



REPUBLIC OF THE PHILIPPINES  
**PHILIPPINE STATISTICS AUTHORITY**

# Updated Production Costs and Returns of Selected Agricultural Commodities

2017 to 2019



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# UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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## FOREWORD

The Updated Production Costs and Returns of Selected Agricultural Commodities is the 17<sup>th</sup> edition released annually by the Philippine Statistics Authority (PSA). It contains 26 agricultural commodities classified into Fruits, Nuts, Root Crops, Vegetables, Legumes, Commercial Crops, and Fisheries. The publication covers the three reference years, 2017 to 2019. It includes a summary of findings for the 2019 data.

The costs of production of temporary crops are the total expenses incurred in production during the current season. For permanent crops like calamansi, durian, mango, papaya, coffee, cashew nut, and pili nut, costs of production refer to maintenance costs of the farms. In updating the costs of production, the assumptions are based on current levels of production/yield and prices of inputs and outputs. Gross returns are derived using the current yield level and the average price of output per kilogram. The interest on operating capital is updated annually, using the Average Banking Lending Rates from the Bangko Sentral ng Pilipinas (BSP). The input structures are based on benchmarks generated by the Surveys on Costs and Returns (SCR) of selected agricultural commodities in the previous years.

The PSA welcomes comments and suggestions from the data users on how to improve the updating system for production costs and returns.



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Undersecretary

National Statistician and Civil Registrar General

Quezon City, Philippines  
September 2020

**UPDATED PRODUCTION  
COSTS AND RETURNS OF SELECTED  
AGRICULTURAL COMMODITIES**



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

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**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

**ASSUMPTIONS AND PROCEDURES USED IN UPDATING  
THE COSTS OF PRODUCTION FOR OTHER CROPS**

| ITEM  | BASIS/PROCEDURE   |
|---|---|
| 1. Cost of seeds/planting materials<br>(Cash, Non-cash and Imputed) | Movement of farmgate price  |
| 2. Irrigation fee   |   |
| 3. Lease rental   |   |
| 4. Rental value of owned land                                       |   |
| 5. Landlord's share   |   |
| 6. Harvester/Thresher/Sheller's share                               | Movement of gross value of yield  |
| 7. Cost of fertilizer   | Quantity used from the survey results multiplied by the current retail price of fertilizer by grade |
| 8. Cost of pesticides   |   |
| Solid   | Movement of the retail price for selected pesticides  |
| Liquid  | Quantity used from the survey results multiplied by the current retail price of pesticides          |
| 9. Soil ameliorants   | Movement of the retail price of fertilizer  |
| 10. Cost of mulching materials                                      | Movement of the retail price of fertilizer  |
| 11. Labor costs (Hired, Unpaid operator, Family and Exchange labor) | Number of mandays from the survey results multiplied by the current agricultural wage rates         |
| 12. Rental: Tools, Equipment, Machine and Animals                   | Movement of agricultural wage rates   |
| 13. Food cost   | Movement of CPI for food  |
| 14. Transport cost  | Movement of CPI for transport   |
| 15. Fuel and Oil  | Movement of CPI for fuel and oil  |
| 16. Repair cost   | Movement of CPI for minor repairs   |
| 17. Electricity cost  | Movement of CPI for light   |
| 18. Interest on crop loans  | Increase of 10 percent per annum  |
| 19. Other production cost   | Movement of CPI for all items   |
| 20. Depreciation cost   | Increase of 10 percent per annum  |
| 21. Interest on operating capital                                   | Based on Average Lending Rates from Bangko Sentral ng Pilipinas (BSP)                               |
| 22. Land tax  | Increase of one (1) percent per annum   |



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

**ASSUMPTIONS AND PROCEDURES USED IN UPDATING  
THE COSTS OF PRODUCTION FOR MILKFISH AND TILAPIA**

| ITEM  | BASIS/PROCEDURE   |
|---|---|
| 1. Stocking materials (Fry and Fingerlings)<br>(Cash, Non-cash and Imputed) | Movement of farmgate price  |
| 2. Fertilizer   |   |
| Organic   | Movement of the average retail price of all types of fertilizer                                     |
| Inorganic   | Quantity used from the survey results multiplied by the current retail price of fertilizer by grade |
| 3. Feeds  | Movement of CPI for all items   |
| 4. Pesticides, Other chemical and other outputs                             | Movement of the retail price for all types of pesticides  |
| 5. Land tax   | Increase of one (1) percent per annum   |
| 6. Rental: Land   | Movement of farmgate price  |
| Machine, Tools and Equipment  | Movement of agricultural wage rates   |
| 7. Labor cost (Hired, Unpaid operator, Family and Exchange labor)           | Movement of agricultural wage rates   |
| 8. Fuel and Oil   | Movement of CPI for fuel and oil  |
| 9. Transport cost of inputs   | Movement of CPI for transport   |
| 10. Irrigation fee  | Movement of farmgate price  |
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| 12. Interest payment on crop loans  | Increase of 10 percent per annum  |
| 13. Electricity   | Movement of CPI for light   |
| 14. Food expense  | Movement of CPI for food  |
| 15. Repairs   | Movement of CPI for minor repairs   |
| 16. Other expense (Containers, etc.)  | Movement of CPI for all items   |
| 17. Other laborer's share   | Movement of agricultural wage rates   |
| 18. Landlord's share  | Movement of farmgate price  |
| 19. Harvester's share   | Movement of gross value of yield  |
| 20. Lease rental  | Movement of farmgate price  |
| 21. Depreciation  | Increase of 10 percent per annum  |
| 22. Interest on operating capital   | Based on Average Lending Rates from Bangko Sentral ng Pilipinas (BSP)                               |
| 23. Rental value of owned land  | Movement of farmgate price  |

# UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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## TECHNICAL NOTES

### *Cost Classification*

**Cash Costs** – are direct cash outlays or cash payments for the use of different factors of production such as labor, fertilizers and chemicals.

**Non-Cash Costs** – are expenditures that are paid in kind. Valuation of cost items makes use of the prevailing prices in the community. Generally, these non-cash costs represent the portions of the farmer's production that serve as payments for the use of particular factors of production.

**Imputed Costs** – are expenditures that do not involve actual outlays in cash or in kind; they represent the opportunity costs of using owned resources in a particular activity and are computed using the values of the best alternative uses foregone.

**Total Costs** – refer to the sum of cash costs, non-cash costs and imputed costs.

### *Indicators of Profitability*

**Gross Returns** – refer to the gross value of production. It is derived by multiplying the total volume of production by the farmgate or producer price.

$$\text{Gross Returns} = \text{Production} \times \text{Farmgate Price}$$

**Returns Above Cash Costs** – returns after deducting the total cash outlays from the total value of production.

$$\text{Returns Above Cash Costs} = \text{Gross Returns} - \text{Cash Costs}$$

**Returns Above Cash and Non-Cash Costs** – returns after subtracting the cash and non-cash costs from the total value of production.

$$\begin{aligned} \text{Returns Above Cash and Non-Cash Costs} \\ = \text{Gross Return} - (\text{Cash Costs} + \text{Non-Cash Costs}) \end{aligned}$$

**Net Returns** – refers to the net profit after subtracting all expenses incurred from the total value of production.

$$\text{Net Returns} = \text{Gross Returns} - \text{Total Costs}$$

**Net Profit-Cost Ratio** – determines the rate of return to the farmers (the amount earned by the farmer for every peso spent in the production).

$$\text{Net Profit-Cost Ratio} = \text{Net Return} \div \text{Total Costs}$$

**Return on Investments** – measures the amount of return on an investment, relative to the investment costs. The result is expressed in percentage.

$$\text{Return on Investments} = \text{Net Profit-Cost Ratio} \times 100$$

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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### ***Specific Cost Items***

**Seeds/Planting materials** – are plant materials used for sowing purposes for the production of food, fodder, oil, industrial crops, vegetable, fruit flower, lawn and tree crops and include vegetative parts and/or organs used for propagating the crops/species.

**Fertilizers** – refer to any substance, solid or liquid, inorganic or organic, natural or synthetic, single or combination of materials that is applied to the soil or on the plant to provide one or more of the essential elements to improve plant nutrition, growth, yield or quality, or for promoting a chemical change that enhances plant nutrition and growth.

**Soil ameliorants** – are elements placed or mixed into the soil to replenish depleted soil nutrients for better plant growth.

**Pesticides** – refer to chemicals used to control/eradicate insects, pests and weeds.

**Mulching materials** – refer to the layer of material applied to the surface of an area of soil to conserve moisture, improve the fertility and health of the soil and reduce weed growth.

### ***Paid Labor***

**Hired labor** – is labor provided by a person who is paid by the farm operator. Payment of wages is either *in cash or in kind* (as agreed). Hired labor includes a man, eventually in combination with an animal or machine in the case of custom services (wages as well as in-kind payments have to be considered).

### ***Unpaid Labor***

**Operator labor** – is labor contributed by the farm operator.

**Family labor** – is labor provided by the farmer's family members who take part in any production activities.

**Exchange labor** – is work done by farm laborers in exchange (or as payment) for the work done by the farm operator and family members outside the operator's own farm.

*Mandays of unpaid labor are valued at prevailing wage rate in the locality.*

**Land tax** – is amount of tax paid by the owner-operator for the farm land.

**Rentals** – refer to payments for the use of land, machine, animal, tools and farm machineries.

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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**Fuel and Oil** – refer to the cost incurred for the use of gasoline, oil, and other related inputs.

**Transport costs of inputs** – are expenditures incurred in transporting farm inputs to the production sites.

**Transport costs of produce from farm to first point of sale** – refer to expenditures incurred in transporting farm produce to the first point of sale. In this case, the farmer receives a price upon delivery of his product from the farm to a specific location (first point of sale).

**Interest payment on crop loan** – refers to payment for the interest on borrowed capital used in the farm operations.

**Landlord's/Landowner's share** – is the portion of farmer's production that goes to the owner of farmland based on the agreed sharing arrangement. The valuation is based on the price at which the produce is sold or would be sold in the market.

**Financier's share** – is the portion of farmer's production that goes to the financier of the farm operations based on the agreed sharing arrangement.

**Repairs** – cover all repairs and improvements made on tools and equipment and other facilities used in the production process.

**Food expenses** – expenditures incurred in providing food to exchange and hired laborers.

**Harvesters' share** – refers to the portion of farmer's production that serves as payment to farm laborers who perform the harvesting.

**Water expense** – is the payment in cash reported by farmers for the water consumed in the production process during the reference period.

**Electricity cost** – is payment for electricity consumed in the production process.

**Storage fee** – refers to the payment in storing the produce in a suitable place for a period of time before disposition or distribution.

**Depreciation** – refers to the cost of wear and tear of farm tools and equipment, machinery and other farm facilities and structures. It is computed as cost of acquisition divided by the estimated lifespan of farm equipment.

**Interest on operating capital** – is the cost of capital foregone for the purchase of seeds, fertilizers, chemicals and payment of wages for hired labor. This is derived by multiplying the total cash outlays by the prevailing lending rates from the Bangko Sentral ng Pilipinas (BSP).

**Rental value of owned land/animal** – is the imputed cost for the use of own farmland or animal which is derived by asking the farmer how much would be the annual value of the land or value of the animal per cropping if it will be rented out.

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

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**SUMMARY OF FINDINGS**

**FRUITS**

**CALAMANSI**

- The maintenance cost in calamansi production averaged PhP 76,890 per hectare in 2019. An average yield per hectare of 6,422 kilograms grossed PhP 153,218.
- Returns above cash costs averaged PhP 101,156 per hectare while returns above cash and non-cash costs amounted to PhP 99,636 per hectare.
- Less of all costs, the net profit was PhP 76,328 per hectare.
- The average cost of producing a kilogram of calamansi was PhP 11.97. Farmgate price was quoted at PhP 23.86 per kilogram.
- A net gain of PhP 0.99 was realized for every peso of investment in calamansi production.

**DURIAN**

- In 2019, the cost of maintaining a hectare of durian production averaged PhP 108,072. With an average yield of 4,754 kilograms per hectare, gross earnings amounted to PhP 186,732.
- After deducting cash costs, returns amounted to PhP 161,006 per hectare. Subtracting both cash and non-cash costs, returns figured to PhP 99,974 per hectare.
- Durian production netted an average of PhP 78,660 per hectare.
- The production cost of durian was PhP 22.73 per kilogram. The price received by farmers was PhP 39.28 per kilogram.
- Farmers earned PhP 0.73 for every peso invested in durian farming.

**MANGO**

- The average maintenance cost incurred for mango production was PhP 92,421 per hectare in 2019. Gross returns amounted to PhP 156,336 from an average yield of 3,954 kilograms per hectare.
- Less of cash costs, farmers netted PhP 107,112 per hectare. Returns settled at PhP 100,386 per hectare after deducting cash and non-cash costs.
- Net of all costs, profit averaged PhP 63,915 per hectare.
- Per kilogram, the production cost of mango was PhP 23.37 while farmgate price was recorded at PhP 39.54.
- Net profit-cost ratio for mango production was computed at 0.69.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **PAPAYA**

- Papaya production entailed an average maintenance cost of PhP 178,359 per hectare in 2019. With an average yield per hectare of 21,377 kilograms, gross receipts amounted to PhP 172,187.
- After deducting cash costs, returns amounted to PhP 42,697 per hectare. With further reduction of non-cash costs, earnings settled at PhP 42,455 per hectare.
- A deficit of PhP 6,172 per hectare was realized when all costs were deducted.
- The average cost of papaya production per kilogram was PhP 8.34 while farmgate price was PhP 8.05 per kilogram.

### **PINEAPPLE**

- In 2019, pineapple production incurred an average cost of PhP 94,927 per hectare. At an average yield of 41,604 kilograms per hectare, pineapple farmers grossed PhP 453,070.
- Less of cash costs, returns amounted to PhP 377,979 per hectare. When both cash and non-cash costs were deducted, returns averaged PhP 376,796 per hectare.
- Net of all costs, returns figured to PhP 358,143 per hectare.
- On a per kilogram basis, production cost averaged PhP 2.28 while farmgate price stood at PhP 10.89.
- Pineapple producers netted PhP 3.77 for every peso of investment.

### **WATERMELON**

- The cost of producing a hectare of watermelon averaged PhP 78,421 in 2019. Gross earnings amounted to PhP 250,597 from an average yield of 16,596 kilograms per hectare.
- Returns settled at PhP 201,010 per hectare, after subtracting cash costs. Less the cash and non-cash costs, returns amounted to PhP 200,317 per hectare.
- Net returns per hectare averaged PhP 172,176.
- Production cost per kilogram averaged PhP 4.73. Farmers sold watermelon at PhP 15.10 per kilogram.
- Net profit-cost ratio was 2.20.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **NUTS**

#### **CASHEW NUT**

- The cost incurred in cashew nut production averaged PhP 9,670 per hectare in 2019. An average yield of 845 kilograms per hectare grossed PhP 46,433.
- When cash costs were deducted from gross returns, farmers earned PhP 45,259 per hectare. Subtracting both the cash and non-cash costs, returns amounted to PhP 44,568 per hectare.
- After all costs were accounted for, net returns settled at PhP 36,763.
- Per kilogram, production cost averaged PhP 11.45 while farmgate price was estimated at PhP 54.97.
- Farmers received PhP 3.80 for every peso of investment in cashew nut production.

#### **PILI NUT**

- The average production cost of pili nut in 2019 amounted to PhP 36,746 per hectare. The average yield per hectare at 3,308 kilograms generated gross receipts amounting to PhP 178,218.
- Returns above cash costs figured to PhP 168,523 per hectare. Returns above cash and non-cash costs averaged PhP 153,680 per hectare.
- Net profit settled at PhP 141,472 per hectare.
- The average cost of producing a kilogram of pili nut was PhP 11.11. The price quoted by farmers was PhP 53.88 per kilogram.
- For every peso invested in pili nut farming, producers earned PhP 3.85.

### **ROOT CROPS**

#### **CASSAVA**

- The production of cassava entailed an average cost of PhP 42,204 per hectare in 2019. The average yield per hectare of 11,834 kilograms was valued at PhP 97,632.
- Less of cash costs, returns amounted to PhP 75,169 per hectare. Less of cash and non-cash costs, returns settled at PhP 74,143 per hectare.
- With all costs deducted, returns averaged PhP 55,428 per hectare.
- On a per kilogram basis, production cost was PhP 3.57 and the farmgate price was PhP 8.25.
- Net profit-cost ratio was estimated at 1.31.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **SWEET POTATO**

- On the average, the cost of producing a hectare of sweet potato was PhP 38,221 in 2019. The average yield per hectare of 6,310 kilograms grossed PhP 117,051.
- Less of cash costs, returns amounted to PhP 104,982 per hectare. After deducting cash and non-cash costs, returns figured to PhP 100,257 per hectare.
- After all costs were subtracted, a net gain of PhP 78,830 per hectare was realized.
- Production cost per kilogram averaged PhP 6.06 while producer's price stood at PhP 18.55 per kilogram.
- For every peso of investment in sweet potato production, farmers gained PhP 2.06.

### **BULBS**

#### **ONION (RED)**

- In 2019, the production cost of onion (red) averaged PhP 158,490 per hectare. Gross returns of PhP 471,048 were estimated from an average yield per hectare of 11,464 kilograms of onion.
- Returns above cash costs amounted to PhP 348,189 per hectare. Returns above cash and non-cash costs settled at PhP 339,156 per hectare.
- Onion (red) production in 2019 netted an average of PhP 312,558 per hectare.
- Production cost of onion (red) was PhP 13.83 per kilogram and farmgate price was quoted at PhP 41.09 per kilogram.
- Net profit-cost ratio was 1.97.

#### **ONION (MULTIPLIER)**

- The cost of producing a hectare of onion (multiplier) averaged PhP 118,182 in 2019. Average yield of 9,727 kilograms per hectare amounted to PhP 291,128.
- After cash costs were deducted, returns averaged PhP 226,374 per hectare. When both cash and non-cash costs were subtracted, returns figured to PhP 198,469 per hectare.
- Net returns amounted to PhP 172,946 per hectare.
- Production cost per kilogram averaged PhP 12.15. Farmer's selling price was PhP 29.93 per kilogram.
- A peso invested in onion (multiplier) production generated a net gain of PhP 1.46.



## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **GARLIC**

- The average production cost per hectare of garlic in 2019 was PhP 124,026. Gross receipts of PhP 251,318 were estimated from an average yield of 2,778 kilograms per hectare.
- Net of cash costs, returns averaged PhP 195,360 per hectare. Less of cash and non-cash costs, returns averaged PhP 172,798 per hectare.
- Net returns amounted to PhP 127,292 per hectare.
- The cost of producing a kilogram of garlic was PhP 44.65 while farmgate price stood at PhP 90.47 per kilogram.
- A net profit of PhP 1.03 was computed for every peso of investment in garlic production.

## **VEGETABLES**

### **AMPALAYA**

- In 2019, ampalaya farmers spent an average production cost of PhP 194,522 per hectare. With an average yield per hectare of 8,368 kilograms, gross receipts figured to PhP 313,972.
- Returns above cash costs stood at PhP 222,488 per hectare. Returns above the cash and non-cash costs amounted to PhP 218,688 per hectare.
- Ampalaya production netted an average cost of PhP 119,450 per hectare.
- Per kilogram, the average production cost was PhP 23.25 while producer's selling price was PhP 37.52.
- Farmers earned PhP 0.61 per peso of investment in ampalaya production.

### **CABBAGE**

- A one-hectare of cabbage production incurred an average cost of PhP 143,633 in 2019. An average yield of 16,319 kilograms per hectare corresponded to gross receipts of PhP 289,170.
- After deducting cash costs, returns averaged PhP 204,148 per hectare. After cash and non-cash costs were accounted for, returns settled at PhP 204,005 per hectare.
- Cabbage producers netted PhP 145,537 per hectare, after all costs were deducted.
- Average production cost was estimated at PhP 8.80 per kilogram. Farmgate price was PhP 17.72 per kilogram.
- A peso invested in cabbage production, farmers netted PhP 1.01.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **CARROT**

- In 2019, the cost of producing carrot averaged PhP 112,654 per hectare. The average yield of 14,298 kilograms per hectare was valued at PhP 364,171.
- When cash costs were subtracted, farmers earned an average of PhP 295,725 per hectare. After deducting both cash and non-cash costs, returns of PhP 295,701 per hectare were realized.
- Net profit amounted to PhP 251,517 per hectare.
- On a per kilogram basis, production cost of carrot was PhP 7.88 while farmgate price was PhP 25.47.
- Net profit-cost ratio stood at 2.23.

### **CAULIFLOWER**

- The average cost of producing a hectare of cauliflower was PhP 128,917 in 2019. An average yield of 10,919 kilograms per hectare grossed PhP 415,465.
- After deducting cash costs, returns were computed at PhP 329,005 per hectare. Less of cash and non-cash costs, returns figured to PhP 323,312 per hectare.
- Net earnings amounted to PhP 286,548 per hectare.
- Production cost of cauliflower was PhP 11.81 per kilogram while farmgate price was PhP 38.05 per kilogram.
- For every peso of investment in cauliflower production, farmers received PhP 2.22.

### **EGGPLANT**

- Per hectare, production cost of eggplant averaged PhP 158,248 in 2019. Gross earnings amounted to PhP 285,755 from an average yield of 11,453 kilograms per hectare.
- Net of cash costs, returns amounted to PhP 185,095 per hectare. After deducting the combined cash and non-cash costs, returns settled at PhP 180,742 per hectare.
- Net returns stood at PhP 127,507 per hectare.
- The cost of producing a kilogram of eggplant averaged PhP 13.82. Farmgate price was recorded at PhP 24.95 per kilogram.
- Net profit-cost ratio in eggplant production was computed at 0.81.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **HABITCHUELAS**

- In 2019, the cost of habitchuelas production per hectare averaged PhP 92,848. An average yield of 4,537 kilograms per hectare was valued at PhP 124,846.
- Less of cash costs, returns amounted to PhP 83,068 per hectare. After deducting cash and non-cash costs, returns reached PhP 81,068 per hectare.
- Net of all costs, returns amounted to PhP 31,998 per hectare.
- Per kilogram, the average cost of producing habitchuelas was PhP 20.47 while farmgate price was quoted at PhP 27.52.
- Farmers gained PhP 0.34 for every peso of investment in habitchuelas production.

### **WHITE POTATO**

- White potato growers incurred an average production cost of PhP 210,079 per hectare in 2019. Gross receipts amounted to PhP 493,629 from an average yield of 15,445 kilograms per hectare.
- Returns above cash costs amounted to PhP 364,862 per hectare. Returns above cash and non-cash costs averaged PhP 353,683 per hectare.
- Net profit amounted to PhP 283,550 per hectare.
- The cost of producing white potato averaged PhP 13.60 per kilogram and the price received by farmers was PhP 31.96 per kilogram.
- Per peso investment in white potato production, farmers netted PhP 1.35.

### **STRINGBEANS**

- In 2019, farmers spent an average cost of PhP 175,818 in producing a one hectare of stringbeans. From an average yield of 15,184 kilograms per hectare, farmers grossed PhP 424,687.
- Gross returns less of cash costs amounted to PhP 345,532 per hectare. Deducting both cash and non-cash costs, returns settled at PhP 341,583 per hectare.
- After all costs were subtracted, farmers netted PhP 248,870 per hectare.
- Producing a kilogram of stringbeans incurred an average cost of PhP 11.58. The price received by farmers was PhP 27.97 per kilogram.
- A net gain of PhP 1.42 was generated for every peso invested in stringbeans production.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **TOMATO**

- The cost of producing tomato averaged PhP 233,052 per hectare in 2019. The average yield of 13,649 kilograms of tomato per hectare amounted to PhP 246,767.
- Returns settled at PhP 70,580 per hectare after deducting cash costs. Less of cash and non-cash costs, returns amounted to PhP 70,281 per hectare.
- Net of all costs, returns settled at PhP 13,715 per hectare.
- The cost of producing a kilogram of tomato averaged PhP 17.08, while farmgate price was PhP 18.08 per kilogram.
- Net profit-cost ratio was computed at 0.06.

## **LEGUMES**

### **MONGO**

- In 2019, the production cost of mongo averaged PhP 22,247 per hectare. Average yield per hectare of 869 kilograms was equivalent to gross earnings of PhP 48,689.
- After cash costs were subtracted, returns amounted to PhP 40,319 per hectare. Subtracting both cash and non-cash costs, returns figured to PhP 37,005 per hectare.
- After considering all costs, mongo farmers netted of PhP 26,442 per hectare.
- Per kilogram, the average production cost was PhP 25.61 while farmgate price was PhP 56.05.
- A peso invested in mongo production, farmers earned PhP 1.19.

### **PEANUT**

- The production cost of peanut per hectare in 2019 was PhP 40,499. Gross receipts amounted to PhP 72,116 from the average yield of 1,674 kilograms per hectare.
- After cash costs were subtracted, returns amounted to PhP 49,582 per hectare. Less of cash and non-cash costs, returns settled at PhP 45,272 per hectare.
- Net earnings from peanut production averaged PhP 31,617 per hectare.
- The production cost per kilogram of peanut was estimated at PhP 24.20 and the farmgate price was PhP 43.09 per kilogram.
- For every peso of investment, peanut farmers gained PhP 0.78.

## **UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES**

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### **COMMERCIAL CROP**

#### **COFFEE**

- In 2019, the maintenance cost in coffee production averaged PhP 42,642 per hectare. The average yield per hectare of 536 kilograms grossed PhP 46,366.
- Returns above cash costs amounted to PhP 16,046 per hectare. Returns above cash and non-cash costs figured to PhP 14, 898 per hectare.
- Net profit was recorded at PhP 3,724 per hectare.
- On a per kilogram basis, average production cost was PhP 79.56 while producer's price stood at PhP 86.50.
- Net profit of PhP 0.09 was realized for every peso of investment in coffee production.

### **FISHERIES**

#### **MILKFISH (BRACKISHWATER FISHPOND)**

- The average cost of producing milkfish in one hectare of brackishwater fishpond was estimated at PhP 45,980 in 2019. At a yield of 1,110 kilogram of milkfish per hectare, growers grossed PhP 111,640.
- Returns after subtracting cash costs amounted to PhP 76,899 per hectare while returns less of cash and non-cash costs settled at PhP 76,052 per hectare.
- Net profit from milkfish production was computed at PhP 65,660 per hectare.
- Production cost per kilogram averaged PhP 41.43. Farmgate price was PhP 100.59 per kilogram.
- Growers earned PhP 1.43 per peso of investment in milkfish production.

#### **TILAPIA**

- Tilapia producers in 2019 incurred an average production cost of PhP 302,400 per hectare. Gross earnings reached PhP 486,890 from an average yield of 6,048 kilograms per hectare.
- Less of cash costs, returns amounted to PhP 229,931 per hectare. Net of cash and non-cash costs, returns averaged PhP 227,230 per hectare.
- After all costs were deducted, net returns stood at PhP 184,490 per hectare.
- The cost of producing a kilogram of tilapia was PhP 50.00 while price received by growers was PhP 80.51 per kilogram.
- A net gain of PhP 0.61 was computed for every peso invested in tilapia production.

**STATISTICAL TABLES  
AND  
FIGURES**

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table A. Summary of Updated Average Costs of Production, Selected Commodities, Philippines, 2019

| Commodity              | Gross Returns (PhP/ha) | Total Costs (PhP/ha) | Net Returns (PhP/ha) | Net Profit-Cost Ratio | Cost per Kilogram (PhP) | Yield per Hectare (kg/ha) | Farmgate Price (PhP/kg) | Return on Investments (percent) |
|------------------------|------------------------|----------------------|----------------------|-----------------------|-------------------------|---------------------------|-------------------------|---------------------------------|
| 1. Calamansi           | 153,218                | 76,890               | 76,328               | 0.99                  | 11.97                   | 6,422                     | 23.86                   | 99                              |
| 2. Durian              | 186,732                | 108,072              | 78,660               | 0.73                  | 22.73                   | 4,754                     | 39.28                   | 73                              |
| 3. Mango               | 156,336                | 92,421               | 63,915               | 0.69                  | 23.37                   | 3,954                     | 39.54                   | 69                              |
| 4. Papaya              | 172,187                | 178,359              | -6,172               | -0.03                 | 8.34                    | 21,377                    | 8.05                    | -3                              |
| 5. Pineapple           | 453,070                | 94,927               | 358,143              | 3.77                  | 2.28                    | 41,604                    | 10.89                   | 377                             |
| 6. Watermelon          | 250,597                | 78,421               | 172,176              | 2.20                  | 4.73                    | 16,596                    | 15.10                   | 220                             |
| 7. Cashew Nut          | 46,433                 | 9,670                | 36,763               | 3.80                  | 11.45                   | 845                       | 54.97                   | 380                             |
| 8. Pili Nut            | 178,218                | 36,746               | 141,472              | 3.85                  | 11.11                   | 3,308                     | 53.88                   | 385                             |
| 9. Cassava             | 97,632                 | 42,204               | 55,428               | 1.31                  | 3.57                    | 11,834                    | 8.25                    | 131                             |
| 10. Sweet Potato       | 117,051                | 38,221               | 78,830               | 2.06                  | 6.06                    | 6,310                     | 18.55                   | 206                             |
| 11. Onion (Red)        | 471,048                | 158,490              | 312,558              | 1.97                  | 13.83                   | 11,464                    | 41.09                   | 197                             |
| 12. Onion (Multiplier) | 291,128                | 118,182              | 172,946              | 1.46                  | 12.15                   | 9,727                     | 29.93                   | 146                             |
| 13. Garlic             | 251,318                | 124,026              | 127,292              | 1.03                  | 44.65                   | 2,778                     | 90.47                   | 103                             |
| 14. Ampalaya           | 313,972                | 194,522              | 119,450              | 0.61                  | 23.25                   | 8,368                     | 37.52                   | 61                              |
| 15. Cabbage            | 289,170                | 143,633              | 145,537              | 1.01                  | 8.80                    | 16,319                    | 17.72                   | 101                             |
| 16. Carrot             | 364,171                | 112,654              | 251,517              | 2.23                  | 7.88                    | 14,298                    | 25.47                   | 223                             |
| 17. Cauliflower        | 415,465                | 128,917              | 286,548              | 2.22                  | 11.81                   | 10,919                    | 38.05                   | 222                             |
| 18. Eggplant           | 285,755                | 158,248              | 127,507              | 0.81                  | 13.82                   | 11,453                    | 24.95                   | 81                              |
| 19. Habichuelas        | 124,846                | 92,848               | 31,998               | 0.34                  | 20.47                   | 4,537                     | 27.52                   | 34                              |
| 20. White Potato       | 493,629                | 210,079              | 283,550              | 1.35                  | 13.60                   | 15,445                    | 31.96                   | 135                             |
| 21. Stringbeans        | 424,687                | 175,818              | 248,870              | 1.42                  | 11.58                   | 15,184                    | 27.97                   | 142                             |
| 22. Tomato             | 246,767                | 233,052              | 13,715               | 0.06                  | 17.08                   | 13,649                    | 18.08                   | 6                               |
| 23. Mongo              | 48,689                 | 22,247               | 26,442               | 1.19                  | 25.61                   | 869                       | 56.05                   | 119                             |
| 24. Peanut             | 72,116                 | 40,499               | 31,617               | 0.78                  | 24.20                   | 1,674                     | 43.09                   | 78                              |
| 25. Coffee             | 46,366                 | 42,642               | 3,724                | 0.09                  | 79.56                   | 536                       | 86.50                   | 9                               |
| 26. Milkfish           | 111,640                | 45,980               | 65,660               | 1.43                  | 41.43                   | 1,110                     | 100.59                  | 143                             |
| 27. Tilapia            | 486,890                | 302,400              | 184,490              | 0.61                  | 50.00                   | 6,048                     | 80.51                   | 61                              |

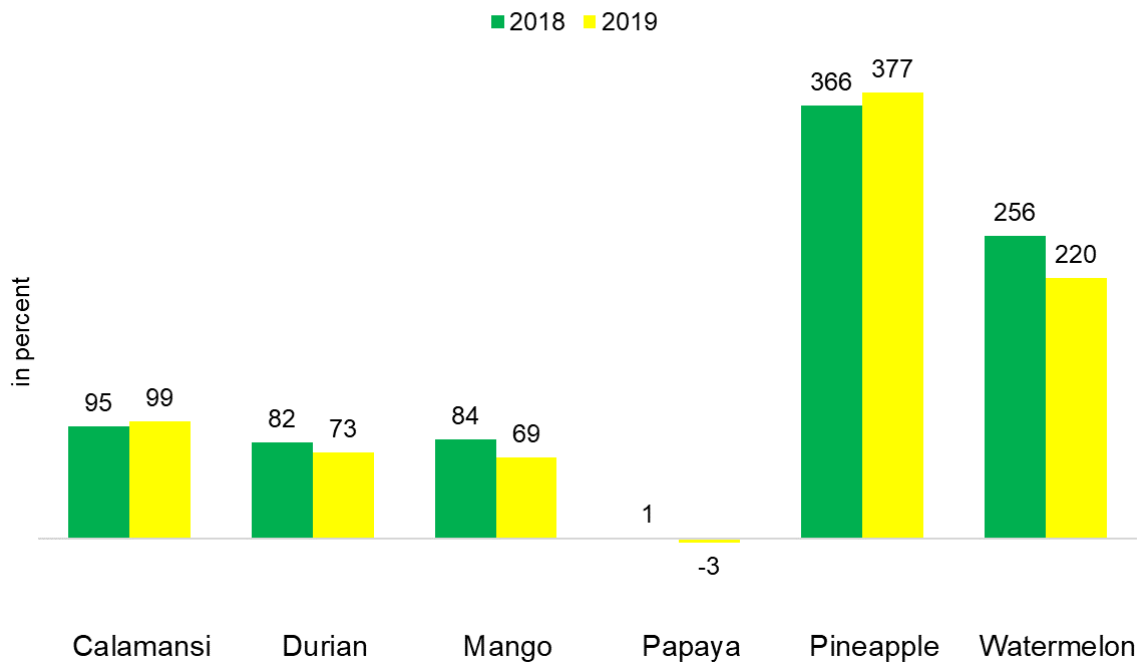
# FRUITS



## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 1. Return on Investments (ROI) of Selected Fruits,  
Philippines, 2018 - 2019



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 1. Calamansi: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 44,893                      | 48,532  | 52,062  |
| Fertilizer                                   | 5,016                       | 5,286   | 5,547   |
| Pesticides                                   | 899                         | 864     | 1,003   |
| Hired labor                                  | 33,471                      | 36,564  | 39,527  |
| Wages for overseer                           | 713                         | 779     | 842     |
| Land tax                                     | 443                         | 447     | 452     |
| Rentals                                      | 121                         | 143     | 146     |
| Fuel and oil                                 | 586                         | 627     | 632     |
| Transport of inputs                          | 600                         | 639     | 646     |
| Interest on crop loan                        | 61                          | 67      | 73      |
| Food expense                                 | 1,389                       | 1,480   | 1,507   |
| Repairs                                      | 1,583                       | 1,620   | 1,671   |
| Irrigation fee                               | 14                          | 17      | 17      |
| <b>NON-CASH COSTS</b>                        | 1,226                       | 1,455   | 1,520   |
| Hired labor paid in kind                     | 102                         | 111     | 120     |
| Wages for overseer (paid in kind)            | 378                         | 413     | 446     |
| Landlord's share                             | 111                         | 141     | 137     |
| Harvester's share                            | 307                         | 377     | 412     |
| Lease rental                                 | 328                         | 414     | 404     |
| <b>IMPUTED COSTS</b>                         | 18,818                      | 21,865  | 23,308  |
| Operator and family labor                    | 6,928                       | 7,568   | 8,181   |
| Exchange labor                               | 14                          | 15      | 17      |
| Depreciation                                 | 3,232                       | 3,555   | 3,911   |
| Interest on operating capital                | 2,258                       | 2,670   | 3,325   |
| Rental value of owned land                   | 6,386                       | 8,056   | 7,875   |
| <b>TOTAL COSTS</b>                           | 64,937                      | 71,852  | 76,890  |
| <b>GROSS RETURNS</b>                         | 114,084                     | 140,149 | 153,218 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 69,191                      | 91,617  | 101,156 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 67,965                      | 90,162  | 99,636  |
| <b>NET RETURNS</b>                           | 49,147                      | 68,297  | 76,328  |
| <b>NET PROFIT - COST RATIO</b>               | 0.76                        | 0.95    | 0.99    |
| <i>Cost per kilogram (PhP)</i>               | 11.01                       | 12.51   | 11.97   |
| <i>Yield per hectare (kg/ha)</i>             | 5,896                       | 5,741   | 6,422   |
| <i>Farmgate price (PhP/kg)</i>               | 19.35                       | 24.41   | 23.86   |

\* - Refers to maintenance costs only

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 2. Durian: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 23,206                      | 24,382  | 25,726  |
| Fertilizer                                   | 11,023                      | 11,638  | 12,304  |
| Pesticides                                   | 537                         | 516     | 599     |
| Other material inputs                        | 13                          | 14      | 14      |
| Hired labor                                  | 6,233                       | 6,809   | 7,360   |
| Land tax                                     | 1,183                       | 1,195   | 1,207   |
| Land rental                                  | 941                         | 776     | 735     |
| Transportation cost of inputs                | 1,245                       | 1,327   | 1,341   |
| Fuel and oil                                 | 14                          | 15      | 15      |
| Food expense                                 | 681                         | 726     | 739     |
| Repairs                                      | 1,336                       | 1,368   | 1,411   |
| <b>NON-CASH COSTS</b>                        | 57,218                      | 58,390  | 61,032  |
| Hired labor (paid in kind)                   | 31,412                      | 34,315  | 37,095  |
| Landlord's share                             | 611                         | 504     | 477     |
| Harvester's share                            | 25,195                      | 23,571  | 23,460  |
| <b>IMPUTED COSTS</b>                         | 21,348                      | 20,572  | 21,314  |
| Operator/family labor                        | 6,149                       | 6,717   | 7,261   |
| Exchange labor                               | 390                         | 426     | 460     |
| Depreciation                                 | 3,204                       | 3,524   | 3,877   |
| Interest on operating capital                | 1,002                       | 1,165   | 1,437   |
| Rental value of owned land                   | 10,603                      | 8,740   | 8,279   |
| <b>TOTAL COSTS</b>                           | 101,772                     | 103,344 | 108,072 |
| <b>GROSS RETURNS</b>                         | 200,544                     | 187,618 | 186,732 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 177,338                     | 163,236 | 161,006 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 120,120                     | 104,846 | 99,974  |
| <b>NET RETURNS</b>                           | 98,772                      | 84,274  | 78,660  |
| <b>NET PROFIT - COST RATIO</b>               | 0.97                        | 0.82    | 0.73    |
| <i>Cost per kilogram (PhP)</i>               | 25.53                       | 22.84   | 22.73   |
| <i>Yield per hectare (kg/ha)</i>             | 3,986                       | 4,524   | 4,754   |
| <i>Farmgate price (PhP/kg)</i>               | 50.31                       | 41.47   | 39.28   |

\* - Refers to maintenance costs only

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 3. Mango: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 44,102                      | 46,234  | 49,224  |
| Fertilizer                                   | 13,412                      | 14,011  | 14,842  |
| Pesticides                                   | 7,092                       | 6,815   | 7,914   |
| Hired labor                                  | 13,245                      | 14,469  | 15,201  |
| Land tax                                     | 840                         | 848     | 856     |
| Rentals                                      | 2,528                       | 2,634   | 2,639   |
| Water/electric bills                         | 283                         | 303     | 305     |
| Fuel and oil                                 | 1,771                       | 1,894   | 1,909   |
| Interest on crop loan                        | 2,007                       | 2,208   | 2,429   |
| Food expense                                 | 1,414                       | 1,507   | 1,534   |
| Repairs                                      | 1,510                       | 1,545   | 1,594   |
| <b>NON-CASH COSTS</b>                        | 6,941                       | 6,946   | 6,726   |
| Hired labor (paid in kind)                   | 831                         | 908     | 954     |
| Rentals (machine and vehicle)                | 155                         | 169     | 178     |
| Landlord's share                             | 4,991                       | 4,946   | 4,690   |
| Harvesters' share                            | 964                         | 923     | 904     |
| <b>IMPUTED COSTS</b>                         | 30,951                      | 33,685  | 36,471  |
| Operator and family labor                    | 6,584                       | 7,193   | 7,557   |
| Depreciation                                 | 18,914                      | 20,805  | 22,885  |
| Interest on operating capital                | 1,900                       | 2,167   | 2,690   |
| Rental value of owned land                   | 3,553                       | 3,521   | 3,339   |
| <b>TOTAL COSTS</b>                           | 81,994                      | 86,865  | 92,421  |
| <b>GROSS RETURNS</b>                         | 166,676                     | 159,630 | 156,336 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 122,574                     | 113,396 | 107,112 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 115,633                     | 106,450 | 100,386 |
| <b>NET RETURNS</b>                           | 84,682                      | 72,765  | 63,915  |
| <b>NET PROFIT - COST RATIO</b>               | 1.03                        | 0.84    | 0.69    |
| <i>Cost per kilogram (PhP)</i>               | 20.70                       | 22.69   | 23.37   |
| <i>Yield per hectare (kg/ha)</i>             | 3,962                       | 3,829   | 3,954   |
| <i>Farmgate price (PhP/kg)</i>               | 42.07                       | 41.69   | 39.54   |

\*- Refers to maintenance costs only

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 4. Papaya: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 113,348                     | 121,410 | 129,490 |
| Fertilizer                            | 27,878                      | 29,564  | 31,278  |
| Pesticides                            | 4,372                       | 4,201   | 4,879   |
| Other material inputs                 | 9                           | 10      | 10      |
| Hired labor                           | 41,744                      | 45,602  | 49,297  |
| Land tax                              | 317                         | 320     | 323     |
| Rentals                               | 4,400                       | 4,410   | 4,674   |
| Fuel and oil                          | 10,042                      | 10,740  | 10,823  |
| Transport costs of inputs             | 5,907                       | 6,296   | 6,362   |
| Irrigation fee                        | 69                          | 66      | 69      |
| Interest on crop loan                 | 13,015                      | 14,316  | 15,748  |
| Food expenses                         | 2,041                       | 2,176   | 2,215   |
| Repairs                               | 1,464                       | 1,499   | 1,546   |
| Landlord's share                      | 34                          | 33      | 35      |
| Wages for overseer                    | 144                         | 158     | 170     |
| Electric bill                         | 511                         | 547     | 551     |
| Others                                | 1,400                       | 1,473   | 1,509   |
| NON-CASH COSTS                        | 230                         | 230     | 242     |
| Hired labor (paid in kind)            | 66                          | 72      | 77      |
| Landlord's share                      | 126                         | 121     | 127     |
| Harvester's share                     | 38                          | 37      | 38      |
| IMPUTED COSTS                         | 39,970                      | 43,879  | 48,627  |
| Operator/family labor                 | 11,265                      | 12,306  | 13,304  |
| Depreciation                          | 22,461                      | 24,707  | 27,178  |
| Interest on operating capital         | 4,166                       | 4,873   | 6,057   |
| Rental value of owned land            | 2,077                       | 1,993   | 2,088   |
| TOTAL COSTS                           | 153,548                     | 165,519 | 178,359 |
| GROSS RETURNS                         | 171,884                     | 167,009 | 172,187 |
| RETURNS ABOVE CASH COSTS              | 58,536                      | 45,599  | 42,697  |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 58,306                      | 45,369  | 42,455  |
| NET RETURNS                           | 18,336                      | 1,490   | -6,172  |
| NET PROFIT - COST RATIO               | 0.12                        | 0.01    | -0.03   |
| <i>Cost per kilogram (PhP)</i>        | 7.16                        | 7.62    | 8.34    |
| <i>Yield per hectare(kg/ha)</i>       | 21,453                      | 21,732  | 21,377  |
| <i>Farmgate price (PhP/kg)</i>        | 8.01                        | 7.68    | 8.05    |

\* - Refers to maintenance costs only

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 5. Pineapple: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 66,790                      | 69,933  | 75,091  |
| Seeds/planting materials              | 24,017                      | 25,052  | 27,473  |
| Fertilizer                            | 14,206                      | 14,402  | 15,266  |
| Pesticides                            | 1,578                       | 1,516   | 1,760   |
| Other material inputs                 | 937                         | 950     | 1,007   |
| Hired labor                           | 14,476                      | 15,813  | 16,614  |
| Land tax                              | 331                         | 334     | 337     |
| Rentals                               | 3,933                       | 4,108   | 4,499   |
| Fuel and oil                          | 94                          | 101     | 101     |
| Transport of inputs                   | 1,853                       | 1,975   | 1,996   |
| Irrigation fee                        | 308                         | 321     | 352     |
| Interest on crop loan                 | 2,127                       | 2,340   | 2,574   |
| Food expenses                         | 534                         | 570     | 580     |
| Repairs                               | 2,397                       | 2,453   | 2,530   |
| NON-CASH COSTS                        | 1,035                       | 1,080   | 1,184   |
| Hired labor (paid in kind)            | 5                           | 6       | 6       |
| Landlord's share                      | 7                           | 7       | 8       |
| Harvesters' share                     | 5                           | 5       | 5       |
| Lease rental                          | 1,018                       | 1,062   | 1,164   |
| IMPUTED COSTS                         | 15,412                      | 16,968  | 18,653  |
| Operator and family labor             | 9,066                       | 9,903   | 10,405  |
| Exchange labor                        | 465                         | 508     | 533     |
| Depreciation                          | 2,121                       | 2,333   | 2,567   |
| Interest on operating capital         | 3,109                       | 3,544   | 4,403   |
| Rental value of owned land            | 651                         | 680     | 745     |
| TOTAL COSTS                           | 83,236                      | 87,981  | 94,927  |
| GROSS RETURNS                         | 385,388                     | 409,707 | 453,070 |
| RETURNS ABOVE CASH COSTS              | 318,598                     | 339,774 | 377,979 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 317,563                     | 338,695 | 376,796 |
| NET RETURNS                           | 302,152                     | 321,726 | 358,143 |
| NET PROFIT - COST RATIO               | 3.63                        | 3.66    | 3.77    |
| <i>Cost per kilogram (PhP)</i>        | 2.06                        | 2.13    | 2.28    |
| <i>Yield per hectare (kg/ha)</i>      | 40,482                      | 41,260  | 41,604  |
| <i>Farmgate price (PhP/kg)</i>        | 9.52                        | 9.93    | 10.89   |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 6. Watermelon: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 43,128                      | 46,160  | 49,587  |
| Seeds/planting materials              | 766                         | 876     | 923     |
| Fertilizer                            | 11,899                      | 12,533  | 13,283  |
| Pesticides                            | 3,284                       | 3,156   | 3,665   |
| Other material inputs                 | 47                          | 50      | 53      |
| Hired labor                           | 20,422                      | 22,309  | 24,117  |
| Land tax                              | 297                         | 300     | 303     |
| Rentals                               | 2,145                       | 2,390   | 2,554   |
| Fuel and oil                          | 949                         | 1,015   | 1,023   |
| Transport cost of inputs              | 339                         | 361     | 365     |
| Irrigation fee                        | 59                          | 68      | 71      |
| Interest on crop loan                 | 673                         | 740     | 814     |
| Food expenses                         | 1,452                       | 1,548   | 1,576   |
| Repairs                               | 795                         | 814     | 840     |
| NON-CASH COSTS                        | 582                         | 657     | 693     |
| Seeds                                 | 74                          | 85      | 90      |
| Hired labor (paid in kind)            | 81                          | 88      | 95      |
| Landlord's share                      | 87                          | 99      | 104     |
| Harvester's share                     | 28                          | 29      | 28      |
| Lease rental                          | 312                         | 356     | 376     |
| IMPUTED COSTS                         | 23,257                      | 25,635  | 28,141  |
| Operator and family labor             | 16,020                      | 17,501  | 18,919  |
| Exchange labor                        | 934                         | 1,020   | 1,103   |
| Depreciation                          | 3,171                       | 3,488   | 3,836   |
| Interest on operating capital         | 2,050                       | 2,390   | 2,979   |
| Rental value of owned land            | 1,083                       | 1,237   | 1,304   |
| TOTAL COSTS                           | 66,968                      | 72,452  | 78,421  |
| GROSS RETURNS                         | 252,738                     | 257,777 | 250,597 |
| RETURNS ABOVE CASH COSTS              | 209,610                     | 211,617 | 201,010 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 209,028                     | 210,960 | 200,317 |
| NET RETURNS                           | 185,770                     | 185,325 | 172,176 |
| NET PROFIT - COST RATIO               | 2.77                        | 2.56    | 2.20    |
| <i>Cost per kilogram (PhP)</i>        | 3.32                        | 4.03    | 4.73    |
| <i>Yield per hectare (kg/ha)</i>      | 20,155                      | 17,989  | 16,596  |
| <i>Farmgate price (PhP/kg)</i>        | 12.54                       | 14.33   | 15.10   |

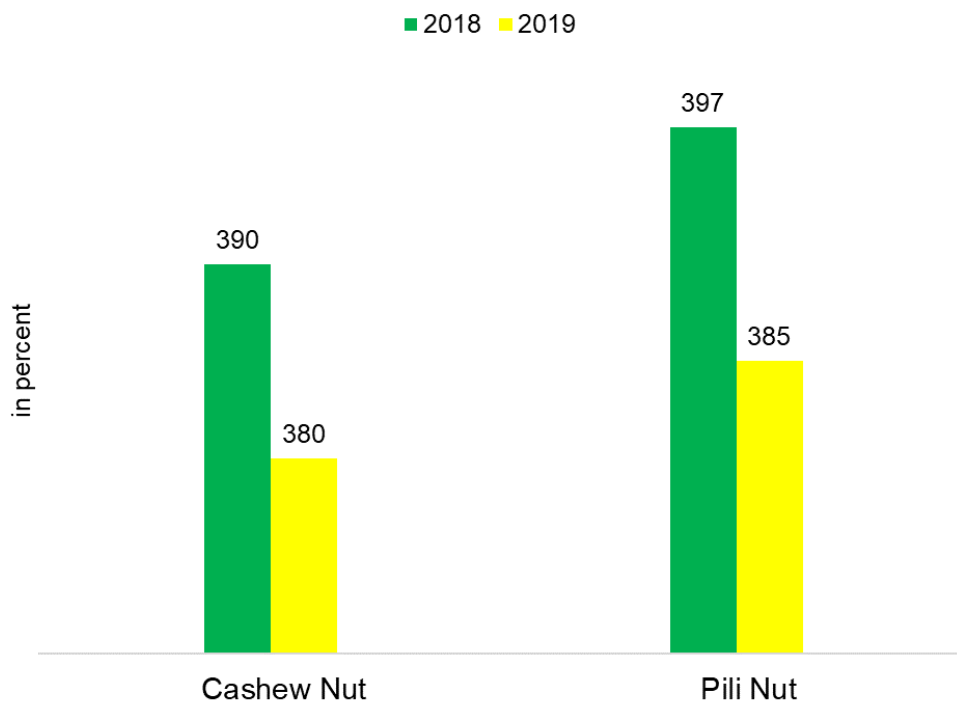
**NUTS**



## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 2. Return on Investments (ROI) of Selected Nuts,  
Philippines, 2018 - 2019



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 7. Cashew Nut: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM                                  | 2017                        | 2018   | 2019   |
|---------------------------------------|-----------------------------|--------|--------|
|                                       | <i>(in PhP per hectare)</i> |        |        |
| CASH COSTS                            | 1,057                       | 1,119  | 1,174  |
| Fertilizer                            | 2                           | 2      | 2      |
| Hired labor                           | 507                         | 554    | 599    |
| Land tax                              | 245                         | 247    | 250    |
| Food expense                          | 117                         | 125    | 127    |
| Repairs                               | 186                         | 191    | 197    |
| NON-CASH COSTS                        | 562                         | 660    | 691    |
| Hired labor (paid in kind)            | 310                         | 339    | 366    |
| Landlord's share                      | 77                          | 97     | 94     |
| Harvester's share                     | 175                         | 224    | 230    |
| IMPUTED COSTS                         | 6,538                       | 7,458  | 7,805  |
| Operator/family labor                 | 4,194                       | 4,582  | 4,953  |
| Depreciation                          | 372                         | 409    | 450    |
| Interest on operating capital         | 29                          | 34     | 43     |
| Rental value of owned land            | 1,943                       | 2,433  | 2,359  |
| TOTAL COSTS                           | 8,157                       | 9,237  | 9,670  |
| GROSS RETURNS                         | 35,194                      | 45,218 | 46,433 |
| RETURNS ABOVE CASH COSTS              | 34,137                      | 44,099 | 45,259 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 33,575                      | 43,439 | 44,568 |
| NET RETURNS                           | 27,037                      | 35,981 | 36,763 |
| NET PROFIT - COST RATIO               | 3.31                        | 3.90   | 3.80   |
| <i>Cost per kilogram (PhP)</i>        | 10.49                       | 11.58  | 11.45  |
| <i>Yield per hectare (kg/ha)</i>      | 777                         | 797    | 845    |
| <i>Farmgate price (PhP/kg)</i>        | 45.28                       | 56.70  | 54.97  |

\* - Refers to maintenance costs only

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 8. Pili Nut: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 8,379                       | 9,076   | 9,695   |
| Hired labor                           | 6,398                       | 6,989   | 7,556   |
| Land tax                              | 567                         | 572     | 578     |
| Lease rental                          | 285                         | 332     | 351     |
| Transport of inputs                   | 112                         | 120     | 121     |
| Food expense                          | 518                         | 553     | 562     |
| Repairs                               | 499                         | 511     | 527     |
| NON-CASH COSTS                        | 11,888                      | 14,261  | 14,844  |
| Hired labor in kind                   | 157                         | 172     | 186     |
| Landlord's share                      | 2,689                       | 3,134   | 3,316   |
| Harvester's share                     | 9,042                       | 10,955  | 11,341  |
| IMPUTED COSTS                         | 10,055                      | 11,296  | 12,207  |
| Operator/family labor                 | 4,999                       | 5,461   | 5,904   |
| Depreciation                          | 1,019                       | 1,121   | 1,233   |
| Interest on operating capital         | 360                         | 429     | 535     |
| Rental value of owned land            | 3,676                       | 4,285   | 4,535   |
| TOTAL COSTS                           | 30,322                      | 34,633  | 36,746  |
| GROSS RETURNS                         | 142,092                     | 172,154 | 178,218 |
| RETURNS ABOVE CASH COSTS              | 133,713                     | 163,078 | 168,523 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 121,825                     | 148,817 | 153,680 |
| NET RETURNS                           | 111,770                     | 137,521 | 141,472 |
| NET PROFIT - COST RATIO               | 3.69                        | 3.97    | 3.85    |
| <i>Cost per kilogram (PhP)</i>        | 9.32                        | 10.24   | 11.11   |
| <i>Yield per hectare (kg/ha)</i>      | 3,253                       | 3,382   | 3,308   |
| <i>Farmgate price (PhP/kg)</i>        | 43.68                       | 50.91   | 53.88   |

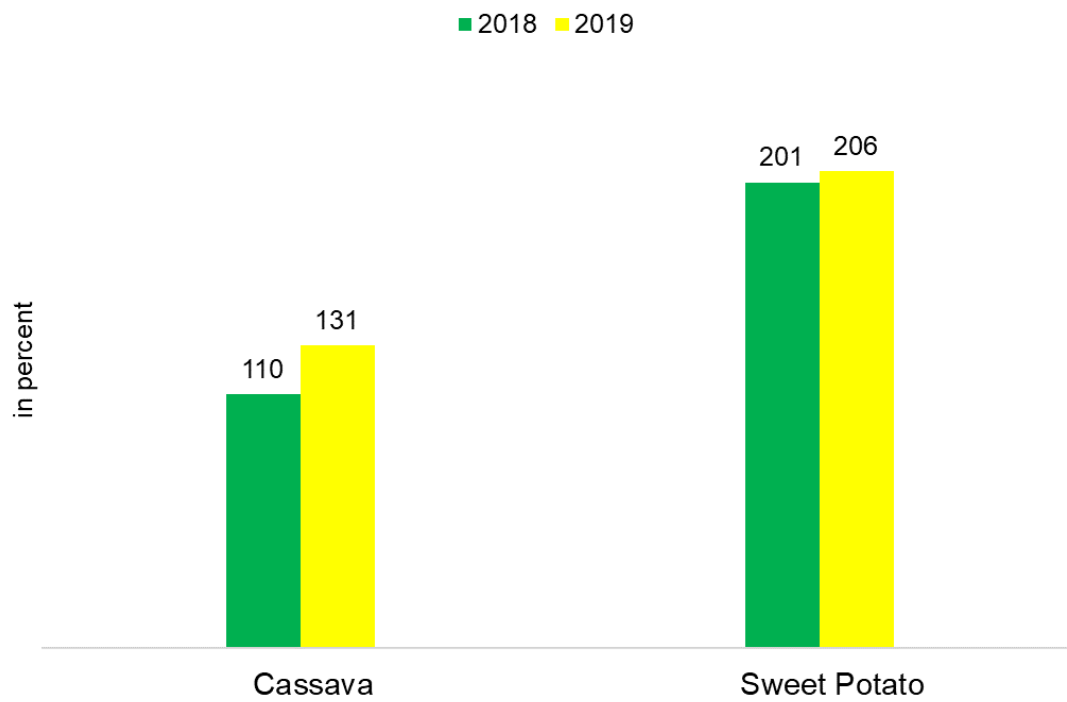
\* - Refers to maintenance cost only

# **ROOT CROPS**

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 3. Return on Investments (ROI) of Selected Root Crops,  
Philippines, 2018 - 2019



## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 9. Cassava: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018   | 2019   |
|---------------------------------------|-----------------------------|--------|--------|
|                                       | <i>(in PhP per hectare)</i> |        |        |
| CASH COSTS                            | 19,757                      | 20,718 | 22,463 |
| Planting materials                    | 293                         | 316    | 306    |
| Fertilizer                            | 3,330                       | 3,393  | 3,516  |
| Pesticides                            | 281                         | 270    | 313    |
| Hired labor                           | 9,261                       | 10,116 | 10,629 |
| Land tax                              | 102                         | 103    | 104    |
| Caretaker/overseer's wages            | 183                         | 200    | 210    |
| Rentals                               | 1,286                       | 1,332  | 1,518  |
| Fuel                                  | 58                          | 62     | 62     |
| Transport cost of inputs              | 60                          | 64     | 65     |
| Interest payment on crop loan         | 173                         | 190    | 209    |
| Landowner's share                     | 3,209                       | 3,103  | 3,916  |
| Repairs                               | 1,243                       | 1,272  | 1,312  |
| Food expense                          | 220                         | 235    | 239    |
| Other costs                           | 58                          | 61     | 63     |
| NON-CASH COSTS                        | 842                         | 816    | 1,025  |
| Planting materials                    | 672                         | 650    | 820    |
| Hired labor                           | 18                          | 19     | 20     |
| Harvesters' share                     | 29                          | 28     | 35     |
| Rentals                               | 6                           | 6      | 7      |
| Landowner's share                     | 117                         | 113    | 142    |
| IMPUTED COSTS                         | 14,713                      | 15,673 | 18,715 |
| Planting materials                    | 563                         | 545    | 687    |
| Fertilizers                           | 1,941                       | 1,977  | 2,049  |
| Pesticides                            | 33                          | 32     | 37     |
| Operator labor                        | 3,469                       | 3,790  | 3,982  |
| Family labor                          | 5,051                       | 5,518  | 5,797  |
| Exchange labor                        | 355                         | 388    | 407    |
| Depreciation                          | 576                         | 634    | 697    |
| Interest on operating capital         | 757                         | 884    | 1,069  |
| Rental value of owned land            | 1,868                       | 1,806  | 3,859  |
| Land tax                              | 93                          | 94     | 124    |
| Other costs                           | 6                           | 7      | 7      |
| TOTAL COSTS                           | 35,312                      | 37,208 | 42,204 |
| GROSS RETURNS                         | 80,905                      | 78,197 | 97,632 |
| RETURNS ABOVE CASH COSTS              | 61,148                      | 57,479 | 75,169 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 60,306                      | 56,663 | 74,143 |
| NET RETURNS                           | 45,593                      | 40,989 | 55,428 |
| NET PROFIT - COST RATIO               | 1.29                        | 1.10   | 1.31   |
| <i>Cost per kilogram (PhP)</i>        | 2.95                        | 3.11   | 3.57   |
| <i>Yield per hectare (kg/ha)</i>      | 11,967                      | 11,962 | 11,834 |
| <i>Farmgate price (PhP/kg)</i>        | 6.76                        | 6.54   | 8.25   |

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 10. Sweet Potato: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 10,562                      | 11,298  | 12,069  |
| Planting materials                    | 154                         | 165     | 180     |
| Fertilizers                           | 1,200                       | 1,263   | 1,340   |
| Pesticides                            | 248                         | 238     | 277     |
| Hired labor                           | 5,321                       | 5,813   | 6,284   |
| Land tax                              | 53                          | 54      | 54      |
| Caretaker / overseer's wages          | 30                          | 33      | 35      |
| Rentals                               | 362                         | 391     | 425     |
| Fuel                                  | 14                          | 15      | 15      |
| Oil                                   | 4                           | 4       | 4       |
| Transport cost of inputs              | 77                          | 82      | 83      |
| Interest payment on crop loan         | 26                          | 29      | 32      |
| Storage costs                         | 3                           | 3       | 4       |
| Electricity                           | 19                          | 20      | 20      |
| Water                                 | 3                           | 3       | 3       |
| Landowner's share                     | 649                         | 697     | 758     |
| Repairs                               | 1,553                       | 1,589   | 1,639   |
| Food expense                          | 595                         | 634     | 645     |
| Others costs                          | 251                         | 264     | 270     |
| NON-CASH COSTS                        | 4,046                       | 4,342   | 4,726   |
| Planting materials                    | 2,686                       | 2,884   | 3,138   |
| Fertilizers                           | 7                           | 7       | 8       |
| Hired Labor                           | 31                          | 34      | 37      |
| Harvesters' share                     | 173                         | 183     | 201     |
| Rentals                               | 10                          | 11      | 12      |
| Landowner's share                     | 1,139                       | 1,222   | 1,330   |
| IMPUTED COSTS                         | 18,076                      | 19,729  | 21,427  |
| Planting materials                    | 924                         | 992     | 1,079   |
| Fertilizers                           | 14                          | 14      | 15      |
| Operator labor                        | 6,569                       | 7,176   | 7,758   |
| Family labor                          | 6,331                       | 6,916   | 7,476   |
| Exchange labor                        | 137                         | 150     | 162     |
| Depreciation                          | 387                         | 425     | 468     |
| Interest on operating capital         | 391                         | 461     | 575     |
| Rental value of owned land            | 1,185                       | 1,273   | 1,385   |
| Rentals                               | 2,060                       | 2,240   | 2,426   |
| Fuel                                  | 5                           | 5       | 5       |
| Transport cost of inputs              | 46                          | 49      | 50      |
| Storage costs                         | 1                           | 1       | 1       |
| Land Tax                              | 21                          | 21      | 21      |
| Others costs                          | 5                           | 6       | 6       |
| TOTAL COSTS                           | 32,684                      | 35,370  | 38,221  |
| GROSS RETURNS                         | 100,412                     | 106,634 | 117,051 |
| RETURNS ABOVE CASH COSTS              | 89,850                      | 95,336  | 104,982 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 85,804                      | 90,994  | 100,257 |
| NET RETURNS                           | 67,728                      | 71,265  | 78,830  |
| NET PROFIT - COST RATIO               | 2.07                        | 2.01    | 2.06    |
| <i>Cost per kilogram (PhP)</i>        | 5.17                        | 5.66    | 6.06    |
| <i>Yield per hectare (kg/ha)</i>      | 6,323                       | 6,254   | 6,310   |
| <i>Farmgate price (PhP/kg)</i>        | 15.88                       | 17.05   | 18.55   |

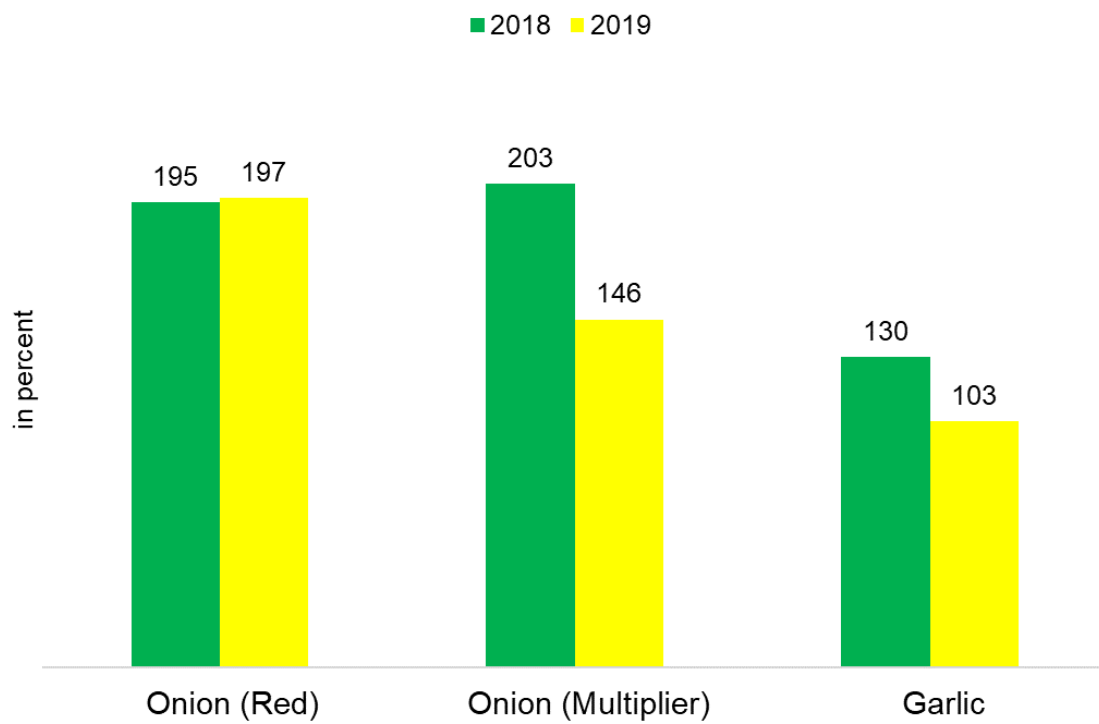
**BULBS**



## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 4. Return on Investments (ROI) of Selected Bulbs,  
Philippines, 2018 - 2019



## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 11. Onion (Red): Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 111,152                     | 121,266 | 122,859 |
| Seeds  | 15,598                      | 18,522  | 15,955  |
| Fertilizers                                  | 16,147                      | 16,904  | 17,967  |
| Pesticides                                   | 9,369                       | 9,003   | 10,455  |
| Mulching materials                           | 8                           | 9       | 9       |
| Hired labor                                  | 38,952                      | 42,552  | 44,707  |
| Caretaker/overseer's wages/employee's salary | 1,953                       | 2,133   | 2,241   |
| Land tax                                     | 438                         | 442     | 446     |
| Rentals                                      | 1,285                       | 1,453   | 1,409   |
| Fuel and Oil                                 | 6,991                       | 7,476   | 7,534   |
| Transport cost of inputs                     | 448                         | 478     | 483     |
| Interest payment on crop loan                | 4,442                       | 4,886   | 5,375   |
| Landowner's share                            | 7,201                       | 8,550   | 7,366   |
| Irrigation fee                               | 369                         | 404     | 424     |
| Storage cost                                 | 868                         | 1,030   | 888     |
| Electricity                                  | 66                          | 70      | 71      |
| Food expense                                 | 3,315                       | 3,534   | 3,597   |
| Repairs                                      | 2,672                       | 2,735   | 2,821   |
| Others                                       | 1,031                       | 1,084   | 1,111   |
| <b>NON-CASH COSTS</b>                        | 8,059                       | 9,141   | 9,033   |
| Fertilizers                                  | 52                          | 55      | 58      |
| Mulching materials                           | 359                         | 375     | 399     |
| Hired labor in kind                          | 76                          | 83      | 88      |
| Harvesters' share                            | 5,383                       | 6,058   | 6,211   |
| Caretaker/overseer's wages                   | 308                         | 336     | 353     |
| Rentals                                      | 1,548                       | 1,838   | 1,583   |
| Landowner's share                            | 312                         | 370     | 319     |
| Irrigation fee                               | 22                          | 26      | 22      |
| <b>IMPUTED COSTS</b>                         | 22,463                      | 25,345  | 26,599  |
| Seeds  | 211                         | 250     | 216     |
| Fertilizers                                  | 92                          | 97      | 103     |
| Mulching material                            | 17                          | 18      | 19      |
| Pesticides (Liquid)                          | 1                           | 1       | 1       |
| Operator labor                               | 7,693                       | 8,403   | 8,829   |
| Family labor                                 | 3,595                       | 3,927   | 4,126   |
| Exchange labor                               | 421                         | 460     | 483     |
| Depreciation                                 | 2,138                       | 2,352   | 2,587   |
| Interest on operating capital                | 4,618                       | 5,471   | 6,473   |
| Rental value of owned land                   | 3,667                       | 4,354   | 3,751   |
| Transport cost of inputs                     | 10                          | 11      | 11      |
| <b>TOTAL COSTS</b>                           | 141,674                     | 155,752 | 158,490 |
| <b>GROSS RETURNS</b>                         | 408,255                     | 459,453 | 471,048 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 297,103                     | 338,187 | 348,189 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 289,044                     | 329,046 | 339,156 |
| <b>NET RETURNS</b>                           | 266,581                     | 303,701 | 312,558 |
| <b>NET PROFIT - COST RATIO</b>               | 1.88                        | 1.95    | 1.97    |
| <i>Cost per kilogram (PhP)</i>               | 13.94                       | 16.17   | 13.83   |
| <i>Yield per hectare (kg/ha)</i>             | 10,163                      | 9,632   | 11,464  |
| <i>Farmgate price (PhP/kg)</i>               | 40.17                       | 47.70   | 41.09   |

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 12. Onion (Multiplier): Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 59,344                      | 62,997  | 64,754  |
| Planting materials                    | 2,340                       | 2,539   | 1,984   |
| Fertilizers                           | 11,131                      | 11,477  | 12,544  |
| Pesticides                            | 5,002                       | 4,807   | 5,582   |
| Mulching Materials                    | 288                         | 297     | 325     |
| Hired labor                           | 20,852                      | 22,780  | 23,933  |
| Other permanent employee's salary     | 323                         | 353     | 371     |
| Land tax                              | 95                          | 96      | 97      |
| Rentals                               | 569                         | 619     | 524     |
| Fuel and Oil                          | 5,115                       | 5,471   | 5,513   |
| Transport cost of inputs              | 361                         | 385     | 389     |
| Interest payment on crop loan         | 1,629                       | 1,792   | 1,971   |
| Landowner's share                     | 4,262                       | 4,624   | 3,613   |
| Irrigation fee                        | 54                          | 59      | 46      |
| Electricity                           | 1,222                       | 1,307   | 1,317   |
| Food expense                          | 3,045                       | 3,246   | 3,304   |
| Repairs                               | 2,350                       | 2,404   | 2,480   |
| Other costs                           | 707                         | 743     | 762     |
| NON-CASH COSTS                        | 31,782                      | 34,320  | 27,905  |
| Planting materials                    | 19,248                      | 20,884  | 16,320  |
| Fertilizers (Organic-Solid)           | 13                          | 13      | 14      |
| Mulching materials                    | 3,058                       | 3,153   | 3,446   |
| Rentals (Machine)                     | 337                         | 368     | 387     |
| Landowner's share                     | 9,126                       | 9,902   | 7,738   |
| IMPUTED COSTS                         | 23,156                      | 25,171  | 25,523  |
| Planting materials                    | 78                          | 85      | 66      |
| Fertilizers                           | 13                          | 13      | 14      |
| Mulching materials                    | 139                         | 144     | 157     |
| Operator labor                        | 9,625                       | 10,514  | 11,046  |
| Family labor                          | 5,146                       | 5,622   | 5,906   |
| Exchange labor                        | 424                         | 463     | 486     |
| Depreciation                          | 1,145                       | 1,259   | 1,385   |
| Interest on operating capital         | 2,825                       | 2,999   | 3,211   |
| Rental value of owned land            | 3,499                       | 3,796   | 2,966   |
| Transport cost of inputs              | 65                          | 70      | 70      |
| Other costs                           | 197                         | 207     | 212     |
| TOTAL COSTS                           | 114,282                     | 122,488 | 118,182 |
| GROSS RETURNS                         | 348,207                     | 370,963 | 291,128 |
| RETURNS ABOVE CASH COSTS              | 288,863                     | 307,966 | 226,374 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 257,081                     | 273,646 | 198,469 |
| NET RETURNS                           | 233,925                     | 248,475 | 172,946 |
| NET PROFIT - COST RATIO               | 2.05                        | 2.03    | 1.46    |
| <i>Cost per kilogram (PhP)</i>        | 11.59                       | 12.65   | 12.15   |
| <i>Yield per hectare (kg/ha)</i>      | 9,864                       | 9,686   | 9,727   |
| <i>Farmgate price (PhP/kg)</i>        | 35.30                       | 38.30   | 29.93   |

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

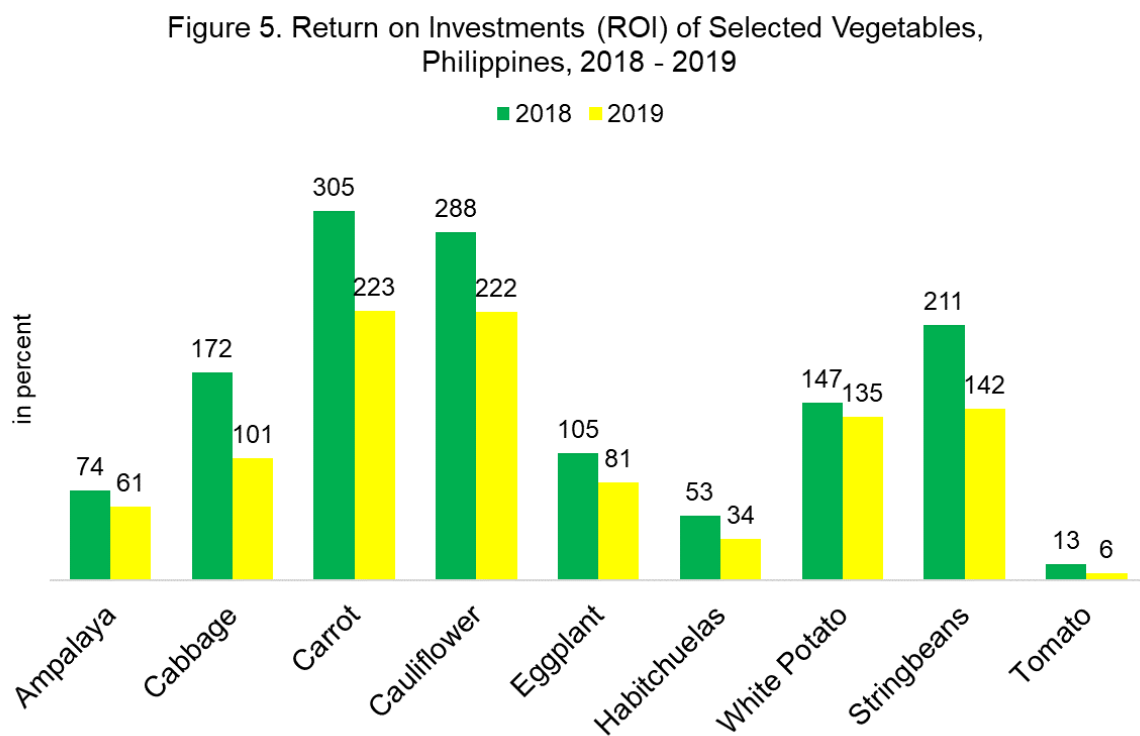
Table 13. Garlic: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 51,762                      | 54,095  | 55,958  |
| Planting materials (cloves)                  | 6,648                       | 6,289   | 5,671   |
| Fertilizers                                  | 8,107                       | 8,531   | 9,094   |
| Mulching materials                           | 134                         | 141     | 150     |
| Pesticides                                   | 4,028                       | 3,871   | 4,495   |
| Hired labor                                  | 19,298                      | 21,081  | 22,149  |
| Caretaker/overseer's wages                   | 127                         | 139     | 146     |
| Land tax                                     | 336                         | 339     | 343     |
| Rentals                                      | 331                         | 343     | 342     |
| Fuel and Oil                                 | 4,269                       | 4,565   | 4,601   |
| Transport cost of inputs                     | 431                         | 459     | 464     |
| Interest payment on crop loan                | 1,116                       | 1,227   | 1,350   |
| Landowner's share                            | 879                         | 784     | 690     |
| Irrigation fee                               | 104                         | 98      | 89      |
| Electricity                                  | 243                         | 260     | 262     |
| Food expense                                 | 2,766                       | 2,949   | 3,002   |
| Repairs                                      | 2,845                       | 2,911   | 3,003   |
| Other costs                                  | 100                         | 105     | 108     |
| <b>NON-CASH COSTS</b>                        | 25,493                      | 24,441  | 22,562  |
| Planting materials (cloves)                  | 13,651                      | 12,913  | 11,645  |
| Fertilizers                                  | 78                          | 83      | 88      |
| Mulching materials                           | 2,638                       | 2,775   | 2,958   |
| Pesticides (Liquid)                          | 5                           | 5       | 5       |
| Hired labor in kind                          | 268                         | 293     | 308     |
| Harvesters' share                            | 241                         | 216     | 190     |
| Caretaker/overseer's wages                   | 19                          | 21      | 22      |
| Rentals                                      | 648                         | 619     | 566     |
| Interest payment on crop loan                | 6                           | 6       | 7       |
| Landowner's share                            | 7,696                       | 7,280   | 6,566   |
| Irrigation fee                               | 243                         | 229     | 207     |
| <b>IMPUTED COSTS</b>                         | 44,584                      | 45,783  | 45,505  |
| Planting materials (cloves)                  | 11,667                      | 11,037  | 9,953   |
| Fertilizers                                  | 714                         | 751     | 801     |
| Mulching materials                           | 274                         | 288     | 307     |
| Pesticides                                   | 7                           | 7       | 8       |
| Operator labor                               | 12,082                      | 13,199  | 13,867  |
| Family labor                                 | 8,127                       | 8,878   | 9,327   |
| Exchange labor                               | 398                         | 435     | 457     |
| Depreciation                                 | 1,675                       | 1,842   | 2,027   |
| Interest on operating capital                | 2,140                       | 2,235   | 2,327   |
| Rental value of owned land                   | 7,363                       | 6,965   | 6,281   |
| Transport cost of inputs                     | 94                          | 100     | 101     |
| Interest payment on crop loan                | 15                          | 16      | 18      |
| Other costs                                  | 29                          | 30      | 31      |
| <b>TOTAL COSTS</b>                           | 121,839                     | 124,319 | 124,026 |
| <b>GROSS RETURNS</b>                         | 320,008                     | 285,735 | 251,318 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 268,246                     | 231,640 | 195,360 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 242,753                     | 207,199 | 172,798 |
| <b>NET RETURNS</b>                           | 198,169                     | 161,416 | 127,292 |
| <b>NET PROFIT - COST RATIO</b>               | 1.63                        | 1.30    | 1.03    |
| <i>Cost per kilogram (PhP)</i>               | 40.38                       | 43.65   | 44.65   |
| <i>Yield per hectare (kg/ha)</i>             | 3,018                       | 2,848   | 2,778   |
| <i>Farmgate price (PhP/kg)</i>               | 106.05                      | 100.32  | 90.47   |

# **VEGETABLES**

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 14. Ampalaya: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 80,050                      | 85,896  | 91,484  |
| Seeds/planting materials              | 8,440                       | 10,006  | 9,789   |
| Fertilizers:                          | 14,987                      | 16,004  | 17,110  |
| Pesticides                            | 12,547                      | 12,056  | 14,001  |
| Hired labor                           | 23,862                      | 26,067  | 28,180  |
| Land tax                              | 248                         | 250     | 253     |
| Rentals                               | 3,635                       | 4,181   | 4,245   |
| Fuel and oil                          | 3,384                       | 3,619   | 3,647   |
| Transport cost of inputs              | 1,921                       | 2,048   | 2,070   |
| Irrigation fee                        | 14                          | 16      | 16      |
| Interest on crop loan                 | 2,766                       | 3,043   | 3,347   |
| Food expense                          | 1,904                       | 2,030   | 2,066   |
| Repairs                               | 3,361                       | 3,440   | 3,548   |
| Others                                | 2,980                       | 3,135   | 3,213   |
| NON-CASH COSTS                        | 3,304                       | 3,788   | 3,800   |
| Seeds/planting materials              | 1,548                       | 1,835   | 1,795   |
| Hired labor (paid in kind)            | 547                         | 598     | 646     |
| Landlord's share                      | 390                         | 462     | 452     |
| Harvester's share                     | 283                         | 327     | 328     |
| Lease rental                          | 14                          | 16      | 16      |
| Others                                | 522                         | 549     | 563     |
| IMPUTED COSTS                         | 82,781                      | 91,173  | 99,238  |
| Operator and family labor             | 51,209                      | 55,942  | 60,475  |
| Exchange labor                        | 2,951                       | 3,224   | 3,485   |
| Depreciation                          | 21,820                      | 24,002  | 26,402  |
| Interest on operating capital         | 3,369                       | 3,937   | 4,896   |
| Rental value of owned land            | 3,432                       | 4,068   | 3,980   |
| TOTAL COSTS                           | 166,135                     | 180,857 | 194,522 |
| GROSS RETURNS                         | 271,566                     | 313,841 | 313,972 |
| RETURNS ABOVE CASH COST               | 191,516                     | 227,945 | 222,488 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 188,212                     | 224,157 | 218,688 |
| NET RETURNS                           | 105,431                     | 132,984 | 119,450 |
| NET PROFIT - COST RATIO               | 0.63                        | 0.74    | 0.61    |
| <i>Cost per kilogram (PhP)</i>        | 19.79                       | 22.10   | 23.25   |
| <i>Yield per hectare (kg/ha)</i>      | 8,395                       | 8,184   | 8,368   |
| <i>Farmgate price (PhP/kg)</i>        | 32.35                       | 38.35   | 37.52   |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 15. Cabbage: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 76,707                      | 83,350  | 85,022  |
| Seeds/planting materials                     | 6,770                       | 9,544   | 6,520   |
| Fertilizers                                  | 23,115                      | 24,060  | 25,294  |
| Pesticides                                   | 5,200                       | 4,997   | 5,802   |
| Hired labor                                  | 22,898                      | 25,014  | 27,041  |
| Land tax                                     | 241                         | 243     | 246     |
| Rentals                                      | 3,101                       | 3,388   | 3,662   |
| Transport cost of inputs                     | 4,391                       | 4,680   | 4,729   |
| Food expense                                 | 3,305                       | 3,524   | 3,586   |
| Repairs                                      | 6,478                       | 6,629   | 6,838   |
| Others                                       | 1,209                       | 1,272   | 1,303   |
| <b>NON-CASH COSTS</b>                        | 132                         | 162     | 143     |
| Seeds/planting materials                     | 58                          | 82      | 56      |
| Hired labor (paid in kind)                   | 73                          | 80      | 87      |
| <b>IMPUTED COSTS</b>                         | 52,173                      | 63,318  | 58,468  |
| Operator/family labor                        | 23,313                      | 25,467  | 27,531  |
| Depreciation                                 | 6,904                       | 7,595   | 8,354   |
| Interest on operating capital                | 3,264                       | 3,905   | 4,582   |
| Rental value of owned land                   | 18,691                      | 26,351  | 18,001  |
| <b>TOTAL COSTS</b>                           | 129,011                     | 146,830 | 143,633 |
| <b>GROSS RETURNS</b>                         | 284,814                     | 399,277 | 289,170 |
| <b>RETURNS ABOVE CASH COST</b>               | 208,107                     | 315,927 | 204,148 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 207,975                     | 315,764 | 204,005 |
| <b>NET RETURNS</b>                           | 155,803                     | 252,447 | 145,537 |
| <b>NET PROFIT - COST RATIO</b>               | 1.21                        | 1.72    | 1.01    |
| <i>Cost per kilogram (PhP)</i>               | 8.33                        | 9.54    | 8.80    |
| <i>Yield per hectare (kg/ha)</i>             | 15,479                      | 15,392  | 16,319  |
| <i>Farmgate price (PhP/kg)</i>               | 18.40                       | 25.94   | 17.72   |



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 16. Carrot: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 61,584                      | 64,978  | 68,446  |
| Seeds/planting materials                     | 3,914                       | 3,788   | 3,165   |
| Fertilizers                                  | 16,097                      | 16,673  | 17,465  |
| Pesticides                                   | 2,877                       | 2,765   | 3,211   |
| Hired labor                                  | 19,660                      | 21,476  | 23,217  |
| Land tax                                     | 96                          | 97      | 98      |
| Rentals                                      | 4,823                       | 5,269   | 5,696   |
| Interest on crop loan                        | 3,841                       | 4,225   | 4,648   |
| Transport cost of inputs                     | 2,108                       | 2,248   | 2,271   |
| Food expense                                 | 1,855                       | 1,978   | 2,013   |
| Repairs                                      | 6,312                       | 6,459   | 6,662   |
| <b>NON-CASH COSTS</b>                        | 30                          | 29      | 24      |
| Seeds/planting materials                     | 30                          | 29      | 24      |
| <b>IMPUTED COSTS</b>                         | 40,067                      | 42,669  | 44,184  |
| Operator/family labor                        | 25,242                      | 27,574  | 29,809  |
| Depreciation                                 | 3,786                       | 4,165   | 4,581   |
| Interest on operating capital                | 2,646                       | 2,808   | 3,007   |
| Rental value of owned land                   | 8,393                       | 8,121   | 6,786   |
| <b>TOTAL COSTS</b>                           | 101,681                     | 107,675 | 112,654 |
| <b>GROSS RETURNS</b>                         | 445,983                     | 436,523 | 364,171 |
| <b>RETURNS ABOVE CASH COST</b>               | 384,399                     | 371,545 | 295,725 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 384,369                     | 371,516 | 295,701 |
| <b>NET RETURNS</b>                           | 344,302                     | 328,848 | 251,517 |
| <b>NET PROFIT - COST RATIO</b>               | 3.39                        | 3.05    | 2.23    |
| <i>Cost per kilogram (PhP)</i>               | 7.18                        | 7.52    | 7.88    |
| <i>Yield per hectare (kg/ha)</i>             | 14,158                      | 14,322  | 14,298  |
| <i>Farmgate price (PhP/kg)</i>               | 31.50                       | 30.48   | 25.47   |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 17. Cauliflower: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 74,883                      | 85,117  | 86,460  |
| Seeds/planting materials              | 10,927                      | 17,828  | 14,988  |
| Fertilizers                           | 19,978                      | 20,417  | 21,121  |
| Pesticides                            | 5,780                       | 5,555   | 6,450   |
| Hired labor                           | 15,022                      | 16,410  | 17,740  |
| Land tax                              | 1,043                       | 1,053   | 1,064   |
| Rentals                               | 12,371                      | 13,514  | 14,609  |
| Transport cost of inputs              | 7,430                       | 7,920   | 8,003   |
| Food expense                          | 766                         | 817     | 831     |
| Repairs                               | 1,566                       | 1,603   | 1,653   |
| NON-CASH COSTS                        | 4,150                       | 6,771   | 5,693   |
| Landlord's share                      | 4,150                       | 6,771   | 5,693   |
| IMPUTED COSTS                         | 30,744                      | 35,030  | 36,764  |
| Operator/family labor                 | 22,169                      | 24,218  | 26,180  |
| Depreciation                          | 2,301                       | 2,532   | 2,785   |
| Interest on operating capital         | 3,428                       | 3,639   | 3,896   |
| Rental value of owned land            | 2,845                       | 4,642   | 3,903   |
| TOTAL COSTS                           | 109,777                     | 126,918 | 128,917 |
| GROSS RETURNS                         | 304,682                     | 491,959 | 415,465 |
| RETURNS ABOVE CASH COST               | 229,799                     | 406,842 | 329,005 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 225,648                     | 400,071 | 323,312 |
| NET RETURNS                           | 194,905                     | 365,041 | 286,548 |
| NET PROFIT - COST RATIO               | 1.78                        | 2.88    | 2.22    |
| <i>Cost per kilogram (PhP)</i>        | 9.99                        | 11.68   | 11.81   |
| <i>Yield per hectare (kg/ha)</i>      | 10,983                      | 10,870  | 10,919  |
| <i>Farmgate price (PhP/kg)</i>        | 27.74                       | 45.26   | 38.05   |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 18. Eggplant: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 88,055                      | 95,253  | 100,660 |
| Seeds/planting materials                     | 1,908                       | 2,345   | 2,158   |
| Fertilizer                                   | 20,345                      | 21,627  | 22,979  |
| Pesticides                                   | 10,554                      | 10,142  | 11,777  |
| Other material inputs                        | 54                          | 57      | 61      |
| Hired labor                                  | 21,752                      | 23,762  | 25,688  |
| Land tax                                     | 89                          | 89      | 90      |
| Rentals                                      | 4,811                       | 5,803   | 5,482   |
| Fuel and oil                                 | 3,654                       | 3,908   | 3,938   |
| Transport cost of inputs                     | 929                         | 990     | 1,000   |
| Irrigation fee                               | 158                         | 194     | 178     |
| Interest on crop loan                        | 10,886                      | 11,975  | 13,172  |
| Food expenses                                | 6,036                       | 6,436   | 6,550   |
| Repairs                                      | 2,568                       | 2,628   | 2,710   |
| Landlord's share                             | 4,311                       | 5,298   | 4,876   |
| <b>NON-CASH COSTS</b>                        | 3,827                       | 4,701   | 4,353   |
| Seeds/planting materials                     | 825                         | 1,014   | 933     |
| Hired labor (paid in kind)                   | 48                          | 52      | 57      |
| Landlord's share                             | 1,537                       | 1,889   | 1,739   |
| Harvesters' share                            | 1,265                       | 1,559   | 1,453   |
| Lease rental                                 | 151                         | 186     | 171     |
| <b>IMPUTED COSTS</b>                         | 45,140                      | 49,584  | 53,235  |
| Operator and family labor                    | 29,971                      | 32,741  | 35,394  |
| Exchange labor                               | 2,427                       | 2,652   | 2,867   |
| Depreciation                                 | 6,888                       | 7,577   | 8,335   |
| Interest on operating capital                | 3,459                       | 3,671   | 3,931   |
| Rental value of owned land                   | 2,395                       | 2,943   | 2,709   |
| <b>TOTAL COSTS</b>                           | 137,022                     | 149,538 | 158,248 |
| <b>GROSS RETURNS</b>                         | 248,832                     | 306,567 | 285,755 |
| <b>RETURNS ABOVE CASH COST</b>               | 160,777                     | 211,314 | 185,095 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 156,950                     | 206,613 | 180,742 |
| <b>NET RETURNS</b>                           | 111,810                     | 157,029 | 127,507 |
| <b>NET PROFIT - COST RATIO</b>               | 0.82                        | 1.05    | 0.81    |
| <i>Cost per kilogram (PhP)</i>               | 12.15                       | 13.22   | 13.82   |
| <i>Yield per hectare (kg/ha)</i>             | 11,280                      | 11,308  | 11,453  |
| <i>Farmgate price (PhP/kg)</i>               | 22.06                       | 27.11   | 24.95   |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 19. Habitchuelas: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018         | 2019         |
|---------------------------------------|-----------------------------|--------------|--------------|
|                                       | <i>(in PhP per hectare)</i> |              |              |
| CASH COSTS                            | 37,130                      | 39,506       | 41,778       |
| Seeds/planting materials              | 3,054                       | 3,591        | 3,303        |
| Fertilizers                           | 13,188                      | 13,864       | 14,666       |
| Pesticides                            | 3,856                       | 3,706        | 4,303        |
| Hired labor                           | 9,146                       | 9,991        | 10,800       |
| Land tax                              | 211                         | 213          | 216          |
| Rentals                               | 2,692                       | 2,941        | 3,179        |
| Transport cost of inputs              | 2,348                       | 2,503        | 2,529        |
| Repairs                               | 2,635                       | 2,697        | 2,782        |
| NON-CASH COSTS                        | 1,850                       | 2,175        | 2,001        |
| Seeds/planting materials              | 1,850                       | 2,175        | 2,001        |
| IMPUTED COSTS                         | 41,595                      | 46,039       | 49,070       |
| Operator/family labor                 | 31,158                      | 34,037       | 36,795       |
| Depreciation                          | 3,279                       | 3,607        | 3,968        |
| Interest on operating capital         | 1,646                       | 1,912        | 2,344        |
| Rental value of owned land            | 5,512                       | 6,483        | 5,963        |
| TOTAL COSTS                           | 80,575                      | 87,720       | 92,848       |
| GROSS RETURNS                         | 114,304                     | 134,494      | 124,846      |
| RETURNS ABOVE CASH COST               | 77,174                      | 94,988       | 83,068       |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 75,324                      | 92,813       | 81,068       |
| NET RETURNS                           | 33,729                      | 46,774       | 31,998       |
| NET PROFIT - COST RATIO               | 0.42                        | 0.53         | 0.34         |
| <i>Cost per kilogram (PhP)</i>        | <i>17.93</i>                | <i>19.51</i> | <i>20.47</i> |
| <i>Yield per hectare (kg/ha)</i>      | <i>4,493</i>                | <i>4,495</i> | <i>4,537</i> |
| <i>Farmgate price (PhP/kg)</i>        | <i>25.44</i>                | <i>29.92</i> | <i>27.52</i> |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 20. White Potato: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM                                  | 2017                        | 2018    | 2019    |
|---------------------------------------|-----------------------------|---------|---------|
|                                       | <i>(in PhP per hectare)</i> |         |         |
| CASH COSTS                            | 116,651                     | 122,570 | 128,767 |
| Seeds/planting materials              | 18,854                      | 19,981  | 20,106  |
| Fertilizers                           | 47,149                      | 48,890  | 51,254  |
| Pesticides                            | 6,282                       | 6,036   | 7,010   |
| Hired labor                           | 25,559                      | 27,920  | 30,183  |
| Land tax                              | 637                         | 643     | 649     |
| Rentals                               | 1,145                       | 1,251   | 1,352   |
| Transport of inputs                   | 6,778                       | 7,225   | 7,301   |
| Food expense                          | 3,223                       | 3,437   | 3,497   |
| Repairs                               | 7,024                       | 7,188   | 7,414   |
| NON-CASH COSTS                        | 10,483                      | 11,109  | 11,179  |
| Seeds/planting materials              | 10,483                      | 11,109  | 11,179  |
| IMPUTED COSTS                         | 60,291                      | 65,509  | 70,133  |
| Operator/family labor                 | 25,399                      | 27,746  | 29,994  |
| Depreciation                          | 7,736                       | 8,509   | 9,360   |
| Interest on operating capital         | 5,509                       | 6,313   | 7,693   |
| Rental value of owned land            | 21,648                      | 22,941  | 23,086  |
| TOTAL COSTS                           | 187,425                     | 199,188 | 210,079 |
| GROSS RETURNS                         | 452,414                     | 492,574 | 493,629 |
| RETURNS ABOVE CASH COST               | 335,763                     | 370,004 | 364,862 |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 325,280                     | 358,895 | 353,683 |
| NET RETURNS                           | 264,989                     | 293,386 | 283,550 |
| NET PROFIT - COST RATIO               | 1.41                        | 1.47    | 1.35    |
| <i>Cost per kilogram (PhP)</i>        | 12.42                       | 12.84   | 13.60   |
| <i>Yield per hectare (kg/ha)</i>      | 15,096                      | 15,509  | 15,445  |
| <i>Farmgate price (PhP/kg)</i>        | 29.97                       | 31.76   | 31.96   |

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 21. Stringbeans: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 70,859                      | 75,945  | 79,155  |
| Seeds  | 4,928                       | 6,287   | 5,245   |
| Fertilizer                                   | 10,449                      | 10,976  | 11,599  |
| Pesticides                                   | 15,564                      | 14,956  | 17,368  |
| Other material inputs                        | 325                         | 341     | 361     |
| Hired labor                                  | 14,255                      | 15,572  | 16,834  |
| Land tax                                     | 506                         | 511     | 516     |
| Rentals                                      | 4,791                       | 5,904   | 5,232   |
| Fuel and oil                                 | 5,529                       | 5,914   | 5,960   |
| Transport cost of inputs                     | 1,872                       | 1,995   | 2,016   |
| Irrigation fee                               | 202                         | 258     | 216     |
| Interest on crop loan                        | 2,886                       | 3,174   | 3,492   |
| Food expenses                                | 1,786                       | 1,905   | 1,938   |
| Repairs                                      | 1,077                       | 1,102   | 1,137   |
| Wages for overseer                           | 317                         | 346     | 374     |
| Others                                       | 6,372                       | 6,704   | 6,869   |
| <b>NON-CASH COSTS</b>                        | 3,701                       | 4,701   | 3,949   |
| Seeds  | 3,487                       | 4,449   | 3,711   |
| Hired labor paid in kind                     | 103                         | 112     | 121     |
| Landlord's share                             | 23                          | 30      | 25      |
| Harvester's share                            | 36                          | 44      | 36      |
| Lease Rental                                 | 52                          | 67      | 56      |
| <b>IMPUTED COSTS</b>                         | 78,281                      | 86,888  | 92,714  |
| Operator/family labor                        | 56,443                      | 61,659  | 66,656  |
| Exchange labor                               | 602                         | 657     | 711     |
| Depreciation                                 | 12,559                      | 13,814  | 15,196  |
| Interest on operating capital                | 2,563                       | 2,955   | 3,643   |
| Rental value of owned land                   | 6,115                       | 7,802   | 6,508   |
| <b>TOTAL COSTS</b>                           | 152,841                     | 167,535 | 175,818 |
| <b>GROSS RETURNS</b>                         | 429,333                     | 521,007 | 424,687 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 358,474                     | 445,062 | 345,532 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 354,773                     | 440,360 | 341,583 |
| <b>NET RETURNS</b>                           | 276,491                     | 353,472 | 248,870 |
| <b>NET PROFIT - COST RATIO</b>               | 1.81                        | 2.11    | 1.42    |
| <i>Cost per kilogram (PhP)</i>               | 9.36                        | 10.78   | 11.58   |
| <i>Yield per hectare (kg/ha)</i>             | 16,337                      | 15,539  | 15,184  |
| <i>Farmgate price (PhP/kg)</i>               | 26.28                       | 33.53   | 27.97   |

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 22. Tomato: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>  | 158,522                     | 167,331 | 176,187 |
| Planting materials   | 5,939                       | 6,198   | 6,012   |
| Fertilizers  | 19,087                      | 19,754  | 20,974  |
| Soil ameliorants   | 420                         | 435     | 462     |
| Mulching materials   | 201                         | 208     | 221     |
| Pesticides   | 15,782                      | 15,166  | 17,611  |
| Hired labor  | 50,252                      | 54,896  | 59,345  |
| Land tax   | 121                         | 122     | 124     |
| Caretaker's/overseer's wage                                | 2,076                       | 2,267   | 2,451   |
| Other permanent employees' salary                          | 256                         | 280     | 302     |
| Rentals  | 3,885                       | 4,089   | 4,053   |
| Fuel   | 2,552                       | 2,730   | 2,751   |
| Oil  | 434                         | 465     | 468     |
| Transport cost of inputs                                   | 1,467                       | 1,564   | 1,580   |
| Transport cost of produce from farm to first point of sale | 14,329                      | 15,275  | 15,435  |
| Interest payment on crop loan                              | 594                         | 653     | 718     |
| Storage fee  | 1,911                       | 1,995   | 1,935   |
| Water expense  | 112                         | 120     | 121     |
| Electricity cost   | 237                         | 253     | 255     |
| Repairs  | 2,736                       | 2,799   | 2,888   |
| Food expense for hired and exchange labor                  | 6,566                       | 7,001   | 7,125   |
| Landowner's share  | 5,369                       | 5,604   | 5,436   |
| Financier's share  | 4,382                       | 4,615   | 4,563   |
| Sack/Crate/Box/Kaing                                       | 16,952                      | 17,834  | 18,275  |
| Other costs  | 2,861                       | 3,009   | 3,084   |
| <b>NON-CASH COSTS</b>                                      | 295                         | 308     | 299     |
| Pesticides   | 3                           | 3       | 3       |
| Rentals  | 273                         | 285     | 277     |
| Landowner's share  | 19                          | 20      | 19      |
| Financier's share  | 1                           | 1       | 1       |
| <b>IMPUTED COSTS</b>                                       | 49,490                      | 53,259  | 56,566  |
| Planting Materials   | 3,008                       | 3,139   | 3,045   |
| Fertilizer   | 1,746                       | 1,807   | 1,919   |
| Mulching materials   | 80                          | 83      | 88      |
| Pesticides   | 1,130                       | 1,086   | 1,261   |
| Operator labor   | 14,249                      | 15,565  | 16,827  |
| Family labor   | 6,290                       | 6,871   | 7,428   |
| Exchange labor   | 92                          | 98      | 106     |
| Depreciation   | 5,977                       | 6,574   | 7,232   |
| Interest on operating capital                              | 5,202                       | 5,521   | 5,912   |
| Land tax   | 111                         | 112     | 113     |
| Rentals  | 1,719                       | 1,832   | 1,872   |
| Rental value of owned land                                 | 2,851                       | 3,049   | 3,073   |
| Rental value of owned animals                              | 1,066                       | 1,165   | 1,259   |
| Oil  | 25                          | 27      | 27      |
| Transport cost of inputs                                   | 753                         | 803     | 811     |
| Transport cost of produce from farm to first point of sale | 3,609                       | 3,847   | 3,887   |
| Storage fee  | 18                          | 18      | 19      |
| Water expense  | 816                         | 872     | 879     |
| Sack/Crate/Box/Kaing                                       | 345                         | 363     | 372     |
| Other costs  | 404                         | 425     | 436     |
| <b>TOTAL COSTS</b>   | 208,307                     | 220,898 | 233,052 |
| <b>GROSS RETURNS</b>                                       | 236,958                     | 249,554 | 246,767 |
| <b>RETURNS ABOVE CASH COSTS</b>                            | 78,437                      | 82,223  | 70,580  |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b>               | 78,141                      | 81,915  | 70,281  |
| <b>NET RETURNS</b>   | 28,651                      | 28,656  | 13,715  |
| <b>NET PROFIT - COST RATIO</b>                             | 0.14                        | 0.13    | 0.06    |
| <i>Cost per kilogram (PhP)</i>                             | 15.70                       | 16.50   | 17.08   |
| <i>Yield per hectare (kg/ha)</i>                           | 13,268                      | 13,388  | 13,649  |
| <i>Farmgate price (PhP/kg)</i>                             | 17.86                       | 18.64   | 18.08   |

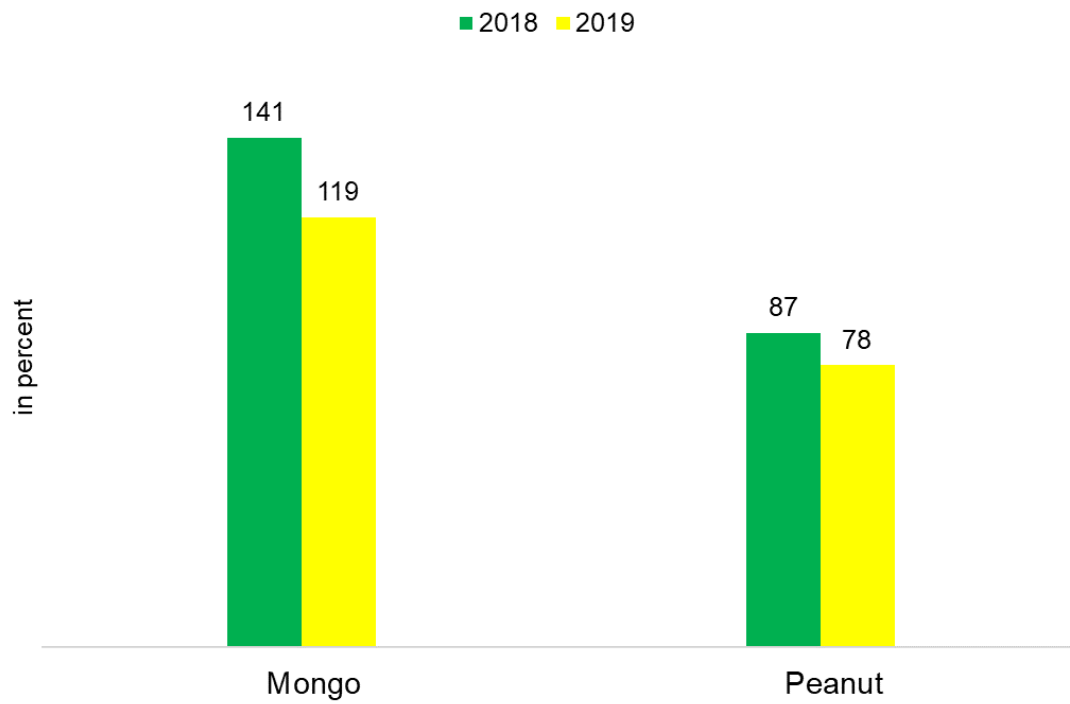
# **LEGUMES**



## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 6. Return on Investments (ROI) of Selected Legumes,  
Philippines, 2018 - 2019



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 23. Mongo: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018   | 2019   |
|--|-----------------------------|--------|--------|
|  | <i>(in PhP per hectare)</i> |        |        |
| <b>CASH COSTS</b>                            | 7,461                       | 7,897  | 8,370  |
| Seeds/planting materials                     | 978                         | 1,000  | 970    |
| Fertilizers                                  | 49                          | 54     | 58     |
| Pesticides                                   | 641                         | 616    | 716    |
| Hired labor                                  | 2,775                       | 3,031  | 3,277  |
| Land tax                                     | 147                         | 148    | 150    |
| Rentals                                      | 636                         | 694    | 748    |
| Fuel and oil                                 | 188                         | 201    | 203    |
| Irrigation fee                               | 52                          | 53     | 51     |
| Interest on crop loan                        | 511                         | 562    | 618    |
| Transport cost of inputs                     | 57                          | 61     | 61     |
| Food expense                                 | 373                         | 397    | 404    |
| Repairs                                      | 1,055                       | 1,080  | 1,114  |
| <b>NON-CASH COSTS</b>                        | 3,275                       | 3,433  | 3,314  |
| Seeds/planting materials                     | 943                         | 964    | 936    |
| Hired labor paid in kind                     | 70                          | 77     | 83     |
| Landlord's share                             | 583                         | 596    | 579    |
| Harvester's share                            | 1,672                       | 1,788  | 1,710  |
| Irrigation fee                               | 7                           | 7      | 7      |
| <b>IMPUTED COSTS</b>                         | 8,955                       | 9,760  | 10,563 |
| Operator/family labor                        | 4,131                       | 4,513  | 4,878  |
| Exchange labor                               | 72                          | 79     | 85     |
| Depreciation                                 | 3,566                       | 3,922  | 4,315  |
| Interest on operating capital                | 250                         | 289    | 356    |
| Rental value of owned land                   | 936                         | 957    | 929    |
| <b>TOTAL COSTS</b>                           | 19,692                      | 21,089 | 22,247 |
| <b>GROSS RETURNS</b>                         | 47,609                      | 50,930 | 48,689 |
| <b>RETURNS ABOVE CASH COST</b>               | 40,148                      | 43,033 | 40,319 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 36,873                      | 39,601 | 37,005 |
| <b>NET RETURNS</b>                           | 27,917                      | 29,841 | 26,442 |
| <b>NET PROFIT - COST RATIO</b>               | 1.42                        | 1.41   | 1.19   |
| <i>Cost per kilogram (PhP)</i>               | 23.36                       | 23.92  | 25.61  |
| <i>Yield per hectare (kg/ha)</i>             | 843                         | 882    | 869    |
| <i>Farmgate price (PhP/kg)</i>               | 56.49                       | 57.76  | 56.05  |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 24. Peanut: Updated Average Costs of Production, Philippines, 2017 - 2019

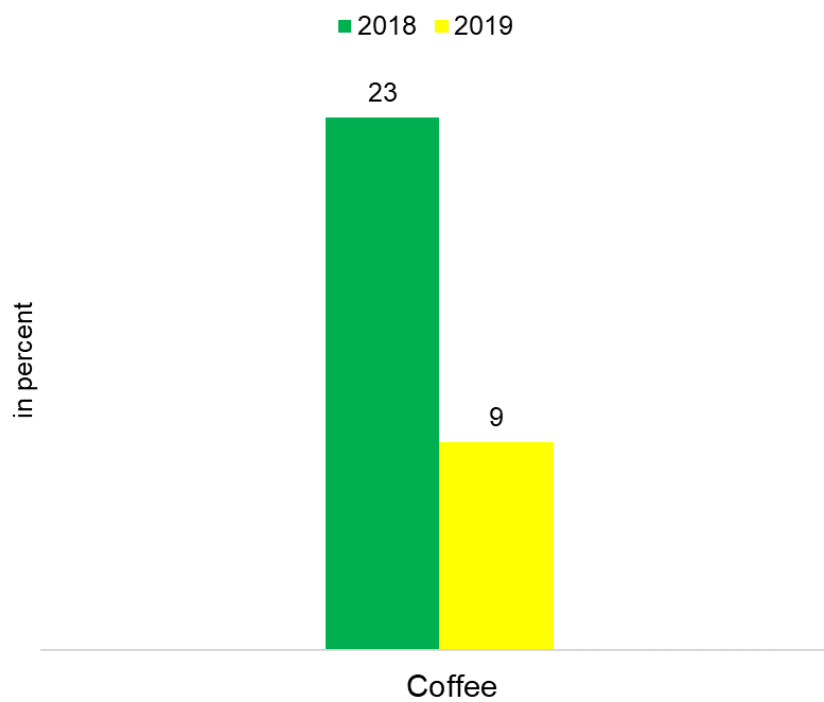
| ITEM                                  | 2017                        | 2018         | 2019         |
|---------------------------------------|-----------------------------|--------------|--------------|
|                                       | <i>(in PhP per hectare)</i> |              |              |
| CASH COSTS                            | 19,566                      | 21,159       | 22,534       |
| Seeds/planting materials              | 2,025                       | 2,174        | 2,227        |
| Fertilizers                           | 520                         | 543          | 570          |
| Pesticides                            | 33                          | 32           | 37           |
| Hired labor                           | 12,755                      | 13,934       | 15,063       |
| Land tax                              | 234                         | 236          | 238          |
| Rentals                               | 645                         | 697          | 730          |
| Fuel and oil                          | 318                         | 340          | 343          |
| Irrigation fee                        | 72                          | 78           | 80           |
| Interest on crop loan                 | 543                         | 598          | 657          |
| Transport cost of inputs              | 177                         | 189          | 191          |
| Food expense                          | 1,015                       | 1,082        | 1,101        |
| Repairs                               | 1,228                       | 1,257        | 1,297        |
| NON-CASH COSTS                        | 3,939                       | 4,208        | 4,310        |
| Seeds/planting materials              | 2,338                       | 2,511        | 2,572        |
| Hired labor paid in kind              | 80                          | 87           | 94           |
| Landlord's share                      | 878                         | 943          | 966          |
| Harvester's share                     | 644                         | 668          | 678          |
| IMPUTED COSTS                         | 11,399                      | 12,524       | 13,655       |
| Operator/family labor                 | 5,601                       | 6,119        | 6,615        |
| Exchange labor                        | 210                         | 230          | 248          |
| Depreciation                          | 2,977                       | 3,274        | 3,602        |
| Interest on operating capital         | 863                         | 1,024        | 1,268        |
| Rental value of owned land            | 1,747                       | 1,876        | 1,922        |
| TOTAL COSTS                           | 34,903                      | 37,891       | 40,499       |
| GROSS RETURNS                         | 68,405                      | 70,968       | 72,116       |
| RETURNS ABOVE CASH COST               | 48,839                      | 49,809       | 49,582       |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 44,901                      | 45,601       | 45,272       |
| NET RETURNS                           | 33,502                      | 33,077       | 31,617       |
| NET PROFIT - COST RATIO               | 0.96                        | 0.87         | 0.78         |
| <i>Cost per kilogram (PhP)</i>        | <i>19.99</i>                | <i>22.46</i> | <i>24.20</i> |
| <i>Yield per hectare (kg/ha)</i>      | <i>1,746</i>                | <i>1,687</i> | <i>1,674</i> |
| <i>Farmgate price (PhP/kg)</i>        | <i>39.17</i>                | <i>42.07</i> | <i>43.09</i> |

**COMMERCIAL CROP**

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 7. Return on Investments (ROI) of Coffee,  
Philippines, 2018 - 2019



**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES**

Table 25. Coffee: Updated Average Costs of Production, Philippines, 2017 - 2019\*

| ITEM                                  | 2017                        | 2018         | 2019         |
|---------------------------------------|-----------------------------|--------------|--------------|
|                                       | <i>(in PhP per hectare)</i> |              |              |
| CASH COSTS                            | 25,183                      | 27,884       | 30,320       |
| Fertilizer                            | 6,695                       | 7,834        | 9,269        |
| Pesticides                            | 158                         | 152          | 176          |
| Hired labor                           | 14,649                      | 16,003       | 16,814       |
| Land tax                              | 670                         | 677          | 684          |
| Rentals                               | 60                          | 62           | 61           |
| Fuel and oil                          | 253                         | 270          | 272          |
| Transport of inputs                   | 183                         | 195          | 197          |
| Interest on crop loan                 | 1,094                       | 1,203        | 1,324        |
| Food expenses                         | 770                         | 821          | 836          |
| Repairs                               | 651                         | 666          | 687          |
| NON-CASH COSTS                        | 1,195                       | 1,177        | 1,148        |
| Hired labor (paid in kind)            | 251                         | 274          | 288          |
| Landlord's share                      | 31                          | 31           | 29           |
| Harvesters' share                     | 620                         | 586          | 560          |
| Lease rental                          | 292                         | 286          | 271          |
| IMPUTED COSTS                         | 9,749                       | 10,535       | 11,174       |
| Operator and family labor             | 5,517                       | 6,026        | 6,332        |
| Exchange labor                        | 137                         | 150          | 157          |
| Depreciation                          | 528                         | 580          | 638          |
| Interest on operating capital         | 1,211                       | 1,473        | 1,861        |
| Rental value of owned land            | 2,357                       | 2,306        | 2,186        |
| TOTAL COSTS                           | 36,127                      | 39,596       | 42,642       |
| GROSS RETURNS                         | 51,330                      | 48,555       | 46,366       |
| RETURNS ABOVE CASH COSTS              | 26,147                      | 20,671       | 16,046       |
| RETURNS ABOVE CASH AND NON-CASH COSTS | 24,952                      | 19,494       | 14,898       |
| NET RETURNS                           | 15,203                      | 8,959        | 3,724        |
| NET PROFIT - COST RATIO               | 0.42                        | 0.23         | 0.09         |
| <i>Cost per kilogram (PhP)</i>        | <i>65.67</i>                | <i>74.42</i> | <i>79.56</i> |
| <i>Yield per hectare (kg/ha)</i>      | <i>550</i>                  | <i>532</i>   | <i>536</i>   |
| <i>Farmgate price (PhP/kg)</i>        | <i>93.30</i>                | <i>91.25</i> | <i>86.50</i> |

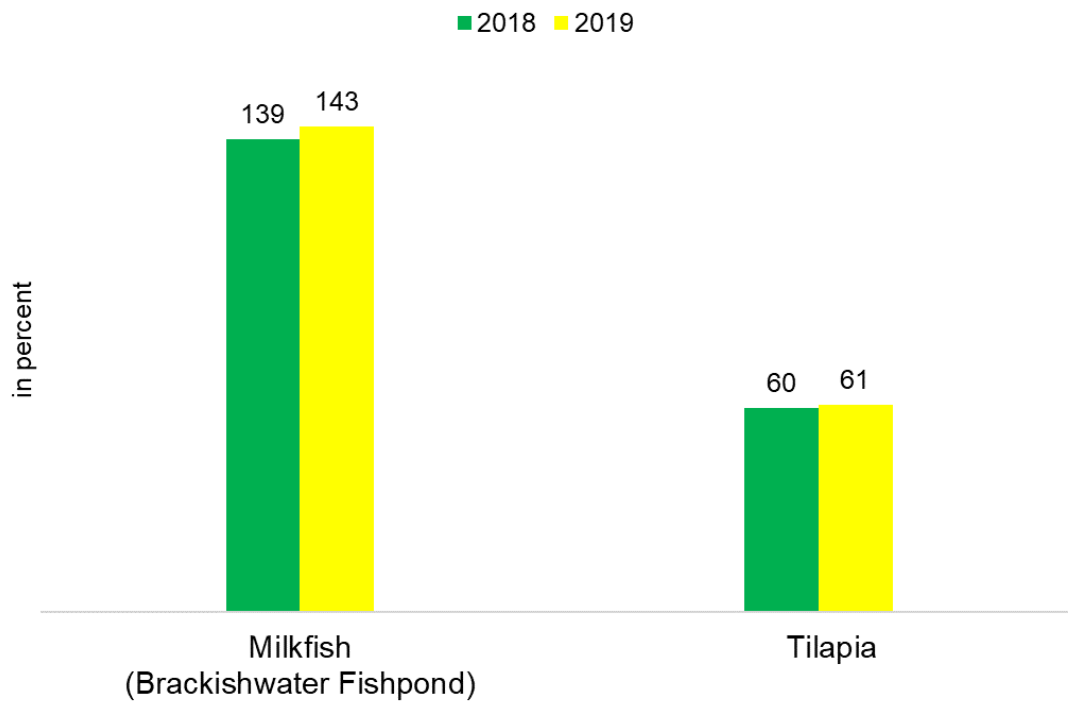
\* - Refers to maintenance costs only

# **FISHERIES**

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

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Figure 8. Return on Investments (ROI) of Selected Fisheries,  
Philippines, 2018 - 2019





## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 26. Milkfish (Brackishwater Fishpond): Updated Average Costs of Production,  
Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 30,757                      | 33,766  | 34,741  |
| Stocking materials                           | 11,744                      | 13,576  | 13,475  |
| Feeds  | 4,442                       | 4,673   | 4,789   |
| Fertilizers                                  | 2,216                       | 2,427   | 2,646   |
| Pesticides and other chemicals               | 436                         | 419     | 487     |
| Hired Labor                                  | 4,001                       | 4,371   | 4,725   |
| Salaries of permanent employees              | 2,905                       | 3,174   | 3,431   |
| Land tax                                     | 413                         | 417     | 421     |
| Rentals                                      | 3,295                       | 3,326   | 3,355   |
| Fuel and oil                                 | 348                         | 372     | 375     |
| Transport cost of inputs                     | 162                         | 172     | 174     |
| License/permit                               | 6                           | 6       | 6       |
| Electricity                                  | 170                         | 182     | 183     |
| Interest payment on loan                     | 74                          | 81      | 89      |
| Food expense                                 | 225                         | 239     | 244     |
| Repairs                                      | 270                         | 277     | 285     |
| Others                                       | 51                          | 54      | 55      |
| <b>NON-CASH COSTS</b>                        | 736                         | 813     | 847     |
| Harvesters' share                            | 273                         | 305     | 320     |
| Caretakers' share                            | 160                         | 179     | 188     |
| Other laborers' share                        | 74                          | 83      | 87      |
| Administrator's share                        | 52                          | 58      | 60      |
| Lease rental                                 | 6                           | 7       | 7       |
| Rice allowance of overseer                   | 171                         | 182     | 186     |
| <b>IMPUTED COSTS</b>                         | 8,571                       | 9,860   | 10,392  |
| Operator labor                               | 196                         | 214     | 232     |
| Family labor                                 | 137                         | 150     | 162     |
| Exchange labor                               | 6                           | 6       | 7       |
| Depreciation                                 | 1,926                       | 2,119   | 2,331   |
| Interest on operating capital                | 1,423                       | 1,726   | 2,058   |
| Rental value of owned fishpond               | 4,883                       | 5,644   | 5,602   |
| <b>TOTAL COSTS</b>                           | 40,064                      | 44,440  | 45,980  |
| <b>GROSS RETURNS</b>                         | 95,319                      | 106,397 | 111,640 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 64,562                      | 72,631  | 76,899  |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 63,826                      | 71,818  | 76,052  |
| <b>NET RETURNS</b>                           | 55,255                      | 61,957  | 65,660  |
| <b>NET PROFIT - COST RATIO</b>               | 1.38                        | 1.39    | 1.43    |
| <i>Cost per kilogram (PhP)</i>               | 36.85                       | 42.33   | 41.43   |
| <i>Yield per hectare (kg/ha)</i>             | 1,087                       | 1,050   | 1,110   |
| <i>Farmgate price (PhP/kg)</i>               | 87.67                       | 101.35  | 100.59  |

## UPDATED PRODUCTION COSTS AND RETURNS OF SELECTED AGRICULTURAL COMMODITIES

Table 27. Tilapia: Updated Average Costs of Production, Philippines, 2017 - 2019

| ITEM   | 2017                        | 2018    | 2019    |
|--|-----------------------------|---------|---------|
|  | <i>(in PhP per hectare)</i> |         |         |
| <b>CASH COSTS</b>                            | 237,934                     | 249,200 | 256,959 |
| Stocking materials                           | 41,370                      | 42,087  | 43,572  |
| Feeds  | 159,582                     | 167,883 | 172,033 |
| Fertilizers                                  | 1,656                       | 1,756   | 1,869   |
| Pesticides                                   | 2,046                       | 1,966   | 2,284   |
| Hired Labor                                  | 8,148                       | 8,901   | 9,623   |
| Salaries of permanent employees              | 1,154                       | 1,261   | 1,363   |
| Wage of stay-in laborers                     | 6,747                       | 7,371   | 7,968   |
| Land tax                                     | 182                         | 183     | 185     |
| Rentals                                      | 4,561                       | 4,573   | 4,583   |
| Fuel and oil                                 | 6,167                       | 6,596   | 6,647   |
| Transport cost of inputs                     | 811                         | 865     | 874     |
| License/permit                               | 7                           | 7       | 7       |
| Electricity                                  | 130                         | 139     | 140     |
| Interest payment on loan                     | 601                         | 662     | 728     |
| Food expense                                 | 1,590                       | 1,695   | 1,725   |
| Repairs                                      | 3,141                       | 3,214   | 3,315   |
| Other costs                                  | 40                          | 42      | 43      |
| <b>NON-CASH COSTS</b>                        | 2,441                       | 2,573   | 2,700   |
| Stocking materials                           | 361                         | 368     | 381     |
| Feeds  | 97                          | 102     | 104     |
| Fertilizers                                  | 15                          | 15      | 16      |
| Hired Labor paid in kind                     | 270                         | 295     | 319     |
| Harvesters' share                            | 585                         | 619     | 650     |
| Caretaker's share                            | 39                          | 41      | 44      |
| Wage of stay-in laborer                      | 515                         | 545     | 572     |
| Other laborers' share                        | 459                         | 485     | 510     |
| Lease rental                                 | 74                          | 75      | 78      |
| Other costs                                  | 25                          | 26      | 27      |
| <b>IMPUTED COSTS</b>                         | 35,498                      | 38,504  | 42,740  |
| Stocking materials                           | 383                         | 390     | 403     |
| Feeds  | 153                         | 161     | 165     |
| Fertilizers                                  | 1                           | 1       | 1       |
| Operator labor                               | 2,916                       | 3,185   | 3,443   |
| Family labor                                 | 1,061                       | 1,159   | 1,253   |
| Exchange labor                               | 3                           | 3       | 3       |
| Depreciation                                 | 6,447                       | 7,092   | 7,801   |
| Interest on operating capital                | 12,426                      | 14,195  | 16,918  |
| Rental value of owned aquafarm               | 12,108                      | 12,318  | 12,753  |
| <b>TOTAL COSTS</b>                           | 275,873                     | 290,277 | 302,400 |
| <b>GROSS RETURNS</b>                         | 438,629                     | 463,845 | 486,890 |
| <b>RETURNS ABOVE CASH COSTS</b>              | 200,695                     | 214,645 | 229,931 |
| <b>RETURNS ABOVE CASH AND NON-CASH COSTS</b> | 198,254                     | 212,072 | 227,230 |
| <b>NET RETURNS</b>                           | 162,756                     | 173,568 | 184,490 |
| <b>NET PROFIT-COST RATIO</b>                 | 0.59                        | 0.60    | 0.61    |
| <i>Cost per kilogram (PhP)</i>               | 48.08                       | 48.67   | 50.00   |
| <i>Yield per hectare (kg/ha)</i>             | 5,738                       | 5,965   | 6,048   |
| <i>Farmgate price (PhP/kg)</i>               | 76.44                       | 77.77   | 80.51   |

**UPDATED PRODUCTION COSTS AND RETURNS  
OF SELECTED AGRICULTURAL COMMODITIES  
PHILIPPINE STATISTICS AUTHORITY**

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