, e.g. income, wage rate, consumption, capital formation, access to credit, insurance and guarantees; and
- Land tenure improvement, agrarian justice delivery, and support services delivery

At the PSA, censuses are undertaken once every ten years and is being spearheaded by the Agricultural and Fisheries Census Division of the National Census Service (NCS). On the other hand, the periodic commodity-based production surveys are undertaken by the three commodity divisions of the Economic Sector Statistics Service (ESSS) which are the Crops Statistics Division, the Livestock and Poultry Statistics Division and the Fisheries Statistics Division. Price generating surveys are lodged at the Price Statistics Division also of the ESSS, while socio-economic surveys and agricultural marketing are spear-headed by the Agricultural Accounts Division of the Macroeconomic Accounts Service (MAS). The following is the list of Census and surveys which continuously generate Agstat.

1. Census

- a. Census of Agriculture and Fisheries (CAF) – This is a large statistical activity which intends to collect data on the structure of Philippine agriculture. This is conducted once every ten years, the latest of which is for 2012.

2. Periodic Sample Surveys –these are done regularly on specific frequency to generate current production related data which are heavily used in the frameworks cited earlier.

a. Crops surveys

1. Palay and Corn Production Survey (PCPS)
2. Monthly Palay and Corn Situation Reporting System (MPCRS)
3. Palay and Corn Stocks Survey (PCSS1)
4. Crops Production Survey (CrPS)

b. Fisheries surveys

1. Quarterly Commercial Fisheries Survey (QCFS)
2. Quarterly Municipal Fisheries Survey (QmFS)
3. Quarterly inland fisheries Survey (Qifs)
4. Quarterly Aquaculture Survey (QAqS)

c. Livestock and poultry data system

1. Commercial livestock and poultry survey (CLPS)
2. Backyard livestock and poultry survey (BLPS)
3. Survey of Slaughterhouses and Poultry Dressing Plants (SSHDP)
4. Semi-Annual Survey of Dairy Farms/Enterprises (SSDE)

- d. Prices survey
 - 1. Farm prices Survey on Crops and backyard livestock & commercial poultry
 - 2. Farm prices Survey on commercial livestock and layer
 - 3. Survey on prices of inputs (pesticides)
 - 4. Wholesale Price Survey (wholesale buying)
 - 5. Wholesale Price Survey (wholesale selling)
 - 6. Retail Selling price survey
 - 7. Weekly cereals and fertilizer price monitoring
 - 8. Wholesale price monitoring of livestock
- e. Socio-Economic and Marketing surveys
 - 1. Survey on food demand
 - 2. Agricultural Labor Survey
 - 3. Costs and Returns Survey
 - 4. Marketing Costs and Margins
- 3. Administrative-based data

These data includes those for slaughter and dairy, number of fishing boats which come from the DA-attached agencies. Also included are domestic and foreign trade data which are sourced from the airports, and seaports for the former and from the Bureau of Customs for the latter. The provision of such data are guided by a Memorandum of Agreement which the PSA executes with relevant agencies.

C. Users of Agricultural Statistics

The following are the some of the data users of Agricultural Statistics:

- a. National Government Agencies, especially the Department of Agriculture
- b. Legislative offices (Senate and House of Representatives)
- c. Local Government Units
- d. Academic institutions including students (private and government)
- e. Research Institutions
- f. Non-Governmental Organizations (NGOs) and Farmers Organization
- g. Foreign embassies and international organizations
- h. Private companies
- i. Media
- j. General public including farmers famers and fisher folks

D. Dissemination Platforms

Philippine Agstat can be accessed through the following platforms:

- a. Web
 - 1. PSA Main Website: <http://www.psa.gov.ph>
 - 2. CountrySTAT Philippines Sub-Website: <http://www.countrystat.psa.gov.ph>

This is a web-based system that integrates national food and agricultural statistical information to ensure harmonized national data and metadata collection for analysis and policy.

3. Philippine Food Security Information System (PhilFSIS): <http://www.Philfsis.psa.gov.ph>

This is a web-based information system that aims to enhance food security planning, implementation and evaluation through improved organization, analysis and dissemination of relevant information. Central in the operationalization of this information system is the PhilFSIS website. The website will contain all the food security indicators and indices together with the food security databases and other related information.

- b. Publications, Bulletins, Press and Special Releases
 1. Statistical publications and reports
 2. Press Releases
 3. Special Releases
 4. Special runs and tabulations
 5. Data request-response through phone, fax, and email
- c. Print and broadcast media
 1. Radio
 2. Television
 3. Newspaper
- d. Social media
 1. Facebook
 2. Twitter

III. Existing Strategies and Programs for Agricultural Statistics

The PSA and PSRTI, being the two prime statistical agencies in the country, are advocates of evidence-based decision making and the use of statistical data in policy planning. In order to instill awareness and appreciation of statistical data the following strategies and programs are being adopted by the two agencies.

A. Dissemination and Communication Strategies

Data dissemination refers to the release of data and metadata produced by a statistical activity through various media and information materials to its intended users. Timely dissemination of statistics to stakeholders increases user access to statistical information and contributes to swift evidence-based policies and decisions. Dissemination of agricultural statistics is guided by norms and standards to ensure that users are informed about the availability and quality of data and that vital information of data providers and respondents is protected.

Following are among the strategies and programs in communication and advocacy practiced by PSA and PSRTI:

1. Data Dissemination Framework

Statistical information dissemination in the Philippines has a general guiding framework in the Government Statistics Accessibility Program (GSAP). Introduced in 1997, the GSAP provides general strategies to improve accessibility of statistical products and services in the PSS. GSAP requires every government agency to create its own website where the public can access their statistical data and information.

For AgStat, the dissemination platforms cited in Section II-D are examples of adherence to this framework. The Philippine CountrySTAT launched in 2006 is recognized as one of the international best practices in statistics in data dissemination.

While the internet has long been utilized by government agencies, the PSA, PSRTI and some National Government Agencies (NGAs) continue to innovate and spend to develop online interactive statistical databases, information systems, ICT applications, and other emerging means to disseminate and communicate statistics. Recently, really simple syndication (RSS) feeds and social networking have been proven as effective ways of extending the reach of statistics. The adoption of ICT by government agencies manifests the importance of providing fast, reliable, and easy access to statistical information by data users.

2. Interaction with Key Data Users/Stakeholders

Interaction with key data users/stakeholders is crucial in advocating for the use of statistics. For AgStat this is done through the conduct of User-Producer Fora. This mechanism provides for a venue where both producers and users of statistics jointly assess the availability, significance, use and soundness of existing statistics and further determine data gaps.

B. Statistical Capacity Building

PSA as the prime statistical agency of the country that collects, produces and disseminates designated statistics, including Agriculture statistics, advocates to instill awareness, appreciation and utilization of the data it collects and disseminates. This advocacy will serve as an avenue for soliciting support in improving and enhancing the quality of the data. Advocacy on understanding, communicating and rational use of agriculture statistics and indicators can be made through the conduct of statistical researches and training.

1. Statistical Trainings

PSA, like any other agency, is implementing programs for human resource development. It continues to provide training and education opportunities for their statistical personnel through in-house statistical training sessions and local and foreign scholarships on various statistics and related fields. The program has trained current senior officials as well as rank-and-file employees and field personnel without sufficient educational background in statistics.

While the PSA and other data producing agencies have an in-house statistical training sessions and local and foreign scholarships, PSRTI was created by virtue of RA 10625 as the research and training arm of the PSS. It is mandated to primarily develop statistical theories, concepts, and methodologies in support of a statistical infrastructure that is compliant with the demands of national development.

The Training Program that PSRTI's offers are of non-degree type designed to be consistent with its mandate to upgrade the country's statistics human resource base with statistical concepts, definitions, theories, and methods in support of the needs of the PSA and other clients.

Below are some of the statistical trainings offered by the PSRTI in 2015:

1. Statistical Data Management and Analysis Using MS Excel
2. Survey Operations and Questionnaire Design
3. Administration and Analysis of FGD Results
4. Statistics-based Decision-Making
5. Regression Analysis (Using Stata or Eviews)
6. Statistical Forecasting
7. Sampling Methods with Statistical Analysis Using Stata
8. Statistics for Policy Analysis
9. Impact Evaluation of Projects
10. Small Area Estimation
11. Project Monitoring Using Statistics
12. Webpage Development for the Dissemination of Statistics
13. Effective Writing and Presentation of Statistical Reports

Table 1. Summary of Trainings Conducted by PSRTI: 2012-2015

Coverage	2015	2014	2013	2012
Statistical Data Management	7	14	7	16
Data Collection	22	6	3	4
Statistical Analysis	14	32	27	32
Information Dissemination	8	11	8	2
Official Statistics	1	0	1	5
TOTAL	52	63	46	59

Source of Data: Philippine Statistical Research and Training Institute.

2. Scholarship Program under the RGSSP Phase I
- 3.

Established in 1998, the program aims to address the future requirements of the PSS for professional statisticians. Under the joint support of the Government of the Philippines and the CIDA through the latter's Policy Training and Technical Assistance Facility, graduate scholarship grants in statistics have been awarded to 15 employees of the former agencies of PSA. The PSRTI, being the agency designated to implement the program, is responsible for coordinating the planning, implementation, and monitoring of the scholarship grants and in providing the needed secretariat support. Since 2006, there have been three scholars who have successfully graduated and have returned to PSRTI and PSA.

C. Statistical Research and Development

There are various institutions that undertake statistical research and development in the PSS. However, since PSRTI is the research and training arm of the PSS, it administers a continuing statistical research program for the PSS, key data producers and users, the academe, and individual experts. Even then PSA is not constrained to conduct statistical research on their own initiative in support to their statistical work.

Despite the common and perennial problem of inadequate resources, the PSRTI continues to strive in promoting and undertaking statistical research activities albeit on a limited scale.

1. Regular updating of the research agenda for the PSS.

Every year, PSRTI formulates a comprehensive and integrated research agenda for the PSS. The agenda is periodically updated in consultation with PSA and other data producers and data users to consider current and emerging needs. The research agenda focus in general to the improvement of methodologies, concepts, definitions and statistical techniques, rationalization of censuses and surveys to improve effectiveness and efficiency of processes and quality of statistics, and development of relevant indicators to address emerging issues and concerns at the national and local levels.

2. Conduct of R&D activities.

With meager resources available, PSRTI has been able to complete on average seven researches in a year during the 2005-2011 periods although these are not much more than in previous years. More than a third of the researches are supported by proceeds from the PSRTI Endowment Fund and from the PRTI's annual budget while the rest are funded by the former agencies that now formed the PSA and other data producers. The statistical research topics pursued are selected to address issues that affect the statistical production process, dissemination and utilization of statistics, or the need for analytic study of certain development issues.

3. Inventory of SR&D initiatives.

In order to promote utilization and institutionalization of research outputs, the PSRTI conducts periodic inventories of completed research studies that have been institutionalized and those being institutionalized. Abstracts of completed statistical researches conducted and coordinated by PSRTI, formerly SRTC, are posted on its website (<http://www.psrti.gov.ph>).

4. Wider dissemination of SR&D outputs.

The triennial National Convention on Statistics (NCS) spearheaded by PSA and the annual conference of the PSAI serve as main venues for the dissemination of statistical researches. The conduct of the NCS have shown a continuing increase in the number of research papers presented, reaching 104 and 112 in 2007 and 2010, respectively, and attendance, with record breaking numbers for the same years.

The annual PSAI conference meanwhile has started convening outside of the National Capital Region while regional statistical congresses have been organized in Luzon, Visayas, and Mindanao bringing the advocacy to conduct statistical closer to stakeholders based in the regions.

The UPSS and UPLB INSTAT in partnership with PSRTI jointly organize the annual National Student-Faculty Conferences for Statistical Sciences, which showcase many statistical researches dealing with both theoretical and applied statistics.

PSRTI also conducts quarterly symposiums/forums for the presentation of completed research undertakings by its thesis/dissertation fellows, scholars, research project partners, and technical staff.

5. Thesis and dissertation fellowship program

With the aim to advocate for SR&D and help enhance capacity of statistical human resources in the country, PSRTI continues to administer an assistance program that provides financial support to students taking up masters and doctorate programs in statistics for the completion of theses and dissertations. The program is funded from the proceeds of the PSRTI Endowment Fund. There have been 12 fellows, mostly from the academe, that benefited from the program during the period 2005-2011.

IV. Issues and Challenges

The PSA and PSRTI are newly created agencies under RA 10625. PSA which was formed by merging the four (4) major statistical agencies (MSAs) also absorbed the various statistical activities of the said agencies. For Agstat alone, PSA has inherited more than 20 surveys regularly done at different frequencies. While still in transition, it is becoming clear that a gigantic task lies ahead on how to maintain and rationalize surveys for operational efficiency and in consideration of the well-being of its staff. Likewise, it is of utmost importance to revisit the designs and methodologies of such surveys and put in place standard tests of reliability and data quality. The following are the major issues and challenges to the PSA for it to sustain the dissemination of relevant agricultural statistics:

1. The need to rationalize statistical surveys

To avoid duplication of efforts, the task ahead for the PSA is to review the different surveys from the MSAs to determine overlaps and therefore decide if indeed integration can be effected. Examples for this are the Farm Income and Expenditure survey and the Survey on Food demand, the Agricultural Labor Survey (ALS) and the Labor Force Survey (LFS).

2. The use of updated frame for AgStat surveys

The results of the 2012 CAF has been made partially available and with this it is imperative that the frames used for AgStat be updated using such results.

3. Review of design and methodologies

With the creation of the Statistical Methodology Unit (SMU) and the strengthening of the Surveys Clearance system, it is expected that an honest-to-goodness review of existing methodologies and design be implemented to increase the reliability of AgStat.

4. Increased use of technologies in processing and dissemination

To ensure that data will be made available when needed it is of equal importance that technology be given considerable attention during the review process.