



REPUBLIC OF THE PHILIPPINES
PHILIPPINE STATISTICS AUTHORITY

Crops Production Survey

Manual of Operations for Supervisors

May 2018



REPUBLIC OF THE PHILIPPINES

PRESIDENT RODRIGO ROA DUTERTE



**REPUBLIC OF THE PHILIPPINES
PHILIPPINE STATISTICS AUTHORITY**

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FOREWORD

This 2018 Manual of Operations for Supervisors serves as guide to the central and field office supervisors and support personnel of the Philippine Statistics Authority (PSA) in the conduct of 2018 Crops Production Survey (CrPS). It provides information about the survey, its methodology, field operations procedure, and data review and validation including the expected outputs and corresponding dates of submission from the Field Offices to the Central Office. Appendices are likewise provided as brief, direct, easy references for the supervisors. These include timetable of activities for efficient and effective implementation of the survey, sample filled-out reports, and CrPS collection form and summary form.

Understanding of and adherence to this Manual is encouraged among the field supervisors for the proper implementation of the 2018 CrPS operations.

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1. INTRODUCTION

The Crops Statistics Division (CSD) of the Philippine Statistics Authority (PSA) generates production-related statistics on crops other than palay and corn through the Crops Production Survey (CrPS). This survey is conducted in 80 provinces and two chartered cities where the commodity coverage varies by province based on the availability in terms of planting and seasonality. Nineteen major crops under the Other Crops sub-sector are highlighted in the Performance of Philippine Agriculture Report.

There are specialized commodity agencies which also generate production-related statistics such as the Sugar Regulatory Administration (SRA), Philippine Coconut Authority (PCA), Philippine Fiber Industry Development Authority (PhilFIDA), and National Tobacco Administration (NTA). The PSA adopts the production data of SRA on canes milled for centrifugal sugar while those from PCA, PhilFIDA, and NTA serve as inputs in the review and validation of estimates.

After the collection and organization of statistics on Other Crops, these undergo a review and validation process before finally released and disseminated. The reports generated from the results of the survey are in the forms of bulletins and publication as follows:

- Bulletin (Quarterly)
 - Major Non-Food and Industrial Crops Quarterly Bulletin
 - Major Vegetables and Rootcrops Quarterly Bulletin
 - Major Fruit Crops Quarterly Bulletin
- Publication (Annual)
 - Crops Statistics of the Philippines

The supervisors play a significant role on the success of the survey since they are responsible on the performance of the statistical researchers and personnel in their respective areas of assignment. It is essential that the supervisor adhere to the prescribed procedures and duties stated in this manual.

This manual aims to provide the supervisors information about the survey, their role as supervisors and guide them to solve problems encountered during field operations. This will guarantee effective implementation of the survey that will ensure the generation of timely and quality data for other crops - non-food and industrial crops, fruit crops, and vegetables and rootcrops.

2. THE CROPS PRODUCTION SURVEY (CrPS)

2.1 Objectives

The Crops Production Survey aims to generate basic production statistics for crops other than palay and corn at the national and sub-national levels. The purpose of the survey is to support the needs of planners, policy and decision makers, and other stakeholders in the agriculture sector and to provide periodic updates on crop related developments.

2.2 Coverage

The survey mainly captures the data on volume of production, area planted/harvested, and number of bearing trees/hills/vines.

The CrPS covers more than 280 crops sub-classified under three commodity groupings, namely: 1) Non-Food and Industrial Crops, 2) Fruit Crops, and 3) Vegetables and Rootcrops. The commodity coverage by province differs and depends on what each province produces.

3. SURVEY METHODOLOGY

3.1 Survey Design

The domain of the survey is the province. The selection of sample farms in the province are done by categorizing small and large farms, according to the area planted to a specific crop. The existing cut-off for planted area among large farms are as follows:

Crop	Luzon	Visayas	Mindanao
	(in hectares)		
Coconut	> 10	>50	>50
Sugarcane	>20	>5	>20
Banana	>10	>10	>100
Pineapple	>5	>5	>100
Coffee	>5	>5	>20
Mango	>5	>5	>10
Rubber	-	-	>15
Abaca	>9	>9	>9
Cacao	>5	>5	>20
Other crops	>5	>5	>10

For large farms, a maximum of five farms shall be chosen for the whole province.

For small farms, a two-stage sampling design is employed. The primary sampling units (PSUs) are the producing cities/municipalities of the specific crop and the secondary sampling units (SSUs) are the farmer-producers in the top five producing cities/municipalities. The identification of top producing municipalities is done by the PSO/field staff through the Key Informant (KI) Approach where a knowledgeable person is asked on agricultural information and other related data. A sample farmer-producer should have a production of the specific crop during the reference quarter and same period last year.

For small farms of crops covered under the Farm Price Survey and selected crops, the top five producing cities/municipalities per commodity in a province are selected to represent the primary sampling units. Five farmer-producers shall be interviewed in each selected city/municipality which shall represent the secondary sampling units.

For small farms of all other crops not covered under the FPS, only the top two to three producing cities/municipalities are chosen as the primary sampling units. Three farmer-producers in each city/municipality are enumerated as secondary sampling units.

The foregoing scheme is implemented for each crop being covered. Under this scheme, a farmer-producer should have production of the specific crop during the reference quarter and same period last year.

3.2 Estimation Procedure

Information from farmer-producer basically consist of the actual volume of production, area, and number of bearing trees/hills/vines during the reference quarter. The percent change for each data item is computed independently for small farms and large farms, followed by the corresponding weight for each farm type. The area planted/harvested is used by the concerned PSO/field staff to determine the weights by farm type.

The following are the conceptual definitions of the information gathered from CrPS:

Crop Production – the quantity produced and actually harvested for a particular crop during the reference period. It includes those harvested but damaged, stolen, given away, consumed, given as harvesters' share, reserved, etc. Excluded are those produced but not harvested due to low price, lack of demand, and force majeure or fortuitous events.

Area Planted – the actual physical area planted, in hectares. This generally applies to area reported for permanent crops and multi-harvest temporary crops.

Area Harvested – the actual area from which harvests are realized, in hectares. This excludes crop area which were totally damaged. It may be smaller than the area planted. In crops statistics, this applies to mono-harvest temporary crops.

Bearing Trees/Hills/Vines – these refer to the number of trees/hills/vines where harvesting has been made in the past but may or may not have borne fruit or productive during the reference period due to cyclical production pattern of the crop. Hills apply to banana and abaca. Vines apply to grapes and the like.

The total of the actual levels of the data items is first computed, as given by the respondents, for each period (current and same period of the previous year), separately, for small farms and large farms. The percent change is then computed. Using production as a sample indicator, percent change is computed using the following formula:

$$\% \text{ change} = \frac{\sum_{i=1}^n Pc_i - \sum_{i=1}^n Pp_i}{\sum_{i=1}^n Pp_i} \times 100$$

where:

- Pc_i - production of the i^{th} sample farmer during the current period
- Pp_i - production of the i^{th} sample farmer during the same period of the previous year
- n - number of sample farmers

The resulting percent change of each type of farm shall be given the corresponding weights, as determined by the PSO. Each type of farm has a corresponding weight which is determined as follows.

For large farms, the weight is computed as:

$$w_l = \frac{A_l}{A_t}$$

where:

- A_l - total area planted to all large farms for each crop in the particular province
- A_t - total area planted to the province

For small farms, the weight is computed as:

$$w_s = \frac{A_s}{A_t}$$

where:

- A_s - total area planted to all small farms for each crop in the particular province
- A_t - total area planted to the province

The overall percent change for the province for each crop is computed as the sum of the weighted percent change for each type of farm, that is:

$$\text{overall \% change} = ([\%change_s \times w_s] + [\%change_l \times w_l])$$

where:

$\% change_s$ - percent change for the small farm samples
 $\% change_l$ - percent change for the large farm samples

The overall percent change is applied to the final estimates of the same period last year to get the estimate of the current period. The current estimates on production, area, and number of bearing trees/hills/vines for the province are derived using the following formula:

$$E_c = E_p \times \left(1 + \left[\frac{\text{overall \% change}}{100} \right] \right)$$

where:

E_p - final estimate for the same period of the previous year (base data)

Estimates of total production/area/number of bearing trees/hills/vines for the region are obtained by aggregating the estimated total production/area/number of bearing trees/hills/vines of the provinces within the region. Estimates at the national level are the sum of the estimates of the regions.

4. FIELD OPERATIONS PROCEDURES

4.1 Role of the Supervisors

Supervisors in the CrPS will ensure that the activities during the pre-survey, training, data collection, processing, review and validation and submission of reports are undertaken.

1. Identify or update the top producing cities/municipalities for each crop.
2. Facilitate the reproduction of the collection form.
3. Conduct orientation/briefing for Statistical Researchers (SRs).
4. Determine the respective assignments of the SRs under his/her supervision.
5. Conduct spot-checking of the data gathering performance of the SRs under his/her supervision during data collection.
6. Supervise and monitor the progress of SRs works.

7. Ascertain the complete and accurate information in CrPS Forms 1, 2a, 2b, 3a and 3b (see Appendix G to K).
8. Address problems and issues reported by the SRs during the data collection.
9. Perform the editing of the accomplished forms submitted by the SRs.
10. Carry out the data processing and prepare the output tables and reports for the Provincial Data Review.
11. Submit the required reports to the Regional Statistical Service Office (RSSO) and Crops Statistics Division of Central Office (CSD-CO).

4.2 Level of Trainings

To ensure the quality of data collected, three (3) levels of training for crops survey are conducted in different venues as follows:

- First Level in Metro Manila;
- Second Level at RSSOs; and
- Third Level at Provincial Offices (POs).

The first level training aims to train the selected representatives from the RSSOs and POs.

The second level training will be cascaded to the PSOs and/or crops focal persons at respective RSSOs.

The third level training will be cascaded to the field supervisors and statistical researchers at the respective POs.

The first and second level of training will be done annually while the third level will be quarterly.

4.3 Data Collection

The field data collection for CrPS is conducted during the last 10 days of the second month of the quarter. The CrPS is undertaken simultaneously with the Farm Price Survey (FPS) during its survey month. Table 1 shows the reference periods of the CrPS every round, with the corresponding data items required during data collection.

Table 1. Reference period and required data items by survey month

Survey Round	Data Items		
	Production	Area Planted/ Harvested ^{1/}	Number of Bearing Trees/Hills/Vines
	Reference Period		
February Round	Jan-Mar		
May Round	Apr-June	Jan-June	Jan-June
	Jan-June		
August Round	July-Sep		
November Round	Oct-Dec	July-Dec	July-Dec
	July-Dec	Jan-Dec	Jan-Dec
	Jan-Dec		

^{1/} area harvested for mono-harvest temporary crops; area planted for permanent crops and multi-harvest temporary crops

4.3.1 Major Components of the CrPS Forms

Five forms are used in the conduct of the survey. These are the following:

1. CrPS Form 1 – Data Collection Form
2. CrPS Form 2A – List of Qualified Farmer-Producers per Crop
3. CrPS Form 2B – City/Municipal Summary Form Per Crop
4. CrPS Form 3A – List of Top Producing Cities/Municipalities per Crop
5. CrPS Form 3B – Provincial Summary Form

The major components of the CrPS Forms are shown in Table 2.

Table 2. Major Components of CrPS Forms per Type of Forms

Major Components of the CrPS Forms									
CrPS Form Type	Title Panel			Identification Particulars		Volume of Production, Area Planted/Harvested, and Number of Bearing Trees/Hills/Vines			
	Form Type	Title of the Survey and Reference Period	Page Number	Geographic Identification	Certification	Name of Crop/Name of Farmer-Producers per city/municipality	Volume of Production This Year and Last Year Same Period	Area Planted/Harvested, Number of Bearing Trees/ Hills/Vines	Reasons for Change
CrPS Form 1	✓	✓	✓	✓	SR and Field Supervisor	✓	✓	✓	✓
CrPS Form 2A	✓	✓	✓	✓	Encoder and Field Supervisor	✓	✓	✓	✓
CrPS Form 2B	✓	✓	✓	✓		✓	✓	✓	✓
CrPS Form 3A	✓	✓	✓	✓	Field Supervisor	✓	✓	✓	✓
CrPS Form 3B	✓	✓	✓	✓	Field Supervisor and PSO	✓	✓	✓	✓

1. The Title Panel found at the topmost part of the CrPS Form 3 contains the following:
 - a) Form Type;
 - b) Type of the Survey and Reference Period; and
 - c) Page Number.
2. The Identification Particulars are composed of the Geographic Identification and Certification.
 - a) Geographic Identification Panel contains the Name of the Province and its respective code.
 - b) Certification Panel contains the Name and Signature of the Encoder, Field Supervisor and the PSO. It also contains their respective contact numbers and the dates when activities were undertaken.
3. Volume of Production, Area Planted/Harvested, and Number of Bearing Trees/ Hills/Vines

This panel contains the Name of Crop/Type of Farm/Name of City/ Municipality, Volume of Production This Year and Last Year Same Period, Area Planted/Harvested, Number of Bearing Trees/Hills/Vines, and Reasons for Change.

- **CrPS 1 – Data Collection Form**

The detailed information on CrPS Form 1 are discussed in the CrPS Manual of Operations for Statistical Researchers.

- **CrPS Form 2A – List of Qualified Farmer-Producers Per Crop (For Small Farm Only)**

The **CrPS Form 2A** contains the list of qualified sample farmer-producers per city/municipality per crop sourced from CrPS Form 1. It has the Title Panel, Identification Particulars, and Volume of Production, Area Planted/Harvested, and Number of Bearing Trees/Hills/Vines. The form can accommodate three (3) crops per page.

- **CrPS Form 2B – City/Municipal Summary Form (For Small Farm Only)**

The **CrPS Form 2B** contains the list of the computer-generated top five farmer-producers from the top five producing cities/municipalities identified in CrPS Form 2A. It has the Title Panel, Identification Particulars, and Volume

of Production, Area Planted/Harvested, and Number of Bearing Trees/Hills/Vines. The form can accommodate four (4) crops per page.

- **CrPS Form 3A – List of Top Producing Cities/Municipalities per Crop (For Small Farm Only)**

The **CrPS Form 3A** contains the list of the top producing cities/municipalities per crop identified in CrPS Form 2A. It has the Title Panel, Identification Particulars, and Volume of Production, Area Planted/Harvested, and Number of Bearing Trees/Hills/Vines. The form can accommodate three (3) crops per page.

- **CrPS Form 3B – Provincial Summary Form**

CrPS Form 3B contains at most five (5) cities/municipalities per crop and two crops per page. Under each crop, there are two blocks. The upper block is intended for the summary of sample large farms. While the lower block is for the summary of five (5) selected cities/municipalities for small farms. *This is to identify the weighted shares of large and small farms in terms of percent change.*

4.3.2 General Instructions for Accomplishing the CrPS Forms 2 and 3.

1. Use soft lead pencil in filling out the Title Panel and Identification Particulars portion of the form.
2. For the Geographic Identification Panel, write the name of the province, city/municipality, and the corresponding codes in the boxes. The Field Supervisor must write the two-digit number in the corresponding box. The geographic names and corresponding codes of the province and city/municipality will be based from the Philippine Standard Geographic Codes (PSGC).
3. For the certification panel, the name must be written in capital letters clearly on the spaces provided and sign adjacent to it. The contact numbers and the dates the activities were undertaken will also be indicated.
4. For the of Production, Area and Number of Bearing Trees/Hills/Vines, instead of copying the computer-generated outputs of encoded data, attach the said outputs to Forms 2a, 2b, 3a and 3b. make sure that the page 1 of each form is properly certified/signed by the encoder, field supervisor and PSO.
5. Accomplish the form properly and neatly. Write legibly. Erase neatly all erroneous entries.

6. Do not leave blank any answer space. A blank answer space may otherwise mean that the corresponding question was not asked.
7. For additional information, use the back pages of the questionnaire and indicate the specific item.
8. Before leaving the respondent's premises, go over the entire questionnaire to make sure that not a single item has been missed.

4.3.3 Specific Instructions for Accomplishing the CrPS Forms 2 and 3.

To ensure the quality of the data gathered, all forms must be accomplished thoroughly and carefully. All CrPS Forms has a common component that guaranteed the timeliness of data collection. This is the Reference Period.

Reference Period. Indicate the reference period on the appropriate spaces provided. The first space shall be for the first month of the quarter and the second space is for the last month of the quarter. The estimate to be reported for the quarter should cover the whole reference period regardless of the date of collection. For instance, the estimate for the first quarter should be from January to March, even if the collection date is in February.

In order to keep count on the number of records, page number was also indicated in all CrPS Forms.

Page Number. There are two lines for the page number. The first line of the two lines is intended to indicate the order of the summary form being accomplished. The second set of line is for the total number of summary forms accomplished per city/municipality. Fill-out the last line after summarizing the report of the municipality. Prefix zero (0) for a single digit.

The diagram illustrates the layout of CrPS Form 2A, titled 'List of Qualified Farmer-Producer per Crop (For Small Farm Only)'. It features the Philippine Statistics Authority logo and a QR code. Two specific fields are highlighted with red boxes and labeled with arrows:

- Reference Period:** A box containing the text 'CROPS PRODUCTION SURVEY' followed by 'to' and a space for the year (e.g., '2018'). Below this, it says 'Reference Period'.
- Page Number:** A box containing the text 'Page' followed by a space for the page number (e.g., '01') and 'of' followed by a space for the total number of pages (e.g., '05').

Below the main form, two example boxes are shown:

- Reference Period Example:** 'CROPS PRODUCTION SURVEY' followed by 'January' to 'March' '2018' and 'Reference Period' below.
- Page Number Example:** 'Page 01 of 05'.

Figure 1. CrPS Form Reference Period and Page Number

Aside from the two components mentioned above which were applicable to all CrPS Forms, below are the other specific instructions in accomplishing other components per type of forms.

- **CrPS Form 1 (Data Collection Form)**

The detailed instructions in filling out the form are discussed in the CrPS Manual of Operations for Statistical Researchers.

- **CrPS Form 2A (List of Qualified Farmer-Producers per Crop)**

Page Number. CrPS Form 2A can accommodate three (3) crops and allotted ten (10) rows each to accommodate all qualified farmers-producers per crop. Fill-out additional forms to accommodate additional crops covered per city/municipality.

Geographic Identification Panel. Refer to item 2 of the general instruction for accomplishing the CrPS Forms 2 and 3.

Certification Panel. The Encoder must fill-out this portion of the certification panel after he/she has encoded the data collected by the SRs. Likewise, the Field Supervisor must do the same after he/she has successfully generated and reviewed the list of all crops per city/municipality.

A. IDENTIFICATION PARTICULARS			
A1. GEOGRAPHIC IDENTIFICATION			
Province: <u>CAVITE</u>	<u>21</u>	City/Municipality: <u>SILANG</u>	<u>18</u>
A2. CERTIFICATION			
I hereby certify that the data generated in this listing form were encoded/reviewed by me personally and in accordance with the instructions.			
Name and Signature of Encoder: <u>CASANDRA G. ABEGONIA</u>	Contact Number: <u>09012345678</u>	Date Encoded: <u>MARCH 01, 2018</u>	
Name and Signature of Field Supervisor: <u>JENNY V. MARTIN</u>	Contact Number: <u>09102030405</u>	Date Reviewed: <u>MARCH 03, 2018</u>	

Figure 2. CrPS Form 2A Geographic Identification and Certification

Volume of Production, Area Planted/Harvested, Number of Bearing Trees/Hills/Vines, and Reasons for Change

CrPS Form 2A (Appendix H) has five major columns divided into eight sub-columns to correspond to the information needed, which are: name of crop/name of farmer-producer, volume of production, area, number of bearing trees/hills/vines, and reason/s for change

Column 1- Name of Crop/Name of Farmer-Producer

Attach the computer-generated list of all qualified sample farmer-producer per crop per city/municipality.

Columns 2 and 3 – Volume of Production

Attach the computer-generated volume of production corresponding the list of all the qualified sample farmer-producers per crop per city/municipality (from CrPS Form 1 Columns 2 and 3 to CrPS Form 2A Columns 2 and 3).

Column 4 and Column 5 – Area Planted/Harvested

Attach the computer-generated area planted/harvested corresponding the list of all the qualified sample farmer-producers per crop per city/municipality (from CrPS Form 1 Columns 4 and 5 to CrPS Form 2A (Columns 4 and 5).

Column 6 and Column 7 – Number of Bearing Trees/Hills/Vines

Attach the computer-generated number of bearing trees/hills/vines corresponding the list of all the qualified sample farmer-producers per crop per city/municipality (from CrPS Form 1 Columns 6 and 7 to CrPS Form 2 (Columns 6 and 7).

Column 8- Reason/s for Change

Attach the computer-generated reasons for change corresponding the list of all the qualified sample farmer-producers per crop per city/municipality (from CrPS Form 1 Column 8 to CrPS form 2A Column 8).

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES							
NAME OF CROP/ NAME OF FARMER-PRODUCER	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED ¹ in hectares		NO. OF BEARING TREES/HILLS/VINES		Reason/s for Change (Indicate codes 6; expand the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: <u>Banana, Saba</u>							
1. <u>Minandro Dela Cruz</u>	275	311	1.0	1.0	26	42	7 increase in hills due to DA hills dispersal
2. <u>Mario Corpuz</u>	450	227	1.0	1.0	40	60	7 small fruits produced due to crowded plantings
3. <u>Corason Paji</u>	764	1,026	1.3	1.3	126	150	7 bigger fruits harvested due to good farm management
4.							
5.							
6.							
7.							
8.							
9.							
10.							

Codes for Column 8:

1-Change in area 3-Pests and Diseases 5-Fertilizers 7-Others, specify

2-Weather Effect 4-Seeds 6-Irrigation Services

Note for Columns 4 & 5:

¹ = area harvested for mono-trait or temporary crops; area planted for permanent crops and multi-harvest temporary crops

Figure 3. CrPS Form 2A Production, Area, and Number of Bearing Trees/Hills/Vines

- **CrPS Form 2B (City/Municipal Summary Form)**

Page Number. CrPS Form 2B can accommodate four crops, fill-out additional forms to accommodate additional crops covered per city/municipality.

Geographic Identification Panel. Refer to item 2 of the general instruction for accomplishing the CrPS Forms 2 and 3.

Certification Panel. The Field Supervisor must fill-out this portion of the certification panel after he/she has successfully generated and reviewed/edited the city/municipal summary form.

A. IDENTIFICATION PARTICULARS	
A1. GEOGRAPHIC IDENTIFICATION	
Province: CAVITE	City/Municipality: SILANG
21	18
B. CERTIFICATION	
I hereby certify that the data summarized in this form were reviewed by me personally and in accordance with the instructions.	
Name and Signature of Field Supervisor: JENNY V. MARTIN	Contact Number: 09102030405 Date Reviewed: MARCH 03, 2018

Figure 4. CrPS Form 2B Geographic Identification and Certification.

Volume of Production, Area Planted/Harvested, Number of Bearing Trees/Hills/Vines, and Reasons for Change

CrPS Form 2B (Appendix I) has the same number of columns and items compared to CrPS Form 2A.

Column 1- Name of Crop/Name of Farmer-Producer

Attach the name of the computer-generated top five farmer-producers per crop from the top five producing cities/municipalities based on the volume of production encoded in CrPS Form 2A.

Columns 2 and 3 – Volume of Production

Attach the volume of production of the computer-generated top five farmer-producers per crop from the top five producing cities/municipalities based on the volume of production (CrPS Form 2A Columns 2 and 3 to CrPS Form 2B Columns 2 and 3).

Column 4 and Column 5 – Area Planted/Harvested

Attach the area planted/harvested of the computer-generated top five farmer-producers from the top five producing cities/municipalities based on

the volume of production (CrPS Form 2A Columns 4 and 5 to CrPS Form 2B Columns 4 and 5).

Column 6 and Column 7 – Number of Bearing Trees/Hills/Vines

Attach the number of bearing trees/hills/vines of the computer-generated top five farmer-producers from the top five producing cities/municipalities based on the volume of production (CrPS Form 2A Columns 6 and 7 to CrPS Form 2B Columns 6 and 7).

Column 8- Reason/s for Change

Attach the reasons for change of the computer-generated top five farmer-producers from the top five producing cities/municipalities based on the volume of production (CrPS Form 2A Columns 8 to CrPS Form 2B Columns 8).

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES							
NAME OF CROP/ NAME OF FARMER/PRODUCER	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED ¹ in hectares		NO. OF BEARING TREES/HILLS/VINES		Reason/s for Change (Indicate codes & expand the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: <u>Banana, Saba</u>							
1. <u>Corazon Peji</u>	764	1,026	1.3	1.3	126	150	7 bigger fruits harvested due to good farm management
2. <u>Minandro Dale Cruz</u>	275	311	1.0	1.0	26	42	7 increase in hills due to DA hills dispersal
3. <u>Mario Corpuz</u>	450	227	1.0	1.0	40	60	7 due to crowded plantings
4.							
5.							
S TOTAL	1,489	1,564	3.3	3.3	192	252	7 bigger fruits harvested due to good farm management

Codes for Column 8:

1- Change in area 3- Pests and Diseases 5- Fertilizers 7- Others, specify:

2- Weather Effects 4- Seeds 6- Irrigation Services

Note for Columns 4 & 5:

¹ - area harvested for mono-harvest temporary crops, area planted for permanent crops and multi-harvest temporary crops.

Figure 5. CrPS Form 2B Production, Area, and Number of Bearing Trees/Hills/Vines.

• CrPS Form 3A - List of Top Producing Cities/Municipalities per Crop

Page Number. CrPS Form 3 has allotted three (3) crops to accommodate the top producing cities/municipalities per crop. Fill-out additional forms to accommodate additional crops covered per province.

Geographic Identification Panel. Refer to item 2 of the general instruction for accomplishing the CrPS Forms 2 and 3.

Certification Panel. The Encoder must fill this portion after he/she has encoded the data collected by the SRs. Likewise, the Field Supervisor after he/she has successfully generated and reviewed the list of all crops per city/municipality.

A. IDENTIFICATION PARTICULARS	
A1. GEOGRAPHIC IDENTIFICATION	
Province: <u>CAVITE</u>	<u>2</u> <u>1</u>
A2. CERTIFICATION	
I hereby certify that the data generated in this summary form were encoded/reviewed by me personally and in accordance with the instructions	
Name and Signature of Encoder: <u>CASANDRA G. ABEGONIA</u>	Contact Number: <u>09012345678</u> Date Encoded: <u>MARCH 01, 2018</u>
Name and Signature of Field Supervisor: <u>JENNY V. MARTIN</u>	Contact Number: <u>09102030405</u> Date Reviewed: <u>MARCH 03, 2018</u>

Figure 6. CrPS Form 3A Geographic Identification and Certification

Volume of Production, Area Planted/Harvested, Number of Bearing Trees/Hills/Vines, and Reasons for Change

CrPS Form 3A (Appendix J) has five (5) major columns divided into eight (8) sub-columns to correspond to the information needed, which are: name of crop/ type of farm/name of city/municipality, volume of production, area, number of bearing trees/hills/vines, and reason/s for change.

Column 1- Name of Crop/Name of Farmer-Producer

Attach the list of all the top producing cities/municipalities per crop generated by the field supervisors in CrPS Form 2A.

Columns 2 and 3 – Volume of Production

Attach the computer-generated volume of production corresponding the list of all top producing cities/municipalities per crop (from CrPS Form 2A Columns 2 and 3 to CrPS Form 3A Columns 2 and 3).

Column 4 and Column 5 – Area Planted/Harvested

Attach the computer-generated area planted/harvested corresponding the list of all the top producing cities/municipalities per crop (from CrPS form 2A Columns 4 and 5 to CrPS Form 3A Columns 4 and 5).

Column 6 and Column 7 – Number of Bearing Trees/Hills/Vines

Attach the computer-generated number of bearing trees/hills/vines corresponding the list of all the top producing cities/municipalities per crop (from CrPS form 2A Columns 6 and 7 to CrPS Form 3A Columns 6 and 7).

Column 8- Reason/s for Change

Attach the reasons for change on the generated reasons for change corresponding the list of all the top producing cities/municipalities per crop (from CrPS Form 2A Column 8 to CrPS Form 32A Column 8).

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES							
NAME OF CROP / NAME OF CITY/MUNICIPALITY	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED ¹ in hectares		NO. OF BEARING TREES/HILLS/VINES		Reason/s for Change (indicate codes & expand the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: <u>Banana, Saba</u>							
1. <u>Silang</u>	1,489	1,564	3.3	3.3	192	252	7 bigger fruits harvested due to good farm management
2. <u>Alfonso</u>	1,879	2,175	4.1	4.2	274	289	1 increase in area due to additional area harvested
3. <u>Amadeo</u>	598	560	1.6	1.6	159	159	2 intermittent rains favorable to fruit development
4. <u>General Emilio Aguinaldo</u>	1,252	1,003	2.1	2.1	245	239	3 affected by bunchy top
5. <u>Indang</u>	741	685	1.5	1.1	158	140	1 affected by bunchy top
6. <u>Tagaytay</u>	2,712	3,426	3.1	3.1	457	576	7 bigger fruits harvested and additional bearing hills; 1A intervention-organic fertilizer dispersal
7							
8							
9							
10							

Codes for Column 8:

1- Change in area	3- Pests and Diseases	5- Fertilizer	7- Others, specify:
2- Weather Effects	4- Seeds	6- Irrigation Services	

Note for Columns 4 & 5:
¹... area harvested for non-harvest temporary crops, area planted for permanent crops and multi-harvest temporary crops.

Figure 7. CrPS Form 3A Production, Area, and Number of Bearing Trees/Hills/Vines

• CrPS Form 3B – Provincial Summary Form

Page Number. CrPS Form 3B can accommodate two crops per page. Fill-out additional forms to accommodate additional crops covered per province. There are two lines for the page number.

Geographic Identification Panel. Refer to item 2 of the general instruction for accomplishing the CrPS Forms 2 and 3.

Certification Panel. The Field Supervisor must fill out this portion after he/she has successfully generated and reviewed/edited the top five producing cities/municipalities per crop per province and by type of farm. The PSO must also fill out this form after he/she has reviewed the completeness and correctness of entries in the summary form.

A. IDENTIFICATION PARTICULARS			
A1. GEOGRAPHIC IDENTIFICATION			
Province: <u>DAVAO DEL NORTE</u>	<u>2</u>	<u>3</u>	
A2. CERTIFICATION			
I hereby certify that the data summarized in this form were reviewed by me personally and in accordance with the instructions.			
Name and Signature of Field Supervisor: <u>NIÑA Z. LOMIO</u>	Contact Number: <u>09621114725</u>	Date Reviewed: <u>MARCH 08, 2018</u>	
Name and Signature of PSO: <u>LYMAR ABRIO</u>	Contact Number: <u>05789101112</u>	Date Reviewed: <u>MARCH 10, 2018</u>	

Figure 8. CrPS Form 3B Geographic Identification and Certification

Volume of Production, Area Planted/Harvested, Number of Bearing Trees/Hills/Vines, and Reasons for Change

CrPS Form 3B (Appendix K) has the same number of columns and items compared to CrPS Form 3A.

Column 1- Name of Crop/Type of Farm/Name of City/Municipality

For *large farms*, get the name of the five large farms per crop based on the volume of production in CrPS Form 1. For easy reference, indicate the name of the city/municipality or location after the name of the large farm.

In case there is no large farm in the province, indicate NA which means Not Available.

For *small farms*, get the name of the crop and the computer-generated top five producing cities/municipalities per crop based on the volume of production encoded in CrPS Form 3A.

Columns 2 and 3 – Volume of Production

Attach the volume of production of the computer-generated top five producing cities/municipalities based on the volume production (from CrPS Form 3A Columns 2 and 3 to CrPS Form 3B Columns 2 and 3).

Column 4 and Column 5 – Area Planted/Harvested

Attach the area planted/harvested of the computer-generated top five producing cities/municipalities based on the volume of production (from CrPS Form 3A Columns 2 and 3 to CrPS Form 3B Columns 2 and 3).

Column 6 and Column 7 – Number of Bearing Trees/Hills/Vines

Attach the number of bearing trees/hills/vines of the computer-generated top five producing cities/municipalities based on the volume of production (from CrPS Form 3A Columns 6 and 7 to CrPS Form 3B Columns 6 and 7).

Column 8- Reason/s for Change

Attach the reasons for change per crop corresponding the top five producing cities/municipalities (from CrPS Form 3A Column 8 to CrPS Form 3B Column 8).

The **Total** after the five rows is simply the total responses of the five sample large farms and five cities/municipalities for small farms per crop.

Summary of Reasons per Crop per Province

For *large farms*, the summary of reason/s for each crop in the province should come from the reasons recorded by each sample large farm. The summary considers the major contributor which supports the change.

For *small farms*, the summary of reason/s for each crop in the province should come from the reasons recorded by each sample city/municipality. The summary considers the major contributor which supports the change.

The **% Change** below the **Total** is the computed percent change of the sample large farms and the five cities/municipalities for each crop based on the volume of production, area, and number of bearing trees/hills/vines of the current period compared with the same period of last year.

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES							
NAME OF CROP / TYPE OF FARM NAME OF CITY/MUNICIPALITY	VOLUME OF PRODUCTION in Kilograms		AREA PLANTED/HARVESTED ¹ in Hectares		NO. OF BEARING TREES/HILLS/VINES		Reasons for Change (Indicate codes & exposed the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: <u>Banana, Cavendish</u>							
LARGE FARM							
1) Lapanday Foods Corp./New Cansla	3,245,414	3,244,588	217.59	217.59	413,421	413,421	3 affected by bunchy top
2) SUMPRU/New Cansla	4,185,648	4,165,322	532.00	532.00	931,888	858,099	3, 1 small stems produce, decrease in area affected by bunchy top
3)							
4)							
5)							
TOTAL	7,431,062	7,409,910	750	750	1,344,421	1,271,520	3 small stems produce, affected by bunchy top
% CHANGE	(0.33)		0.00		(20.38)		
SMALL FARM							
1) City of Tagum	2,158	1,588	2.00	2.00	214	198	3 affected by bunchy top
2) New Cansla	3,317	2,971	3.20	3.20	318	318	3 affected by bunchy top
3) Carmen	5,478	6,258	4.36	4.36	442	458	7 intermittent rains favorable to fruiting stage
4)							
5)							
TOTAL	10,953	10,818	10	10	974	974	3 affected by bunchy top
% CHANGE	(1.23)		0.00		(0.10)		

Codes for Columns 8:

1- Change in area	3- Pests and Diseases	5- Fertilizers	7- Others, specify
2- Weather Effects	4- Seeds	6- Irrigation Services	

Note for Columns 4 & 5:
¹ - area harvested for mono-harvest temporary crops; area planted for perennial crops and multi-harvest temporary crops

Figure 9. CrPS Form 3B Production, Area, and Number of Bearing Trees/Hills/Vines

4.3.4 Instructions in the Editing of the Accomplished CrPS Forms

This section discusses the instructions in editing of the accomplished CrPS Forms 2A, 2B, 3A, and 3B.

The Field Supervisor must edit the accomplished forms before submitting it to the PSO to ensure the quality of the generated data.

4.3.4.1 General Instruction in Editing the CrPS Forms

1. Reference Period – Check if the item is properly filled out.
2. Page Number - Check if page number per city/municipality is consistent with the total number of municipalities covered.
3. Name of Province, City/Municipality - Check if the codes conform with the PSGC.
4. Certification Panel – Check if the items are properly filled out.

4.3.4.2 Editing of the CrPS Forms

- **CrPS Form 2A (for Small Farm Only)**

1. Column 1 – **Name of Crop/Name of Farmer-Producer.** Check if the name of crop/name of farmer-producers reported in CrPS Form 1 are the same as those reported in in CrPS Form 2A.
2. Columns 2 & 3 – **Volume of Production.** Check if the total volume of production per crop by each sample farmer-producer reported in CrPS Form 1 is the same as those reported in CrPS Form 2A.
3. Columns 4 & 5 – **Area Planted/Harvested.** Check if the total area planted/harvested per crop reported by each sample farmer-producer (based on the volume of production) in CrPS Form 1 is the same as those reported in CrPS Form 2A, this year and last year. Area planted/harvested should be reported only during April-June and October-December.
4. Columns 6 & 7 – **Number of bearing Trees/Hills/Vines.** Check if the total number of bearing trees/hills/vines per crop reported by each sample farmer-producer (based on the volume of production) in CrPS Form 1 is the same as those reported in CrPS Form 2A, this year and last year. Number of bearing trees/hills/vines should be reported only during April-June and October-December.
5. Column 8 – **Reason/s for Change.** Check if the reason/s for change per crop by each sample farmer-producer in CrPS Form 1 is the same as those reported in CrPS Form 2A.

- **CrPS Form 2B – City/Municipal Summary Form (For Small Farm Only)**

1. Column 1 – **Name of Crop/Name of Farmer-Producer.** Check if the name of crop/name of the top five farmer-producers per city/municipality generated on CrPS Form 2A are the same as those reported in CrPS Form 2B.
2. Columns 2 & 3 – **Volume of Production.** Check if the total volume of production of the top five farmer-producers per crop per city/municipality generated based on CrPS Form 2A are the same as those reported in CrPS Form 2B.
3. Columns 4 & 5 – **Area Planted/Harvested.** Check if the total area planted/harvested of the top five farmer-producers per crop per city/municipality (based on the volume of production) generated based on CrPS Form 2A are the same as those reported in CrPS Form 2B.
4. Columns 6 & 7 – **Number of bearing Trees/Hills/Vines.** Check if the total number of bearing trees/hills/vines of the top five farmer-producers per crop per city/municipality (based on the volume of production) generated based on CrPS Form 2A are the same as those reported in CrPS Form 2B.
5. Column 8 – **Reasons for Change.** Check if the summary of reasons for change by the top five farmer-producers per crops per city/municipality in CrPS Form 2A are the same as those reported in CrPS Form 2B.

- **CrPS Form 3A – List of Top Producing Cities per Crop (for Small Farm)**

1. Column 1 - **Name of Crop/Name of City/Municipality.** Check if the name of crop/and all the top producing cities/municipalities per crop generated in CrPS Form 2A are the same as those reported in CrPS Form 3A.
2. Columns 2 & 3 – **Volume of Production.** Check if the total volume of production per crop of all the top producing cities/municipalities generated in CrPS Form 2A are the same as those reported in CrPS Form 3A.
3. Columns 4 & 5 – **Area Planted/Harvested.** Check if the total area planted/harvested per crop of all the top producing cities/municipalities (based on the volume of production) generated in CrPS 2A are the same as those reported in CrPS Form 3A.

Area planted/harvested should be reported only during April-June and October-December.

4. Columns 6 & 7 – **Number of bearing Trees/Hills/Vines.** Check if the total number of bearing trees/hills/vines per crop of all the top producing cities/municipalities (based on the volume of production) generated in CrPS 2A are the same as those reported in CrPS Form 3A.
5. Column 8 – **Reason/s for Change.** Check if the reasons for change per crop of the top producing cities/municipalities per municipality reported in CrPS Form 2A are the same as those reported in CrPS Form 3A.

- **CrPS Form 3B – Provincial Summary Form**

1. Column 1 - **Name of Crop/Type of Farm/Name of City/Municipality**

For *large farm*, check if the name of crop and sample large farms reported in CrPS Form 1 is the same as those reported in CrPS Form 3B. Check the number of sample large farms per province. Five large farms per crop are to be reported per province.

For *small farms*, check if the name of crop and the computer generated top producing cities/municipalities per crop reported in CrPS Form 3A are the same as those reported in CrPS Form 3B.

2. Columns 2 & 3 – **Volume of Production**

For *large farms*, check if the volume of production reported in CrPS Form 1 by each sample large farms per crop are the same as those reported in CrPS Form 3B.

For *small farms*, check if the volume of production of the computer-generated top five producing cities/municipalities per crop reported in CrPS Form 3A are the same as those reported in CrPS Form 3B.

3. Columns 4 & 5 – **Area Planted/Harvested**

For *large farm*, check if the area planted/harvested reported in CrPS Form 1 by each sample large farms per crop are the same as those reported in CrPS Form 3B.

For *small farms*, check if the area planted/harvested of the computer-generated top five producing cities/municipalities per crop (based on the volume of production) reported in CrPS Form 3A are the same as those reported in CrPS Form 3B.

Area planted/harvested should be reported only during April-June and October-December.

4. Columns 6 & 7 – **Number of bearing Trees/Hills/Vines**

For *large farm*, check if the number of bearing trees/hills/vines reported in CrPS Form 1 by each sample large farm per crop are the same as those reported CrPS Form 3B.

For *small farms*, check if the number of bearing trees/hills/vines of the computer-generated top five producing cities/municipalities per crop (based on the volume of production) reported in CrPS Form 3A are the same as those reported in CrPS Form 3B.

Number of bearing trees/hills/vines should be reported only during April-June and October-December.

5. Column 8 - **Reasons for Change**

For *large farms*, check if the reasons for change per crop reported by each sample large farm in CrPS Form 1 are the same as those reported in n CrPS Form 3B.

For *small farms*, check if the reasons for change per crop of the computer-generated top five producing cities/municipalities in CrPS Form 3A are the same as those reported in CrPS Form 3B.in CrPS Form 3.

6. **Total** - Check if the total responses of the five sample large farms and top five producing cities/municipalities for small farms per crop are correct.
7. **Percent Change.** Check if the computed percent change on the volume of production, area planted/harvested, and number of bearing trees/hills/vines per crop per type of farm are correct based on the comparison of the current period against the same period of last year.

PROCEED TO THE COMPUTATION OF PROVINCIAL ESTIMATES ON THE VOLUME OF PRODUCTION, AREA PLANTED/HARVESTED, AND NUMBER OF BEARING TREES/HILLS/VINES

4.4 Data Processing

In CrPS, there is no processing system developed to process the edited survey returns. Instead, the survey utilizes the two crops compiling systems, an MS Excel-based templates that utilizes the links and protection commands. The system electronically consolidates the different data sets from the provinces to the region up to the national level. An identical and independent system is provided for each of the sub commodity groups that are classified further into major and other crops. Separate discussions of the two compiling systems are found in Section 5.3 of this manual.

5. DATA REVIEW AND VALIDATION

The PSA has mainstreamed a quarterly data review and validation process to ensure the quality of its statistical products. This is conducted in three levels - the Provincial Data Review (PDR), Regional Data Review (RDR), and National Data Review (NDR).

The first level, PDR is done at the province and is attended by the provincial staff. The Provincial Statistics Officer (PSO) is responsible for the conduct of the PDR, assisted by the focal person for the sub-sector. The RDR is presided by the Regional Director (RD) and/or Statistical Operations and Coordination Division (SOCD) Chief and attended by all the PSOs in the region. The NDR is held at the Central Office (CO) with participation of the technical staff, RSSO representatives and management. At this level, one-on-one consultations between the sector/commodity specialists and the RSSO representatives are done to clear issues, if any, after which regional estimates are finalized and consolidation to come up with the national estimates. Both the regional and the national estimates are then presented to the management for final approval.

Table 3. Data review and validation schedules

Three Levels of Data Review	Schedule
Provincial Data Review (PDR)	Last month of the reference quarter
Regional Data Review (RDR)	Third week of the first month after the reference quarter
National Data Review (NDR)	Last week of the first month after the reference quarter

Note:

All the data review and validation levels focus on the different aspects of the data items on production, area planted/harvested, total number of bearing trees/hills, number of bearing trees/hills per hectare and kilograms per bearing tree or metric ton per hectare.

At the provincial level, the reviewers shall focus on the level that reflects the situation in the province. At the regional level, the focus is on the comparison between and among provinces in the region. At the Central Office, the national level data shall be in comparison between and among the regions and with related national data/information. The regional and national level data shall clearly reflect the relative contribution of its components by crop which vary by reporting period and the annual result.

5.1 Data Review

Data review is concerned with the internal checks of the result of the survey data. Its main purpose is to ensure that the data set are properly gathered, encoded and processed. It should be done in the provincial level since it is the first stage where formal data analysis starts.

The data review technically starts during the data collection upon interview. Initially, the replies of the respondents on the data items required for collection will be subjected to scrutiny. This will be followed by another review on the recorded responses while the interviewer is still at the sample area. The review of data includes the following:

- Check on the completeness of the entries and response items. Conduct probing when necessary to obtain the responses for the required items. Some of these items may not be directly supplied by the respondents due to misunderstanding of the questions or it may take time to recall.
- While the interviewer is still with the respondent, roughly compute for the yield (production in kilograms/number of bearing trees or hectares) and the number of bearing trees per hectare. The statistical researcher must have an idea on the acceptable range during the period. A result outside the range shall be verified. The out of range figure may not necessarily be wrong but may be a new level for which only the respondents could explain. This requires an explanation or remarks from the respondent.
- During the interview, ask the respondent about the weather condition during the previous quarter up to the current quarter. The effect of weather on production/yield varies among crops.




For each crop, the estimation for each data item requires the final data of the same period last year.

To enhance the data review, the following should be observed during data collection:

Case 1: Non-Response Items

Where applicable, all items in the form shall have response or entries. Otherwise, the generated results are outside the realistic and acceptable range. In a sample form shown in Table 4, the missing items due to non-response are indicated by a question mark (?). Check also the appropriateness of the reason to the specific crop and data sets.

Table 4. Banana Saba: Volume of production, Area Planted/Harvested and Number of Bearing Hills, October-December, 2016- 2017.

CrPS Form 1 Data Collection Form AUTHORITY: This survey is authorized under Republic Act (RA) 10625 CONFIDENTIALITY: All data obtained herein shall be held STRICTLY CONFIDENTIAL cannot be used for taxation, investigation, or law enforcement purposes		 Republic of the Philippines PHILIPPINE STATISTICS AUTHORITY Quezon City		 		PSA Approval No: _____ Expires on: _____	
CROPS PRODUCTION SURVEY October to December 2018 Reference Period				Page 01 of 01			
A. IDENTIFICATION PARTICULARS							
A1. GEOGRAPHIC IDENTIFICATION							
Province: DAVAO DEL SUR 1124				City/Municipality: DIGOS 03			
A2. CERTIFICATION							
I hereby certify that the data gathered in this collection form were obtained/reviewed by me personally and in accordance with instructions.							
Name and Signature of Statistical Researcher: _____				Contact Number: _____		Date Accomplished: _____	
Name and Signature of Field Supervisor: _____				Contact Number: _____		Date Reviewed: _____	
A3. FARM CATEGORY							
Type of Farm: <input checked="" type="radio"/> 1 - Large Farm <input type="radio"/> 2 - Small Farm							
A4. SAMPLE IDENTIFICATION							
Name of Large Farm/Farmer-Producer: NOEL PERANDA				Address: Digos			
				Contact Number: 09665878987			
B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES							
COMMODITY GROUPING/ NAME OF CROP	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED* in hectares		NO. OF BEARING TREES/HILLS/VINES		Reason/s for Change (Indicate codes & expound the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2 - FRUIT CROPS							
1 Banana, Saba	875	840	0.60	0.60	120	100	2 Effect of Typhoon "Frank"
2 Banana, Lacatan	580	345	0.40	0.40	80	80	3 Too much rain
3 Pineapple	780	?	0.75	0.75	165	165	?
4 Durian	780	?	1.00	1.00	220	220	?
5 Santol	590	455	?	0.50	110	110	?
6							
7							
8							
9							
10							

Case 2: Outlier Yield (production/number of bearing trees/hills)

At the end of the interview, verify with the respondent if the derived yield is too high or too low based on the yield range for the period. The statistical researcher should be familiar with the yield range in a particular reference period, by crop. These are found in the compiling systems. Note in the example shown in Table 5 that the computed yield of 0.50 kilograms per bearing hill of sample no. 4 is an outlier.

Table 5. Banana Saba: Volume of production, Area Planted/Harvested and Number of Bearing Hills, October-December, 2016- 2017

CrPS Form 2A
List of Qualified Farmer-Producer per Crop
(For Small Farm Only)

Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City

CROPS PRODUCTION SURVEY
October to December 2017
Reference Period:

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A. IDENTIFICATION PARTICULARS

A1. GEOGRAPHIC IDENTIFICATION

Province: Davao del Sur 11 24 City/Municipality: Santa Cruz 1 2

A2. CERTIFICATION

I hereby certify that the data generated in this listing form were encoded/reviewed by me personally and in accordance with the instructions.

Name and Signature of Encoder: _____ Contact Number: _____ Date Encoded: _____

Name and Signature of Field Supervisor: _____ Contact Number: _____

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES

NAME OF CROPS NAME OF FARMER-PRODUCER	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED ^a in hectares		NO. OF B TREES/HILL	Yield per Bearing Hills (kg per hill)	Remarks for Change (to & expand the reason)
	Last Year (1)	This Year (2)	Last Year (3)	This Year (4)			
CROP: <u>Banana, Saba</u>							
1. <u>Ador Gonzales</u>	150	300	0.50	0.50	100	3.00	2 Increase due to no typhoon
2. <u>Edgar Alanea</u>	200	500	1.00	1.00	200	2.50	
3. <u>Volvy Arandela</u>	120	200	0.75	0.75	120	1.67	
4. <u>Ricardo Moreno</u>	300	50	0.50	0.50	100	0.50	
5. <u>Berto Bernal</u>	200	230	0.50	0.50	100	2.30	
6.							
7.							
8.							
9.							
10.							

Sample computation of Yield per Bearing Hills

Case 3: Outlier Bearing Trees/Hills per Hectare

At the end of the interview, verify with the respondent if the derived bearing trees/hills per hectare is out of range (similar procedure with yield). Check if the trees were planted against the number of growing age up to its productive age. The statistical researcher should be familiar with the range of growing years, by crop. Note that in the example illustrated in Table 6, the computed 160 bearing hills per hectare of sample no. 5 is an outlier. In this case, the SR should ask the respondent of the reason/s for having a smaller bearing hills per hectare.

Table 6. Banana Saba: Volume of production, Area Planted/Harvested and Number of Bearing Hills, October-December, 2016-2017

CrPS Form 2A
List of Qualified Farmer-Producer per Crop
(For Small Farms Only)

Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City

CROPS PRODUCTION SURVEY
October to December 2017
Reference Period

Page 01 of 01

A. IDENTIFICATION PARTICULARS

A1. GEOGRAPHIC IDENTIFICATION

Province: North Cotabato 12 47 City/Municipality: Bagua

A2. CERTIFICATION

I hereby certify that the data generated in this listing form were encoded/reviewed by me personally and in accordance with the instructions.

Name and Signature of Encoder: _____ Contact Number: _____ Date Encoded: _____

Name and Signature of Field Supervisor: _____ Contact Number: _____

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES

NAME OF CROP/ NAME OF FARMER-PRODUCER	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED in hectares		NO. OF BEARING TREES/HILLS		Remarks (for Change in area & beyond the masses)
	Last Year (2)	This Year (3)	Last Year (4)	This Year (5)	Last Year (6)	This Year (7)	
CROP: Banana, Saba							
1. Gerry Bucad	40	20	1.00	1.00	200	1000	1,000
2. Liwayway Nagulom	135	85	1.00	1.00	200	420	420
3. Fernando Paterno	340	250	2.00	2.00	400	800	400
4. Leticia Enriquez	270	220	1.00	1.00	200	350	350
5. Larry Sales	110	60	0.50	0.50	80	160	160
6.							
7.							
8.							
9.							
10.							

Sample computation of Bearing Hills per Hectare

Case 4: Incomplete Entries

Before proceeding with the data validation, the corresponding worksheets shall be checked for completeness. A sample worksheet in Table 7 shows separate columns for Year 2 preliminary and final estimates (Year 2P for preliminary and Year 2F for final). Crops with preliminary estimates shall have final estimates. The final estimates may be the same, lower or higher than the preliminary. A drop in the final estimate with preliminary data is possible if there were calamities and shall include an explanation under the remarks column.

Table 7. Volume of production, major vegetables, January-March

Crop	Production (MT)			% Change	Reason for Change
	Year 1	Year 2P	Year 2F		
Mongo	1.19	1.06	1.06	(10.92)	Prolonged rains
Peanut	46.20	38.75	38.75	(16.13)	Heavy rains
Cabbage	-	-	-	-	
Eggplant	345.50	305.44	305.45	(11.59)	Too much rain
Tomato	28.25	25.39	25.39	(10.12)	Prolonged rainfall
Camote	762.00	714.00	?	-	Lodging
Cassava	4,084.00	3,864.00	?	-	Frequent rains

Outputs. The outputs of the data review are the accomplished data review and validation presentation tables and worksheets in the two compiling systems for each of the sub-commodity groups.

Tables 8 and 9 show examples of the results of the PDR in the Crops Compiling System. Table 9 will be submitted in advance to the RSSO and CSD. With the numerous other crops to be reviewed during the RDR proper, a pre-RDR is done among RSSO staff to be led by the SOCD Chief after the submission of provincial reports to allow sufficient time to review the data and identify the questionable estimates. The issues shall be either referred to the concerned Provincial Statistical Office before the RDR proper, or to be settled during the RDR.

Table 8. Volume of production, Non-Food and Industrial Crops, January-March

Crop	Year 1	Year 2	Year 3P				% Change col.3/2	Reasons for change
			CrPS	PDR	RDR	NDR		
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sugarcane (cane) for:	1,173,359	2,718,527	1,448,536	1,448,536	-	-	(46.72)	Less fertilizer usage/movement of harvest
Centrifugal sugar	1,166,268	2,705,770	1,441,000	1,441,000	-	-	(46.74)	Less fertilizer usage/movement of harvest
Panocha/Muscovado	7,069	12,741	7,519	7,519	-	-	(40.99)	Movement of harvest
Chewing	22	17	17	17	-	-	3.27	Bigger canes harvested
Basi/Vinegar		-	-	-	-	-	-	-

Table 9. Volume of production, Non-Food and Industrial Crops, January-March

Crop	Production (MT)			% Change col.3/2	Reasons for change
	Year 1	Year 2	Year 3P		
(1)	(2)	(3)	(4)	(5)	(6)
Sugarcane (cane) for:	1,173,359	2,718,527	1,448,536	(46.72)	Less fertilizer usage/movement of harvest
Centrifugal sugar	1,166,268	2,705,770	1,441,000	(46.74)	Less fertilizer usage/movement of harvest
Panocha/Muscovado	7,069	12,741	7,519	(40.99)	Movement of harvest
Chewing	22	17	17	3.27	Bigger canes harvested
Basi/Vinegar	-	-	-	-	-

5.2 Data Validation

Data validation is the process of assessing the acceptability of the data. It involves different types of analyses with the goal of arriving at the decision whether to accept the data or not. It is done with the main objective of releasing official data which accurately captures the actual situation in the province.

Inputs. A number of auxiliary information shall be used to validate the estimates that will reflect the agricultural situation in the province and will assure that the estimates are within the acceptable levels. The personnel involved in validation shall be equipped with available information as data check points. Some of this reference information are production-related statistics from other agencies, foreign trade, prices, consumption, weather condition, government and private program policies, trading and processing patterns, parameters of selected fruit crops and non-food and industrial crops, fruiting season, and harvesting calendar. Tables 10 to 17 shows the details of these auxiliary information.

Table 10. List of auxiliary information used as data checks and possible sources

Information	Source
1. Production related statistics: No. of bearing trees, area, production, yield, updated cropping calendar	Agri-Businessmen
	Bureau of Plant Industry (BPI)
	Cooperatives
	Institute of Plant Breeding (IPB)
	Local Government Units (LGUs)
	National Tobacco Administration (NTA)
	Non-Government Organizations (NGOs)
	Philippine Coconut Authority (PCA)
	Philippine Fiber Industry Development Authority (PhilFIDA)
	Philippine Seed Board
	Philippine Statistics Authority (PSA)
	Private Growers
	Sugar Regulatory Administration (SRA)
	Bangko Sentral ng Pilipinas
2. Foreign trade statistics	BPI
	PSA
3. Prices on: a. fertilizer, pesticides; b. farm gate, wholesale, retail	Agricultural Traders
	Plantation Farms
	PSA
4. All relevant data from: a. large growers; b. fruit crops associations, cooperatives	Agri-Businessmen
	NGOs,
	Private Growers
5. Per capita consumption; industrial consumption	Food and Nutrition Research Institute
	Industry Associations
	LGUs
	PSA
6. Weather conditions and damage report due to natural and man-made calamities	Department of Agriculture (DA)
	Farmers
	LGUs
	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
	PSA
7. Government and private programs and policies implemented, affecting crop production (i.e. seed dispersal program, subsidies)	DA
	LGUs
	NGO
8. Trading and processing patterns of selected commodities	PSA (trading matrix of selected fruits)

Table 11. Parameters of selected Non-Food and Industrial Crops

Crop	Yield	Bearing Trees, Hills/ha
Abaca	450-1,900 kg./ha	625-1,100 hills/ha
Coconut	5-60 nuts/tree	100-160 trees/ha
Coffee		
<i>Arabica</i>	500-1000 kg of green beans/ha 1.85-3.70 kg of dried berries/tree 0.92-1.85 kg of dry beans/tree 0.50-1.00 kg. of green beans/tree	950-1,400 trees/ha
<i>Excelsa</i>	1,000 kg of green beans/ha 6.73-12.35 kg of dried berries/tree 3.37-6.17 kg of dry beans/tree 1.82-3.33 kg of green beans/tree	300-550 trees/ha
<i>Liberica</i>	1,000 kg of green beans/ha 6.73-12.35 kg of dried berries/tree 3.37-6.17 kg of dry beans/tree 1.82-3.33 kg of green beans/tree	300-550 trees/ha
<i>Robusta</i>	1,200 kg of green beans/ha 4.44-8.89 kg of dried berries/tree 2.22-4.44 kg of dry beans per tree 1.20-2.40 kg of green beans/tree	500-1000 trees/ha
Rubber	13.15 kg of cuplump/tree (3.4 -4 kg per bt)	160-280 trees/ha (500 trees per ha)
Sugarcane (cane for):		
<i>Centrifugal Sugar</i>	15-90 mt./ha	20,000-25,000 hills/ha
<i>Panocha</i>	12,600-91,000 canes/ha	20,000-25,000 hills/ha
<i>Basi/Vinegar</i>	3,000-9,000 lit./ha	20,000-25,000 hills/ha
Tobacco	400-1,600 kg/ha	14,000-20,000 hills/ha
<i>Virginia</i>	1,800-2,000 kg/ha	
<i>Native</i>	1,600-1,800 kg/ha	
<i>Others (Burley)</i>	1,900-2,200 kg/ha	
Cacao	0.2-3 kg/tree	1,000 trees/ha
Cashew	93.75 kg/tree	70-160 trees/ha
Cotton		
<i>Old file</i>	200-800 kg/ha	10,000-12,500 hills/ha
<i>Series data</i>	200-3,000 kg./ha	10,000-12,500 hills/ha
Palm		
Oil Palm		
<i>Old file</i>	5-60 kg/tree	400-625 trees/ha
<i>New, internet</i>	125-300 kg/tree	143 trees/ha
Kaong	225 kg/tree	143 trees/ha
Pili Nut	5-60 kg/ha	60-70 trees/ha
Betel Nut	30-300 nuts/tree	1,000-1,500 trees/ha
Other Fibers		
<i>Jute</i>	2,500-3,000 kg/ha	
Sisal	2,000-3,500 kg/ha	
Ramie	800-1,400 kg/ha	40,000-45,000 hills/ha
Maguey	130-1,900 kg/ha	2,500-3,000 hills/ha
Kapok	100-2,000 kg/ha	204-280 trees/ha
Bromeliad/ Euphorbia	* 51-120 mt/ha	

* with planting medium

Table 12. Parameters and fruiting season of selected fruit crops

Crop	Planting Density	Yield			Fruits/ Kilo	Bearing Age	Fruiting Season											
		Quantity	Unit	Kilos			J	F	M	A	M	J	J	A	S	O	N	D
MAJOR:																		
Banana	400	1-6	bunches			10-12 mos	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bungulan				4.4 - 89														
Cavendish				4.4 - 90														
Lacatan				4.4 - 91														
Latundan				4.4 - 92														
Saba				4.4 - 93														
Others				4.4 - 94														
Bungulan				13														
Cavendish				30														
Lacatan				15														
Latundan				10														
Saba				20														
Calamansi	400-625	0.1-2	kaing	4.4 - 88	40-50	6						✓	✓	✓				
Mango	51-100	20-3t	fruits			10				✓	✓	✓	✓					
Carabao				750	3-5													
Piko				600	4-5													
Others																		
Pineapple	28572	8t-12t	fruits	18.9t - 28.4t		12-18 mos		✓	✓	✓	✓							
Other Fruits:																		
Balimbing	277	20-900	fruits	100		4-5			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Durian	100	10-500	fruits	500		4-5							✓	✓	✓	✓		
Lanzones	400	2-100	kilos	2-100	60-80	12-20	✓	✓	✓	✓								
Mangosteen	156	100-600	fruits	100	5-6	10					✓	✓	✓	✓	✓	✓	✓	✓
Papaya		5-60	fruits			6-9 mos	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Solo																		
Hawaiian	400-500			156														
Native	1.1t-2.5t			39														
Rambutan	100-156	200-300	fruits	50		5-6						✓	✓	✓	✓			
Tamarind	40-70	1-15	kaing	77-105		3-4				✓	✓	✓	✓	✓	✓	✓	✓	✓
Watermelon	2t-3t	3t-10t	fruits	6.9t - 30t														
Mandarin	160-280	20-1,000	fruits	125	8-9/4-5	5	✓						✓	✓	✓	✓	✓	✓
Orange	120-200	10-600	fruits	100	5-6/3-7	3-4	✓	✓								✓	✓	
Avocado	123	500-600	fruits	360	3-5	4-5					✓	✓	✓	✓				
Guava	277	7.5-20	kilos	7.5-20		4-6										✓	✓	✓
Native																		
Guapple	600-625																	
Guyabano	400	12-24	fruits	38.4		3-5						✓	✓					
Jackfruit	100	20-500	fruits	1500		7						✓	✓					
Melon	2t-3t	3t-12t	fruits															
Honey-dew																		
Muskmelon																		
Santol	69	150-300	fruits		5	5-7							✓	✓	✓	✓		
Starapple	156	1000	fruits	275	7-10	5-6	✓	✓	✓	✓								✓
Pomelo	100-156	5-400	fruits	450		4-5	✓									✓	✓	✓
Atis	625	40-75	fruits	30	8-15	3-5							✓	✓	✓	✓	✓	✓
Breadfruit	69	600-800	fruits	480		4-6	✓					✓	✓	✓	✓	✓	✓	✓
Chico	156	500-2t	fruits	400	15-20	6-8					✓	✓	✓	✓	✓	✓		
Duhat	100			100/tree		7-8						✓	✓	✓				
Mabolo	51	10-800	fruits			6-7							✓	✓				
Marang	100	30-1,500	fruits			4-5							✓	✓	✓	✓	✓	✓
Sineguelas	100-156	150-300	fruits	6	50-70	3												
Lime	204-280	10-500	fruits			3-4										✓	✓	✓

The parameters established by the Bureau of Plant Industry (BPI), as shown in Table 12, are the national averages. These levels vary at the provincial level due to the differences in climate type, topography and farm practices. Note that the provincial parameters should not deviate too much from the national average.

Table 13. Guide on Planting and Growing Vegetables

Crop/Variety	Time of Planting	Maturity*	Yield Per Hectare
Mongo/ Mungbean	Feb-Mar/May-Jun/Sep-Oct	65-72 DAP	1.0-1.5 tons
Peanut	May-Jun / Sep-Oct	90-110 DAP	1.5-2.5 tons
Cabbage	Oct - Dec	55-60 DAT	20-25 tons
Eggplant	All season	90-120 DAP	9-11 tons
Tomato	Jan-May / Sep-Oct	55-65 DAT	20-30 tons
Garlic	Oct-Dec	95-120 DAP	8-12 tons
Onion	Oct - Feb	3-4 MAT	8-15 tons
Sweet Potato	All season	90-120 DAP	25-35 tons
Habitchuelas	Oct - Jan	50 DAP	8-12 tons
Snap Beans	All season	43-52 DAP	10-15 tons (green pods)
Broccoli	Oct - Dec	50-65 DAT	4-10 tons
Cauliflower	Sep - Jan	45-60 DAT	20,000 heads
Kangkong	All season	30-50 DAP	10-12 tons
Lettuce (loose leaf)	All season	30-45 DAT	5-10 tons
Pechay	All season	25-30 DAT	6-10 tons
Chinese Cabbage	Oct - Dec	55-65 DAT	10-25 tons
Ampalaya	All season	60-75 DAP	8-15 tons
Stringbeans	All season	50-65 DAP	6-12 tons (green pods)
Bush Sitao	Nov - Mar	45-50 DAP	8-10 tons
Upo	Oct-Mar	90-100 DAP	5-10 tons
Okra	All season	60-75 DAP	6-11 tons
Squash	Nov-Jan	3-5 MONTHS	10-12 tons
Ginger	Apr-May	8-12 MAT	5-10 tons
Sweet Pepper	Sep - Jan	80-90 DAT	10-20 tons
Carrot	All season	75-103 DAS	4-8 tons
Gabi (native)	All season	6-12 MAT	7-12 tons
Radish	Oct-Mar	45-60 DAP	8-10 tons
Potato	Sep - Jan	110-120 DAT	15-25 tons
Chayote	Sep - Jan	6-10 MAT	2.5-4.0 tons
Patola	Apr-May / Sep-Nov	60-85 DAP	3,333-5,000 fruits
Black Pepper	All season	3-6 years	2-4 tons
Cucumber	May-Jul / Oct-Dec	50-65 DAP	10-15 tons
Sweet Pea	Nov-Jan	80-90 DAP	2.0-3.0 tons (green pods)
Celery	Sep - Jan	65-75 DAP	5-6 tons
Chick Pea	Sep - Jan	60-90 DAT	2.5-3.0 tons
Cowpea	All season	60-75 DAP	8-10 tons (green pods)
Hyacinth Beans (batao)	All season	75-90 DAP	10,000-15,000 pods
Lima Beans (patani)	Nov - Mar	5-6 MAS	1.0-2.5 tons
Mustard	All season	25-30 DAT	6-10 tons
Soybeans	Jan-Feb/May-Jun/Sep-Oct	85-100 DAP	2-3 tons

Source: Bureau of Plant Industry (BPI)

Note: *DAP - Days after Planting; DAT - Days after Transplanting

An example of data check for a specific commodity is shown in Table 14. This serves as data check for the yield of mango, in kilograms per bearing tree, provided by the National Mango Research and Development Center in Guimaras. The yield differs by age and type of mango propagation. Similar to most permanent crops, the volume of production depends upon the age of the trees.

Table 14. Yield per tree by propagation and age of mango-carabao

Age of Trees	GRAFTED TREES			SEEDED TREES		
	Kilograms Per Tree			Kilograms Per Tree		
	Average	Minimum	Maximum	Average	Minimum	Maximum
1	-	-	-	-	-	-
2	-	-	-	-	-	-
3	0.50	-	0.50	-	-	-
4	1.00	-	1.00	-	-	-
5	58.00	10.00	150.00	-	-	-
6	70.00	10.00	200.00	-	-	-
7	73.50	0.50	300.00	-	-	-
8	83.67	5.00	300.00	100.00	50.00	150.00
9	104.00	10.00	300.00	100.00	50.00	150.00
10	105.00	20.00	400.00	190.00	10.00	500.00
11	141.25	20.00	450.00	205.00	20.00	550.00
12	171.36	25.00	500.00	207.00	30.00	600.00
13	192.78	25.00	600.00	226.92	25.00	1,000.00
14	194.33	30.00	700.00	297.50	40.00	800.00
15	203.11	28.00	600.00	297.80	28.00	1,200.00
16	269.00	30.00	800.00	340.00	50.00	900.00
17	277.89	31.00	800.00	386.00	20.00	1,500.00
18	278.71	40.00	1,000.00	389.00	30.00	1,200.00
19	327.22	35.00	900.00	450.00	30.00	1,300.00
20	341.50	35.00	900.00	451.53	50.00	1,400.00
21-25	356.67	50.00	1,200.00	563.08	150.00	1,400.00
26-30	463.07	70.00	1,500.00	610.25	180.00	1,800.00
31-40	558.50	85.00	1,500.00	644.25	250.00	2,000.00
41-50	600.00	400.00	800.00	770.18	379.00	2,200.00
51-60	620.00	150.00	1,500.00	974.16	120.00	2,200.00
61-70	650.00	500.00	800.00	1,081.43	105.00	2,500.00
71-80	700.00	400.00	1,500.00	1,185.50	60.00	2,500.00
81-90	720.00	500.00	800.00	1,401.54	123.00	3,100.00
91-100	781.25	400.00	1,500.00	1,600.64	180.00	3,000.00

Source: National Mango Research and Development Center, Guimaras

Table 15 shows an example of validation parameters for fruit crops. The table indicates the range and common levels on number of trees per hectare, yield per bearing tree in kilograms, pieces per kilogram, weight per fruit and kilograms per bunch.

Table 15. Fruit crops parameters, Davao Sur, 2002

Crop	Bearing Age		Number of Trees/Hectare			Yield/Bearing Tree (in kg.)		
	Years	Months	Lowest	Highest	Common	Lowest	Highest	Common
Banana								
Bungulan	-	9-12	600	900	800	30	40	30
Cavendish	-	9-12	1500	1700	1700	30	60	45
Lakatan	-	9-12	600	900	800	25	54	40
Latundan	-	9-12	600	900	800	30	52	30
Saba	-	9-12	600	700	625	25	50	40
Others	-	9-12	300	500	400	24	36	30
Mango								
Carabao	5	-	30	277	80	10	2200	500
Pico	8	-	30	277	80	10	2200	600
Others	10	-	30	200	65	10	1100	450

Table 15. continued...

Crop	Pieces/Kilogram			Weight/Fruit			Kilograms/Bunch		
	Lowest	Highest	Common	Lowest	Highest	Common	Lowest	Highest	Common
Banana									
Bungulan	8	20	20	-	-	-	15	20	15
Cavendish	4	10	7	-	-	-	25	35	30
Lakatan	8	20	18	-	-	-	15	25	20
Latundan	5	20	15	-	-	-	15	25	15
Saba	10	20	18	-	-	-	20	30	20
Others	5	15	12	-	-	-	12	18	15
Mango									
Carabao	4	6	5	-	-	-	-	-	-
Pico	4	6	5	-	-	-	-	-	-
Others	5	7	6	-	-	-	-	-	-

Pieces per kilogram apply to the number of small fruits in a kilogram, like calamansi and tomato. Weight per fruit is applied to big fruits like papaya and jackfruit. The kilogram per bunch is applied to fruits in bunches, like banana and industrial crops like oil palm.

The number of trees per hectare may be used to estimate the area. If the number falls outside the range, the number of trees and/or area could have been underestimated or overestimated. A number above the range may indicate overestimation of the number of trees or underestimation of the area. The area for scattered trees or in small farms is determined by assuming the trees are planted in the same way as in compact farms and the area is estimated based on the number of trees to a hectare.

Yield in kilograms per unit indicates the relative production level. A number below the yield range indicates underestimation while a level above the range suggests overestimation. Under normal condition, the acceptable level is either within the range, the arithmetic mean, or common level of the parameters, where available. Both parameters on number of trees per hectare and kilograms per hectare are in an annual basis.

It is important that a harvesting calendar be established for each crop and province in a normal year. Harvest months may vary by crop and year due to farm practices or technology, as well as impact of climate change. Table 16 shows an example of a harvesting calendar.

Table 16. Harvesting calendar, Davao Sur, 2002

Crop	HARVEST MONTHS											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
	<i>in percentage</i>											
Banana												
Bungulan	7	8	9	10	9	9	9	9	8	7	8	7
Cavendish	7	6	7	10	10	9	8	7	9	9	9	9
Lakatan	7	8	9	10	11	9	8	8	8	8	7	7
Latundan	9	8	6	6	7	7	8	9	10	10	10	10
Saba	8	7	6	8	9	8	8	8	8	10	10	10
Others	7	8	9	10	9	9	9	8	8	8	8	7
Mango												
Carabao	6	6	7	13	18	10	8	7	6	6	7	6
Pico	5	5	7	14	19	12	8	7	6	6	6	5
Others	5	5	8	17	20	10	8	5	6	6	5	5

With the large number of crops being monitored every reporting period, it is suggested that the final data observations be prepared after the submission of the final annual estimates and the release of the Quarterly Report of the Performance in Agriculture. The crops listed shall be those with questionable yield, i.e.

kilograms/bearing tree or kilograms/hectare, and bearing trees/hectare. Table 17 shows an example guide in validating data using validation parameters.

Table 17. Final data observations, Fruit Crops, 2007

Crop	Item	2007 Annual Final Data	Parameters	
			PSO	BPI
Bungulan	kilograms/bearing hill	12.57	30	79
	bearing hills/hectares	187.00	400	400
Lacatan	kilograms/bearing hill	38.54	30	58
	bearing hills/hectares	110.00	400	400
Latundan	kilograms/bearing hill	7.49	20	88
	bearing hills/hectares	177.00	400	400
Saba	kilograms/bearing hill	8.25	35	122
	bearing hills/hectares	115.00	400	400
Mango - Carabao	kilograms/bearing tree	6.33	75	750
	bearing trees/hectares	25.00	50	51-100
Mango - Piko	kilograms/bearing tree	5.12	75	600
	bearing trees/hectares	36.00	60	51-100
Pineapple	kilograms/bearing tree	2.16	10	8.9t-28.4t
Lanzones	kilograms/bearing tree	15.34	10	2-100
	bearing trees/hectares	206.00	200	400

A copy of the data series of each other crops is a must during the data review. The POs should maintain its own data series for all other crops by collection period as quick reference. The data series are likewise available in the two compiling systems, in each of the sub-commodity groups. The data series maintained include the working files and released data. The data series show the estimates in the past and mostly in the current reporting period.

In the event that there is an insufficient source of information that would serve as data checks or reference/parameters, other possible sources of this information may be tapped.

1. Analytical Tools in Data Validation. This section discusses two commonly used analytical tools in data validation. These are the analysis of time series data and Delphi-User's Perspective.

Analysis of Time Series Data. Time series analysis is an approach used to identify the underlying characteristics of a data. It is one of the most commonly used analysis technique in agricultural statistics. Given the dynamics of agricultural situation and its adaptability with natural factors and human interventions, both of which may vary across time, analyzing the trend of agricultural statistics is a comprehensive approach in data validation.

The most basic method is to graph the time series data and visually examine the overall trend (increasing, decreasing), cyclic patterns (seasonal effects), outliers (data points which are exceedingly high or low) and turning points (different trends within a data series).

A line graph may be constructed to easily identify the movement of the parameter. From this series, stability and/or fluctuations may be identified. Since the current estimate to be validated is always on the end of the plotted trend, its movement relative to the historical data is visualized through the line graph. If there are no known extreme factors present which could have affected the parameter, say production, stability in the trend is expected. On the other hand, if there are compromising conditions present, say typhoons, it is expected to have noticeable fluctuations on the trend.

In data validation, time series analysis can be used to reconcile and resolve inconsistencies of the statistics from various sources other than the existing statistical series. The data set that follows the general pattern of change in the series may be considered more accurate than the other set.

The following are points to consider on validating the data of other crops.

Case 1: Questionable Semestral Data on Number of Bearing Trees

Usually, the number of bearing trees reported in every semester is the same throughout the year. The same trees are reported even if these failed to bear fruit at certain reference period. However, there is a possibility that there maybe changes due to trees that were cut, trees which fell due to calamities or due to new bearing trees.

On the example illustrated in Table 18, it can be noticed that there is a significant discrepancy between the number of bearing trees in Year 3 and Year 4 between the periods of July to December and January to June. It appeared that the second semester is independent from the first semester, but it should have been the same number of trees referred to, since these trees were there throughout the year. Instances of this case should always be verified.

Table 18. Number of Bearing Trees, Coffee, by variety, January-June and July-December

Crop/Variety	Year 1	Year 2	Year 3	Year 4
Coffee				
Arabica	11,846	11,846	11,609	11,609
Jan-Jun	11,846	11,846	11,135	11,135
Jul-Dec	11,846	11,846	11,609	11,609
Robusta	153,739	162,426	157,553	157,553
Jan-Jun	153,739	156,814	137,996	137,996
Jul-Dec	153,739	162,426	157,553	157,553
Liberica	147,444	151,867	145,881	145,881
Jan-Jun	147,444	151,867	136,680	136,680
Jul-Dec	147,444	150,393	145,881	145,881

Case 2: Yield and Bearing Trees per Hectare

Each crop has its own productive age. Yield also varies by crop, age and type of propagation. Normally, for permanent crops, production is low during the early productive age. Production increases as the tree matures. Grafted trees bear fruit much earlier as compared to trees planted as seeds.

Table 19 shows the estimates of the different data items for calamansi from Year 1 to Year 6 for January to June. With reference to the validation parameters of calamansi in Table 19.A, calamansi planted as seeds bear fruit between 4 to 6 years from planting. Grafted seedlings bear fruit much earlier or within the year. Note the drop in kilograms per bearing tree with significant increase in bearing trees in Year 2 and Year 5. New bearing trees produced small quantities, pulling down the average yield. Also, production continued to increase as the bearing trees matured in Year 5 and Year 6. In cases like this, ensure that the bearing trees per hectare and yield per bearing tree is within the acceptable range as years go on.

Table 19. Volume of production, area, bearing trees, kilograms per tree and bearing trees per hectare, Calamansi, January-June

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Calamansi						
Production (m.t.)	732.84	768.23	828.98	1,212.30	1,366.95	2,021.27
Area Planted (ha.)	60.00	150.00	200.00	210.00	210.00	260.00
Bearing Trees	16,050	21,900	22,800	24,300	62,250	83,000
Bearing Trees/ha.	350	365	380	405	415	415
Kg./bearing tree	45.66	35.08	36.36	49.89	21.96	24.35

Table 19.a. Validation parameters for calamansi

Parameter	Low	Common	High
Bearing Age	4 - 6 years		
Planting Density (trees/hectare)	400	450	625
Yield (kg.)	4.40	45.00	88.00

Case 3: Questionable Yield Levels between Varieties

It is vital to be familiar with the characteristics of a crop, especially on size and weight, between varieties. The yield reflects which variety produces more and heavier fruits. For example, the Hawaiian variety of papaya produces much bigger and heavier fruits than the two other varieties, native and solo. In this case, Hawaiian variety is expected to have relatively higher yield. However, in the example shown in Table 20, the Hawaiian variety in Year 3 has the lowest yield. Having knowledge of the fact that the particular variety is supposed to have higher yield compared to the other two, the data must be further verified, validated and corrected, if needed.

Table 20. Yield per bearing tree, in kilograms, Papaya, July-December

Crop/Variety	Year 1	Year 2	Year 3
Papaya			
Hawaiian	45.65	46.08	22.57
Native	22.40	25.42	25.05
Solo	31.38	31.39	32.69

Case 4: Unacceptable Simultaneous Increase in Area and Bearing Trees

Based on the previous examples, permanent crops have growing years before bearing fruits. Each crop also varies in terms of planting density, given the size of the tree and growing requirements. For the permanent crops, any increase in area does not necessarily mean increase in bearing trees. Newly planted trees, if any, will have to be reported in the additional areas. After reaching their productive years, the increase in the number of bearing trees should then be reflected.

A report on simultaneous increase in area and bearing trees could have been based on the area previously reported, specifically, years back when these new reported bearing trees were planted. This could eventually lead to questionable results.

An example in Table 21 shows that the reported bearing trees per hectare of mango from 275 (Year 4) to 317 (Year 5) bearing trees per hectare are both way above the range of 100-150 trees per hectare, according to the validation parameters of mango in Table 21.A. In spite of an increase in area, the increase in the number of bearing trees within a year is not acceptable.

Table 21. Area, bearing trees and bearing trees per hectare, mango, January-June

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Mango					
Area Planted (ha.)	5.00	2.00	3.00	3.00	5.00
Bearing Trees	225	428	550	550	950
Bearing Trees/ha.	45	86	110	275	317

Table 21.a. Validation parameters for mango

Parameter	Low	Common	High
Bearing Age	5 - 10 years		
Planting Density (trees/hectare)	100	120	150

Case 5: Acceptable Simultaneous Increase in Area and Bearing Trees

The example in Table 22 shows that the bearing trees per hectare of mango carabao are 36 and 42, for Year 5 and Year 6, respectively. Any increase in bearing trees along with an increase in area is acceptable, since the number of bearing trees per hectare is still within the density of 70 trees per hectare, based on the validation parameters in Table 22.A. Also, the 32 bearing trees per hectare from Year 1 to Year 3 is still within the acceptable range.

Table 22. Area, bearing trees and bearing trees per hectare, mango carabao, January-June

Item	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mango Carabao						
Area Planted (ha.)	6,742	6,833	6,850	6,870	6,870	6,900
Bearing Trees	218,090	219,912	219,920	240,450	245,259	291,280
Bearing Trees/ha.	32	32	32	35	36	42

Table 22.a. Validation parameters for mango carabao

Parameter	Low	Common
Bearing Age	4 - 10 years	
Planting Density (trees/hectare)	30	70

Case 6: High Level Planting Bearing Trees per Hectare as Against the Parameters

The age of the planting materials may vary and affect the year when the trees start to bear fruits. In Table 23, using jackfruit statistics as an example, despite the planting material of one-year old or two-year old trees, the number of bearing trees per hectare is way above the acceptable range of 100-200 trees per hectare, as shown in the validation parameters in Table 23.A.

There was an overestimation in the number of bearing trees despite the use of one-year old or two-year old planting materials. The area is correspondingly based on a five (5) or six (6) year data. Based on other sources of parameters, the current number of bearing jackfruit trees, given that these were planted five to six years ago, is between 4,500 to 5,850 trees.

Table 23. Area and bearing trees, jackfruit, 2008, 2013-2016, July-December

Item	2008	...	2013	2014	2015	2016
Area Planted (ha.)	30	...	30	30	30	30
Bearing Trees	2,400	...	36,520	36,520	33,500	29,300
Bearing Trees/ha.	...	...		
1 year old planting material	...	...	1,217	936	1,117	977
2 year old planting material	...	...	...	1,217	859	977

Table 23.a. Validation parameters for jackfruit

Parameter	Low	Common	High
Bearing Age	7 - 10 years		
Planting Density (trees/hectare)	100	150	200

Case 7: Questionable Level of Production

The yield or kilogram per bearing hill or tree reflects if production is underestimated, overestimated or within the ideal range. Clearly, the example in Table 24 shows that banana bungulan production is underestimated, given that at least a bunch is produced in a year. It is rather unlikely that a hill produces only an average of 2.32-7.27 kilograms, unless severely damaged. Given this situation, a drop in production for whatever reason should be corrected at the very least to solve the problem of underestimated production. Note that in 2012, due to a

calamity, the reported drop in banana bungulan production was too high, from 50.84 metric tons to 31.03 metric tons. The declining trend could have been maintained, but at a very low rate, since the kilograms per bearing hill in the previous report was already very low at 3.67 kilograms. Input errors may also be considered in this case.

Table 24. Volume of production, area, bearing hills, bearing hills per hectare and kilograms per hill, banana bungulan, July-December, 2009-2016

Item	2009	2010	2011	2012	2013	2014	2015	2016
Production (m.t.)	52.98	57.34	45.99	50.84	31.03	45.00	56.06	70.50
Area Planted (ha.)	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Bearing Hills	19,790	19,800	19,800	13,860	11,700	9,700	9,700	9,700
Bearing Hills/ha.	1,099	1,100	1,100	770	650	539	539	539
Kg./bearing hill	2.68	2.90	2.32	3.67	2.65	4.64	5.78	7.27

Case 8: Abrupt Change in Production

In Table 25a, the data series shows a production range of 30,353 metric tons to 34,124 metric tons from 2009 to 2010, with an area of about 3,300 hectares. The abrupt change in production in 2013 from 16,310 metric tons to 29,574 metric tons in 2014 is within the range of the levels in the previous years, and the level of area and bearing trees were maintained. The abrupt change in this case is acceptable.

Table 25a. Volume of production, area, and bearing trees, mango, January-June, 2009-2016

Item	2009	2010	2011	2012	2013	2014	2015	2016
Mango								
Production (m.t.)	30,353	34,124	12,549	12,965	16,310	29,574	18,634	21,975
Area Planted (ha.)	3,343	3,384	3,384	3,384	3,384	3,384	3,395	3,395
Bearing Trees	415,800	416,150	416,150	416,174	416,115	407,951	373,220	368,220

Case 9: Abrupt Change in Production, Area and Bearing Trees

In the example in Table 25b, production, area and number of bearing trees of calamansi slightly increased from 2012 to 2015. However, in 2016, these abruptly increased at questionable levels. Calamansi bears fruit in four to six years when planted by seeds, while grafted trees bear minimal quantity of fruits on the first year and gradually increase as the tree matures. The volume in 2016 could not be possible even if a yield of one kilogram per tree is assumed, for the new bearing trees at least. The data series on yield reveals that the annual increase ranges from 0.20 to 1.80 kilograms per bearing tree. A sharp increase in crop production or yield per bearing tree is very remote. The very high number of bearing trees reported in 2016 is because the new trees were included in the report. The 2016 yield of 24.86 per bearing tree is the average yield for the new and old trees, which

is not correct since new bearing trees, which were included in the report, have very minimal yield in their initial fruiting. In these cases, thorough and careful review and validation should be done.

Table 25b. Volume of Production, Area, and Bearing Trees, Calamansi, January-June, 2012-2016

Item	2012	2013	2014	2015	2016
Calamansi					
Production (m.t.)	881.03	892.18	910.74	957.59	3,188.97
Area Planted (ha.)	97.60	99.00	101.50	106.00	348.00
Bearing Trees	27,200	27,377	26,750	26,950	128,255
Bearing Trees/ha.	279	277	264	254	369
Kg./bearing tree	32.39	32.59	34.05	35.53	24.86

Case 10: Initial Report of Previously Unreported Productive Crop

Some productive crops have been verified to have existed in the province but were never been reported for some reasons. Therefore, the crop has no previously reported data series. In this case, the initial report for production, area and bearing trees shall be reported simultaneously, without applying the number of years of growing before reaching bearing age. In the initial report, the levels of kilograms per bearing tree and the number of bearing trees should reflect the situation in the province.

For crops with data series whose levels do not reflect the situation in the province, the number of growing years before the productive age shall be followed. Abrupt change or reflection of the actual situation in the province shall be allowed based on hard facts, surveys and other official documents. A simple example is shown in Table 26.

Table 26. Volume of production, area, number of bearing trees, yield and density, lanzones, January-June, 2009-2016

Item	2009	2010	2011	2012	2013	2014	2015	2016
Lanzones								
Production (m.t.)	-	-	-	-	-	0.50	0.55	0.55
Area (ha.)	-	-	-	-	-	5.00	5.00	5.00
Bearing Trees	-	-	-	-	-	1,000	1,000	1,250
Kg./bearing tree	-	-	-	-	-	0.50	0.55	0.44
Bearing Trees/ha.	-	-	-	-	-	200	200	250

Case 11: Inconsistent Production Share Based on CrPS Reports and Harvesting Calendar

One way of checking the accuracy of production report is through the use of an established harvesting calendar in a normal year. However, the share may vary from year to year due to farm practices, technology and impact of climate. A harvesting calendar gives an idea on what reference period the production movement shall be.

Table 27 reflects the inconsistencies in terms of production shares between the CrPS reports and the established harvesting calendar. The bulk of production differs much between the CrPS and harvesting calendar. Both should have been consistent in the share of production. The POs should maintain an updated harvesting calendar as a basis in any movement of production between reference periods.

Table 27. Production share based on the CrPS report and harvesting calendar, by quarter, mango carabao, 2014

Province	Quarter 1		Quarter 2		Quarter 3		Quarter 4	
	CrPS	Harvesting Calendar	CrPS	Harvesting Calendar	CrPS	Harvesting Calendar	CrPS	Harvesting Calendar
1	11.95	70.00	88.05	30.00	-	-	-	-
2	20.33	50.00	79.67	50.00	-	-	-	-
3	42.50	20.00	57.50	80.00	-	-	-	-
4	67.22	30.00	32.78	70.00	-	-	-	-
5	3.07	28.00	68.58	59.00	19.82	9.00	8.53	4.00
6	2.42	12.00	96.20	79.00	0.78	4.00	0.60	5.00

Case 12: Inconsistency of Estimates in the Crops Compiling System (CCS) against Other Crops Compiling System (OCCS)

Each sub-commodity group has an independent Crops Compiling System. It covers the major and other crops individually listed and regularly appears in all the reporting periods throughout the year. It has two files, one for the production alone and the other for the area, bearing trees, bearing trees per hectare and kilograms per hectare or bearing tree per hectare.

To properly account for the breakdown of the crops not individually listed in Quarter 1 and Quarter 3 worksheets of the CCS, which are collectively termed Other Crops, the OCCS was developed to supplement the CCS. This is a single file which covers all the data items covered in the two files under the CCS.

The OCCS shall first be accomplished as this presents the breakdown of the rest of the other crops not listed in the CCS. This assures that the total for Other Crops

is the same in both the CCS and OCCS. Some observations in the CrPS reports are discussed in the subsequent sections.

The crops listed in Table 28 appear in both the CCS and OCCS. However, the levels in the final estimates of Year 1 (Year1F) for both systems differ. The same trees and crops were covered and reported in both compiling systems, therefore, the estimates shall be the same. The estimates of total Other Vegetables with breakdown in the OCCS shall be reflected to the CCS.

Table 28. Volume of production, Other Vegetables, from CCS and OCCS, July-September

Crop	Crops Compiling		Other Crops	
	Year 1P	Year 1F	Year 1P	Year 1F
Camote tops	330.00	330.00	330.00	357.00
Patola	36.00	37.00	36.00	39.26
Black pepper	0.70	0.70	0.70	0.70
Cucumber	2.50	2.60	2.50	2.50
Gabi leaves w/ stem	996.00	996.00	996.00	66.50
Bamboo shoots	8.35	8.35	8.35	6.50
Malunggay leaves	532.00	532.00	532.00	8.02
Jackfruit young	1,603.00	1,603.00	1,603.00	1,524.82
Green papaya	762.00	762.00	762.00	294.50
Chili pepper fruit	2.78	2.78	2.78	1.79
Pao (galiang)	136.80	136.80	136.80	8.01
Tugue	14.80	14.80	14.80	-
Other Vegetables	69.00	69.00	69.00	29.39
Kondol	-	-	24.96	14.96
Chili pepper leaves	-	-	12.85	2.85
Paco	-	-	18.18	8.18
Winged beans	-	-	13.01	3.40

Delphi-User's Perspective. Consultation with major industry authority is another approach to validate the survey results through the Delphi-User's Perspective. To firm up the data, solicit explanations from the industry experts and determine the acceptability. The process passes the judgment on the quality of estimates to the industry experts. Interaction with the data users and industry experts also advocate for greater cooperation on data collection so as to increase response rates. The consultation can also be used to generate feedback on data quality.

Informed industry personnel know the updates on the different developments in their industry. Thus, they can be good source of validating the survey results. Major industry authority usually maintains relevant and historical data sets on economic

situations, local and international trade, prices and supply. They are fully aware on the production and prospects of their industry.

5.3 Outputs for Submission

For Other Crops, the submission of the two accomplished compiling systems is important for the generation of the national level estimates. In the next sections, the two (2) compiling systems, Crops Compiling System and (CCS) and Other Crops Compiling System (OCCS) are shown.

Moreover, an output in the data review and validation is the documentation of the final report which includes the estimates and explanations on the situation during the reporting period. These are crucial in the preparation of the Quarterly Report of the Performance in Agriculture.

The Crops Compiling System (CCS). The CCS has two (2) separate components. One is a separate file for production data (Figure 10), while the other one is for the data regarding area planted/harvested, number of bearing trees and yield (Figure 11).

AURORA: Volume of Production of Major and Other Non-food and Industrial Crops in Metric Tons, October-December, 2014-2018									
Crop	Volume of Production (MT)					% Change	Reason for Change		
	2014F	2015F	2016F	2017P	2017F				
MAJOR:	59,423.95	28,383.09	21,558.00	31,479.23	31,479.23	45.98			
Abaca(dried raw fiber)	20.00	15.00	5.00	5.63	5.63	12.60	Increased number of harvestable hills		
Coconut w/ husk:	59,330.00	28,330.00	21,532.00	31,459.60	31,459.60	46.11	More fruits developed due to fertilization (Salt) program of Philippine Coconut Authority		
Matured	45,660.00	22,650.00	16,988.00	24,530.00	24,530.00	44.40	More fruits developed due to fertilization (Salt) program of Philippine Coconut Authority		
Young	13,650.00	5,680.00	4,544.00	6,929.60	6,929.60	52.50	More fruits developed due to fertilization (Salt) program of Philippine Coconut Authority		
Coffee(dried berries w/ pulp)	73.95	38.00	21.00	5.00	5.00	(76.19)	Did not harvest due to lack of target market		
Arabica									
Excelsa	12.79	6.50	3.00	-	-	-	Did not harvest due to lack of target market		
Libenca									
Robusta	61.25	31.50	18.00	5.00	5.00	(72.22)	Did not harvest due to lack of target market		
Others									
Rubber(coagulated cup lump)									
Sugarcane (cane) for									
centrifugal sugar									
ethanol									
panocha/muscovada									
Cheewig									
Basi/Vinegar									
Tobacco(dried leaves)									
Native									
Virginia									
Others									
PRIORITY:	22.58	21.95	26.00	19.39	19.39	(1.20)			
Cacao(dried beans w/ pulp)	16.30	19.35	18.00	17.46	17.46	(3.00)	Effect of heavy rains during flowering stage		
Cashew(nut w/ nut)									
Cotton(seed cotton)									
Palm Fruit:									
Oil Palm(Fresh Fruit Bunch)									
Kaong (kernel)									
Bromeladi(live plant w/ pot)									
Euphorbia(live plant w/ pot)									
Green cornstalk									
Rice hay(dried hay)									
Coconut Sap/Tube	6.28	2.60	2.00	1.93	1.93	(4.93)	Frequent rainfall hindered harvesting		

Figure 10. A sample of the production data file from the CCS

Figure 11. A sample of the area, number of bearing trees and yield data file from the CCS

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC
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Reason/s, Remarks and Explanations. As a source document in the analysis and report preparation, of equal importance to the estimates are the reasons for change, remarks and explanation, especially for estimates with significant change, out of the ideal or acceptable range levels, or not realistic enough but exists in the province. Large changes need stronger reasons to support the extent of the change. Conventions must also be considered, such as attribution of change to the movement in the area planted or harvested being applicable for temporary mono-harvest crops.

The required reasons come in two aspects. The first is on any difference between the preliminary and the final estimates. The second is on the reasons for changes compared to the previous year of the same period. The first aspect shall provide an idea on the changes for the consolidation and maintenance of the Philippine National Accounts. It shall clarify for the change of level between the preliminary estimates and final data. The second aspect is the required description of the highlights of the situation in the province, such as the climate that occurred in the province from the previous up to the current quarter, changes in the agricultural structure due to programs and policies implemented by the national and local government, as well as the other stakeholders in the agriculture sector.

On weather or climate, it is important that its impact to the crops or response of the crop be cited. Crops respond differently to changes in weather or climate and by growing stage. The impact to the crop is better cited along with the growing stage for the crop.

Some existing programs implemented by the government that may affect crop production are the Vegetable Production Program, Rootcrops Program, Coffee Rehabilitation Program, Rubber Production Program and other locally implemented programs. Infrastructures being put up in the province, likewise, may create impact on crop production. These include irrigation facilities, warehouses, tram lines, green houses, freezer van and the like.

To further improve the reasons, remarks or explanation and be more useful to the data users, the following should be considered.

Reason/s for Any Differences between Preliminary and Final Data

It is important that any difference between the preliminary and final data be documented. This is to keep track of the cause of the change in level and not on what affected the crop to increase or decrease. Table 29 shows an example of large discrepancy between the preliminary and final estimates of vegetables and rootcrops production for Year 3. Justification on this case would include evidence to confirm and support the differences between the two data and such should be properly documented.

Table 29. Volume of production, in metric tons, Vegetables and Rootcrops, April-June

Crop	Year 1	Year 2	Year 3P	Year 3F
Vegetables and Rootcrops	371.51	390.64	230.02	307.22
Asparagus	50.00	55.00	47.67	62.87
Ampalaya	1.10	1.12	0.73	1.58
Broccoli	132.74	139.38	62.74	57.19
Cabbage	4.02	5.03	5.20	5.20
Carrots	0.55	0.57	1.85	2.90
Cauliflower	1.00	2.00	43.50	7.40
Cassava	181.50	186.93	68.00	169.60
Radish	0.60	0.61	0.33	0.48

Reason/s for All Crops Regardless of Change or No Change

The provincial estimate is the result of the different responses which reflects if the current estimates are the same, higher or lower, compared to the estimates of the same period last year. The reasons for the change in each of the crops being monitored, regardless of the degree (even if there is no change at all), must always be specified. Table 30 shows an example of a complete report regarding the reasons for the change in the production of selected crops.

Table 30. Volume of production, in metric tons, Selected Crops, January-March

Crop	% Change	Reason/s for Change
Abaca	(7.56)	Hills were toppled down due to Typhoon "Nina"
Coconut	(2.31)	Less nuts developed due to effect of dry spell from previous quarters
Mature	(2.58)	Less nuts developed due to effect of dry spell from previous quarters
Young	8.28	Higher demand for fresh buko juice
Coffee	(10.54)	Effect of strong winds brought by Typhoon "Lawin" during the flowering stage
Arabica	(1.53)	Cutting down of old trees and less productive trees
Robusta	(2.03)	Effect of strong winds brought by Typhoon "Lawin" during the flowering stage
Rubber	17.87	More tapping activities due to good buying price of cuplump
Sugarcane	3.03	Sufficient and proper application of fertilizer
Tobacco	3.82	Increase in area harvested due to contract growing of ABC Inc.
Native	1.00	Sustained preference for chewing and cigar leaf
Virginia	2.28	Increase in area harvested due to contract growing of ABC Inc.
Mongo	0.27	More and better pods developed due to distribution of quality seeds
Peanut	9.10	More pods developed due to favorable soil moisture
Cabbage	(1.21)	Shifted to production of brocolli, lettuce and Chinese pechay
Eggplant	3.15	Bigger fruits harvested due to sufficient use of fertilizer

Table 30. continued...

Crop	% Change	Reason/s for Change
Banana	5.23	Increased bearing hills on Cavendish
Bungulan	(0.79)	Affected by Sigatoka disease(Toril Plantation)
Cavendish	7.96	Increased area and number of bearing hills harvested
Lacatan	(0.49)	Less fertilizer usage
Latundan	(6.04)	Affected by bugtok disease
Saba	(7.95)	Affected by bugtok disease
Others	(1.65)	Some areas shifted to cavendish.
Calamansi	(8.79)	Decrease in number of bearing trees due to Typhoon "Nina"
Pineapple	2.61	Increase in area harvested from corporate farms

Identification of Pest and Diseases

Pests and diseases vary by crop, growing stage and season. The presence the effect of these on the crops should always be specifically identified. Table 31 shows a comparative example of how the presence of pests and diseases should be reported.

Table 31. Volume of production, in metric tons, onion, eggplant, abaca and cacao

INCORRECT

Crop	% Change	Reasons for Change
Onion	(2.46)	Affected by pests
Eggplant	(3.66)	Affected by pests
Abaca	(4.04)	Affected by disease
Cacao	(35.64)	Poor quality fruits/infected by a disease

CORRECT

Crop	% Change	Reasons for Change
Onion	(2.46)	Affected by "army worms"
Eggplant	(3.66)	Affected by "flee beetles and fruit borer"
Abaca	(4.04)	Affected by "mosaic and bunchy top disease"
Cacao	(35.64)	Poor quality fruits due to "black pod disease"

Identification of Typhoons/Calamities and Date of Occurrence

Every year, an average of 20 typhoons enters the Philippine Area of Responsibility as reported by Philippine Atmospheric Geophysical Astronomical Services Administration (PAGASA). Typhoons vary in coverage area and adverse effects on crops. In some cases, typhoons confine their influence to certain areas such that the said typhoon may not be felt in the rest of the production areas. The identity of the typhoon that hit the area shall help in tracking the crop and the amount of damage it inflicted in the production area. Table 32 shows an example of properly identifying typhoons as sources of change.

Table 32. Volume of production, in metric tons, coconut and abaca

INCORRECT		
Crop	% Change	Reasons for Change
Coconut	(24.58)	Series of typhoons hit the prov
Mature	(26.23)	Series of typhoons hit the prov
Young	(28.36)	Series of typhoons hit the prov
Abaca	(21.92)	Damaged by typhoon

CORRECT		
Crop	% Change	Reasons for Change
Coconut	(24.58)	Decrease in number of bearing trees due to Typhoon "Nona" last year
Mature	(26.23)	Decrease in number of bearing trees due to Typhoon "Nona" last year
Young	(28.36)	Decrease in number of bearing trees due to Typhoon "Nona" last year
Abaca	(21.92)	Toppled down hills due to Typhoon "Nina" last quarter

Identification of the Crop in which the Other Crop Shifted To

With the large number of crops being monitored, the identity of the crops in which other crops shifted to, shall indicate the crops most likely to drop or increase in the coming periods. These crops should be specified. An example is illustrated in Table 33.

Table 33. Volume of production, in metric tons, tobacco, sugarcane and mongo, January-March

INCORRECT		
Crop	% Change	Reasons for Change
Tobacco	14.99	shifted from other variety
Native	24.58	shifted from other variety
Virginia	(4.35)	shifted to other variety
Sugarcane	(28.08)	shifted to other crops
Mongo	12.89	shifted from other crops

CORRECT		
Crop	% Change	Reasons for Change
Tobacco	2.58	more area harvested due to financial support from XYZ Corporation for native variety
Native	20.72	shifted from virginia variety; more area harvested due to financial support from XYZ Corporation
Virginia	(5.96)	shifted to native variety
Sugarcane	(28.08)	shifted to corn
Mongo	12.89	shifted from peanut

Inconsistent Reason/s in Reference to Other Data Items

The reasons for change shall not be confined to the movement of production, but the data that supports the change such as the number of bearing trees and bearing trees per hectare should be considered as well. The item referred to should be consistent as cited in the reasons.

In an example in Table 34, the 2.47% increase from Year 1 to Year 2 production of oil palm was attributed to an increase in the number of bearing trees. However, Table 35 showed no increase in the number of bearing trees from Year 1 to Year 2. Also, there was barely an increase in the bearing tree per hectare, as observed in Table 36. This is a common error in reporting and should always be observed and verified.

Table 34. Volume of production, in metric tons, oil palm, July-December

Crop	% Change	Reasons for Change
Oil Palm	2.47	increase in bearing trees

Table 35. Number of bearing trees, oil palm

Crop/Period	Year 1	Year 2
Oil Palm	1,375,550	1,375,550
Jan-Jun	1,140,000	1,375,550
Jul-Dec	1,375,550	1,375,550

Table 36. Bearing trees per hectare, oil palm

Crop/Period	Year 1	Year 2
Oil Palm	314	314
Jan-Jun	600	314
Jul-Dec	314	314

Summary of Reason/s

The summary of reasons should integrate, if possible, the reasons from its components and should be precise when traced. Where possible, the summary considers the major contributor which supports the change. For the case of crops with variety, an example is shown in Table 37. The overall production of onion decreased. In this case, the summary of reason for onion is the same reason for the variety with the largest decrease, or the most common reason/factor attributed to the varieties that decreased. Since the native variety had the highest decrease, its reason shall also be the summary of reasons for onion.

Table 37. Volume of production, in metric tons, onion, January-March

INCORRECT				
Crop/Variety	Year 1	Year 2	% Change	Reasons for Change
Onion	11,583.25	11,456.19	(1.10)	Lesser area harvested due to damages on seedlings caused by Typhoons "Lando" and "Nona"
Native	11,174.54	11,048.28	(1.13)	Lesser area planted as planting materials were infested with onion weevils
Bermuda	408.71	407.91	(0.20)	Lesser area harvested due to damages on seedlings caused by Typhoons "Lando" and "Nona"
CORRECT				
Crop/Variety	Year 1	Year 2	% Change	Reasons for Change
Onion	11,583.25	11,456.19	(1.10)	Lesser area planted as planting materials were infested with onion weevils
Native	11,174.54	11,048.28	(1.13)	Lesser area planted as planting materials were infested with onion weevils
Bermuda	408.71	407.91	(0.20)	Lesser area harvested due to damages on seedlings caused by Typhoons "Lando" and "Nona"

Regional Summary of Reasons Accounting for the Major Contributing Provinces

As in the previously discussed summary of reasons, the summary for the regions shall be a consolidation of the reasons from among the provinces which support the change. Depending on the trend, the reason(s) attributed to by the large contributing province(s) shall be cited. Table 38 illustrates that production for region A dropped by 0.32 percent. In this case, the summary of reason for region A is the same reason for the provinces with the major contribution to the decline, or the most common reason/factor attributed to the provinces which decreased. Since, province C and province D posted highest reduction in production, therefore reasons shall also be the summary of reasons for banana. In cases, where only one province reports harvest, adopt the reason for the region.

Table 38. Volume of production, in metric tons, banana, January-March

Region/Province	Year 1	Year 2	% Change	Reasons for Change
Region A	2,833.22	2,824.1	(0.32)	Decrease in area harvested area planted with rubber (Prov D)
Province A	1,590.00	1,628.5	2.42	Sufficient water supply resulted from constant rainfalls
Province B	427.86	450.9	5.37	Increase no. of bearing hills harvested
Province C	646.42	588.2	(9.01)	Experienced lodging
Province D	168.94	156.6	(7.32)	Decrease in area harvested area planted with rubber

CORRECT

Region/Province	Year 1	Year 2	% Change	Reasons for Change
Region A	2,833.22	2,824.10	(0.32)	Lodging (Prov C) and shifted to rubber (Prov D)
Province A	1,590.00	1,628.5	2.42	Sufficient water supply resulted from constant rainfalls
Province B	427.86	450.9	5.37	Increase no. of bearing hills harvested
Province C	646.42	588.2	(9.01)	Experienced lodging
Province D	168.94	156.6	(7.32)	Decrease in area harvested area planted with rubber

Vague Summary of Reasons

The summary of reasons should be specific, clear and precise. An example in Table 39 shows a better summary of reasons regarding decrease in the production of papaya. The decrease was specifically attributed to old and less productive trees, instead of citing a variety, which is more objective and informative.

Table 39. Volume of production, in metric tons, papaya, January-March

Crop/Variety	Year 1	Year 2	% Change	Reasons for Change
Papaya	680.51	614.10	(9.76)	Decrease in production reported for native papaya
Hawaiian	240.22	255.36	6.30	Increase in bearing trees
Native	435.62	357.34	(17.97)	Decrease in bearing trees due to old less productive trees
Solo	4.67	1.40	(70.02)	Increase productive trees

CORRECT

Crop/Variety	Year 1	Year 2	% Change	Reasons for Change
Papaya	680.51	614.10	(8.72)	Decrease in bearing trees due to old less productive trees
Hawaiian	240.22	255.36	7.66	Increase in bearing trees
Native	435.62	357.34	(17.81)	Decrease in bearing trees due to old less productive trees
Solo	4.67	1.40	69.70	Increase productive trees

APPENDICES

Appendix A. Timetable of Activities

Activity	Survey Rounds			
	February Round	May Round	August Round	November Round
Pre-survey activities				
Updating of top producing municipalities	05-09 Feb			
Reproduction of collection form	15-16 Feb	17-18 May	16-17 Aug	15-16 Nov
Briefing of statistical researchers (SR)	15 Feb	17 May	17 Aug	16 Nov
Data collection and supervision				
Data collection	17-28 Feb	21-31 May	18-31 Aug	19-29 Aug
Mailing of Crops Compiling to RSSOs/PSOs	26 Feb	25 May	28 Aug	27 Nov
Data processing and generation of tables	28 Feb-07 Mar	31 May-07 Jun	31 Aug-07 Sept	29 Nov-05 Dec
Data review and validation				
Provincial Data Review	nl 9th Mar	9th Jun	11th Sept	7th Dec
Submission of provincial report to RSSO & CO-CSD (soft-copy)	14 Mar	14 Jun	14 Sept	08 Dec
Consolidation and pre-RDR at RSSO	15-20 Mar	15-20 Jun	15-20 Sept	10-13 Dec
Submission of RSSO report to CO (e-copy)	26 Mar	25 Jun	26 Sept	17 Dec
Regional Data Review	14-17Apr	13-17 Jul	12-16 Oct	18-21 Dec
Submission of RDR results to CO	18 Apr	18 Jul	17 Oct	26 Dec
National Data Review	23-27 Apr	23-27 Jul	22-26 Oct	07-11 Jan '19
Generation of statistical tables	Apr	Jul	Oct	Jan 2019
Preparation and web posting of Quarterly Bulletin				
Major Non-Food & Industrial Crops Quarterly Bulletin	nl 31 May	nl 31 Aug	nl 29 Nov	nl 28 Feb
Major Fruit Crops Quarterly Bulletin	nl 31 May	nl 31 Aug	nl 29 Nov	nl 28 Feb
Major Vegetables & Rootcrops Quarterly Bulletin	nl 31 May	nl 31 Aug	nl 29 Nov	nl 28 Feb

Appendix B. Data Items for Submission

Survey Round	Production		Area Planted/Harvested		Number of Bearing Trees/Hills/Vines	
	Preliminary	Final	Preliminary	Final	Preliminary	Final
February Round	Jan-Mar	Oct-Dec July-Dec Jan-Dec		July-Dec Jan-Dec		July-Dec Jan-Dec
May Round	Apr-June Jan-June		Jan-June		Jan-June	
August Round	July-Sep	Apr-June Jan-June		Jan-June		Jan-June
November Round	Oct-Dec July-Dec Jan-Dec	July-Sep	July-Dec Jan-Dec		July-Dec Jan-Dec	

Appendix C. Reports

Provincial Report on Production (Crops Compiling System)

	A	U	V	W	Z	AA	AB
1	PALAWAN : Volume of Production of Major and Other Non-food and Industrial Crops in Metric Tons, October-December, 2014-2017						
2	Crop	Volume of Production (MT)			% Change	Reason for Change	
3		2016F	2017P	2017F			
4	MAJOR:	261,525.01	262,326.04	262,326.04	0.31		
5	Abaca(dried raw fiber)	6.45	7.65	7.65	18.60	More stripping due to higher price of abaca (P90-100/kg)	
6	Coconut w/ husk	261,410.86	262,209.65	262,209.65	0.31	Increase in number of bearing trees	
7	Matured	261,302.30	262,100.50	262,100.50	0.31	Increase in number of bearing trees	
8	Young	108.56	109.15	109.15	0.54	Increase in number of bearing trees	
9	Coffee(dried berries w/ pulp)	76.95	77.26	77.26	0.40	Increase in yield of Robusta due to good management practices such as	
10	Arabica	0.45	0.44	0.44	(2.22)	Decrease in area due to cutting of less productive trees	
11	Excelsa	5.68	5.58	5.58	(1.76)	Decrease in area due to cutting of less productive trees	
12	Liberica	5.58	5.49	5.49	(1.61)	Decrease in area due to cutting of less productive trees	
13	Robusta	65.24	65.75	65.75	0.78	Increase in yield due to good management practices such as pruning of	
14	Others	-	-	-	-		
15	Rubber(coagulated cup lump)	30.75	31.48	31.48	2.37	Increase in number of tappable trees	
16	Sugarcane (cane) for:	-	-	-	-		
17	centrifugal sugar	-	-	-	-		
18	ethanol	-	-	-	-		
19	panocha/muscovado	-	-	-	-		
20	Chewing	-	-	-	-		
21	Basi/Vinegar	-	-	-	-		
22	Tobacco(dried leaves)	-	-	-	-		
23	Native	-	-	-	-		
24	Virginia	-	-	-	-		
25	Others	-	-	-	-		
26	PRIORITY:	5,063.46	5,067.43	5,067.43	0.08		
27	Cacao(dried beans w/ pulp)	48.75	49.33	49.33	1.19	Increase in yield due to enough rainfall during fruiting stage	
28	Cashew(ripe fruit w/ nut)	-	-	-	-		
29	Cotton(seed cotton)	-	-	-	-		
30	Palm Fruit:	4,458.59	4,463.24	4,463.24	0.10	Increase in bearing tress	
31	Oil Palm(Fresh Fruit Bunch)	4,458.59	4,463.24	4,463.24	0.10	Increase in bearing tress	
32	Kaong(kernel)	-	-	-	-		
33	Bromeliad(live plant w/ pot)	-	-	-	-		
34	Euphorbia(live plant w/ pot)	-	-	-	-		
35	Green cornstalk	-	-	-	-		
36	Rice hay(dried hays)	-	-	-	-		
37	Coconut Sap/Tuba	556.12	554.86	554.86	(0.23)	Lesser tappings due to frequent rains	
38							

Appendix D. Reports

Provincial Report on Area and Number of Bearing Trees (Crops Compiling System)

	A	U	V	W	Z	AT	AU	AV	AY	BS	BT	BU	BK	CR	CS	CT	CW
1	PALAWAN: Area in Hectares, Number of Bearing Trees, Yield and Planting Density, July-December, 2014-2017																
2	Crop	Area in Hectares				Bearing Trees				Bearing Trees per Hectare				or Bearing Tree (kg.) / Yield per Hectare			
3		2016F	2017P	2017F	% Change	2016F	2017P	2017F	% Change	2016F	2017P	2017F	% Change	2016F	2017P	2017F	% Change
4	MAJOR:	91,006	93,342	93,302	2.52	5,279,875	5,251,850	5,251,090	0.21								
5	Abaca(dried one fiber)	450	450	450	-									0.04	0.05	0.04	48.01
6	Coconut w/ husk	86,200	90,589	90,500	2.61	4,986,500	4,992,750	4,992,750	0.25	56	55	55	(2.30)	59.04	58.98	58.88	0.07
7	Manured	86,200	90,589	90,500	2.61	4,986,500	4,992,750	4,992,750	0.25	56	55	55	(2.30)	59.01	58.05	58.85	0.07
8	Young													#C/N/01	#C/N/01	#C/N/01	#C/N/01
9	Coffee(dried berries w/ pulp)	555	552	552	(0.72)	155,525	154,400	154,400	(0.50)	352	352	352	0.15	0.29	0.40	0.43	0.98
10	Arabica	12	11	11	(8.33)	4,625	4,500	4,500	(2.70)	385	409	409	5.94	0.10	0.10	0.10	0.45
11	Excelsa	44	42	42	(4.55)	16,400	17,800	17,800	(3.25)	418	424	424	1.35	0.31	0.31	0.31	1.55
12	Liberica	15	14	14	(6.67)	5,900	5,500	5,500	(6.78)	393	393	393	(0.12)	0.95	1.00	1.00	5.54
13	Robusta	485	485	485	-	166,600	166,600	166,600	-	344	344	344	-	0.38	0.39	0.39	6.78
14	Others																
15	Rubber(coagulated cup lump)	1,900	1,900	1,900	-	63,950	63,900	63,900	0.08	35	36	36	0.08	0.97	1.01	1.01	3.66
16	Supacans (cane) for																
17	centrifugal sugar																
18	ethanol																
19	panocha/muscovado																
20	Chewing																
21	Basil/Vinagar																
22	Tobacco(dried leaves)																
23	Native																
24	Virginia																
25	Others																
26	PRIORITY:	31,962	31,981	31,981	0.06	3,922,400	3,923,650	3,923,650	0.03								
27	Cacao(dried beans w/ pulp)	77	78	78	1.30	17,200	17,200	17,200	-	223	221	221	(1.88)	2.63	2.87	2.87	1.19
28	Cashewripe fruit w/ nut)	25,985	25,983	25,988	0.01	3,402,100	3,402,450	3,402,450	0.01	131	131	131	(0.00)				
29	Cotton(seed cotton)																
30	Palm Fruit	5,900	5,915	5,915	0.25	503,100	504,000	504,000	0.18	85	85	85	(0.00)	16.67	17.04	17.04	2.25
31	Oil Palm(Fresh Fruit Bunch)	5,900	5,915	5,915	0.25	503,100	504,000	504,000	0.18	85	85	85	(0.00)	16.67	17.04	17.04	2.25
32	Kaong(kernel)																
33	Bamela(live plant w/ pot)																
34	Euphorbia(live plant w/ pot)																
35	Green cornstalk																
36	Rice hay(dried hay)																
37	Coconut SapTube																

Appendix E. Reports

Provincial Report on Production (Other Crops Compiling System)

	A	P	R	T	U	V
1	PALAWAN: Volume of Production of Other NFICrops , October-December, 2014-2018					
2	Crop	PRODUCTION (in MT)				
3		2014F	2015F	2016F	2017P	2017F
4	Other NFICS* {a+b+c+d}	13,802.41	13,823.50	13,828.99	13,829.55	13,829.55
5	Semestral [a]	13,730.77	13,750.56	13,755.07	13,753.93	13,753.93
6	Pili nut					
7	Coir					
8	Jute					
9	Kapok					
10	Maguey					
11	Ramie					
12	Salago					
13	Chrysanthemum	-	-	-	-	-
14	Ornamentals (plants with pot)					
15	Cutflower(flower/flower with stem)					
16	Cuttings/Stem					
17	Gladiola	-	-	-	-	-
18	Ornamentals (plants with pot)					
19	Cutflower(flower/flower with stem)					
20	Cuttings/Stem					
21	Orchids	10.44	11.33	11.40	11.58	11.58
22	Ornamentals (plants with pot)	10.44	11.33	11.40	11.58	11.58
23	Cutflower(flower/flower with stem)	-	-	-	-	-
24	Cuttings/Stem	-	-	-	-	-
25	Dendrobium	7.23	7.75	7.78	7.85	7.85
26	Ornamentals (plants with pot)	7.23	7.75	7.78	7.85	7.85
27	Cutflower(flower/flower with stem)					
28	Cuttings/Stem					
29	Vanda	3.21	3.58	3.62	3.73	3.73
30	Ornamentals (plants with pot)	3.21	3.58	3.62	3.73	3.73
31	Cutflower(flower/flower with stem)					
32	Cuttings/Stem					
33	Roses	0.85	0.98	1.02	1.10	1.10
34	Ornamentals (plants with pot)	0.85	0.98	1.02	1.10	1.10
35	Cutflower(flower/flower with stem)					
36	Cuttings/Stem					
37	Coconut leaves	13,719.48	13,738.25	13,742.65	13,741.25	13,741.25
38	Cogon					
39	Annual [b]	47.98	48.72	49.35	50.12	50.12
40	Romblon					
41	Tiger Grass					
42	Banana Leaves	47.98	48.72	49.35	50.12	50.12
43	Laza/Tambo					
44	Nipa Sap/Wine					

Appendix F. Reports

Provincial Report on Area and Number of Bearing Trees (Other Crops Compiling System)


	A	T	U	V	AQ	AR	AS	BN	BO	BP	CK	CL	CM	DH	DI	DJ
1	PALAWAN : Volume of Production, Area Planted/Harvested, Number of Bearing Trees, Bearing Trees per Hectare, and Yield of Other NFICS, July-December, 2014-2017															
2	Crop	PRODUCTION (in MT)			AREA (ha)			Number of Bearing Trees			Bearing Trees per Hectare			Yield per BT (in kgs.) / Yield per Hectare (in MT)		
3		2016F	2017P	2017F	2016F	2017P	2017F	2016F	2017P	2017F	2016F	2017P	2017F	2016F	2017P	2017F
4	Semestral	27,270.20	27,271.87	27,271.87	14.20	14.20	14.20	230	240	240						
5	Pili nut	-	-	-	3.00	3.00	3.00	230	240	240	77	80	80	-	-	-
6	Coir	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Jute	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Kapok	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Maguey	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Ramie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Salago	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Chrysanthemum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Ornamentals (plants with pot)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Cutflower(lower/flower with stem)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Cuttings/Stem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Gladiola	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Ornamentals (plants with pot)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Cutflower(lower/flower with stem)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	Cuttings/Stem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Orchids	22.58	22.87	22.87	5.85	5.85	5.85	-	-	-	-	-	-	3.86	3.91	3.91
21	Ornamentals (plants with pot)	22.58	22.87	22.87	-	-	-	-	-	-	-	-	-	-	-	-
22	Cutflower(lower/flower with stem)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Cuttings/Stem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	Dendrobium	14.03	14.18	14.18	3.35	3.35	3.35	-	-	-	-	-	-	4.19	4.23	4.23
25	Ornamentals (plants with pot)	14.03	14.18	14.18	-	-	-	-	-	-	-	-	-	-	-	-
26	Cutflower(lower/flower with stem)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Cuttings/Stem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Vanda	8.55	8.69	8.69	2.50	2.50	2.50	-	-	-	-	-	-	3.42	3.48	3.48
29	Ornamentals (plants with pot)	8.55	8.69	8.69	-	-	-	-	-	-	-	-	-	-	-	-
30	Cutflower(lower/flower with stem)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Cuttings/Stem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Roses	2.39	2.52	2.52	5.35	5.35	5.35	-	-	-	-	-	-	0.45	0.47	0.47
33	Ornamentals (plants with pot)	2.39	2.52	2.52	-	-	-	-	-	-	-	-	-	-	-	-
34	Cutflower(lower/flower with stem)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	Cuttings/Stem	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36	Coconut leaves	27,245.23	27,246.48	27,246.48	-	-	-	-	-	-	-	-	-	-	-	-
37	Cogon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Other NFICS* (a + b + c)	134.29	137.38	137.38	102.10	102.10	102.10	450	445	445	-	-	-	-	-	-
39	Annual [a]	83.47	85.27	85.27	-	-	-	-	-	-	-	-	-	-	-	-
40	Romblon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Tiger grass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Banana leaves	83.47	85.27	85.27	-	-	-	-	-	-	-	-	-	-	-	-
43	Laza/Tambo	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix G. CrPS Form 1- Data Collection Form

<p>CrPS Form 1 Data Collection Form</p> <p>AUTHORITY: This survey is authorized under Republic Act (RA) 10625.</p> <p>CONFIDENTIALITY: All data obtained herein shall be held STRICTLY CONFIDENTIAL; - cannot be used for taxation, investigation, or law enforcement purposes.</p>	 Republic of the Philippines PHILIPPINE STATISTICS AUTHORITY Quezon City	 	<p>PSA Approval No: _____</p> <p>Expires on: _____</p>				
CROPS PRODUCTION SURVEY _____ to _____ 20__ Reference Period							
Page _____ of _____							
A. IDENTIFICATION PARTICULARS							
A1. GEOGRAPHIC IDENTIFICATION							
Province : _____		City/Municipality : _____					
A2. CERTIFICATION							
I hereby certify that the data gathered in this collection form were obtained/reviewed by me personally and in accordance with instructions.							
Name and Signature of Statistical Researcher : _____		Contact Number : _____ Date Accomplished : _____					
Name and Signature of Field Supervisor : _____		Contact Number : _____ Date Reviewed : _____					
A3. FARM CATEGORY							
Type of Farm: _____		1 - Large Farm 2 - Small Farm					
A4. SAMPLE IDENTIFICATION							
Name of Large Farm/Farmer-Producer : _____		Address : _____					
		Contact Number : _____					
B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES							
COMMODITY GROUPING/ NAME OF CROP	VOLUME OF PRODUCTION In kilograms		AREA PLANTED/HARVESTED ¹ In hectares		NO. OF BEARING TREES/HILLS/VINES		Reason/s for Change (Indicate codes & expound the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1 - NON-FOOD AND INDUSTRIAL CROPS							
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							
2 - FRUIT CROPS							
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							
3 - VEGETABLES AND ROOTCROPS							
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							
Codes for Column 8: 1 - Change in area 2 - Pests and Diseases 3 - Fertilizers 4 - Others, specify _____ 5 - Weather Effects 6 - Seeds 7 - Irrigation Services 8 - _____				Note for Columns 4 & 5: ¹ - area harvested for mono-harvest temporary crops; area planted for permanent crops and multi-harvest temporary crops			


Appendix H. CrPS Form 2A- List of Qualified Farmer Producer per Crop (For Small Farm Only)

CrPS Form 2A
List of Qualified Farmer-Producer per Crop
(For Small Farm Only)



Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City

CROPS PRODUCTION SURVEY
In _____ 20__
Reference Period



Page _____ of _____

A. IDENTIFICATION PARTICULARS

A1. GEOGRAPHIC IDENTIFICATION

Province: _____ City/Municipality: _____

A2. CERTIFICATION

I hereby certify that the data generated in this listing form were encoded/reviewed by me personally and in accordance with the instructions.

Name and Signature of Encoder : _____ Contact Number : _____ Date Encoded : _____

Name and Signature of Field Supervisor : _____ Contact Number : _____ Date Reviewed : _____

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILL/VINES

NAME OF CROP/ NAME OF FARMER-PRODUCER	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED* in hectares		NO. OF BEARING TREES/HILL/VINES		Reason/s for Change (Indicate codes & expound the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: _____							
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							
CROP: _____							
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							
CROP: _____							
1							
2							
3							
4							
5							
6							
7							
8							
9							
0							

Codes for Column 8:

1- Change in area 3- Pests and Diseases 5- Fertilizers 7- Others, specify


2- Weather Effects 4- Seeds 6- Irrigation Services

Note for Columns 4 & 5:

* - area harvested for mono-harvest temporary crops; area planted for permanent crops and multi-harvest temporary crops


Appendix I. CrPS Form 2B - City/Municipality Summary Form per Crop (For Small Farm Only)

CrPS Form 2B
City/Municipality Summary Form per Crop
(For Small Farm Only)



Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City

CROPS PRODUCTION SURVEY
to _____ 20__
Reference Period



Page _____ of _____

A. IDENTIFICATION PARTICULARS

A1. GEOGRAPHIC IDENTIFICATION

Province: _____ City/Municipality: _____

A2. CERTIFICATION

I hereby certify that the data summarized in this form were reviewed by me personally and in accordance with the instructions.

Name and Signature of Field Supervisor : _____ Contact Number : _____ Date Reviewed : _____

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES

NAME OF CROP/ NAME OF FARMER-PRODUCER	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED* in hectares		NO. OF BEARING TREES/HILLS/VINES		Reason's for Change (Indicate codes & expound the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: _____							
1							
2							
3							
4							
5							
TOTAL							
CROP: _____							
1							
2							
3							
4							
5							
TOTAL							
CROP: _____							
1							
2							
3							
4							
5							
TOTAL							
CROP: _____							
1							
2							
3							
4							
5							
TOTAL							

Codes for Columns 8:

1- Change in area

2- Weather Effects

3- Pests and Diseases

4- Seeds

5- Fertilizers

6- Irrigation Services


7- Others, specify

Note for Columns 4 & 5:


* - area harvested for mono-harvest temporary crops; area planted for permanent crops and multi-harvest temporary crops

Appendix J. CrPS Form 3A - List of Top Producing Cities/Municipalities Per Crop (For Small Farm Only)

CrPS Form 3A
List of Top Producing Cities/Municipalities Per Crop
(For Small Farm Only)

 **Republic of the Philippines**
PHILIPPINE STATISTICS AUTHORITY
Quezon City

CROPS PRODUCTION SURVEY
to 20__
Reference Period



Page _____ of _____

A. IDENTIFICATION PARTICULARS

A1. GEOGRAPHIC IDENTIFICATION

Province:

A2. CERTIFICATION

I hereby certify that the data generated in this summary form were encoded/reviewed by me personally and in accordance with the instructions.

Name and Signature of Encoder : _____ Contact Number : _____ Date Encoded : _____

Name and Signature of Field Supervisor : _____ Contact Number : _____ Date Reviewed : _____

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES


NAME OF CROP / NAME OF CITY/MUNICIPALITY	VOLUME OF PRODUCTION in kilograms		AREA PLANTED/HARVESTED ¹ in hectares		NO. OF BEARING TREES/HILLS/VINES		Reasons for Change (Indicate codes & expound the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: _____							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
CROP: _____							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
CROP: _____							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Codes for Column 8:
1-Change in area 3-Pests and Diseases 5-Fertilizers 7-Other, specify
2-Weather Effects 4-Seeds 6-Irrigation Services


Note for Columns 4 & 5:
¹ - area harvested for mono-harvest temporary crops; area planted for permanent crops and multi-harvest temporary crops

Appendix K. CrPS Form 3B – Provincial Summary Form

CrPS Form 3B
Provincial Summary Form



Republic of the Philippines
PHILIPPINE STATISTICS AUTHORITY
Quezon City



CROPS PRODUCTION SURVEY
to 20__
Reference Period

Page ____ of ____

A. IDENTIFICATION PARTICULARS

A1. GEOGRAPHIC IDENTIFICATION

Province: _____

A2. CERTIFICATION

I hereby certify that the data summarized in this form were reviewed by me personally and in accordance with the instructions.

Name and Signature of Field Supervisor : _____ Contact Number : _____ Date Reviewed : _____
Name and Signature of PSO : _____ Contact Number : _____ Date Reviewed : _____

B. PRODUCTION, AREA, AND NUMBER OF BEARING TREES/HILLS/VINES

NAME OF CROP / TYPE OF FARM NAME OF CITY/MUNICIPALITY	VOLUME OF PRODUCTION In kilograms		AREA PLANTED/HARVESTED ^a In hectares		NO. OF BEARING TREES/HILLS/VINES		Reasons for Change (Indicate codes & expound the reason)
	Last Year	This Year	Last Year	This Year	Last Year	This Year	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CROP: _____							
LARGE FARM							
1							
2							
3							
4							
5							
TOTAL							
% CHANGE							
SMALL FARM							
1							
2							
3							
4							
5							
TOTAL							
% CHANGE							
CROP: _____							
LARGE FARM							
1							
2							
3							
4							
5							
TOTAL							
% CHANGE							
SMALL FARM							
1							
2							
3							
4							
5							
TOTAL							
% CHANGE							

Codes for Column 8:
 1- Change in area 3- Pests and Diseases 5- Fertilizers 7- Others, specify
 2- Weather Effects 4- Seeds 6- Irrigation Services

Note for Columns 4 & 5:
^a - area harvested for mono-harvest temporary crops; area planted for permanent crops and multi-harvest temporary crops



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