

Republic of the Philippines
<u>PHILIPPINE STATISTICS AUTHORITY</u>



SPECIAL RELEASE

GOAT SITUATION REPORT April to June 2023

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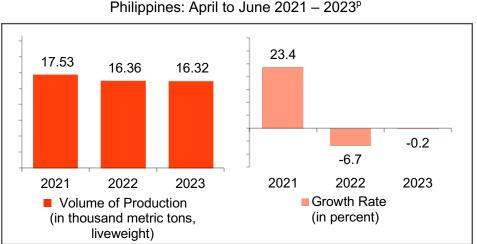


Figure 1. Volume and Annual Growth Rate of Goat Production Philippines: April to June 2021 – 2023^p

^p – preliminary

Sources: Philippine Statistics Authority, Backyard Livestock and Poultry Survey (BLPS), and Commercial Livestock and Poultry Survey (CLPS)

The volume of goat production from April to June 2023 was recorded at 16.32 thousand metric tons, liveweight. This indicates an annual decline of -0.2 percent from the 16.36 thousand metric tons, liveweight output in the same period of 2022. (Figure 1 and Table 1)

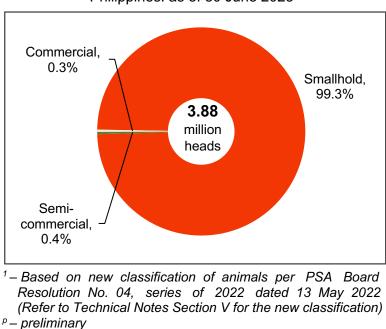
Northern Mindanao was the top producer of goat with 2.01 thousand metric tons, liveweight or 12.3 percent share to the total goat production during the reference quarter. Completing the top five regions with the highest volume of goat production at liveweight in the second quarter of 2023 were the following:

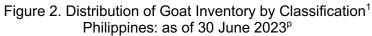
- a. Central Visayas, 1.97 thousand metric tons;
- b. Davao Region, 1.78 thousand metric tons;
- c. Western Visayas, 1.68 thousand metric tons; and
- d. Ilocos Region, 1.67 thousand metric tons.

These regions accounted for 55.8 percent of the country's total goat production during the quarter. Ω_{I}



Relative to their outputs in the same quarter of 2022, seven regions registered decrements in production during the reference quarter. In terms of level, Central Visayas registered the highest decline of 0.24 thousand metric tons, from 2.22 thousand metric tons in the second quarter of 2022 to 1.97 thousand metric tons this second quarter of 2023. (Table 1)





Sources: Philippine Statistics Authority, BLPS and CLPS

As of 30 June 2023, the total goat inventory was estimated at 3.88 million heads. This reflects a decrease of -0.5 percent compared with the previous year's same period count of 3.90 million heads. About 99.3 percent of the country's goat population came from smallhold farms, while semi-commercial and commercial farms contributed 0.4 percent and 0.3 percent, respectively. (Figure 2 and Table 2)

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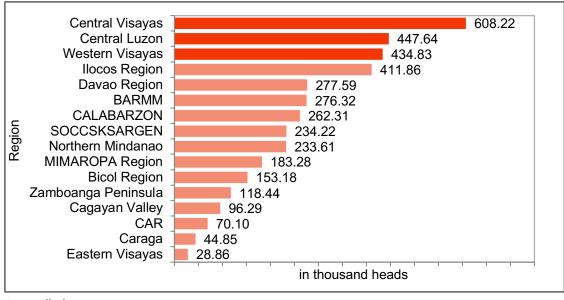
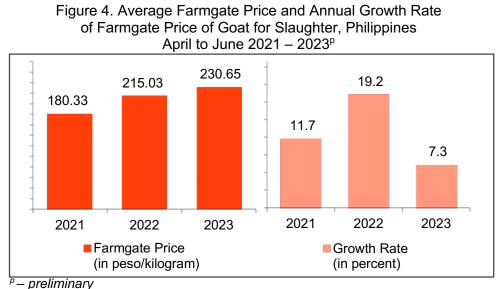


Figure 3. Distribution of Goat Inventory by Region As of 30 June 2023^p

^p – preliminary

Sources: Philippine Statistics Authority, BLPS and CLPS

Central Visayas recorded the highest goat population with 608.22 thousand heads. This was followed by Central Luzon and Western Visayas with corresponding inventories of 447.64 thousand heads and 434.83 thousand heads. These three regions shared 38.4 percent to the country's total goat population as of 30 June 2023. (Figure 3 and Table 2)



Sources: Philippine Statistics Authority, 2021 Farm Prices Survey, 2022 – 2023 BLPS, and 2022 – 2023 CLPS

The average farmgate price of goat for slaughter was quoted at PhP 230.65 per kilogram, liveweight for this quarter. This was 7.3 percent higher than the previous year's same period average farmgate price of PhP 215.03 per kilogram, liveweight. (Figure 4 and Table 3)

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In the second quarter of 2023, the highest average farmgate price was observed in May at PhP 235.53 per kilogram, liveweight, while the lowest average farmgate price was recorded in June at PhP 222.74 per kilogram, liveweight. (Table 3)

John

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STATISTICAL TABLES

Table 1. Volume of Goat Production by Region, Philippines April to June 2021 - 2023^p

Region		Production ric tons, live		Annual Growth Rate (in percent)		Percent Share
	2021	2022	2023 ^p	2022	2023 ^p	2023 ^p
Philippines	17,530	16,356	16,322	-6.7	-0.2	100.0
CAR	226	214	231	-5.1	7.9	1.4
I – Ilocos Region	2,292	1,678	1,669	-26.8	-0.5	10.2
II – Cagayan Valley	347	323	323	-7.0	0.2	2.0
III – Central Luzon	1,656	1,693	1,616	2.3	-4.5	9.9
IVA – CALABARZON	920	1,001	1,133	8.8	13.2	6.9
MIMAROPA Region	608	634	642	4.4	1.2	3.9
V – Bicol Region	592	647	635	9.2	-1.8	3.9
VI – Western Visayas	1,471	1,517	1,681	3.1	10.8	10.3
VII – Central Visayas	2,993	2,217	1,974	-25.9	-10.9	12.1
VIII – Eastern Visayas	158	131	155	-17.1	19.1	1.0
IX – Zamboanga Peninsula	600	537	584	-10.6	8.8	3.6
X – Northern Mindanao	2,162	2,185	2,010	1.1	-8.0	12.3
XI – Davao Region	1,871	1,684	1,776	-10.0	5.5	10.9
XII – SOCCSKSARGEN	903	898	894	-0.5	-0.5	5.5
XIII – Caraga	166	110	117	-33.5	6.2	0.7
BARMM ^{1/}	566	888	879	56.8	-1.0	5.4

 p^{P} – preliminary p^{P} – preliminary 1^{I} – The sample coverage for BARMM in 2023 includes provinces of Maguindanao del Sur and Maguindanao del Norte 1^{I} – The sample coverage for BARMM in 2023 includes provinces of Maguindanao del Sur and Maguindanao del Norte Province of Cotabato).

Note: Details may not add up to total due to rounding. Growth rate and percent share may yield different results when computed manually due to rounding.

Sources: Philippine Statistics Authority, Backyard Livestock and Poultry Survey, and Commercial Livestock and Poultry Survey

Region/Classification	Inventory (in number of heads)			Annual Growth Rate (in percent)		Percent Share
	2021	2022 ^r	2023 ^p	2022 ^r	2023 ^p	2023 ^p
<u>Total</u>	1		1		1	
Philippines	3,950,834	3,901,946	3,881,592	-1.2	-0.5	100.0
CAR	61,624	63,857	70,102	3.6	9.8	1.8
I – Ilocos Region	494,685	428,359	411,860	-13.4	-3.9	10.6
II – Cagayan Valley	88,784	95,586	96,289	7.7	0.7	2.5
III – Central Luzon	396,213	400,095	447,643	1.0	11.9	11.5
IVA – CALABARZON	258,083	265,594	262,307	2.9	-1.2	6.8
MIMAROPA Region	171,136	190,755	183,283	11.5	-3.9	4.7
V – Bicol Region	169,976	167,235	153,178	-1.6	-8.4	3.9
VI – Western Visayas	516,696	495,159	434,828	-4.2	-12.2	11.2
VII – Central Visayas	572,749	579,740	608,219	1.2	4.9	15.7
VIII – Eastern Visayas	24,072	33,340	28,857	38.5	-13.4	0.7
IX – Zamboanga Peninsula	127,531	128,939	118,438	1.1	-8.1	3.1
X – Northern Mindanao	246,162	233,406	233,608	-5.2	0.1	6.0
XI – Davao Region	316,129	282,165	277,590	-10.7	-1.6	7.2
XII – SOCCSKSARGEN	230,801	234,875	234,222	1.8	-0.3	6.0
XIII – Caraga	49,382	48,403	44,849	-2.0	-7.3	1.2
BARMM ^{1/}	226,811	254,438	276,319	12.2	8.6	7.1
<u>Smallhold</u>						
Philippines	3,917,785	3,871,349	3,854,541	-1.2	-0.4	100.0
CAR	61,624	63,857	70,102	3.6	9.8	1.8
I – Ilocos Region	494,685	427,895	411,657	-13.5	-3.8	10.7
II – Cagayan Valley	85,575	94,438	95,662	10.4	1.3	2.5
III – Central Luzon	388,772	396,878	445,526	2.1	12.3	11.6
IVA – CALABARZON	244,618	245,670	245,499	0.4	-0.1	6.4
MIMAROPA Region	169,592	189,637	181,467	11.8	-4.3	4.7
V – Bicol Region	169,822	166,715	152,723	-1.8	-8.4	4.0
VI – Western Visayas	516,209	493,258	434,186	-4.4	-12.0	11.3
VII – Central Visayas	571,918	579,740	608,219	1.4	4.9	15.8
VIII – Eastern Visayas	23,883	33,340	28,857	39.6	-13.4	0.7
IX – Zamboanga Peninsula	127,531	128,746	118,160	1.0	-8.2	3.1
X – Northern Mindanao	244,645	232,997	232,635	-4.8	-0.2	6.0
XI – Davao Region	315,232	281,025	276,363	-10.9	-1.7	7.2
XII – SOCCSKSARGEN	228,392	234,875	233,644	2.8	-0.5	6.1
XIII – Caraga	48,476	47,840	43,522	-1.3	-9.0	1.1
BARMM ^{1/}	226,811	254,438	276,319	12.2	8.6	7.2

Table 2. Goat Inventory by Classification and Region, Philippines As of 30 June 2021– $2023^{\rm p}$

Continued

Region/Classification	(in n	Inventory umber of hea	ads)	Annual Growth Rate (in percent)		Percent Share
-	2021	2022 ^r	2023 ^p	2022 ^r	2023 ^p	2023 ^p
Semi-commercial						
Philippines	16,212	14,794	14,170	-8.7	-4.2	100.0
CAR	0	0	0			
I – Ilocos Region	0	464	203		-56.3	1.4
II – Cagayan Valley	342	1,148	437	235.7	-61.9	3.1
III – Central Luzon	2,749	290	431	-89.5	48.6	3.0
IVA – CALABARZON	7,121	9,647	8,642	35.5	-10.4	61.0
MIMAROPA Region	1,544	0	372	-100.0		2.6
V – Bicol Region	154	520	455	237.7	-12.5	3.2
VI – Western Visayas	487	1,901	642	290.3	-66.2	4.5
VII – Central Visayas	285	0	0	-100.0		
VIII – Eastern Visayas	50	0	0	-100.0		
IX – Zamboanga Peninsula	0	0	0			
X – Northern Mindanao	369	409	973	10.8	137.9	6.9
XI – Davao Region	419	415	688	-1.0	65.8	4.9
XII – SOCCSKSARGEN	1,786	0	0	-100.0		
XIII – Caraga	906	0	1,327	-100.0		9.4
BARMM ^{1/}	0	0	0			
<u>Commercial</u>					1	
Philippines	16,837	15,803	12,881	-6.1	-18.5	100.0
CAR	0	0	0			
I – Ilocos Region	0	0	0			
II – Cagayan Valley	2,867	0	190	-100.0		1.5
III – Central Luzon	4,692	2,927	1,686	-37.6	-42.4	13.1
IVA – CALABARZON	6,344	10,277	8,166	62.0	-20.5	63.4
MIMAROPA Region	0	1,118	1,444		29.2	11.2
V – Bicol Region	0	0	0			
VI – Western Visayas	0	0	0			
VII – Central Visayas	546	0	0	-100.0		
VIII – Eastern Visayas	139	0	0	-100.0		
IX – Zamboanga Peninsula	0	193	278		44.0	2.2
X – Northern Mindanao	1,148	0	0	-100.0		
XI – Davao Region	478	725	539	51.7	-25.7	4.2
XII – SOCCSKSARGEN	623	0	578	-100.0		4.5
XIII – Caraga	0	0	0		-100.0	
BARMM ^{1/}	0	0	0			

Table 2. - Concluded

.. – data not applicable

^r – revised

^{*p*} – preliminary

1/ – The sample coverage for BARMM in 2023 includes provinces of Maguindanao del Sur and Maguindanao del Norte (previously Province of Maguindanao), Cotabato City, and the Eight Area Clusters (63 barangays, previously from Province of Cotabato).

Note: Growth rate and percent share may yield different results when computed manually due to rounding.

Sources: Philippine Statistics Authority, Backyard Livestock and Poultry Survey, and Commercial Livestock and Poultry Survey

Table 3. Average Farmgate Price of Goat for Slaughter
Philippines: April to June 2021 – 2023 ^p

Month	Averaç (in peso pe	Annual Growth Rate (in percent)			
	2021 2022 2023 ^p				2023 ^p
Average	180.33	215.03	230.65	19.2	7.3
April	174.41	209.72	233.69	20.2	11.4
Мау	176.41	207.83	235.53	17.8	13.3
June	190.17	227.53	222.74	19.6	-2.1

^p – preliminary

Note: Quarterly average and growth rate may yield different results when computed manually due to

rounding. Sources: Philippine Statistics Authority, 2021 Farm Prices Survey, 2022 – 2023 Backyard Livestock and Poultry Survey, and 2022 – 2023 Commercial Livestock and Poultry Survey

TECHNICAL NOTES

I. Introduction

The Goat Situation Report presents the industry situation in terms of volume of production, inventory by classification, and monthly average farmgate prices. It serves as a ready reference for the various clients and stakeholders of the Philippine Statistics Authority (PSA) in the agriculture sector.

The data for this report were collected by PSA through the two surveys, namely, Backyard Livestock and Poultry Survey (BLPS) and the Commercial Livestock and Poultry Survey (CLPS).

The BLPS aims to generate estimates on the supply and disposition of livestock and poultry commodities at the household level. In the second quarter of 2023, the number of sample households covered was 21,884 from the 1,156 sample barangays nationwide. On the other hand, the CLPS seeks to generate estimates on the supply and disposition of livestock and poultry commodities from the sample establishments. There were 146 sample goat establishments covered in the second quarter of 2023.

Both surveys are conducted quarterly in all provinces, including National Capital Region (NCR). Moreover, the commodities covered in the surveys include: cattle, carabao, swine, goat, chicken, duck, and other animals raised/tended by households and establishments.

II. Data Collection

A. Backyard Livestock and Poultry Survey

1. Data collection procedure

The field data collection for the second quarter of 2023 was conducted from 01 to 08 July 2023. The data collection was undertaken by hired Statistical Researchers (SRs) through face-to-face interview with qualified respondents of the sample households. Prior to data collection, training of selected staff from Field Offices, including SRs, was conducted to ensure uniform understanding of concepts and proper implementation of survey procedures. Field and manual editing of the accomplished questionnaires was done to ensure completeness, consistency, and reasonableness of the information gathered.

2. Survey Questionnaire

The BLPS Questionnaire is a 19-page form composed of 16 blocks that aims to gather information on the basic characteristics and operations of the household.

The data items included in the survey are as follows:

- a. Type of household operation/purpose
- b. Inventory by age

- c. Breeder that gave birth
- d. Supply indicator (number of births, received/acquired)
- e. Slaughtered in the household
- f. Sold live for slaughter
- g. Sold live for other purposes (breeding, fattening)
- h. Average farmgate price
- i. Milk production indicators
- j. Deaths/Losses
- k. Average liveweight per head
- I. Disposition by areas of destination
- m. Assessment of household's production

B. Commercial Livestock and Poultry Survey

1. Data collection procedure

The schedule of field data collection for the second quarter of 2023 was during the last 10 days of June 2023. The data collection was undertaken by hired SRs through face-to-face interview with qualified respondents of the farms/establishments. Prior to data collection, training of Field Office personnel, including SRs, was conducted to ensure that the procedures and concepts of the survey are understood and properly implemented. Field and manual editing of the accomplished questionnaires was done to ensure completeness, consistency, and reasonableness of the information gathered.

2. Survey Questionnaire

The CLPS Goat Survey Questionnaire is a five-page questionnaire that aims to gather necessary information on supply and disposition of goat commercial farms/establishments.

The data items included in the survey are as follows:

- a. Type of establishment operation
- b. Inventory by age
- c. Supply indicator (number of births, received/acquired)
- d. Slaughtered in the establishment
- e. Sold live for slaughter
- f. Sold live for other purposes (breeding, fattening)
- g. Average farmgate price
- h. Milk production indicators
- i. Deaths/Losses
- j. Average liveweight per head
- k. Disposition by areas of destination
- I. Assessment of establishment's production

III. Sampling Design

A. Backyard Livestock and Poultry Survey

1. Sampling Frame

The BLPS sampling frame is based on the results of the 2017 Listing of Farm Households (LFH) and 2012 Census of Agriculture and Fisheries (CAF). For barangays not covered in the 2017 LFH, the list of households was taken from the 2012 CAF. The sampling frame is updated quarterly based on the status of the sampled households using structured Frame Maintenance Form (FMF) submitted by the Provincial Statistical Offices every quarter.

2. Sample Selection Procedure

The BLPS uses two-stage sampling design. The first stage is the selection of sample barangays or Primary Sampling Units (PSUs) using probability proportional to size where the measure of size is the total animal inventory.

The second stage is the selection of sample households or Secondary Sampling Units (SSUs) that are engaged in livestock and poultry raising in the sampled barangays using systematic sampling.

The number of sample households per selected barangay is 20 but this could be less if the selected barangay has less than 20 households. The sample households per quarter are independent.

The sample size was determined based on a five percent (5%) target coefficient of variation.

3. Domain

The domain of the survey is the province. In the case of NCR, the region is the domain.

- 4. Estimation Procedure
 - a. Survey Weight
 - a.1. Base Weight

PSU Weight

The PSU weight is computed as follows:

$$w_{1i} = \frac{X}{aX_i}$$

Where:

 $w_{1i} = PSU$ weight

a = barangay sample size for the province

X = total animal inventory for the province

 X_i = animal inventory of barangay *i*

i =subscript for barangay

SSU Weight

The SSU weight is computed as follows:

 $w_{2ij} = \begin{cases} \frac{N_i}{n_i} , if household has at most 3 operators \\ \frac{N_i}{n_i} \times \frac{M_{ij}}{m_{ij}} , if household has greater than 3 operators \end{cases}$

Where:

 $w_{2ij} = SSU$ weight $N_i = total number of households in barangay i$ $n_i = number of sample households in barangay i$ $M_{ij} = total number of operators in household j of barangay i$ $m_{ij} = number of sample operators in household j of barangay i$ j = subscript for household

Base Weight

The base weight is the product of the PSU and SSU weights. That is,

$$w_{ij} = w_{1i} \times w_{2ij}$$

Where:

 w_{ij} = base weight of household *j* in barangay *i* w_{1i} = PSU weight w_{2ij} = SSU weight

a.2. Adjustment Factor

The adjustment factor to account for non-response is given as follows:

$$A_p = \frac{\sum_{i=1}^{a} \sum_{j=1}^{n_i} w_{ij} X_{1ij}}{\sum_{i=1}^{a} \sum_{j=1}^{n_i} w_{ij} X_{2ij}}$$

Where:

 A_p = adjustment factor for province p

- X_{1ij} = eligible status of household *j* in barangay *i* (1 if eligible, 0 otherwise)
- X_{2ij} = responding status of household *j* in barangay *i* (1 if responding, 0 otherwise)

Eligible households are the following:

- Interview completed;
- Refused to be interviewed without replacement;
- Temporarily away/Not at home without replacement; and
- HH temporarily not accessible without replacement.

Ineligible households are the following:

- Resides outside the barangay;
- Unknown in the locality; and
- Deceased (No other livestock and poultry operator in the household).
- a.3. Final Weight

The final weight formula is given as follows:

$$w_{ij}' = w_{ij} \times A_p$$

Where:

 w'_{ij} = final weight for province p

- w_{ij} = base weight of household *j* in barangay *i*
- A_p = adjustment factor for province p
- b. Estimation of Total
 - b.1. Estimation of Provincial Total

Estimation of provincial total is done per animal type and the formula is given as follows:

$$\hat{Y}_p = \sum_{i=1}^a \sum_{j=1}^{n_i} w'_{ij} y_{ij}$$

Where:

 \hat{Y}_p = estimated total for province *p*

 $y_{ij} =$ survey data (inventory, production, etc.) for household *j* in barangay *i*

b.2. Estimation of Regional and National Total

The regional estimates are obtained by aggregating the estimates for the provinces within the region, while the national estimate is derived by adding all the regional estimates obtained in each region.

B. Commercial Livestock and Poultry Survey

1. Sampling Frame

The CLPS frame is based on the results of the 2021 Updating of the List of Establishments (ULE). It is updated quarterly based on the results of visit of the sample farms/establishments using the FMF.

2. Sample Selection Procedure

The CLPS uses stratified probability proportional to size sampling design, where the establishment is the primary sampling unit. The animal type serves as a stratification variable and the size measure is the maximum farm/housing capacity of the establishment. Per animal type, the establishments are sorted by maximum housing capacity and sample establishments are selected using systematic sampling. A panel sample establishment is maintained for a year and a new set of samples is selected during the first quarter of the next year.

Complete Enumeration (CE) is applied for provinces with less than 25 commercial farms/establishments, otherwise, sampling is used.

3. Domain

The domain of the survey is the province. In the case of NCR, the region is the domain.

- 4. Estimation Procedure
 - a. Survey Weight
 - a.1. Base Weight

The base weight per animal type is given as follows:

$$w_i = \frac{X}{aX_i}$$

Where:

- w_i = base weight of establishment *i*
- *a* = number of sample establishments in the province
- X_i = maximum farm/housing capacity of establishment *i*
- *X* = total maximum farm/housing capacity of the province
- a.2. Adjustment Factor

The adjustment factor to account for non-response is given as follows:

$$A_p = \frac{\sum_{i=1}^{a} w_i X_{1i}}{\sum_{i=1}^{a} w_i X_{2i}}$$

Where:

 A_p = adjustment factor for province p X_{1i} = eligible status of establishment *i* (1 if eligible, 0 otherwise)

 X_{2i} = responding status of establishment *i* (1 if responding, 0 otherwise)

Eligible establishments are the following:

- Operational
- Refusal
- Cannot be contacted/Not accessible

Ineligible establishments are the following:

- Temporarily Stopped Operation
- Permanently Closed/Stopped Operation
- Shifted Farm Operation
- Cannot Be Located
- Duplicate
- Out-of-scope Recreation
- Out-of-scope Change Sector
- Out-of-scope Main Office/Ancillary Unit
- a.3. Final Weight

The final weight formula is given as follows:

$$w_i' = w_i \times A_p$$

Where:

 w'_i = final weight of establishment *i* w_i = base weight of establishment *i* A_n = adjustment factor for province *p*

- b. Estimation
 - b.1. Estimation for the Province

Estimation of provincial total is done per animal type and the formula is given as follows:

$$\widehat{Y}_p = \sum_{i=1}^a w'_i y_i$$

Where:

 \hat{Y}_p = estimated total for province *p* y_i = survey data (inventory, production, etc.) for establishment *i*

b.2. Estimation of Regional and National Total

The regional estimates are obtained by aggregating the estimates for the provinces within the region, while the national estimates are derived by adding all the regional estimates obtained in each region.

IV. Concepts and Definitions of Terms

Farmgate price refers to the price received by raisers for their produce at the location of farm. Thus, marketing costs, such as the transport and other marketing costs (if any) incurred in selling the produce, are not included in the farmgate prices.

Inventory refers to the actual number of goat present in the farm as of a specific reference date.

Volume of production refers to the number of tended/raised goat disposed for slaughter, including those which were shipped out for slaughter. This is expressed in metric tons, liveweight.

V. Farm Classification

The following are the new farm classifications and definitions based on the approved <u>PSA Board Resolution No. 04, series of 2022</u>:

Classification	Definition
Smallhold	Tending not more than 35 does
Semi-commercial	Tending 36-100 does
Commercial	Tending more than 100 heads of does

The data on the inventory of goat based on the definitions indicated above can be accessed in the OpenSTAT website of PSA with the link: <u>bit.ly/livestock-inventory-by-type-classification</u>



Similarly, data on inventory of goat by farm type (i.e., backyard and commercial) can still be accessed in the OpenSTAT website of PSA with the link: <u>bit.ly/livestock-inventory-by-type-farm</u>



VI. Dissemination of Results and Revision

The PSA disseminates the Goat Situation Report quarterly and is uploaded in the PSA Website.

The livestock and poultry statistics follows the revision policy as stipulated in the PSA Board Resolution No. 1, Series of 2017-119 approving the revision of quarterly estimates on agricultural production, prices, and related statistics to be limited to the immediately preceding quarter and for the past three years with quarterly breakdown to be done only during May of the current year.

VII. Citation

Philippine Statistics Authority. (22 August 2023). *Technical Notes on Q2 2023 Goat Situation Report*. <u>bit.ly/goat-technical-notes</u>



VIII. Contact Information

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