EXECUTIVE SUMMARY

After four centuries of coffee production in the Philippines, all of the stakeholders unified to develop this long-awaited Philippine Coffee Industry Roadmap 2017-2022. This brings into account the current condition of the country's coffee industry in the light of bridging the various gaps in the supply chain towards a more responsive and globally competitive industry favorable to its particular customers and beneficiaries.

The roadmap is composed of three sections; *Where are we? Where do we want to go?, and How do we get there?* It provides both internal and external assessments of the industry. The roadmap outlines the vision, mission, goals, strategies and action plans to enhance the growth of the coffee industry from 2017 to 2022. Both primary and secondary data presented were gathered from several meetings and consultations among the coffee stakeholders in the government and private sectors.

The Philippine Coffee Industry Roadmap looked back at its current production volumes of 37,000 metric tons (MT), with an area of 117,454 hectares (ha), and an average yield of 300 kilograms (kg) per hectare. The following were taken into account: the issues and concerns; cost and return confronting the coffee growers, traders and processors; the market vis-a-vis its benefits to the coffee drinker-customers e.g. low productivity, senile trees, low soil fertility, limited control of pests and diseases; limited skills and technical know-how; lack of post-harvest facilities; and access to credit and markets.

These challenges will be considered in setting the directions and action plans, following the supply chain analysis from farm inputs, production, primary processing, secondary processing (manufacturing), and distribution.

The various stakeholders in the government, civil society groups and the private sector laid down several strategies and approaches to address the increasing demand and limited supply of quality green coffee beans; to wit: the use of improved/registered coffee planting materials; adoption of the good agricultural practices (GAP) of coffee; initial provision/subsidy of farm inputs and appropriate post-harvest facilities; access to credit and market outlets of coffee growers and conduct continuing education programs among coffee growers through the support services from government and private sector stakeholders.

At the end of the target term in 2022, it is expected that the coffee growers have increased their average yield of 1 ton per hectare, supplied the needed volume of 214,626 MT with self-sufficiency level from 41.60% to 160.16% and have increased farmers' income and farm productivity.

To help enable the roadmap to be effectively utilized, the Philippine Coffee Council, a private sector led body with government support up to the provincial level, will be created to guide and monitor its implementation.

PHILIPPINE COFFEE INDUSTRY ROADMAP 2017-2022

1. OVERVIEW

1.1 Rationale

Why invest in coffee? A sizeable portion of the population love coffee as a beverage and as a health drink with antioxidants that fight free radicals. For a farmer, coffee is a lucrative business and provides livelihood to many. Luckily, the Philippines is an ideal place to grow quality coffee. However, local coffee's production is decreasing by 3.5% per year over the past 10 years,[1]while the Philippines' coffee consumption from 2014 to 2015 increased by 8.8%. [2]

Republic Act (RA) No. 7900, An Act to Promote the Production, Processing, Marketing and Distribution of High-Value Crops, Providing Funds, therefore, and for Other Purposes or known as the High-Value Crops Development Act of 1995 defines high-value crops (HVC) as crops other than traditional ones which include coffee.

Also, in RA 7900, Declaration of Policy, it states the declared the policy of the State to accelerate the growth and development of agriculture in general, enhance productivity and incomes of farmers and the rural population, improve the investment climate, competencies and efficiency of agribusiness and develop high-value crops as export crops that will significantly augment the foreign exchange earnings of the country, through an all-out promotion of the production, processing, marketing, and distribution of high-value crops in suitable areas of the country.

The roadmap is the detailed plan to guide key players and government agencies in the progress of coffee industry toward their goal. It is crafted based on the coffee industry stakeholders' pursuit of inclusive growth models thru value chain approach and to sustain increases in yields, incomes, improved farm productivity and to enhance farmers' technical capability and skills, and also to create avenues for food security and poverty alleviation.

The roadmap is divided into three main sections and attempts to answer key strategic questions -- *Where are we? Where do we want to go?, and How do we get there?* Through the road map, it assesses the Philippine coffee industry and outlines the vision, mission, goals, strategies and action plans to grow the coffee industry from 2017 to 2022.

The document is a product of numerous meetings, consultations and workshops among key stakeholders in the coffee industry from both the government and the private sectors. It includes data on production, area, yield, prices and trade.

[1]Philippine Statistics Authority (PSA)
[2]http://www.ico.org/prices/new-consumption-table.pdf

1.2 Objectives

The major objective is to develop a harmonized coffee roadmap led by the stakeholders, in collaboration with the Department of Agriculture (DA), the Department of Trade and Industry (DTI), the academe and other key players in the coffee industry. The roadmap integrates the coffee value chain analysis and to address the challenges of industry with appropriate strategies and successful implementation of agreed action plans. The following are the other objectives:

a) provide a comprehensive assessment of the Philippine coffee industry;
b) analyze market trends and identify opportunities;
c) define goals and formulate strategies to increase yield, lessen importation and improve farmer's income; and
d) recommendation plans using the coffee value chain framework for 2017 to 2022 for a competitive and vibrant Philippine coffee industry.

1.3 Data Sources and Methodology

1.3.1 Data Sources

The study used primary and secondary data. Primary data sources were face-to-face interviews (e.g. farmers, processors, industry associations), consultations and workshops with industry players. These were completed in 2016. The results were included in the draft roadmap presented to industry players during the two validation workshops conducted separately in Quezon City and in Baguio City in August 2016 and November 2016, respectively.

Secondary data were obtained from government institutions such as the Philippine Statistics Authority, Provincial/Regional Agricultural Offices, DA and DTI as well as from private institutions, websites of international organizations (e.g. FAOSTAT, USDA/FAS, UN Trademap), and internet searches.

1.3.2 Analytics

The roadmap includes industry situation, value chain analysis, market analysis, SWOT analysis, strategy formulation and action planning.

Industry Situation is an assessment of the industry performance, both local and international. It covers coffee industry structure, performance, coffee varieties and consumption.

Supply/Value Chain Analysis **-** A supply chain is a network of connected and interdependent organizations cooperating to control, manage and improve the flow of materials and information from suppliers to end-users. It includes input sub-system, production, processing, marketing and distribution, including the logistics between each sub-system. The value chain is an offshoot of supply chain management. Value chain analysis describes the activities within and around each sub-system and relates them to an analysis of the competitive strength of the industry. The ability to perform certain activities, manage the linkages between these activities and build trust is a source of competitive advantage.

The supply/value chain analysis shows the supply chain segments and corresponding cost build up, including margins. Likewise, it identifies players in the supply/value chain factors that

support the growth of the industry. Lastly, it discusses key constraints to stability and sustainability.

Market Analysis discusses the status and potential of the local coffee market. It explores consumption trends by type of product.

SWOT Analysis outlines the internal factors-strengths (S) and weaknesses (W), and external factors - opportunities (O) and threats (T) involved in the industry. The SWOT is used to help the industry face and address its challenges.

Strategy Formulation and Action Planning "The process of scenario planning begins with long discussion about how participants think that big shifts in society, economics, politics and technology might affect a particular issue. From this, the group aims to draw up a list of priorities, including things that will have the most impact on the issue and those outcomes that are most uncertain. These priorities then form the basis for sketching out a rough picture of the future. Scenario planning draws from a wide range of discipline and interests, including economics, psychology, politics and demographics" (Hindle, 2008).

Through a series of consultation workshops, the goals, strategies, targets and action plans were developed. The roadmap was finalized during the December 2016 consultation workshop participated in by the coffee producers, processors, traders, the DA and DTI officials and other sectors.

2. INDUSTRY SITUATIONER

The industry situationer discusses several areas: industry structure, particularly the type and number of farms, varieties produced, processing and product types, performance in terms of production area, yield, trade prices and farm cash flow.

Small farmers are the country's main producers of coffee in Mindanao. The four varieties grown are: Robusta which accounts for 69% of production, Arabica (24%), Excelsa (6%) and Liberica (1%).

However, the country's coffee supply is not enough. In 2015, coffee production was only 36,171 MT of green coffee beans. Farm yields averaged only 0.30 tons per hectare.

According to the International Coffee Organization (ICO), 144.8 million or 8.668 million tons was the global estimated number of 60-kg bags of coffee produced in 2015-2016. There was also an estimated increase of 1.6 percent in global coffee production in 2015-2016.

Farmers market coffee to small processors, large companies and specialty coffee shops. These buyers process coffee into various forms – such as green coffee beans (GCB), roasted, ground, and instant.

The continuous drop in production was caused by various factors such as: increase number of coffee growers shifting to other crops, old age of trees with limited or no rejuvenation; poor farm practices – limited knowledge on appropriate coffee technology of farmers, aged farmers; limited access to certified planting materials and limited access to credit.

2.1 Structure

Majority of coffee farmers have an average farm size of one to two ha, with most farms owned by the farmers themselves. Most farms are intercropped with vegetables, coconut, fruit trees and forest trees (especially in the case of Arabica coffee). There are very few commercial scale plantations in the country.

Table 2.1 Coffee Farms by Type, Philippines

Type of Farm	Description
Smallholder	with an area of 1.5 hectares or less, intercropped with coconut and fruit trees, owned
Plantation	Leases on public lands (CBFM and IFMA)

Source: Various Industry Consultations

Based on the Philippine Statistics Authority (PSA) data, there are nearly 276,000 coffee farms in the country, with about 79.4 million trees. The median farm size is 1-2 ha.

Table 2.2 Number of Coffee Farms

Item	Value
Number of farms	275,681
Number of trees (million)	79.4
Median size (ha)	1 – 2

Source: PSA

Table 2.3 Number of Bearing Trees per Region, 2015

REGION	Number of Bearing Trees
PHILIPPINES	**77,440,524**
CAR	4,455,089
Ilocos Region	121,965
Cagayan Valley	1,594,099
Central Luzon	1,123,365
CALABARZON	10,345,601
MIMAROPA	269,228
Bicol Region	531,243
Western Visayas	5,866,854
Central Visayas	1,047,765
Eastern Visayas	75,439
Zamboanga Peninsula	649,788
Northern Mindanao	5,896,738
Davao Region	13,608,316
SOCCSKSARGEN	19,114,155
CARAGA	3,420,507
ARMM	9,320,372

Source: PSA

The most common variety grown in the country is Robusta, which accounted for 69 percent of total production in 2015. Robusta is mainly used for instant coffee. Next is Arabica, which contributes 24 percent (%). Arabica is mostly cultivated in high elevation areas (1000 meters

above sea level) and sells at a premium price. It is primarily used for brewing or blending. The other varieties are Excelsa and Liberica (kapeng barako).

Table 2.4 Coffee Varieties

Variety	Production GCB (tons)	Percent share to total production
Robusta	24,924	69
Arabica	8,717	24
Excelsa	2,273	6
Liberica	257	1
TOTAL	36,171	100

Source: PSA

There are local small and medium coffee processors of roasted beans and ground coffee in the country. Nestle Philippines, Inc., located in Cagayan de Oro, is the largest local processor of soluble coffee which accounts for 80% of the instant coffee market. It is followed by Universal Robina Corporation and Commonwealth Foods Corp.

Table 2.5 Partial List of Coffee Processors by Location, Philippines

Location	No. of Processors	Selected Players	Total Capacity (kg GCB)
NCR	Many	Bote Central Century Pacific Group (Snow Mountain Dairy Corporation) Commonwealth Foods, Inc. Goldshine Pharmaceuticals, Inc. Regent Foods Corp. Universal Robina Corp.	
CAR			
Kalinga	9	Nor-Ref Food Products Our Tribe Food Products Magallaya Mountain Specialty Coffee Balawag MPC Gawidan Farmers Dengon's Coffee Marketing Mananig MPC	60 kg/day 270 kg/day *(1,350 kg/week)* 48 kg/day *(240 kg/week)*
CALABARZON	at least 15	Cavite State University Café Amadeo Development Cooperative Gourmet Café Silka Merlo Agricultural Corp. Anca Trading Courage Ivory	 50 kg/day *(1 ton/month)* 5 tons/day 70 kg/day 250 kg/day
10	4 (2 major, 2 small)	Nestle Philippines Monk's Blend Balay Mindanao	 125-150 kg/day *(2.5 – 3 tons/month)*

		LGU Maramag	3-5 kg/day 3-5 kg/day
11	7 (small processors)	Coffee for Peace Davao Best Others	20 kg/day *(100 kg/week)*
12	5	Sultan Coffee Green Tropics North Valley Browncup Kulaman Tricom	25 kg/day *(6,000 kg/year)*

Source: Various Industry Consultations

Green coffee beans (GCB) are used to produce roasted beans, as well as ground or instant coffee. Roasted beans are intended for grinding. It has a high demand among industrial buyers and some institutional users. Ground coffee is derived from crushed roasted beans, mainly for brewing and has a better flavor than instant coffee. The market includes industrial buyers, institutional users and households.

Instant soluble coffee is easy to prepare and priced lower than ground coffee. These include pure soluble coffee, single-serve sachet mixes (e.g., 2-in-1 (coffee and sugar), 3-in-1 (coffee, sugar and creamer), mixtures and ready-to-drink. There are also 5-in-1 and 7-in-1 coffee variants with added functional ingredients.

There are also specialty coffees made from the high quality green coffee beans roasted and brewed according to well-established standards. They include Arabica blends, organic coffee, Civet coffee (Alamid coffee), etc. which cater to niche markets.

Table 2.6 Types of Coffee Products Produced

Type	Use	Markets
Beans	for further processing	Industrial
Roasted beans	for grinding	Industrial, institutional
Ground coffee	for brewing	Institutional, households
Instant soluble coffee	for immediate consumption upon addition of hot water	Households, Institutional
Specialty coffee (e.g. organic, civet coffee, etc.)	for niche markets	Households, institutional

2.2 Performance

2.2.1 Production, area and yield

At the global level, total production by all exporting countries from 2014 to 2015 increased by 0.7%. Philippine production increased at a faster rate for the same period at 3.5%.

Table 2.7 Coffee Exports

Crop year commencing	2012	2013	2014	2015	% Change 2014-15
TOTAL	144 960	146 506	142 278	143 306	0.7
Arabicas	88 420	88 400	82 889	82 890	0.0
Colombian Milds	11 523	13 488	14 571	14 845	1.9
Other Milds	29 143	26 838	25 768	25 755	0.0
Brazilian Naturals	47 753	48 074	42 551	42 289	-0.6
Robustas	56 540	58 106	59 389	60 416	1.7
Philippines	**177**	**186**	**193**	**200**	**3.5**

Source: http://www.ico.org/trade_statistics.asp?section=Statistics

Table 2.8 Top 30 Coffee Producing Countries

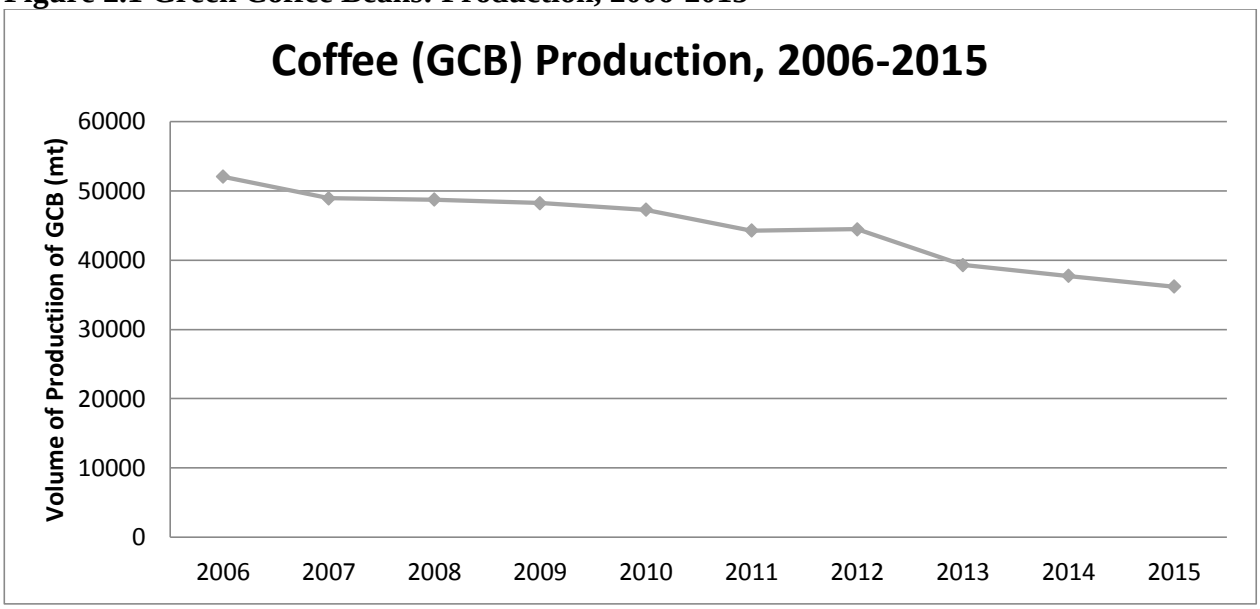
	Country	2014 GCB production (MT)		Country	2014 GCB production (MT)
1	Brazil	2,804,070	16	Nicaragua	89,700
2	Vietnam	1,406,469	17	Madagascar	57,340
3	Colombia	728,400	18	Papua New Guinea	55,527
4	Indonesia	643,900	19	Kenya	51,500
5	Ethiopia	419,980	20	Tanzania	48,982
6	India	304,500	21	Venezuela	48,356
7	Honduras	282,230	22	El Salvador	41,965
8	Guatemala	231,536	23	Cameroon	38,114
9	Peru	222,047	24	Thailand	37,950
10	Uganda	220,135	25	Philippines	37,727
11	Mexico	214,667	26	Sierra Leone	36,241
12	China	118,057	27	Haiti	35,232
13	Laos	113,580	28	Congo	29,940
14	Ivory Coast	106,944	29	Bolivia	28,582
15	Costa Rica	90,916	30	Yemen	20,357

Source: FAO

According to Food and Agriculture Organization (FAO) statistics, Brazil is the top coffee global producer in 2014 with a volume of 2,804,070 MT of GCB. It is followed by Vietnam, Colombia, Indonesia and Ethiopia. However, the Philippines ranked 25th with a volume of 37,727 MT of GCB.

In the Philippines, small farmers grow coffee. Based on official statistics from the PSA, production has generally declined by 3.51 percent per annum over the past ten (10) years from 52,047 tons GCB in 2006 to 36,171 tons of GCB in 2015.

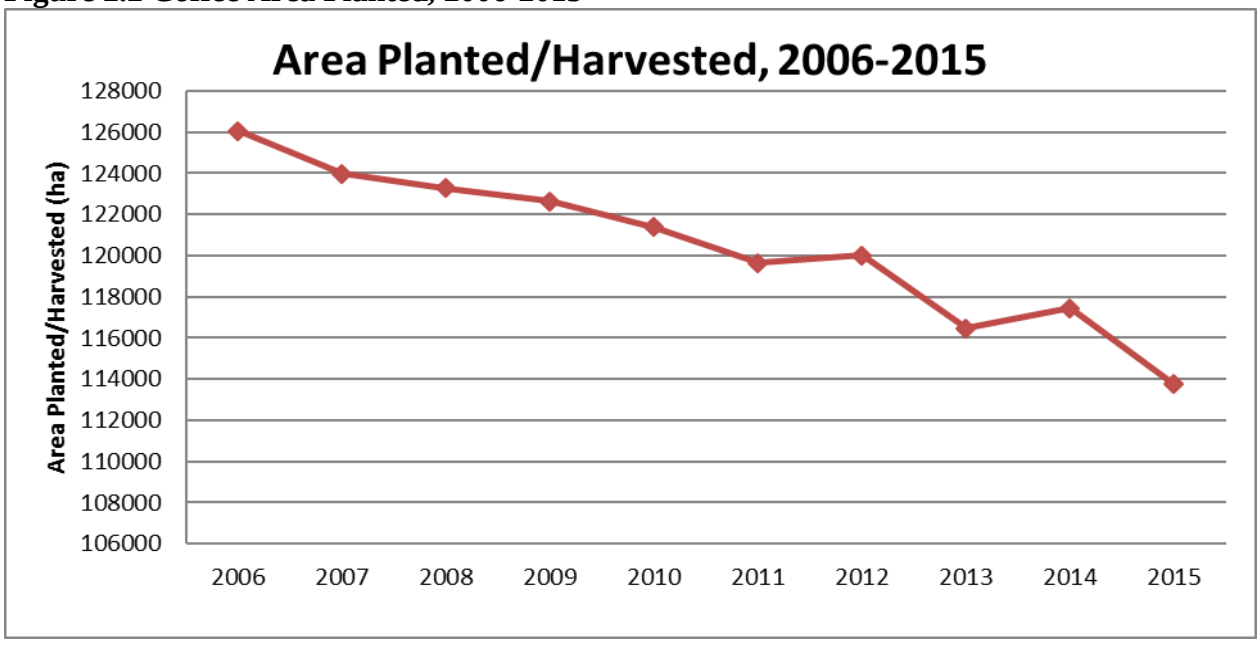
Figure 2.1 Green Coffee Beans: Production, 2006-2015



Source: PSA
Caveat: Official statistics may be overstated and must be treated with caution

Meanwhile, area planted for coffee also decreased by 1.02% per year over the last ten years. About 117,451 ha planted/harvested for coffee in 2014 had declined by 3.16% to 113,738 ha in 2015. This was attributed to the increase of number of coffee growers shifting to other crops, land conversion to real estate and recreation areas and urbanization.

Figure 2.2 Coffee Area Planted, 2006-2015

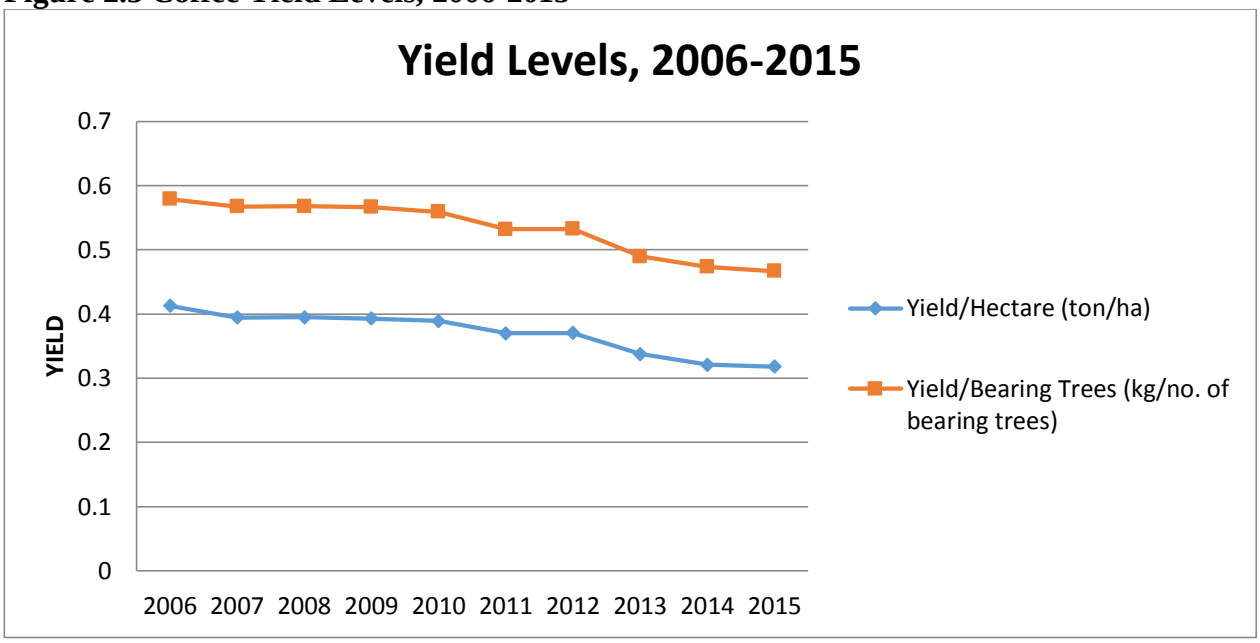


Source: PSA

In the past 10 years, yield per hectare declined by 2.53% per year. Meanwhile, yield per bearing tree decreased by 2.09% per year over the last 10 years. The low productivity was caused by

old age of trees, limited rejuvenation and poor farm management. *(Note: Based on industry data, the average yield is 250 – 300 kg green coffee beans per hectare.)*

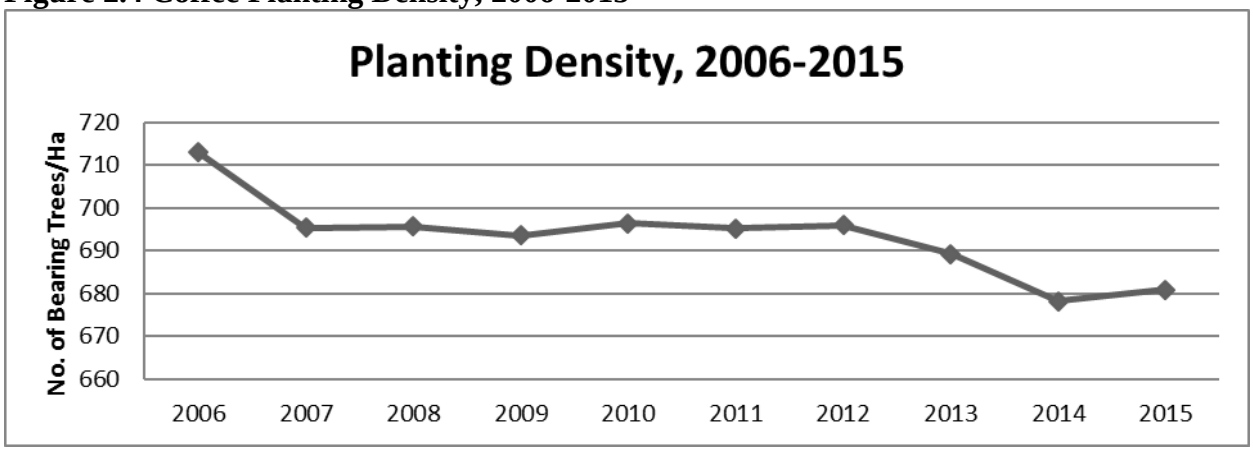
Figure 2.3 Coffee Yield Levels, 2006-2015



Source: PSA

On the average, there were 693 bearing trees in a hectare during the 10-year period as compared to the standard 1,100 trees per hectare planting density or at three meters by three meters planting distance for *Robusta*. The drop in densities is attributed to crop shifting and cutting of old trees.

Figure 2.4 Coffee Planting Density, 2006-2015



Source of basic data: PSA

2.2.2 Key production areas

In 2015, the top three producing regions were concentrated in Mindanao namely, Davao Region, SOCCSKSARGEN, and ARMM. Collectively, they contribute 68 percent of the coffee produced in the whole Philippines.

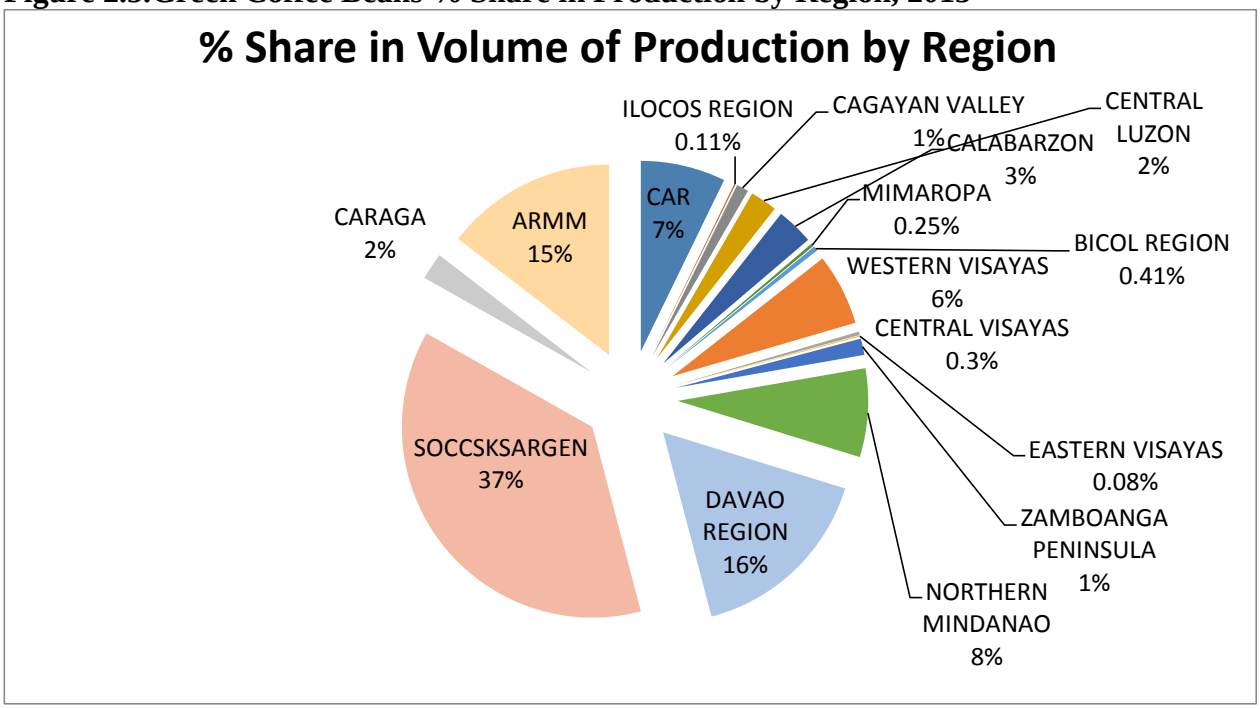
SOCCSKSARGEN accounted for 37 percent of total output in 2015 or 13,479 tons of green coffee beans followed by Davao Region with 16% or 5,840 tons of GCB and then ARMM with 15 percent or 5,263 tons of GCB.

Table 2.9 Local Production, Area Harvested and Yield, 2015

REGION	PRODUCTION (mt)	AREA (ha)	YIELD (mt/ha)
PHILIPPINES	36,171	113,738	0.32
CAR	2,605	6,631	0.39
Ilocos Region	40	352	0.11
Cagayan Valley	372	2,922	0.13
Central Luzon	824	1,957	0.42
CALABARZON	1,136	13,409	0.08
MIMAROPA	89	933	0.10
Bicol Region	148	737	0.20
Western Visayas	2,195	9,857	0.22
Central Visayas	104	1,702	0.06
Eastern Visayas	30	172	0.17
Zamboanga Peninsula	504	919	0.55
Northern Mindanao	2,718	11,709	0.23
Davao Region	5,840	17,344	0.34
SOCCSKSARGEN	13,479	26,731	0.50
CARAGA	823	4,417	0.19
ARMM	5,263	13,946	0.38

Source: PSA

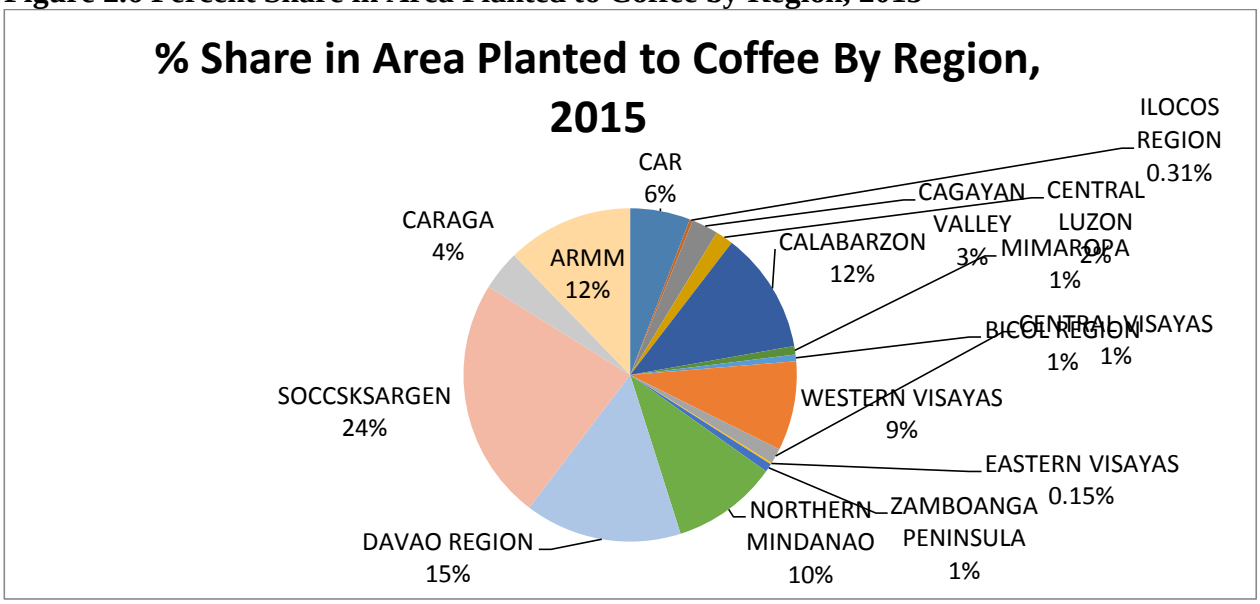
Figure 2.5.Green Coffee Beans % Share in Production by Region, 2015



Source of basic data: PSA

Total area planted to coffee in 2015 was 113, 738 ha. The top five regions with the biggest planting area for coffee are as follows: SOCCSKARGEN (26,731 ha); Davao Region (17,344 ha); ARMM (13,946 ha); CALABARZON (13,409 ha) and Northern Mindanao (11,709 ha).

Figure 2.6 Percent Share in Area Planted to Coffee by Region, 2015



Source of basic data: PSA

2.2.3 Coffee varieties

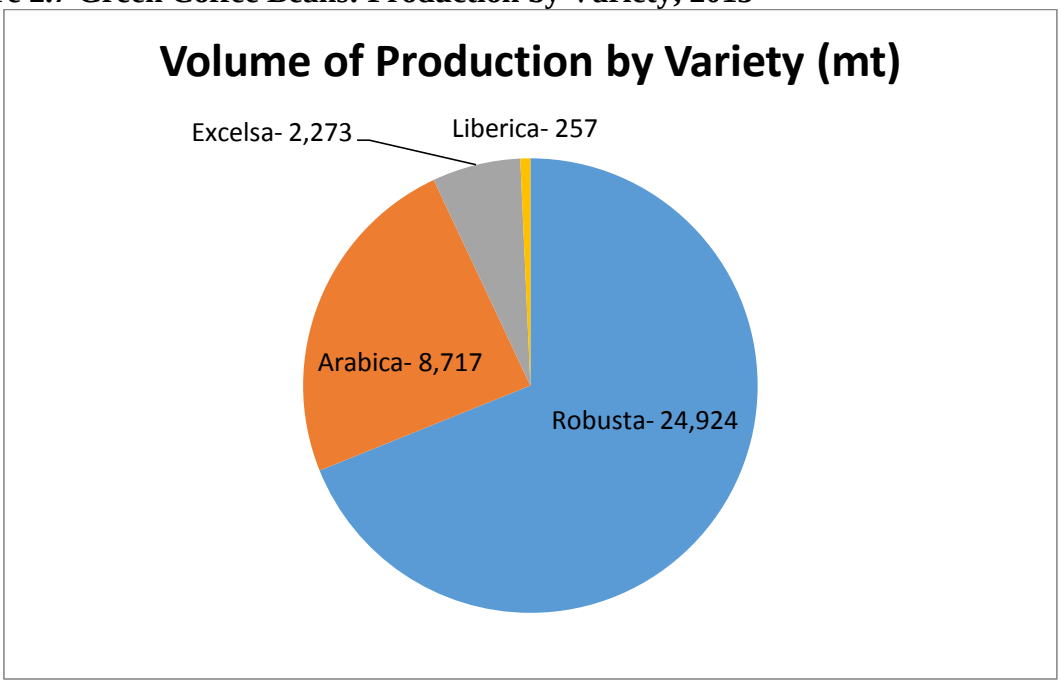
The four major varieties of coffee are *Robusta*, *Arabica*, *Excelsa* and *Liberica*. Arabica and Robusta are the large-scale commercially viable species. There are thousands of coffee varieties, but only these four are commercially grown varieties and cultivars.

Usually a high-yielding variety, Robusta is used in espresso and instant mixes. *Arabica* which grows well in high altitudes is the most expensive. *Excelsa* with berries bigger than Arabica but smaller than Liberica is more drought and pest resistant than other varieties. Lastly, *Liberica*, also known as *Kapeng Barako* has a strong flavor and sharp aroma.

Robusta was the dominant variety with 69 percent or 24,293 tons of GCB in 2015. It was followed by *Arabica* with 24 percent or 8,717 tons of GCB, *Excelsa* with six percent or 2,273 tons of GCB, and *Liberica* with one percent or 257 tons of GCB.

Furthermore, Robusta was also the main variety planted at 75 percent (85,683 ha) of all areas in 2015, followed by Arabica with 15 percent (18,768 ha), *Excelsa* with 7 percent (8,007 ha) and *Liberica* with 1 percent (1,280 ha).

Figure 2.7 Green Coffee Beans: Production by Variety, 2015

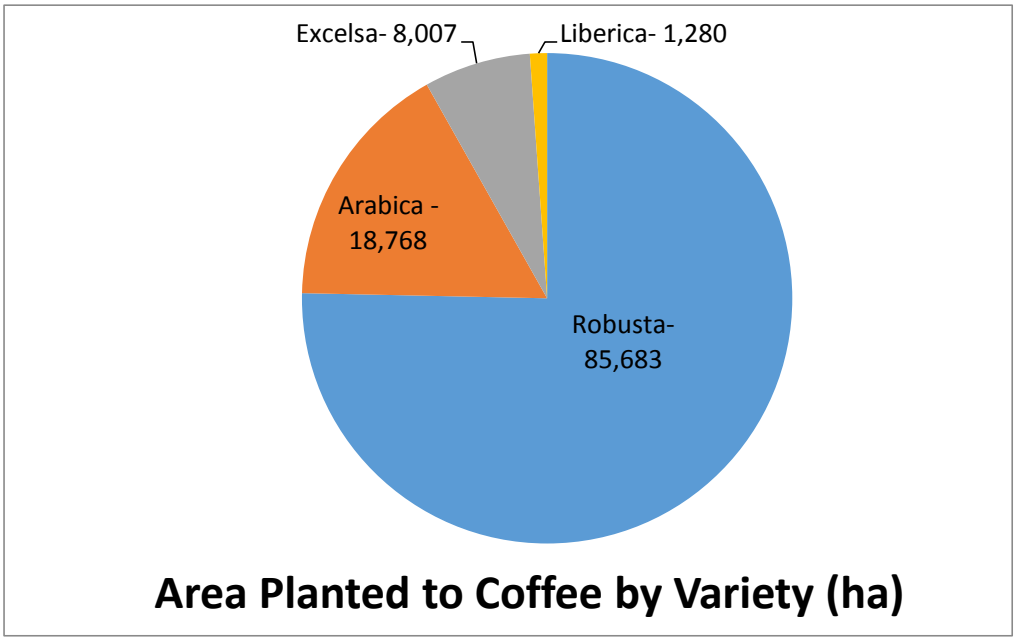


Source: PSA

Based on PSA 2015 estimates, *Robusta* accounted for 24,924 MT or 69% of total production, followed by *Arabica* with 8,717 MT or 24%.

In 2015, the dominant regional producers of *Robusta and Arabica* coffee were Davao Region and SOCCSKSARGEN while Excelsa was mostly produced in ARMM and Davao Region. *Liberica* coffee was mainly produced in Western Visayas and ARMM.

Figure 2.8 Area Planted to Coffee by Variety, 2015

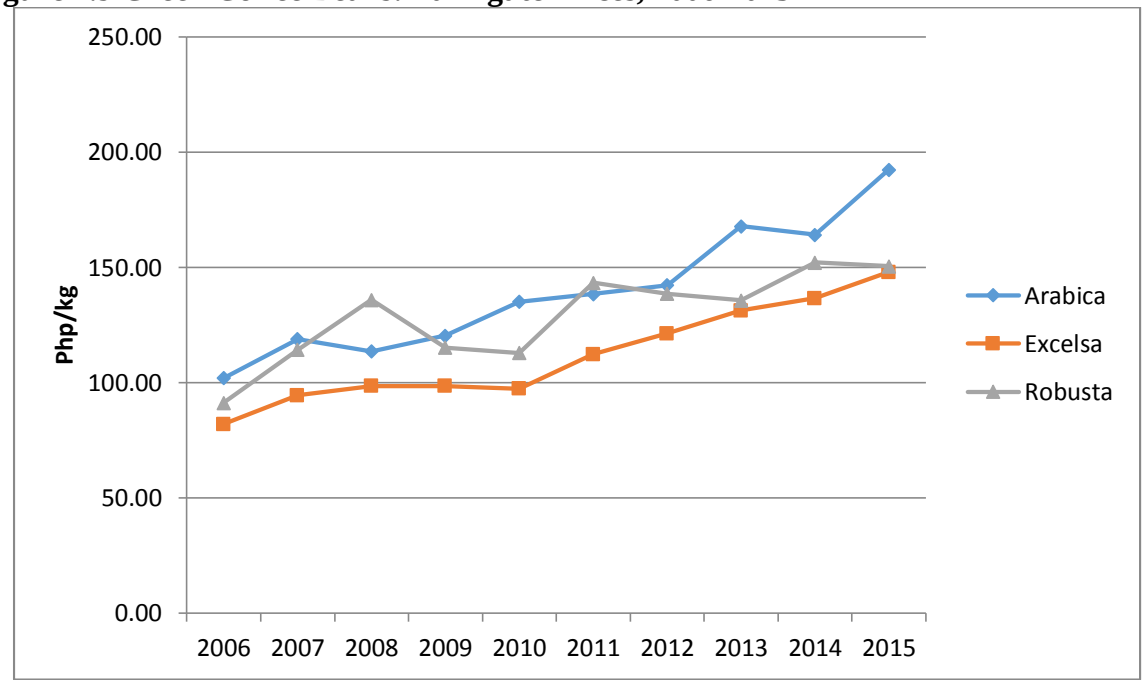


Source of basic data: PSA

2.2.4 Domestic Prices

As a world traded commodity, farm gate prices of dry coffee beans were variable. Prices posted overall increases for the past 10 years. Farm gate prices of *Robusta* rose by 5.93% per annum from PhP 45.6/kg in 2006 to PhP 74.98/kg in 2015. Likewise, *Arabica* prices grew by 6.85% annually to PhP 96.21/kg in 2015 from PhP 51.02/kg in 2006. *Excelsa* prices also rose by 6.23% per year from PhP 40.98/kg in 2006 to PhP 73.99/kg in 2015.

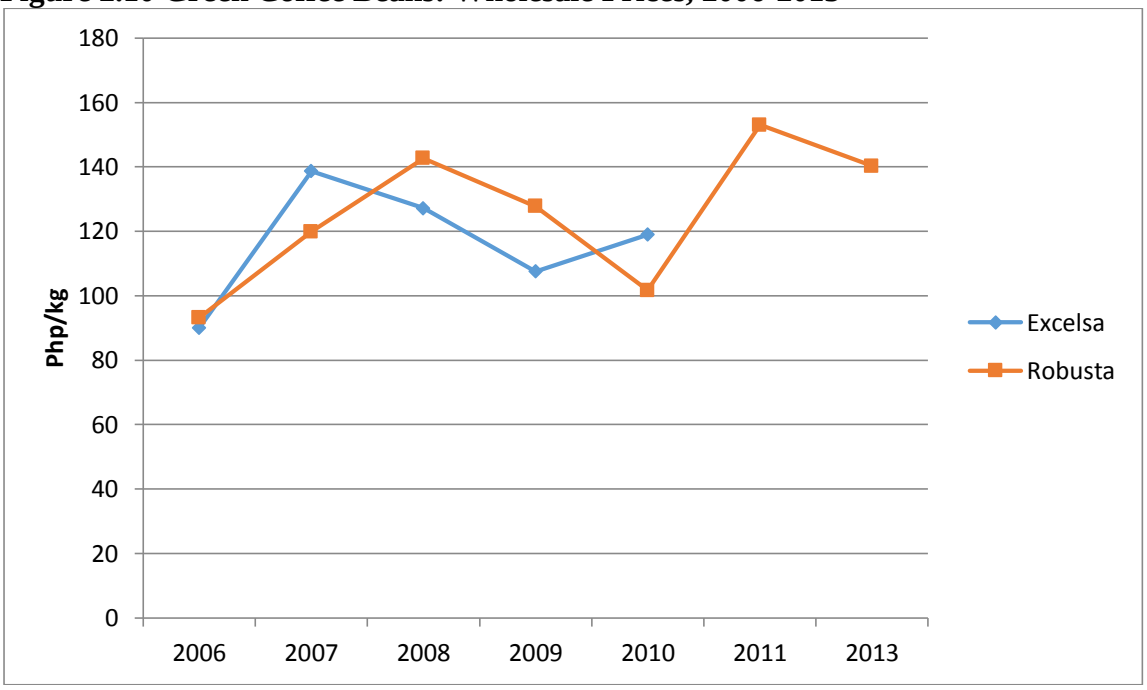
Figure 2.9 Green Coffee Beans: Farmgate Prices, 2006-2015



Source: PSA

Wholesale prices of green coffee beans have changed thru the years. *Robusta* wholesale prices grew by 8.41% per year from PhP 91.20/kg in 2006 to PhP 150.5/kg in 2015. For *Excelsa*, prices reached PhP 97.36/kg in 2010, from PhP 81.96/kg in 2006. The fluctuating wholesale prices against farmgate prices were attributed to the intense competition among wholesalers and averaging not weighted by traded volume. Likewise, changes in the foreign exchange rate such as peso depreciation increased the domestic price.

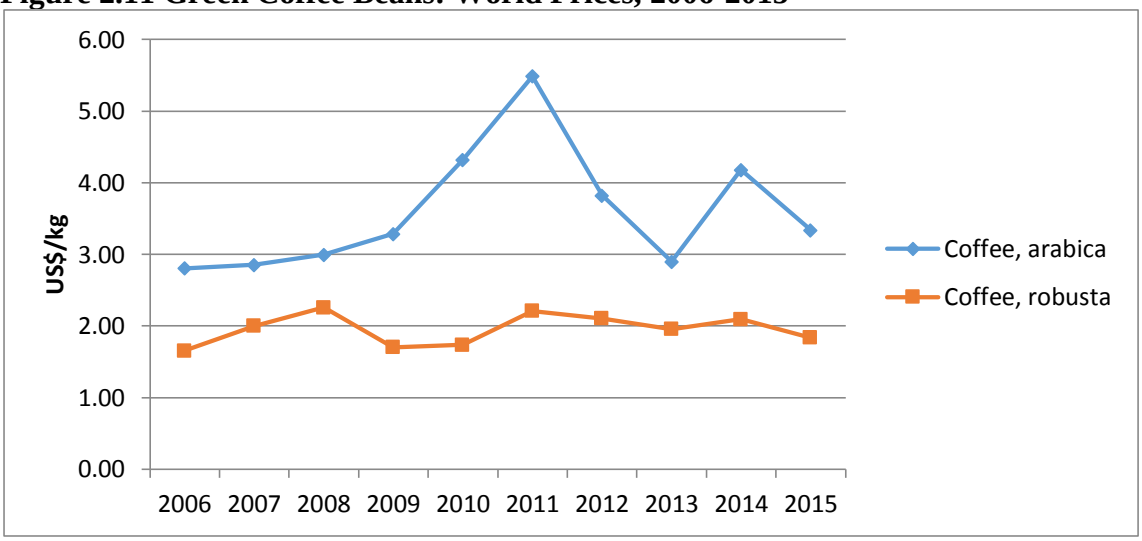
Figure 2.10 Green Coffee Beans: Wholesale Prices, 2006-2013



Note: data not available in 2012, 2014-2015 for Robusta; 2011-2015 for Excelsa
Source: PSA

For the last 10 years, world prices of *Robusta* grew from US$ 1.66/kg in 2006 to US$1.84/kg in 2015. Likewise, world prices of *Arabica* grew from US$ 2.8/kg in 2006 to US$ 3.34/kg in 2016.

Figure 2.11 Green Coffee Beans: World Prices, 2006-2015



Source: World Bank

2.2.5 Consumption

According to the ICO, there was a 2% increase in the total global coffee consumption from 2014-2015 and an 8.8% increase in the total consumption from 2014-2015 in the Philippines.

Table 2.10 Global Coffee Consumption, in 60 kg Bags

Calendar years	2012	2013	2014	2015	CAGR
World total	143,430	147,811	150,389	152,204	2.0%
Africa	9,839	10,690	10,455	10,621	2.6%
Asia & Oceania	28,421	29,649	31,260	33,131	5.2%
Central America & Mexico	5,149	5,154	5,215	5,242	0.6%
Europe	49,459	50,499	50,960	50,116	0.4%
North America	25,730	26,931	27,679	27,975	2.8%
South America	24,831	24,888	24,819	25,120	0.4%
Philippines	**2,250**	**2,438**	**2,675**	**2,900***	**8.8%**

Source: ICO

Table 2.11 Philippine Coffee Data (2014)

Average yield per tree	Unit of Measurement	Actual	Standard
Fresh cherry	kg	1.325	2 to 4
Dried cherry	grams	530	
Green bean	grams	265	
Number of trees per hectare	trees	700	1,100
Total number of trees *(@1,500/ha)	million	82.215	176.176*
Total number of hectares planted	ha	117,451	
Total production (2014)	metric tons	75,454	dried cherry
		37,727	green coffee bean
Total consumption	metric tons	132,000	green coffee bean
Per capita consumption (2012)	kg	1.30	green coffee bean
	cups	66	
Import dependence ratio	consumption vs. imports	3.50	green coffee bean

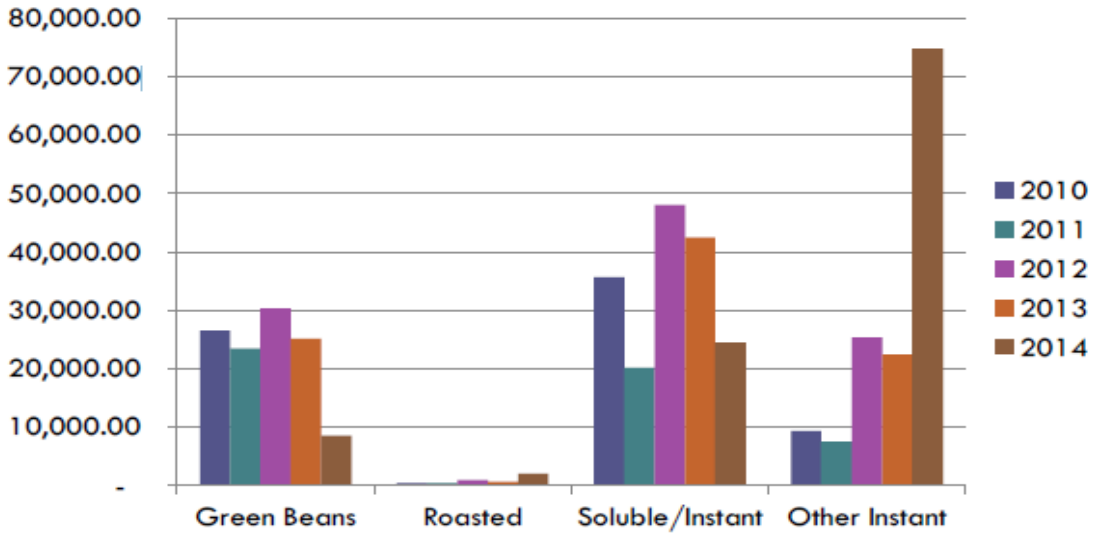
2.2.6 Trade

Trade consists of GCB, roast and ground coffee, extracts, essences and concentrates of coffee (principally single-serve sachets), as well as preparations with a basis of coffee. Since 1997, Philippines has been a net importer. The country's imports continue to increase with the growing number of specialty coffee shops and foreign coffee brands.

Global estimated number of 60kg bags of coffee produced for the period 2015-2016 is 144.8 million which is equivalent to 8.688 million tons. This figure is up by 1.6% compared to 2014-2015. *(Source: The Current State of the Global Coffee Trade | #CoffeeTradeStats http://www.ico.org/monthly_coffee_trade_stats.asp)*

Imports. PSA classified imports of coffee into GCB, roasted, soluble/instant and other instant. Other instant imports posted significant growth from 2010 to 2014, exceeding 70,000 tons.

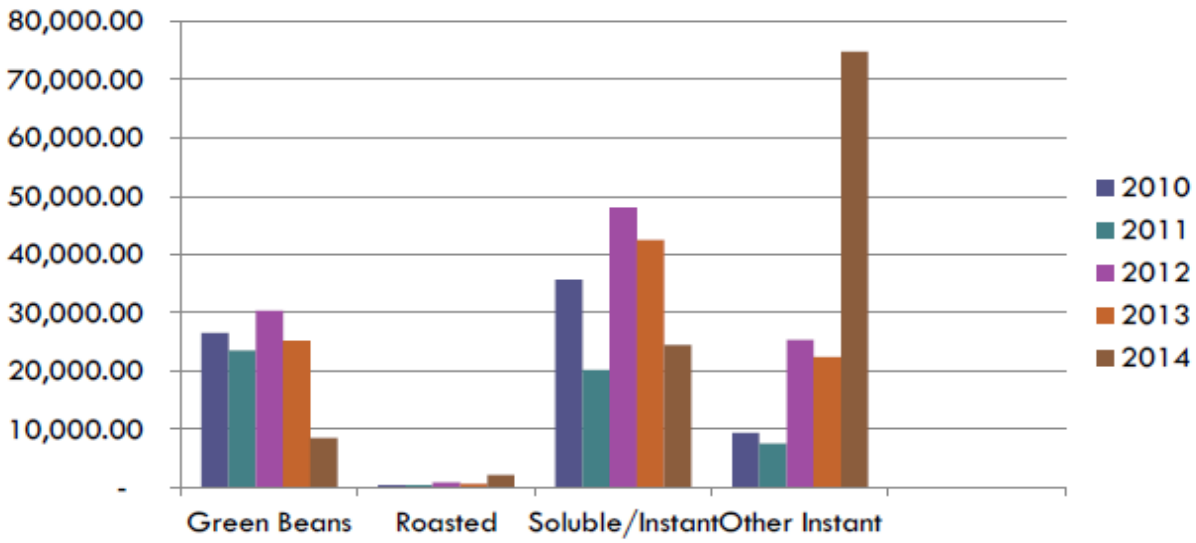
Figure 2.12 Comparative Philippine Imports by Form, 2010-2014



Source: ICO

Exports. Export volume was highest for other instant coffee forms at more than 70,000 tons in 2014. GCB and soluble/instant coffee forms export volume declined in 2014 compared to 2013.

Figure 2.13 Comparative Philippine Coffee Exports by Form, 2010-2014



Source: ICO

2.2.7 Brands and Players

Local and imported coffee brands in the country include *Nescafe, Café Puro, Great Taste, Blend 45, Jimm's, Kaffe de Oro, Koffie, Folgers, G7, Good Day, Grandeur, Kopiko, San Mig, and Vinacafe*. Nestle Philippines, Inc. (NPI) enjoys around 80% of volume sales from supermarkets, groceries, convenience stores, drug stores, sari-sari stores, and the like in 2010 (Euromonitor, June 2012). NPI purchases around 80% of domestic production.

Table 2.12 Coffee Brands in the Philippines, 2012

Coffee Manufacturers	
Brand/s	**Manufacturer**
Café Puro	Commonwealth Foods, Inc.
Great Taste, Blend 45	Universal Robina Corp.
Jimm's	Goldshine Pharmaceuticals, Inc.
Kaffe de Oro	Century Pacific Group (Snow Mountain Dairy Corporation)
Koffie	Regent Foods Corp.
Nescafe	Nestle Philippines Inc. (market leader)
Coffee Importers	
Brand/s	**Company/Importer**
Folgers	The Folgers Coffee Company/Sysu International Inc.
Coffee G7	Trung Nguyen (Vietnam)/Benby Enterprises, Inc.
Good Day	PT Santos Jaya Abadi (Indonesia)
Grandeur	Super Coffee Corp. Pte Ltd (Singapore, Thailand)
Kopiko	P.T. Maha Jaya Suksesindo (Indonesia)/Tridharma Mktg. Corp. (Tao Group) (major)
Khao Shong	Khao Shong Industry 1979 Co. Ltd. (Thailand)
Nescafe Decaf	Nestle Korea Ltd/Nestle Philippines Inc.

Nescafe Gold	Nestle Korea Ltd/Nestle Philippines Inc.
San Mig coffee	Super Coffee Corp. Pte Ltd (Singapore, Thailand)
Vinacafe	Vinacafe Bien Hoa Jointstock Company (Vietnam)

Source: Orzales, 2011; Selected supermarkets/stores in Metro Manila

Locally-made ground coffee brands available in the market include Aguinaldo blend, Altura coffee, Café Amadeo, Café de Lipa, Café Chico, Coffee Alamid (civet coffee), Davao coffee (variants *Robusta*, *Arabica*, *Excelsa*), Gourmet café, Kalinga blend, Kalinga *Robusta* premium coffee, Kalinga brew, Kalinga Musang coffee, Kape Isla, Magallaya brew premium coffee (*Excelsa*), Monk's blend, Mt. Apo Civet coffee, Musang coffee roasted beans, Negros Rainforest, Rocky Mountain (variants *Mountain Blend and Classic Blend*) and Sagada coffee, among others. The products are manufactured by entrepreneurs, mostly operating on a small scale. Most derived their brand names from the place where they are being produced.

Likewise, there are notable local and foreign specialty coffee chains like Bo's Coffee, Figaro, McCafé (uses 100 percent *Arabica* premium coffee), Seattle's Best Coffee, Starbucks Coffee (market leader), The Coffee Bean and Tea Leaf, and UCC Coffee, to name a few.

Table 2.13 Specialty Coffee Shops in the Philippines, 2012

Specialty Coffee Shop	Company	Number of Stores
Starbucks Coffee	Rustan Coffee Co.	190
Figaro	Figaro Coffee Co., Inc.	62
Bo's Coffee	Coffee Centrale, The Bean Co., Inc.	51
The Coffee Bean and Tea Leaf	The Coffee Bean and Tea Leaf Phils., Inc.	38
Gloria Jean's Coffees	Specialty Beans Phils., Inc.	22
McCafe	Golden Arches Development Corp.	17
Mocha Blends	Mocha Blends Corp.	16
Seattle's Best Coffee	Coffee Masters, Inc.	15
UCC Coffee	Blue Mountain Coffee Ventures, Inc.	13
Highlands Coffee	Digital Paradise Inc.	7

Source: Orzales, 2011

Quick service restaurants (e.g. KFC uses 100 percent *Arabica* premium coffee), donut shops, pastry stores, teashops and hotels offer coffee in their menus. Most restaurants like Max's, Pancake House, etc. serve coffee as well.

3. COST AND RETURN ANALYSIS (per ha)

Farm cash flows were developed for typical Robusta and Arabica coffee farms and modern Arabica farm. These are the two leading varieties in the country.

3.1 Robusta

For a typical Robusta farm, the production cost of average of five areas with a planting density of 850 trees (with intercrop) per ha amounted to about Php 37.33/kg. The average processing cost is Php 5.50/kg. Labor costs accounted for aboutPhp 12.84/kg.

Assuming the average price of PhP80/kg of green coffee beans, the profit margin for the typical farm averaged to Php 34.95/kg.

Table 3.1 COST AND RETURN ANALYSIS OF ROBUSTA COFFEE PRODUCTION IN ONE (1) HECTARE AREA

ITEM	Unit	Unit Cost (PhP)	COSTS AND RETURN ANALYSIS OF COFFEE PRODUCTION IN A HECTARE AREA											
			Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
			Qty	Cost/ Value (PhP)	Qty	Cost/ Value (PhP)	Qty	Cost/ Value (PhP)	Qty	Cost/ Value (PhP)	Qty	Cost/ Value (PhP)	Qty	Cost/ Value (PhP)
GROSS INCOME: Sales of Green Coffee Beans	kilo	100			**350**	**35,000**	**834**	**83,400**	**1,250**	**125,000**	**1,667**	**166,700**	**1,667**	**166,700**
EXPENSES: Labor: Clearing/Brushing/ Contouring	sq.m.	0.30	10,000	3,000										
Field Layout/Staking	md	300	6	1,800										
Holing (75 holes/md)	holes	3.00	1,667	5,001										
Basal Fertilization and Transplanting	md	300	7.25	1,450										
Replanting (5%)	md	300.00	2.5	500										
Ringweeding/Underbrushing (2-4x)	tree	1.50	6,668	10,002	6,668	10,002	3,334	5,001	3,334	5,001	3,334	5,001	3,334	5,001
Sidedress Fertilization (2x)	tree	1.25	3,334	4,168	3,334	4,168	3,334	4,168	3,334	4,168	3,334	4,168	3,334	4,168
Foliar Fertilizer Spraying (4x)	md	300	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400
Bio-Pest Control (4x Spraying)	md	300	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400
Bending/Training of Coffee Multiples	hill	0.50	1,667	834		0								
Pruning (Formative/Phytosanitary)	md	300		0	3	900	5	1,500	6.0	1,800	6.0	1,800	6.0	1,800
Harvesting	md	300		0	7	2,100	15	4,500	20	6,000	25.0	6,000	25.0	11,800
Floating/ Drying (Dry Processing)	md	300		0	2	600	5	1,000	10.0	2,000	15	3,000	19.50	3,900
Drying, Dehulling, Cleaning and Bagging	md	300		0	1	300	3	550	8	2,400	10.0	3,000	10.00	3,000
Sub-Total			**31,555**		**22,870**		**21,519**		**26,169**		**27,769**		**34,469**	
Inputs: Stakes	pc	0.25	1,667	417										
Planting Materials: Coffee Seedlings	pc	25	**1,667**	**41,675**										
Organic Fertilizer (0.5kg/hill), 834 kg	kg	7	5,838	2,940	1,667	11,669	3,334	23,338	3,334	23,338	3,334	23,338	3,334	23,334
Foliar (Organic) Fertilizer (Based on leaf analysis)	liter	250	4	1,000	4	1,000	8.0	2,000	8	2,000	8	2,000	8	2,000
Bio-Control repellants	liter	150	3	450	3	450	6	900	6	900	6	900	6	900
Pruning Shear	pc	250			1	250	3	750						
Knapsack Sprayer	unit	2,700	1	2,700	1	2,700								
Plastic Container for Harvesting	pc	50			3	150	3	150	3	150	3	150	6	300

Drying Trays	pc	300			2	600	3	900	3	900	2	600	4	1,200
Jute Bags for Storing Coffee Berries	pc	50			5	250.00	6	300	3	150	3	150	4	200
Sub-Total			**49,182**		**17,069**		**28,338**		**27,438**		**27,138**		**27,934**	
TOTAL EXPENSES			**80,736**		**39,939**		**49,857**		**53,607**		**54,907**		**62,403**	
NET INCOME			**(80,736)**		**(4,939)**		**33,543**		**71,393**		**111,793**		**104,297**	
CUMULATIVE NET INCOME			**(80,736)**		**(14,307)**		**19,236**		**90,629**		**202,422**		**306,719**	
Estimated Percentage of Harvest in Kilo per Tree (conservative estimate based on GAP organic technology)					**21%**		**50%**		**75%**		**100%**		**100%**	
ROI (%):					**11.27**		**133.17**		**203.60**		**167.13**			

Expenses as Farmer's Counterpart (For 1667 Seedlings)

Year 1 -

Labor…… **31,555**

Year 2 -

Labor…… **22,870**

Year 3 -

Labor…… **21,519**

Total Labor Expenses as Farmer's Counterpart …….. **75,944**

Total Accumulated Expenses for 3 Years Without Labor Counterpart **170,532** **Loanable Amount without Labor Counterpart**

less: Total Labor Expenses can be Farmer's Counterpart **75,944** 45%

Total Amount that can be borrowed from Farmer's Counterpart …….. **94,588** **Loanable Amount with Labor Counterpart**

3.2 Arabica

For Arabica, the farmer's production cost for a typical one hectare Arabica farm averaged to Php 55.33/ha. The farmer's processing cost is Php 8.08/kg.

Labor cost accounted for Php 41.01/kg, the biggest cost component in total farmer's cost. Material input costs are as low at Php 1.51 as no material inputs such as fertilizers and pesticides are being applied. For an Arabica modern farm, cost of material inputs is at Php 20.29 as fertilizers and pesticides are utilized.

A typical farm has its first harvest on the second year while a modern farm on the third year. The typical farm sells dry parchment while the modern farm sells green coffee beans.

For the modern farm, the farmer's profit margin is at Php 146.58/kg. On the other hand, farmer's profit margin for a typical farm is at Php 60.93. The typical Arabica farm needs about five years to recover its initial investment during the first year while a modern farm takes a little over four years to recoup its initial investment during the first two years.

Table 3.2 COSTS AND RETURN ANALYSIS OF ARABICA COFFEE PRODUCTION IN ONE (1) HECTARE AREA

As of 12.02.17

ITEM	Unit	Unit Cost (PhP)	COSTS AND RETURN ANALYSIS OF COFFEE PRODUCTION IN A HECTARE AREA											
			Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
			Qty	Cost/Value (PhP)	Qty	Cost/Value (PhP)	Qty	Cost/Value (PhP)	Qty	Cost/Value (PhP)	Qty	Cost/Value (PhP)	Qty	Cost/Value (PhP)
GROSS INCOME: Sales of Green Coffee Beans	kilo	150			**400**	**60,000**	**1,000**	**150,000**	**1,500**	**225,000**	**2,000**	**300,000**	**2,000**	**300,000**
EXPENSES:														
Labor: Clearing/Brushing/ Contouring	sq.m.	0.30	10,000	3,000										
Field Layout/Staking	md	300	6	1,800										
Holing (75 holes/md)	holes	3.00	2,000	6,000										
Basal Fertilization and Transplanting	md	300	10.00	3,000										
Replanting (5%) 100 pcs	md	300.00	2.5	500										
Ringweeding/Underbrushing (2-4x)	tree	1.50	8,000	12,000	8,000	12,000	8,000	12,000	4,000	6,000	4,000	6,000	4,000	6,000
Sidedress Fertilization (2x)	tree	1.25	4,000	6,000	4,000	6,000	4,000	6,000	4,000	6,000	4,000	6,000	4,000	6,000
Foliar Fertilizer Spraying (4x)	md	300	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400
Bio-Pest Control (4x Spraying)	md	300	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400	8	2,400
Bending/Training of Coffee Multiples	NA													
Pruning (Formative/Phytosanitary)	md	300		0	3	900	5	1,500	6.0	1,800	6.0	1,800	6.0	1,800
Harvesting	md	300		0	7	2,100	15	4,500	20	6,000	25.0	7,500	25.0	7,500
Floating/ Drying (Wet Processing)	md	300		0	2	600	5	1,500	10.0	3,000	15	4,500	15.00	4,500
Drying, Dehulling, Cleaning and Bagging	md	300		0	2	600	4	1,200	6	1,800	10.0	3,000	10.00	3,000
Sub-Total			**37,100**		**27,000**		**31,500**		**29,400**		**33,600**		**33,600**	
Inputs: Stakes	pc	0.25	2,000	500										
Planting Materials: Coffee Seedlings	pc	25	2,000	50,000										
Organic Fertilizer (0.5kg-2kg/hill), 1000-	kg	7	5,838	2,940	1,667	11,669	3,334	23,338	3,334	23,338	3,334	23,338	3,334	23,334
Foliar (Organic) Fertilizer (Based on leaf analysis)	liter	250	4	1,000	4	1,000	8.0	2,000	8	2,000	8	2,000	8	2,000

Bio-Control repellants	liter	150	3	450	3	450	6	900	6	900	6	900	6	900
Pruning Shear	pc	250			1	250	3	750						
Knapsack Sprayer	unit	2,700	1	2,700	1	2,700								
Plastic Container for Harvesting	pc	50			3	150	3	150	3	150	3	150	6	300
Drying Trays	pc	300			2	600	3	900	3	900	2	600	4	1,200
Jute Bags for Storing Coffee Berries	pc	50			5	250.00	6	300	3	150	3	150	4	200
Sub-Total			**57,590**		**17,069**		**28,338**		**27,438**		**27,138**		**27,934**	
TOTAL EXPENSES			**46,946**		**45,755**		**49,857**		**53,607**		**54,907**		**62,403**	
NET INCOME			**(46,946)**		**14,245**		**100,143**		**171,393**		**245,093**		**237,597**	
CUMULATIVE NET INCOME			**(46,946)**		**(32,701)**		**67,442**		**238,835**		**483,928**		**721,525**	

Estimated Percentage of Harvest in Kilo per Tree — **20%** | **50%** | **75%** | **100%** | **100%**

(conservative estimate based on GAP organic technology)

ROI (%): **201%** | **320%** | **446%** | **381%**

Expenses as Farmer's Counterpart (For 1667 Seedlings)

Year 1 -
Labor…… **37,100**

Year 2 -
Labor…… **27,000**

Year 3 -
Labor…… **31,500**

Total Labor Expenses as Farmer's Counterpart …… **95,600**

Total Accumulated Expenses for 3 Years Without Labor Counterpart **85,928** **Loanable Amount without Labor Counterpart**

less: Total Labor Expenses as Farmer's Counterpart **95,600**

Total Amount that can be borrowed with Farmer's Counterpart …….. **181,528** **Loanable Amount with Labor Counterpart**

4. SUPPLY/VALUE CHAIN ANALYSIS

Value chain analysis (VCA) is a method of accounting and presenting the value created in a product or service as it is processed from raw inputs to a final product consumed by end users. This section discusses the supply chain segment, targets, problems and interventions for each stage of the Philippine coffee industry.

4.1 Supply Chain Segments and Players

The segments along the supply chain are identified by phase.

Nursery Development and Farm Inputs - Input suppliers refer to licensed dealers or agricultural supply stores that sell inputs to nursery operators and farmers. Payment terms are either cash or credit. Transactions in this stage include selling and purchasing of seeds, planting materials, plastic bags, fertilizer, irrigation instruments and tools/equipment.

Planting materials are sourced from nurseries, existing plants and *wildlings* (i.e., those that sprout under the coffee trees in the field). Nestle Philippines has clonal gardens in Davao and Lipa, Batangas. There are also private nurseries and nurseries in state colleges and universities like Cavite State University (CavSU) and Benguet State University (BSU). Likewise, there are commercial farms especially in Arabica (e.g. Rocky Mountain in CAR and MacNut in Sultan Kudarat) that produce their own seedlings. However, there is a shortage of quality planting materials in the country.

Farm Production - Farmers cultivate, fertilize, maintain, produce, and harvest coffee for sale to traders or processors. It involves activities in the farm such as area selection, land preparation, planting, crop management (i.e. fertilization, pest control, weeding, pruning), drying, dehulling/milling, sorting/grading and storage.

Intercropping is a common practice among local coffee farmers. Crops involved are vegetables, coconut, fruit and forest trees. The planting densities range from 600 to 1,700 trees per hectare.

Most farms use inorganic fertilizers and some use organic fertilizers (e.g. chicken manure). The fertilizers used include urea, phosphate and potash. Low yield necessitates application rates below recommended level.

Maintenance activities include weeding, fertilization and pruning. Weeding and fertilization are done thrice and at least twice a year, respectively. Pesticide application is also practiced to get rid of pests and diseases. Pruning to remove unnecessary braches and sprouts is done after harvest. These activities are possible thru hired labor.

Harvesting in two years is made possible with the use of seedlings that are eight to ten months old. For areas which use *wildlings* (e.g. Kalinga in Luzon), harvesting starts on the fifth year, usually takes place from December to March. Most areas use stripping method where all cherries (whether red or green) are stripped from the branch. While this method addresses security and theft concerns, bean quality is very poor. Other areas harvest by picking only the red cherries.

Primary Processing - Activities at this stage include wet and dry processing, drying, depulping and dehulling to prepare GCBs for storage and further processing for the domestic and export markets.

Three main post-harvest handling practices are currently conducted in the Philippines. The most common of these is the 1) dry process also known as the natural process; 2) wet or washed process; and 3) the semi-washed process. The last two processes are not very common but are gaining popularity. Robusta is typically processed using the dry or natural process. Arabica growers also use the dry or natural process as there is limited quality equipment available for the other processing methods.

The wet process, usually applied to Arabica, entails pulping the cherries to separate the outer skin. The product, called parchment coffee, is then fermented through soaking in water for 8 to 12 hours (overnight), washed in the morning and then dried to remove parchment to get GCBs.

The drying systems are sun or mechanical drying (e.g., using kerosene or LPG-fired dryers, or solid fuel waste-fired dryers). The most common practice is sun-drying, wherein the coffee beans are spread on paved drying areas or on the ground, using mats, nets or canvas for two days to two weeks depending on the weather. However, this method is not recommended as it affects bean quality.

Marketing/Trading - Traders purchase coffee (mostly GCBs) from farmers to sell to other traders or processors. Trading takes place in the farm or buying station at the *barangay*, municipal or provincial level.

Farmers sell green coffee beans either directly to buyers or to agents or traders. The agents/traders then consolidate their purchases and resell to other traders and processors. Other buyers include millers, processors and/or buying stations of coffee companies (e.g. Nestle buying station).

Secondary Processing - The players process GCBs to produce value-added coffee products like roasted beans, roast and ground coffee, specialty coffee and single-serve coffee mixes (3-in-1) or consumer pack soluble for the domestic and export markets.

The biggest processor of soluble instant coffee is Nestle Philippines, followed by Universal Robina Corporation and Commonwealth Foods. Many small to medium scale coffee processors also produce roasted beans as well as ground coffee and instant coffee.

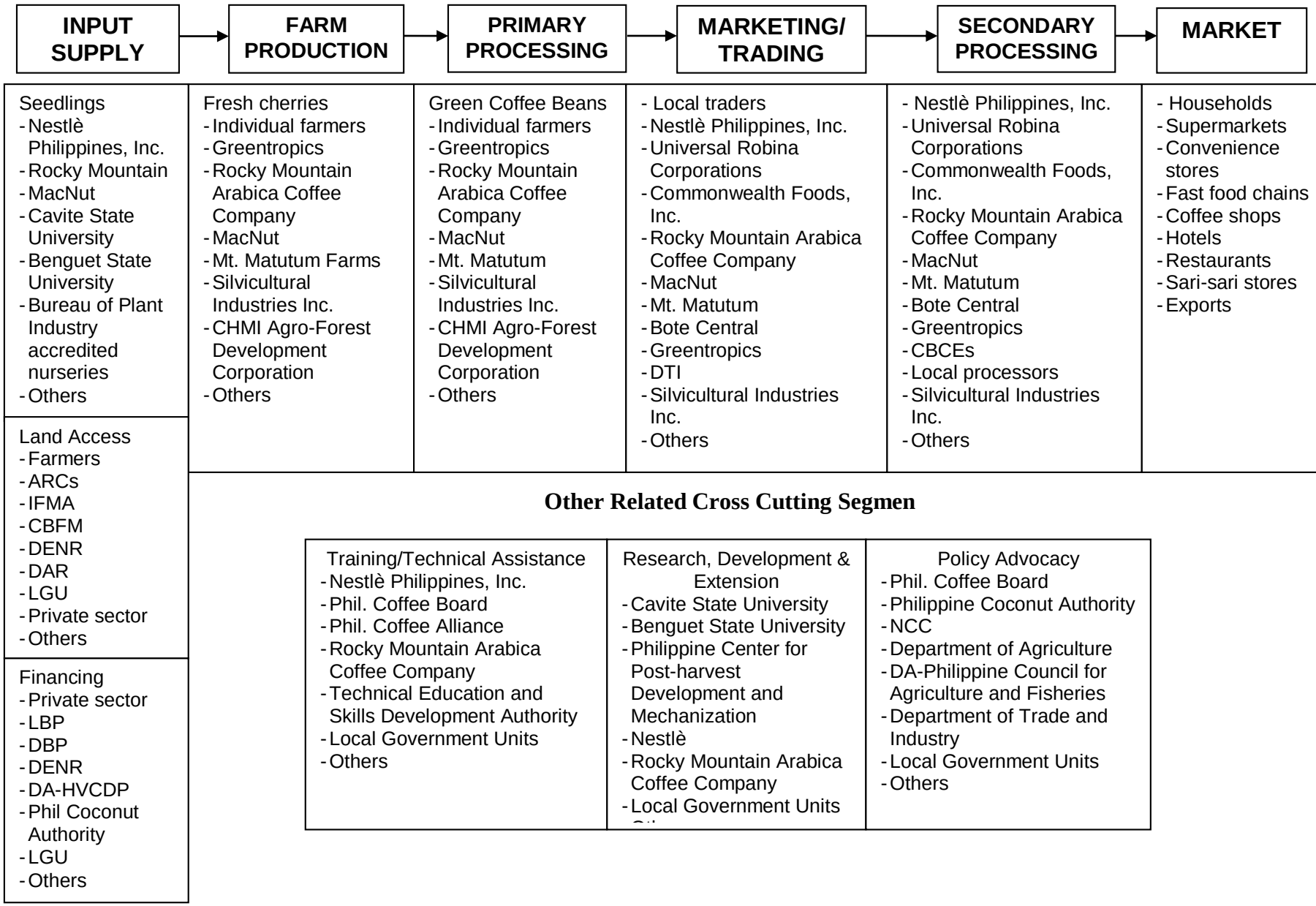
Market - The market/users refer to consumers of coffee beans in its various forms like roasted beans, ground coffee, and instant coffee. They may be consumed in households, coffee shops or restaurants.

Logistics - The logistic providers offer services for transport, storage and warehousing of farm inputs, coffee beans and coffee products.

Table 4.1 Supply Chain Segments and Activities

Inputs for Nursery Development	Inputs	Farm Production	Primary Processing	Marketing Logistics/	Secondary Processing	Logistics	Market
- Area selection - Seeds - Plastic bags - Fertilizer - Tools and equipment	- Seedlings - Fertilizer - Pesticides - Tools and equipment	- Area Selection - Land preparation - Maintenance - Fertilization - Pest control - Harvesting - Sorting/Grading - Storage	- Depulping - Fermentation - Drying - Dehulling to green coffee beans	- Trading - Handling - Transport/ Shipping - Storage	- Roasted beans - Roast and ground coffee - Instant coffee	- Handling - Transport/ Shipping - Storage	- Domestic - Exports

Figure4.1. Selected Stakeholders and Players along the Coffee Supply/Value Chain



4.2 Cost build-up and Margins

This section presents the value chains of typical farms for Robusta and Arabica. The costs and margins were estimated based on the information gathered from research and consultation workshops. It is important to note that performance costs differ per area due to varying practices.

4.2.1 Robusta

For Robusta when peak production period is between four to seven years, a typical farm incurs a cost of PhP 37.33/kg GCB for material inputs, labor, rent and depreciation. Hauling fresh cherries costs additional PhP 1.38/kg. A farmer's primary processing cost which includes drying, dehulling and sorting amounts to PhP 5.50/kg. The total farmer's cost is PhP 45.05/kg plus delivery cost to processor at PhP 0.83/kg. With a buying price of PhP 80/kg of GCBs, a farmer's profit margin per kg is estimated at PhP 34.95/kg.

4.2.2 Arabica

A typical Arabica farm production is PhP 55.33/kg green coffee bean (GCB). The peak of production occurs on the fifth to tenth year. Additional expenses of Php 8.08/kg for primary processing which includes depulping, washing and drying of coffee beans. With a buying price of PhP 125/kg GCB, a farmer's profit margin can reach PhP 60.93.

A farmer selling beans to a trader incurs a delivery cost of PhP 0.66/kg. Dehulling and sorting is done by a trader costs PhP 6.00/kg. After which beans are transferred to the processor at a delivery cost of PhP 0.50/kg. With a buying price of PhP 175/kg, the trader's margin is PhP 43.50 per kg.

Secondary processing which entails turning GCBs into ground coffee costs Php 35/kg. The cost breakdown covers PhP 25/kg for roasting, PhP 4.00/kg for grinding, and PhP 6.00/kg for packaging and sealing. An additional PhP 5.34/kg for delivery cost. With a selling price of PhP 440/kg GCB, the processing margin is PhP 224.66/kg.

Modern Arabica farmer's production cost is estimated at PhP 47.13/kg GCB during the peak production period (years 6 to 10). The farmer's profit margin is higher at PhP 146.58 per kg GCB with a buying price of PhP 200/kg GCB.

Processing the GCBs to ground coffee costs PhP 48.00/kg. Delivery to end user is at PhP 9.60/kg. Hence, with a selling price of PhP 416/kg, a farmer's profit margin for a modern Arabica farm is PhP 158.40/kg GCB.

For farmer's value added cost, a typical Arabica farm amounts to PhP 122.83/kg GCB versus a modern farm value of PhP 178.85/kg GCB.

Table 4.2 Value added: Typical and Modern Arabica Farms (in Php per kg green bean equivalent)

Item	Typical Farm	Modern Farm
Labor – farm	41.01	10.43
+ Rent	10.00	10.87
+ Depreciation	2.81	5.54
+ Labor - primary processing	8.08	5.43
+ Profit margin	60.93	146.58
= Farmer's Value Added	122.83	178.85

Source of basic data: Consultation Workshops and Interviews

4.3 Support Industries

Coffee growers and farm-based roasters concerns include quality of production, lack of quality beans, poor post-harvest management, inadequate knowledge on modern technologies and minimal information on market access, trends and opportunities. To address these issues, National Government Agencies (NGAs) are collaborating to implement programs that develop the coffee industry.

Coffee support industries include nurseries, fertilizer suppliers and crop protection industries.

As of October 2016, there are fifty nurseries accredited by the Bureau of Plant Industry (BPI). They have extremely limited supply of seedlings and no certified nursery. Nestle has the biggest nursery operation located in three locations - Tagum, Davao del Norte, NOMIARC Malaybalay, Bukidnon and Lipa, Batangas which produces two million, 500,000 and 1 million seedlings, respectively.

Farmers commonly use organic fertilizers like chicken dung and vermicast. Inorganic fertilizers are used sparingly such as complete (14-14-14), urea (46-0-0) and ammonium sulfate (21-0-0). Pesticides are seldom used in coffee farming.

4.4 Key Institutions and Programs

The Philippine Council for Agriculture and Fisheries (PCAF) monitors the implementation of coffee programs. Meanwhile, the DA's High Value Crops Development Program (HVCDP) is the lead coordinator of coffee production and farm expansion projects and other high value crops development programs.

Women play an active role in coffee processing and marketing. Stakeholders in the coffee industry are eventually being dominated by women entrepreneurs who are also active in some areas of the value chain such as harvesting/picking, sorting, grading and packaging and in networking.[3]

[3]The Philippine Coffee Industry Profile from DTI

Table 4.3 Key Institutions of the Coffee Industry, Philippines

Key Institution	Coffee-related Functions/Objective
Bureau of Soils and Water Management (BSWM)	Soil testing to assess the soil suitability for planting coffee.
Bureau of Plant Industry (BPI)	Seed propagation and nursery accreditation to ensure the availability of good planting materials
The Coffee Industry Development-Technical Working Group	Acting on the implementation of Good Agricultural Practices (GAP) for coffee to ensure the compliance of coffee farms. The GAP for coffee was approved last March 2016.
World Economic Forum (WEF) Grow Asia – Philippine Partnership for Sustainable Agriculture	Seeks to promote the development of focus commodities such as coffee, cassava, corn, coconut and marine productswhich are seen to help improve the quality of life in the countryside.
Grow Asia	A multi-stakeholder partnership platform that catalyzes action on inclusive and sustainable agricultural development in South East Asia. Partners with DA and Nestle Philippines in implementing projects to help alleviate the living condition of small coffee farmers.
Department of Environment and Natural Resources (DENR)	Thru the National Greening Program (NGP), DENR has already planted coffee trees in a total area of 73,000 hectares, intercropped with other fruit bearing trees.
Philippine Center for Postharvest Development and Mechanization (PhilMech)	Fabricating mechanized post-harvest facilities for coffee such as mechanized dryer, huller, pulper, sorter and grinder for the establishment of coffee processing centers in coffee producing areas nationwide.
Department of Trade and Industry (DTI)	Created DTI National Coffee Industry Cluster Team, composed of members from the Regional Operations Group (ROG), National Capital Region (NCR) and the Export Marketing Bureau (EMB) to focus on the development, branding, marketing and promotion of Philippine coffee with focus on the specialty coffee.

Source: The Philippine Coffee Industry Profile from DTI

4.4.1 National Coffee Programs

The DENR's National Greening Program allotted 86,000 hectares of land to plant coffee from 2016-2028. The regions with the biggest areas are CAR (25,000 ha), Cagayan Valley (12,000 ha), and SOCCSKSARGEN (10,000 ha). For every hectare, 500 seedlings have been planted at 4m x 5m planting density. The cost for each coffee seedling is PhP 12.00.

The Philippine Coconut Authority (PCA) was given Php 300-M in 2013 to intercrop coconut trees with coffee in 18,000 ha. Another 4,400 ha of existing coffee trees in coconut farms were rehabilitated. The program covered 10,000 ha in 2014 and 5,000 ha in 2015-2016.

4.4.2 Private Sector Initiatives

The private sector also plays an active role thru program implementation for the coffee industry. They provide demonstration farms of coffee as part of its corporate social responsibility program. Also, they give free trainings on coffee production, post-harvest, GAP and rejuvenation to improve coffee farming. Some of them are major suppliers of coffee seedlings and are also engage in the production, processing, and marketing of coffee. The coffee stakeholders promote Philippine coffee through technical assistance and credit programs. There are also programs that developed coffee farmers into coffee entrepreneurs through education, training, coaching and mentoring.

5. MARKET TRENDS AND PROSPECTS OVERVIEW

Filipinos across all socio-economic classes are regular coffee drinkers. They usually consume coffee during breakfast and for social occasions to unwind and meet with friends. The type of coffee most consumed is soluble coffee or single-served coffee mixes like the 3-in-1, 5-in-1, 7-in-1 sachets which offer easy preparation time and value for money. The price per sachet ranges from PhP 5.00 to PhP 12.00.

The low-priced instant coffee sachets are widely available and distributed thru *sari-sari* stores, *carinderias*, convenience stores, groceries, and supermarkets/hypermarkets. Market leader, Nescafe has an estimated 80% share. Other local brands (e.g. Great Taste, San Mig, Café Puro, Jimm's) and imported brands (e.g. Kopiko, Good Day, G7) account for the rest of the market.

Over the years, the market of coffee shops (e.g. Starbucks, Figaro, Bo's, Coffee Bean and Tea Leaf) has increased. There is a growing market of retail third-wave (barista, preparation focus) and fourth wave (roaster innovation-roast types, on demand roasting, home roasting etc.) coffee shops. These are usually patronized by young professionals and more financially capable individuals who want to relax and catch up with friends and business associates. Restaurants, fast food chains, donut shops and hole-in-the-wall eateries also serve coffee. They usually purchase Arabica and Liberica varieties.

The growing consumption of coffee consequently increased the demand for it. One industry player places total demand at 65,000 tons growing by an annual average of three percent (3%) over the medium term. Others estimate that demand for Robusta is at a high of 100,000 tons with another 12,000 tons for Arabica, Liberica, and Excelsa. The industry group's estimated annual growth rate is 10% to 13%. According to PSA figures, the per capita consumption of GCBs for more than 20 years has been 0.3 – 0.5 kg per year.

The coffee industry sees promising growth as it gears up to address increasing domestic demand in the future and to participate in the global market where Indonesia, Vietnam and Thailand have established footholds. Likewise, we expect more coffee shops to emerge as Filipinos have embraced "over a cup of coffee" social interaction with family, friends and business associates.

6. SWOT Analysis

A widely used and acceptable analytical framework, the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis helps organizations face its greatest challenges and identify promising markets.

The acronym, S (strengths) and W (weaknesses), refer to internal factors. These are experiences and resources readily available to an organization.

External forces that influence and impact an organization are identified as O (opportunities) and T (threats). These are usually things that the organization can not control.

Strengths - Philippine climate and land are suitable to growing four coffee varieties – Robusta, Arabica, Excelsa and Liberica. Robusta accounted for over 69% production in 2015 followed by Arabica (24%), Excelsa (6%) and Liberica (1%). Government agencies and private sector stakeholders provide technical information on coffee farming. There is a strong presence of consolidators/traders/processors to support farmers. Farmers have a ready market and coffee milling facilities present in major coffee producing provinces.

Weaknesses - While available, government agencies' technical information on coffee farming is limited. Coffee is also experiencing decline in production and hectarage due to the farmers shifting to other crops as well as land conversion of agricultural areas to real estate, recreation areas and urbanization. Coffee farming is dominated by small farmers with an average farm size of one to two hectares. Low yield is a result of old trees, poor farm practices as manifested by limited knowledge on appropriate coffee technology of farmers, aged farmers and lack of equipment, and inadequate post-harvest facilities. Likewise, there is limited access to certified planting materials and information, education and communication (IEC) materials on nursery establishment and proper seedling handling. There is also a limited access and application of fertilizers and bio-control due to high costs and poor farm-to-market roads increase logistic costs.

All these factors result to low production volume, and no importation just to meet local demand.

With limited post-harvest facilities like de-hullers and depulpers, coffee farmers generally sundry their fresh coffee cherries and have them milled through local millers. Wherever available, plant utilization is low in some areas due to lack and/or poor quality of raw material (i.e. green coffee beans).

Lack of reliable industry data (i.e. PSA data different from industry data) and market intelligence (price, production volume, area, trade, etc.) makes planning, analysis and decision making challenging.

The industry also suffers from limited/ineffective research and development (R&D) and limited access to credit with stringent loan requirements.

Opportunities – There is a growing demand, thus, providing an opportunity for local players to increase their production.

Coffee consumption is now dominated by soluble coffee, which is a shift from local 'nilaga' brewed coffee. Recent resurgence of the roast, ground and brew sector of the market is changing the coffee market.

Threats - The entry of imported coffee and coffee products from Indonesia and Vietnam threatens local producer. An Indonesian brand has become a key player in the single-serve coffee sachet (3-in-1) market in the Philippines with its Kopiko brand. San Mig coffee sachets are manufactured in Thailand. Factors affecting sachet production include availability of quality beans, cost of sugar and packaging, among others.

The price of GCBs is volatile, with local prices dictated by world prices. The high cost of growing coffee also puts pressure on the supply.

For Arabica, the unstable peace and order situation and presence of theft in the highland growing areas discourage investments. The poor condition of rural infrastructure exacerbates the situation.

Table 6.1 SWOT Analysis of the Philippine Coffee Industry

SUB SYSTEM	STRENGTHS	WEAKNESSES	OPPORTU-NITIES	THREATS
Input Supply	• Availability of the four coffee varieties – Robusta, Arabica, Excelsa and Liberica	• Insufficient supply of quality and/or certified planting materials • Lack of accredited/ certified mother clonal gardens and nurseries • Lack of trained propagators • Limited IEC materials on nursery establishment and proper seedling/handling • High cost of farm inputs • Improper handling of seeds • Lack of training of trainers		
Production	• Favorable climate and land conditions to grow four (4) commercial varieties of coffee	• Low yield • Proliferation of old trees that need to be rejuvenated or replaced		• Increasing volume of coffee imports • Poor peace and order

SUB SYSTEM	STRENGTHS	WEAKNESSES	OPPORTU-NITIES	THREATS
	• Availability of technical information on coffee farming • Willingness of the farmers to be active stakeholders • Availability of idle lands suitable for coffee production • Availability of climate change index	• Limited planting and replanting activities • Poor farm management practices • Lack of information dissemination of the climate change index • Low GCB local production • GCB poor quality		situation in some coffee production areas • Strict farm credit • Climate change
Post-harvest/ Processing	• Availability of coffee milling facilities in large coffee producing provinces • Availability of new processing technologies catering to small holder coffee farmers	• Inadequate post-harvest facilities (e.g. drying, milling, roasting, grinding) • Low utilization of processing facilities • Lack of standards for appropriate postharvest machinery and equipment for coffee		
Marketing	• Philippine coffee is known, accepted and traded worldwide • High demand for coffee products	• Fragmented and unorganized farmers	• Increasing demand for coffee products • Growing market for specialty coffee • Presence of geographic brands • Possibility of import-substitution since imports account for over 80 percent of supply	• Volatile prices
Cross-cutting concerns	• Persistent/innovative /resourceful stakeholders to the development of the coffee industry • New tools available like color-coded maps, landscaping program of DA, food consumption	• Inadequate (quantity and quality) of infrastructure (e.g. farm-to-market roads) • Inadequate market intelligence on coffee • Lack of price transparency		

SUB SYSTEM	STRENGTHS	WEAKNESSES	OPPORTU-NITIES	THREATS
	and quantification project	• No existing reliable data on coffee (i.e. PSA data different from industry data) • Absence of coffee expert in DA • Limited / Ineffective R&D • Lack of farmer friendly long-term financing • Inappropriate policies (e.g. land access) • Dispersed efforts among the key players • Poor implementation of the government procurement process		

Source: Coffee Master Plan Workshop; Key Informant Interviews

7. TARGET SETTING

This chapter includes the vision, mission and goals of the industry, including targets in terms of area, income and sufficiency levels.

7.1 Industry Vision, Mission and Goals

After numerous consultations with key coffee stakeholders from the private sector and the government, the group has agreed on the following vision, mission and goals for the Philippine coffee industry.

VISION

An industry that is cost-competitive, aligned with global quality standards, reliable and environment-friendly; and provides sustainable benefits to farmers, processors, traders and exporters.

MISSION

Development of a cost-competitive, quality-driven, supply-reliable, product-diversified value chain from farming to coffee products manufacturing under sustainable practices and consumer safety in compliance to food safety and environmental requirements.

The industry goals include:

GOALS

- Increase yield of GCBs by 0.3 MT/ha to 1 MT/ha by 2022 and production by 5% per annum;
- Lessen dependence on coffee bean and coffee products importation;
- Improve farmers' standard of living from poverty level of 15% per annum through diversified sustainable agribusiness farming systems;
- Increase employment by 3% in the coffee industry;

7.2 Targets

As earlier stated, one of the goals of the plan is to improve the coffee farmers' farm productivity, product quality and profitability.

7.2.1 Area Targets

(Important Note: The information in this section is based on various consultations from key stakeholders of the coffee industry both from the government and private sector. This includes farmers and associations, LGUs, DA-BPI-HVCDP, DA-RFOs, DTI-ROG, DTI-RFUs, local processors, traders, academe, and other stakeholders.)

The total target area will reach 140,552 ha in 2017 and increase to 213,788 ha by 2022. Majority of the target areas for coffee production will be in Mindanao particularly SOCCSKSARGEN for and Davao.

The seedling requirements will be sourced from existing nurseries, planned nurseries which are either government or private sector-owned.

Table 7.1 Physical Targets for Coffee Production, 2017 – 2022

TARGETS	2017	2018	2019	2020	2021	2022
Total Expansion Area (ha)	16,446	16,597	13,845	13,983	14,263	14,548
Total Area (Existing + Expansion) (ha)	140,552	157,149	170,994	184,977	199,240	213,788
Production Targets (MT)	43,676	52,412	68,135	95,389	143,084	214,626

Yield (MT/ha)	0.31	0.33	0.40	0.52	0.72	1.00
Self-sufficiency (%)	41.60	47.54	58.86	78.48	112.11	160.16
Techno Demo Farm	36	54	72	90	108	126
Processing equipment and facilities (units)	18	18	18	18	18	18

Table 7.2 Physical Targets for Coffee by Variety, 2017 – 2022

TARGETS	2017	2018	2019	2020	2021	2022
Total Expansion Area (ha)	16,446	16,597	13,845	13,983	14,263	14,548
Target Expansion (Robusta), ha	12,335	12,448	13693	10,487	10,697	10,911
Target Expansion (Arabica), ha *based on available data	4,111	4,149	4,564	3,496	3,566	3,637
Target Expansion (Liberica)	1000	1000	1000			

7.3 Sufficiency Level

Based on above figures and assumptions on yield and areas, the sufficiency level will improve from 41.60 in 2017 to 160.16 in 2022. To increase farmers' income and improve self-sufficiency, area expansion and production yield should also increase. Exports remain as a vision in the future to increase the Philippine coffee footprint in the global market.

8. STRATEGIES AND POLICIES

As key stakeholders are determined to achieve the projected results of the plan, a pre-roadmap phase between 2016 to 2017 was identified. During this time, the following initiatives will be carried out to ensure the coffee industry's readiness to execute the agreed coffee roadmap.

- Establish an institutional platform among stakeholders at the national level Philippine Coffee Council/Strengthen the PCAF-Coffee Industry Development Sub-Committee and AFCs Sectoral Coffee Committees at all levels.
- Identify, organize, capacitate coffee farmers, IPs, & other coffee enthusiast & implement appropriate interventions.
- Make available accessible credit facilities, guarantee funds and crop insurance for coffee farmers and cooperatives
- Provide incentives for coffee seedling propagators/ coffee farm establishment (farmers, corporate nurseries, service providers)

8.1 Action Programs and Priority Activities

There are a number of priority activities for 2017 to 2019. These include:

- Effectively cascade GAP) and other PNS on coffee to community coffee growers' association/ groups
- Ensure/Conduct continuous, updated coffee education and training at all levels of coffee sectoral AFCs/groups
- Provide appropriate Production/Post Harvest facilities only to coffee producing groups
- Support the revised National Greening Program
- Strengthen the Production and Promotion of Specialty Coffee
- Start the branding of Philippine Coffee
- Establishment/regular updating of coffee database

8.1.1 Levels of Engagement

As a number of stakeholders play critical roles in the successful execution of the 2016-2022 coffee roadmap, the levels of engagement of each must be defined and clarified. This will ensure active and appropriate participation of each key player. Likewise, the principles of responsibility and accountability in each key player's performance in their assigned tasks are strengthened.

The levels of engagement will be defined at the start of the roadmap implementation. It will be reviewed and updated as shown by the results of the action plans and as deemed necessary by the key stakeholders.

Table 8.1 Action Programs and KRAs for the Coffee Industry

A) **INPUTS:** Improve quality and availability of planting material

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Accreditation of plant nurseries and certification of seed/clonal gardens and seedlings	No. of accredited nurseries No. of certified seed/clonal gardens Available good quality planting materials six months after giving the bidding award)	Promote accreditation /certification of nurseries Train/retooling plant nursery evaluators (PNE) and plant materials inspectors (PMI), farmers Invest in mother clonal /seed gardens and nurseries (one per major coffee area)(community based and accredited by DA-BPI)	LGU, Private sector, DA-RFOs, BPI, SCUs Service providers	Jan-Dec 2017 2018-2022 & onwards
Training/Retooling of propagators and provision of IEC materials	No. of trainings conducted with re-entry plan No. of IEC materials produced No. of propagators trained	Conduct trainings for nursery establishment, propagation of planting materials Reproduce and distribute IEC materials to farmers Re-entry program	DA-ATI,TESDA, LGU, Industry associations, Private sector Service providers	Jan-Dec 2017 2018-2019 & onwards

B) **FARM PRODUCTION:** Enhance farm efficiency and investments

Key Result Area	Performance Indicators	Action Program	Working Group	Timeline
Yield improvement	Ave. yield from 300 kg/ha to 1.0 ton/ha (Arabica) Ave. yield from 700 kg/ha to 1.0 ton/ha (Robusta) Net Income > PhP84,000/year	IEC campaign on GAP/best farm practices including seed selection, rejuvenation, etc. Provision of farm inputs, fertilizers, bio-controls	Private Sector, DA, BPI, ATI, BAFS, PCARRD, LGU Service Providers/Investors PSA, BAFS	Jan-Dec 2017 2018-2022 & onwards
Production expansion - new planting and replanting areas	Total expansion area ≥90,000 ha to address deficit	Develop Public Private Partnership (PPP) for planting and replanting projects; Promote investment for new plantation development	Continuing - Industry/third party group Service Providers DA,DTI,DENR, PCA, NAPOCOR Private sectors	Jan-Dec 2017 2018-2019 & onwards
Expansion of seed/clonal gardens	Number of clonal gardens established	Develop PPP for expansion of seed/clonal gardens	Continuing - Industry/third party group service providers	Jan-Dec 2017 2018-2019 & onwards

B) **FARM PRODUCTION:** Enhance farm efficiency and investments

Key Result Area	Performance Indicators	Action Program	Working Group	Timeline
Adaption of GAP and Good Manufacturing Practices (with certification)	No. of GAP certified farms No. of GMP certified processing companies	Benchmarking and best practices dissemination Conduct trainings on GAP/GMP	DA, BPI, BAFS, ATI, SCUs, Private sector, LGU Service providers	Jan-Dec 2017 2018-2022 & onwards
Trainings/Retooling on post-harvest management	No. of skilled farmers/ farm workers/ SMEs	Conduct trainings with TESDA/ATI accredited coffee experts	Private Sector, TESDA, LGU, SCUs, ATI , DA, DTI Service providers	Jan-Dec 2017 2018-2022 & onwards

C) **PROCESSING**: Improve competitiveness

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Lower processing costs	Power, labor and material input cost per kg	Enhance processing efficiency (provision of processing technology)	Private Sector, DA, DTI, PhilMech, DOST	Jan-Dec 2017 2018-2022 & onwards
Improved quality of coffee products (GCB, roasted and brewed)	Better prices of coffee products	Establish and promote quality standards for Philippine Coffee. Strengthen and build competencies of farmers/ processors for the adoption, dissemination of standards; Incentivize compliance to product standard Improve packaging and labels of coffee products including quality seal	Private Sector DA, BAFS, DTI Service providers	Jan-Dec 2017 2018-2022 & onwards

C) **PROCESSING**: Improve competitiveness

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Adequate appropriate post-harvest facilities	No. of pulping, washing, fermentation, drying, hulling, storage facilities	Establish village/ SME level facilities	Private Sector, DA, PhilMech	Jan-Dec 2017 2018-2022 & onwards
More value-adding on farm products	No. of value-added products produced	Conduct workshops on industry clustering, value chain analysis and entrepreneurial trainings	SCUs, DA, Private sector, DTI, DA, DOST	Jan-Dec 2017 2018-2022 & onwards
Upgrading and adjustment of processing methods	No. of SMEs with productivity and efficiency	Provide Coffee post-harvest trainings Provision of appropriate facilities (local or imported) to include pulping, fermentation, hulling, drying (solar and mechanical), and milling at affordable termsfor semi-washed and washed coffees.	Private Sector, DA, DTI, DOLE, DOST, PhilMech Service providers	Jan-Dec 2017 2018-2022 & onwards
Increased investment in Specialty coffee business	No. of new SMEs in the Specialty Coffee business (roasters, café)	Promote investment opportunities in specialty coffee markets	DTI, Private sector, DA Service providers	Jan -Dec 2017 2018-2022 & onwards

D) **MARKET**: Improve market price and coffee standards

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Transparent pricing linked to world market	Farm price as a percent of world price	Daily world price access from DA website / SMS	Private Sector, DTI, DA, LGU Service providers	Jan-Dec 2017 2018-2022 & onwards
Geographic branding and standards for coffee	No. of geographic brands and standards for Philippine coffee products	Convene concerned organizations to settle standards	DA, BAFS, Industry associations, DTI	Jan-Dec 2017 2018-2022 & onwards
Enhanced market intelligence, access and marketing strategies for specialty coffee	No. of new markets accessed No. of market opportunities explored	Find alternative markets Tap agricultural/ trade attaches in Philippine embassies	Private sector, DA - AMAS, DTI, Industry associations, DOST Service providers	Jan-Dec 2017 2018-2022 & onwards

E) **MARKET**: Improve market price and coffee standards

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Enhance access to market information: price, market, volume	No. of price and market information provided to farmers	Daily world price and other market information are made available by web and SMS.	Private Sector, DTI, DA-AMAS, LGU Service providers	Jan-Dec 2017 2018-2022
Branding and promotion of Philippine coffee	No. of geographic brands and standards for Philippine coffee products	Establish/ develop and aggressively promote Philippine coffee (Quality, brand, logo) Disseminate quality standards Registration of brand and logo	BPS, DA, BAFS, Industry Associations, DTI	Jan-Dec 2017 2018-2022
Enhanced market intelligence, access and marketing strategies for specialty coffee	No. of new markets accessed No. of market opportunities explored	Develop market niching with the specialty coffee market and other alternative markets Tap agricultural/ trade attaches in Philippine embassies	Private sector, DA - AMAS, DTI, Industry Associations, DOST Service providers	Jan-Dec 2017 2018-2022 & onwards

F) **SUPPORT SERVICES**: Financing: Access to long-term funds

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Access to long- term financing	Longer grace and repayment periods of loans Lower interest rates	Review financing program for coffee Develop appropriate financing packages for coffee farmers/ SMEs DA to endorse proposal to Land Bank of the Philippines (LBP)/ SB Corporation	LBP, DBP, Agricultural Guarantee Fund Pool- Agricultural Credit and Policy Council Private sector DA LGU Service providers	Jan-Dec 2017 2018-2022

G) **SUPPORT SERVICES**: Logistics: Reduce logistics cost to processors/market

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Farm-to-Market Roads (FMRs)	Length of FMRs to coffee farms Lower transport cost/ton/km	Advocacy to prioritize FMRs	Industry assns. LGU, DA-PRDP Private sector, DPWH Farmers' Organizations	Jan-Dec 2017 2018-2022 & onwards
Establishment of Tramlines	No. of tramlines established	Identify areas	Industry assns. DA, PhilMech Private sector, LGU	Jan-Dec 2017 & onwards

E) **SUPPORT SERVICES**: R & D: Improve research and extension services

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Improved production and postharvest technologies	GCB yield not lower than 1kg/tree Grade of coffee in each region is not lower than 2 Trained QA staff/ para-technicians,	Train farmers R and D program on variety and CM by region Establishment of coffee grading and cupping laboratory Identify, train, appoint QA technicians	CavSU, BSU, UPLB DA-BAR, DOST-PCAARRD, DTI, experts Private Sector People's organization/ Service providers	2017-2022 & onwards

E) **SUPPORT SERVICES:** *Policies*: Appropriate investment incentives

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Improved policies (eg. propagation of seedlings) Policy on Plant now pay later/scheme Policy on Roll-Over Mechanism of Production and Processing Subsidies	Law(s) giving incentives to coffee farmers and propagators Decreasing GCB importation	Review existing rules on incentives on coffee industry Install appropriate investment incentives friendly programs	Office of DA Secretary DoF, DTI-BOI, BoC	Jan-Dec 2017 2018-2022 & onwards

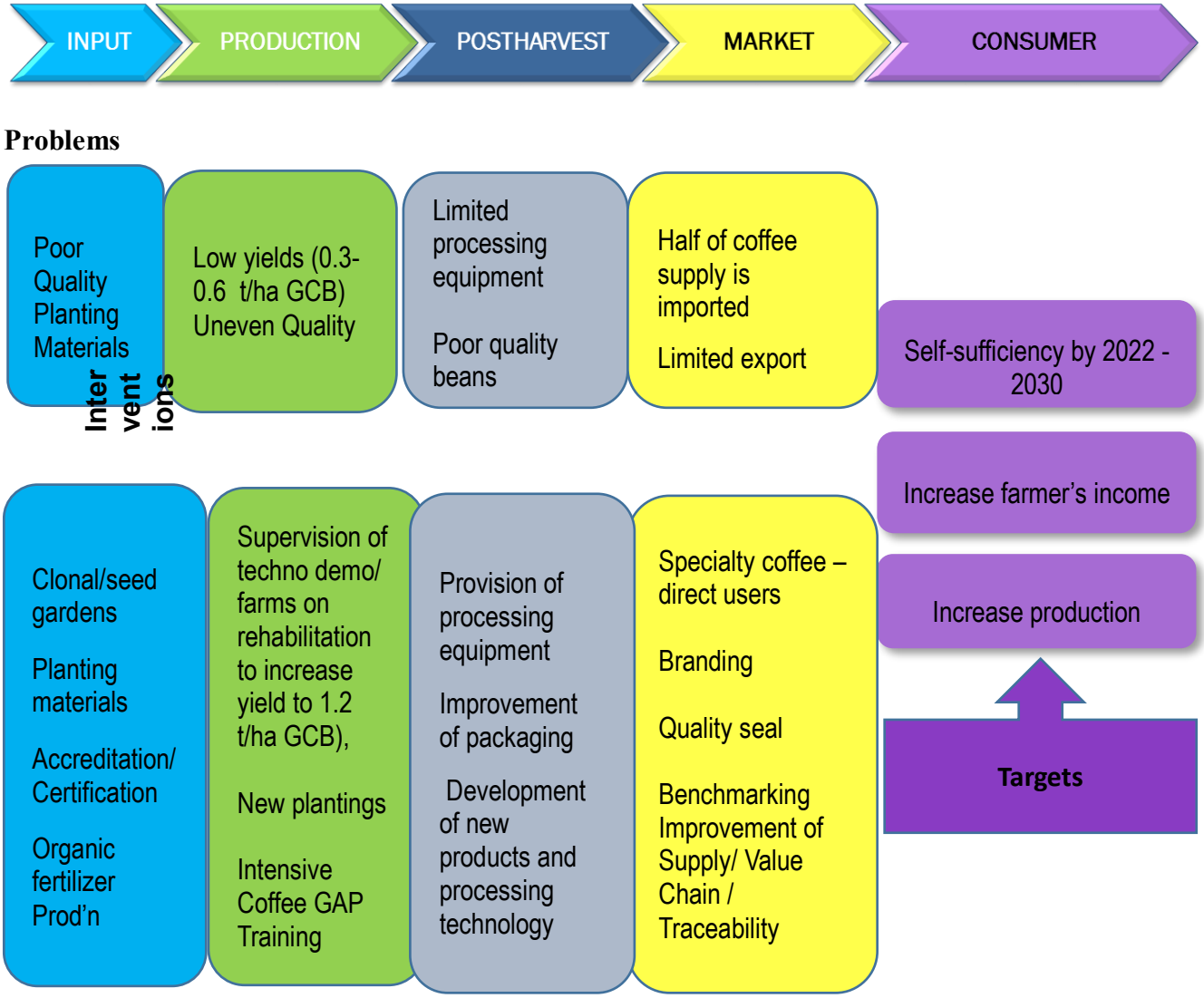
E) **SUPPORT SERVICES**: Market Intelligence: Reliable Industry Data

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Improved collection and recording of industry data and data bank (e.g. production, area, trade, demand) Reconciled data base of the coffee industry	Industry data aligned with private sector estimates - Geo-tagging of producers and processors	Conduct Coffee Industry Regular Census Establishment/ regular updating of buyer-supplier and coffee network database	Industry associations, PSA, Private Sector, DA-HVCDP - PCAF, LGU, DTI	Jan-Dec 2017 2018-2022 And onwards

E) **SUPPORT SERVICES**: Organization: Industry Unity in Diversity

Key Result Area	Performance Indicators	Action Programs	Working Group	Timeline
Improved industry organizational and relational structure Strengthen AFCs coffee sectoral groups	Aligned government and private sector initiatives Organized Coffee NTWG Number of functional regional and provincial coffee councils/sub-councils Organized AFCs coffee sectoral groups	Conduct seminar on organizational development Team building Conduct regular TWG/ council meetings Conduct regular AFC coffee sectoral groups	Industry assns, DA, Private Sector/ RDCs, DTI, LGUs DA-PCAF	Jan-Dec 2017 2018-2022

Summary Of Interventions Across The Coffee Supply Chain



SUMMARY OF CHALLENGES AND ACTION PLANS FOR COFFEE

Challenges	Action Plan
Low yields (300-600 kg/ha) due to lack of fertilization, maintenance and old trees	Establishment of techno demo farms for best practices and trainings on GAP Rehabilitation of old trees, provision for inputs
Limited good quality planting materials for expansion Limited accredited nurseries/ seed gardens	Establishment of community-based clonal/seed gardens and nurseries Accreditation of nurseries and certification of planting materials
Limited market opportunities and fluctuating prices for GCBs) Underdeveloped direct corporate market distribution to end users.	Provision of processing equipment Improvement of packaging and branding Development of new products and processing technology including specialty coffee and quality seal Establish /develop direct corporate buyers of processed GCBs

Coffe key stakeholders are keen on the coffee industry roadmap. With proper and timely execution, the strategies and action plans are keys to the success of the Philippine coffee industry.

9. PLAN IMPLEMENTATION AND MONITORING

(This will be reviewed and finalized once the Philippine Coffee Council is created.)

9.1 Plan Implementation and Monitoring

The implementation of the Philippine coffee industry roadmap shall be guided by the Philippine Coffee Council once it is created. This will be private sector led and government sector-supported. The Council, to be created at the national level shall have membership from the regional and provincial coffee councils. It aims to unify the various coffee stakeholders to attain the goal of inclusive growth, uplift the welfare and increase awareness on quality coffee among the country's smallholder farmers, producers, processors, roasters and retailers including their families.

The Philippine Coffee Council membership composition, its primary roles and responsibilities will be drawn upon its creation after the endorsement of the roadmap by the Secretaries of Agriculture and Trade and Industry to the President of the Philippines.

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ANNEX

Private Sector Initiatives

The private sector also plays an active role thru programs for the coffee industry.

- Nestle Philippines, Inc. maintains demonstration farms of coffee as part of its corporate social responsibility program. Farmers can purchase planting materials at cost from Nestle's nurseries and techno demo farms. With tissue culture, good quality and high yielding varieties are achieved. There are also free trainings on coffee production, post-harvest, good agricultural practices (GAP) and rejuvenation to improve coffee farming. Nestle has no contract with farmers but buys GCBs based on world market price.

- Rocky Mountain Arabica Coffee Company (RMACC) is a major supplier of Arabica seedlings. It also engages in coffee production, processing, and marketing. Their farmers include indigenous tribes like the Ibaloi, Kankana-ey, T'boli, and Talaandig. The company has an operational plantation in Tuba, Benguet and several plantations under development in Kiamba, Kitanglad, Miarayon, and Camp John Hay. Partnering with Benguet State University and Xavier University to promote best practices in coffee, RMACC created a training and research program on Arabica production and processing.

- CHMI Agro-Forest Development Corporation developed a 200-hectare agricultural farm in the mountainous town of Alcoy, Cebu. It is a joint venture with farmers' cooperatives under community-based forest management agreement (CBFMA) with the local community in Alcoy. Nestle provides seedlings and technical assistance.

- The Philippine Coffee Board (PCB) aims to develop and promote Philippine coffee through technical assistance and credit programs for coffee farms; and through marketing and promotions to the domestic and export markets. It partners with Cavite State University (CavSU), Department of Trade and Industry – International Coffee Organization Certifying Agency (DTI-ICOCA) and lending institutions. It conducts research/training, certification and credit programs. It has a "Pick Red" campaign and conducts seminars (cupping, fertilizer use, coffee 101, retail markets, coffee origins, and the annual coffee summit). Its past project includes *Pilipinas! Gising at Magkape*.

- Bote Central Inc. started a coffee production and consumption program entitled Kape't Buhay. The program developed coffee entrepreneurs through education, training, coaching and mentoring. DSWD provided soft loan packages to transform farmers to retailers and improve their income. Bote Central Inc. provided community roasting business units which enabled local entrepreneurs to brew coffee at a lower price. "Kape't Buhay" was officially turned over by Bote Central to the Philippine Coffee Alliance on July 30, 2013 as its flagship program.

- Silvicultural Industries Inc. (SII) and M and S Company, Inc. (M and S) developed Integrated Forest Management Agreement (IFMA) projects in Sultan Kudarat province. Under IFMA, more than 300 hectares of forest land and forest resources were converted to dual-purpose tree plantations by qualified applicants. Cultivated crops included mango, durian, mangosteen and Arabica coffee. An Arabica variety from Costa Rica was used to produce two metric tons/hectare versus the country's average yield of 0.5 ton/hectare. The variety was resistant to rust, a very potent Arabica coffee disease. Regular pruning of the tree yielded firewood and biomass for possible reconstitution of waste coffee grounds to biodiesel.