

KINGDOM OF CAMBODIA

Nation Religion King



**Improving Statistics Data on Food Processing and Distribution
Related to Agricultural Crops in ASEAN Region**

**RESULT OF
CASSAVA VALUE CHAIN AND DISTRIBUTION SURVEY
of Pilot Project in Cambodia 2017-2018**

**Department of Planning and Statistics of MAFF
In collaboration with
ASEAN Food Security Information System (AFSIS)
2018**

INTRODUCTION

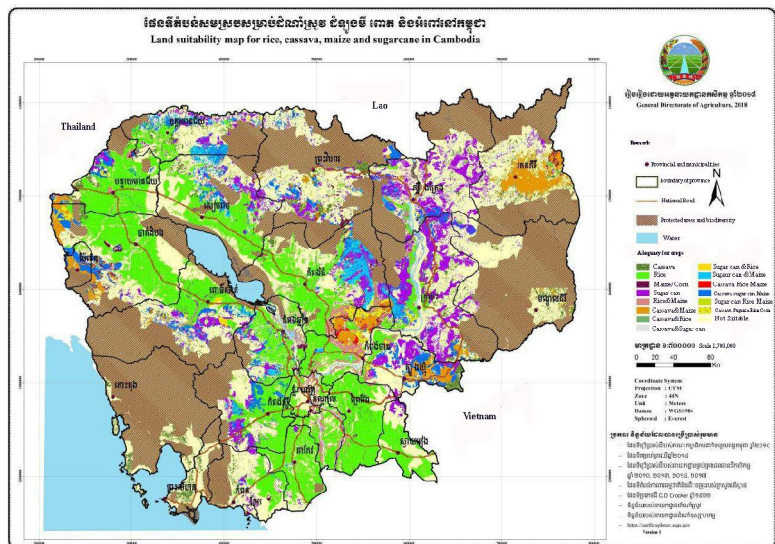
In order to implement the mentioned policy and strategy, the Ministry of Agriculture Forestry and Fisheries (MAFF) focuses on improving agricultural productivity, diversification and commercialization by accelerating the implementation of necessary measures, including the building and improving of infrastructures support to agricultural production, increasing of the provision of technical services to the farmers, the strengthening of the agricultural research and development capacity to increase crop yields and climate change adaptation, improving soil fertility, the strengthening the capacity of agricultural communities and the institutional capacity to promote agricultural development.

In Cambodia cassava is one of the most important upland crops and the crop has been both a mechanism for livelihood improvement at the household level, and a national source of income. As a relatively undemanding crop in terms of inputs, cassava can be considered an excellent pro-poor crop compared to other upland crops. The crop has high-yield potential and can be grown under a wide range of upland conditions. Cassava grows reasonably well in low soil fertility and in areas with low or rainfall conditions which limit the growth of many other food and feed crops.

Cassava is the second largest crop production in Cambodia after rice. It is grown mainly by smallholder farmers for food to supplement the rice diet, for animal feed and for extraction of starch from its roots, but mainly for export as fresh roots to the international markets. Actually, the opportunities for the development of cassava industry crop is likely to increase, while the availability of data and information are limited.

To improve methods of data collection on Value Chain of cassava, Ministry of Agriculture, Forestry and Fisheries and Department of Planning and Statistics has done a survey in collaboration with the ASEAN Food Security Information System (AFSIS).

- Cambodians engage in farming of rice, which after rice that cassava like in Banteay Meanchey, Battambang, Kampong Thom, Kratie, Pailin and Tbong Khmum have chosen to grow cassava to improve their livelihood.
- However, uses cassava as well as tapioca for export and some used in country like basic food.
- At present, the crop is of great



interest to cassava because it has a market value to be exported overseas like Vietnam, Thailand and China.

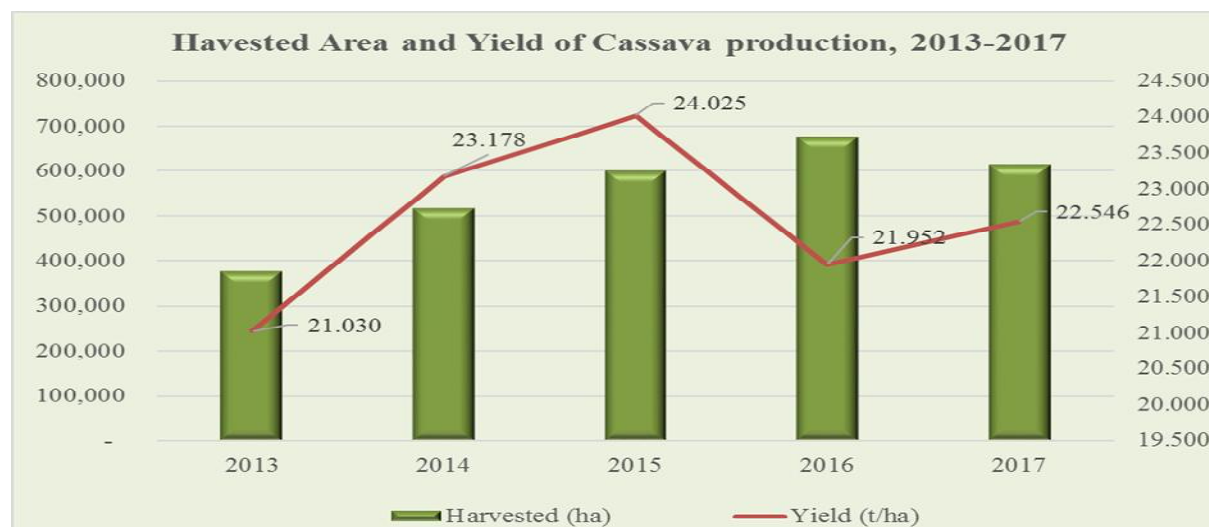
This paper presents a needs assessment study of cassava production in Cambodia, which helps us to understand the current situation of cassava cultivation practices for the farmer in Cambodia. It specifically highlights the current agronomic practices in smallholder cassava production.

Recently, the Ministry promulgated the document on “Agriculture Extension Policy in Cambodia” so that farmers and farmers’ cooperatives are able to receive and utilize knowledge, information and technology to improve agriculture.

It is observed that the land size for Cassava crops has increased from 377, 239 hectares in 2013 to approximately 684,070 hectares in 2016 (an average increase of approximately 1.24%, in 2017 the market moving change price down decreased land area from 684,070 to 613,912 hectares in 2017. The amount of cassava crops production has increased from 7.9 million tons in 2013 to approximately 14.8 tons in 2016 (an average increase of 1.2%).

Item	2013	2014	2015	2016	2017
Cultivated	377,239	515,293	626,181	684,070	613,912
Harvested (ha)	377,239	515,293	598,602	675,126	612,861
Yield (t/ha)	21.030	23.178	24.025	21.952	22.546
Production	7,933,381	11,943,204	14,381,182	14,820,249	13,817,262

Graph show about Cassava Harvested are and Yield from 2013 to 2017



OBJECTIVE AND METHODOLOGY

1. PURPOSE

To find out the value chain about food processing and distribution of cassava.

2. METHODOLOGY

Cambodia has varied topography and natural resources, and enjoys a tropical monsoon climate with marked wet and dry seasons. The average yearly precipitation humidity is 60%-80%, and average annual temperature is 23-32°C. Cassava is grown on about four soil types in Cambodia: sandy, loamy, clayey and rocky. The soil color also differs across Cambodian provinces.

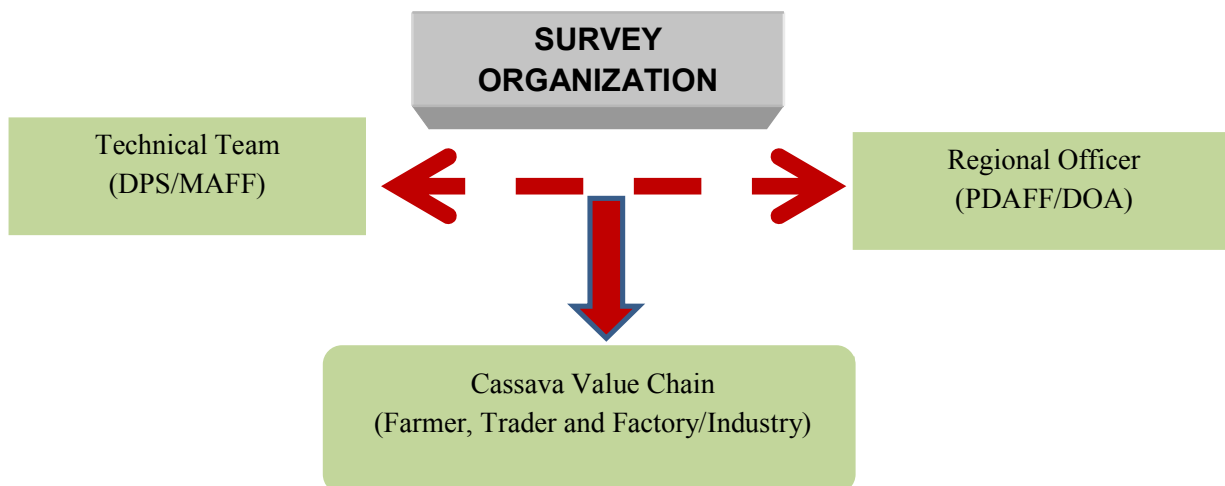
These provinces both have a long history of cassava production and are currently the largest cassava growing areas in Cambodia. Besides cassava, farmers grow other crops, including rice, maize, mungbean, soybean, peanut and fruit trees. The survey study as well as: **LISTING ORGANIZATION and SAMPLING STAG.**

SCOPE OF THE SURVEY

- 1 The object survey is cassava-based farmer, Small trader, Large trader, Cambodia and Thailand Factory
2. The survey location: districts of Battambang and Pailin Province of Cambodia
3. The focus of the survey is designed to obtain information about the Processing Value Chain and distributing of cassava.
4. Number of samples: 100 Farmer, Middleman trader and factory.

SURVEY ACTIVITIES

No.	Activities	Officers	Documents	Schedule
1	Survey Preparation	Team	--	October, 2017
2	Regional Coordination	DPS/MAFF	List of Farmer & Companies in VCC Questionnaire	November, 2017
3	Listing	Team, Province, District	VCC Questionnaire	December, 2017
4	Survey	Team, Province, District	VCC Questionnaire	January 2018
5	Survey Supervision	Supervisor Team	VCC Questionnaire	February 2018
6	Processing of Survey Results	Team	Data Tabulation	March, 2018
7	Survey Results Analysis	Team	Processing of Survey Results	April, 2018
9	Preparation of the Final Report	Team	Final Report	May, 2018



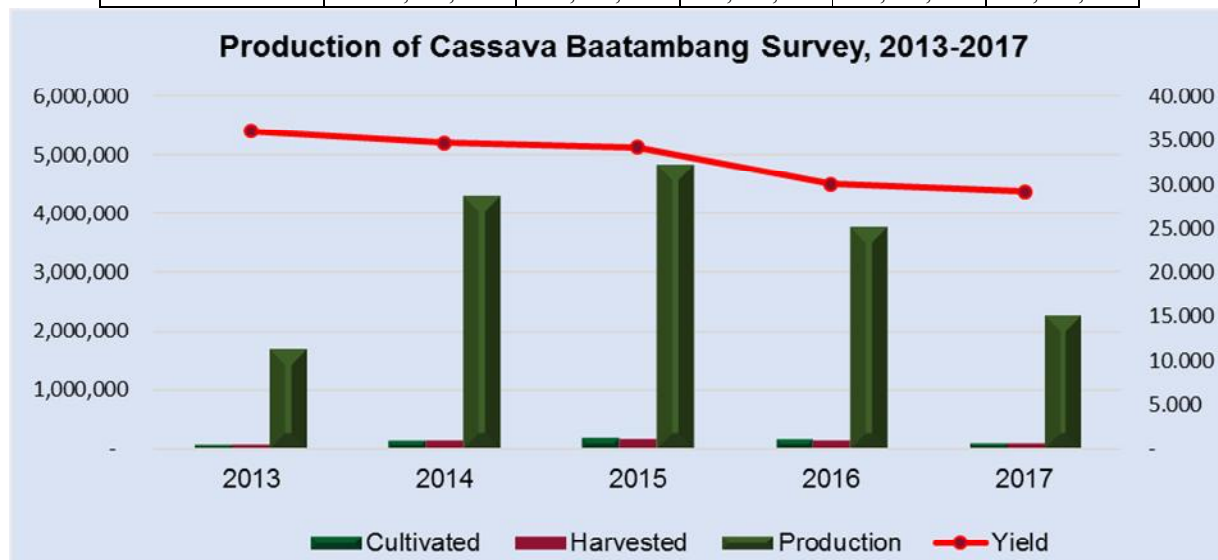
SURVEY METHODS

Two important cassava growing provinces, Battambang (Rotonak Mondol and Kamrieng districts) and Pailin (Sala Krao), were selected as the study area for this Graph. These provinces both have a long history of cassava production and are currently the largest cassava growing areas in Cambodia. Besides cassava, farmers grow other crops, including rice, maize, mungbean, soybean, peanut and fruit trees.

Selection of the sample area performed with **multistage sampling technique**

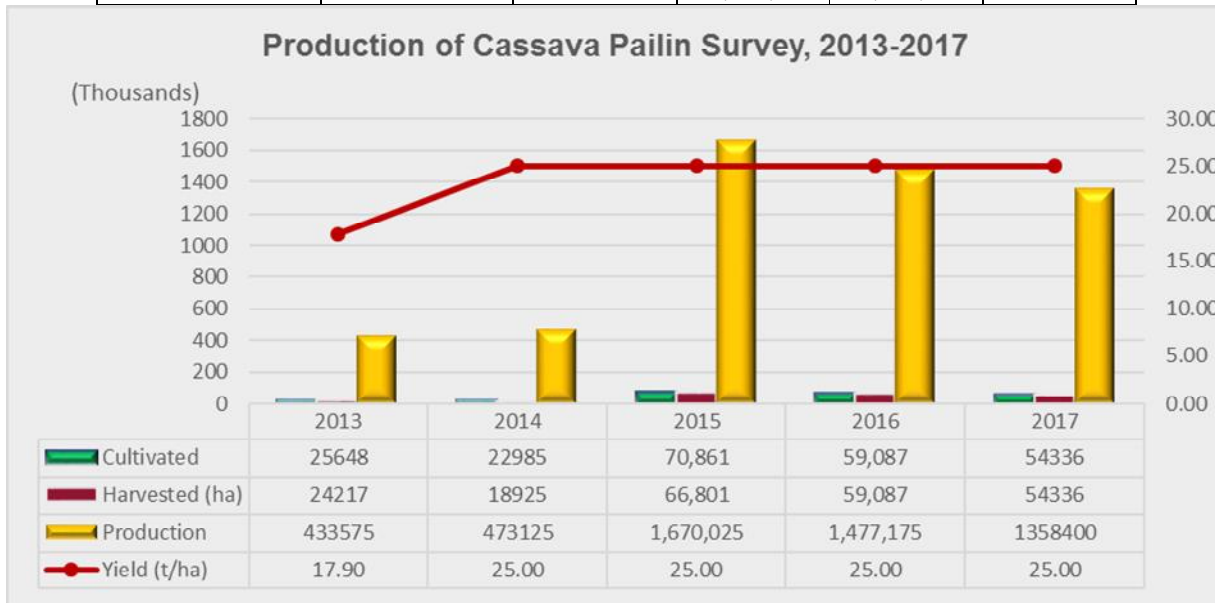
The table show about **Production of Cassava, 2013-2017 in Battambang Province**

Item	2013	2014	2015	2016	2017
Cultivated	61,632	124,979	154,709	134,385	77,451
Harvested	47,161	123,826	141,410	125,593	77,451
Yield	36.050	34.722	34.187	30.012	29.199
Production	1,700,147	4,299,436	4,834,427	3,769,266	2,261,493



The table show about Production of Cassava, 2013-2017 in Pailin Province

Item	2013	2014	2015	2016	2017
Cultivated	25648	22985	70,861	59,087	54336
Harvested (ha)	24217	18925	66,801	59,087	54336
Yield (t/ha)	17.90	25.00	25.00	25.00	25.00
Production	433575	473125	1,670,025	1,477,175	1358400



Stage 1: Province Selection

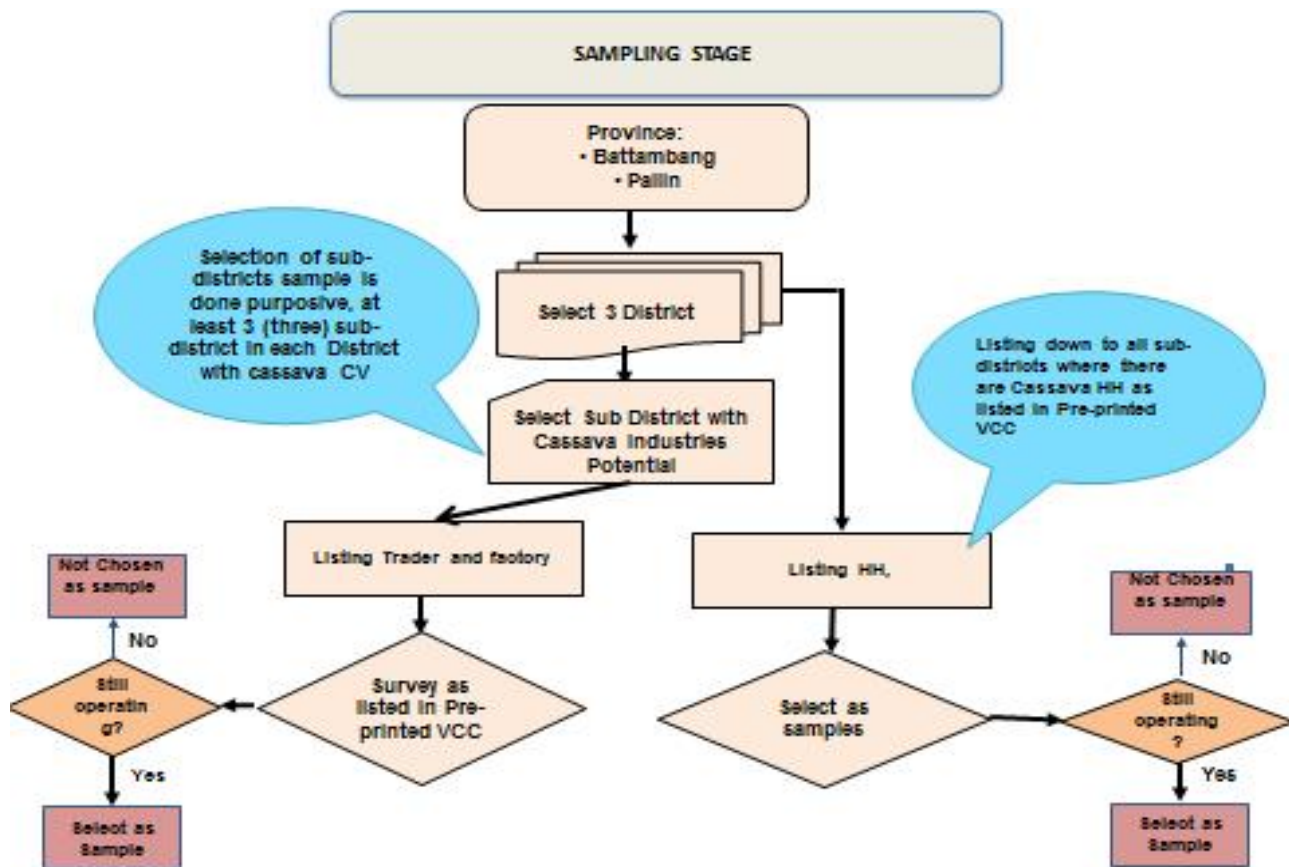
Purposive sampling with cassava production as consideration to Battambang and Pailin Province

Stage 2: District Selection

1. **Purposive sampling** with cassava Value Chain as consideration : **Salakrao, Rattanakmondol and Kamreang** were chosen.
2. **For listing** done for the entire Farmer trader Factory / businesses as listed in Pre-printed VCC are also included in the enumeration.

Stage 3: Commune Selection

- For registration / listing down to all Commune where there are Farmer Trader Factory companies as listed in Pre-printed VCC.
- For registration / listing performed on the Commune sample.
- Selection of Commune sample is conducted by purposive in that sub-district at least have cassava producer and Processing with the additional criteria.



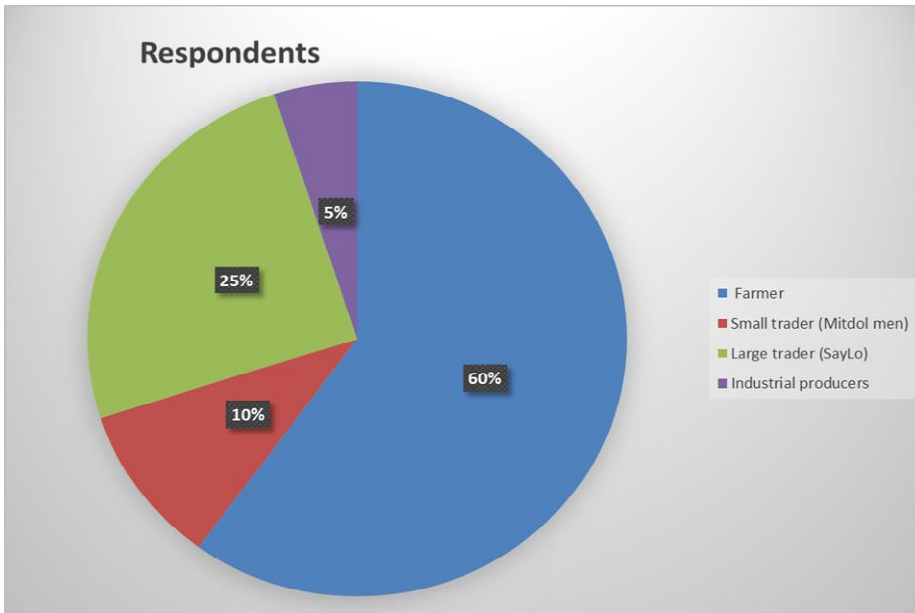
NUMBER OF RESPONDENT

Value Chain Process	Value Chain Actor	Battambang (Sample)		PaiLin (Sample)		Total Sample
		Small	Medium-large	Small	Medium-large	
Production	Farmer/Producer/Cooperative	15	30	5	10	60
Aggregation	Middle Man/Large trader	5	20	5	5	35
Processing	Industrial producers/ Small processing units	0	3	0	2	5
Total		20	53	10	17	100

Description	Listing	Respondent
Farmer	150	60
Small trader (Mitdol men)	50	10
Large trader (SayLo)	72	25
Industrial producers	8	5
Total	280	100

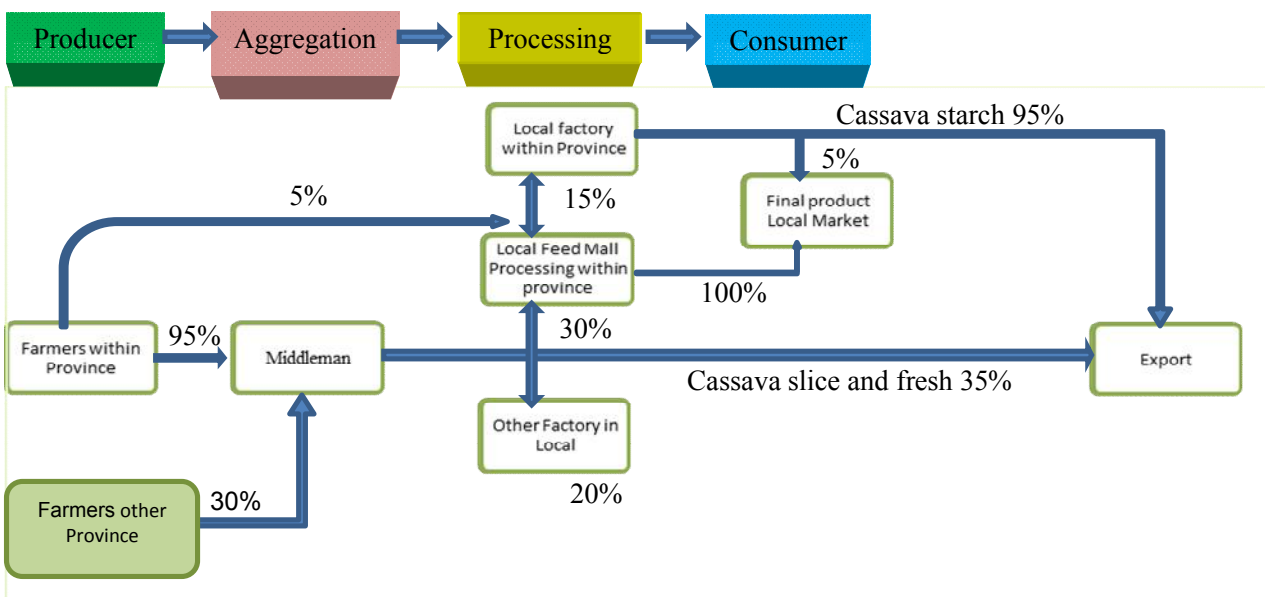
RESULT OF SURVEY

NUMBER of RESPONDENT IN PERCENTAGE



The total percentage of farmer respondents surveyed amount 60%, the large trader or SayLo that respondent 25%, around 10% small and medium, the last 5% for Industry producer to respondents.

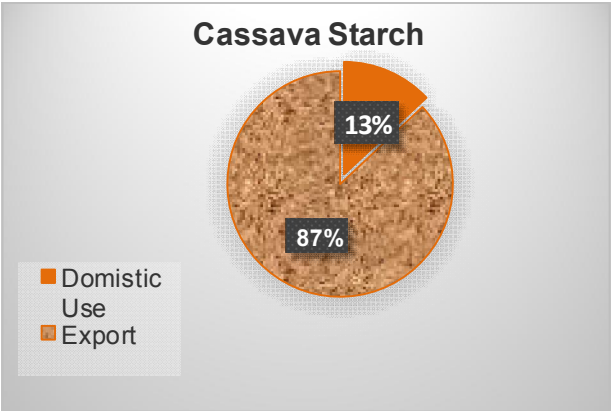
Cassava Value chain flow.



Cassava value chain flow that producer have collect production from farmers with 95% in provinces and other farmer 30% out of provinces. Moreover, the aggregation was 5% with sources from producer to middleman. However, processing need 15% for local factory within province, which some from local feed mail processing within province 30% and other 20% from

other factory local. According, the customer link local feed mail processing 100% final product local market to export Cassava starch 95% and Cassava slice and fresh 35% from middleman.

CASSAVA USAGE FOR FACTORY



<i>Factory Produce</i>	<i>Fresh</i>	<i>Starch</i>
<i>Production (TON/YEAR)</i>	921,760	166,770

Cassava usage for factory that 921,760 tones per year fresh production may around 13% domestic use and cassava production export that strach total 87%.

CASSAVA PRODUCTION 2017



N°	Province-Town	Cassava		
		Cultivated area	Harvested area	Production
		(ha)	(ha)	(Ton)
1	Battambang	78,488	78,488	2,330,021
2	Pailin	54,336	54,336	1,358,400
Total		132,824	132,824	3,688,421

The cassava production in 2017 that Battambang province the cultivated are 78,488 ha and production 2,330,021 tones and Pailin province cultivated are 54,336 ha and production 1,358,400 tones, which the supplies local processing probably 25%, other around 35% and export to Thailand 40%.

CASSAVA AVERAGE PRICE

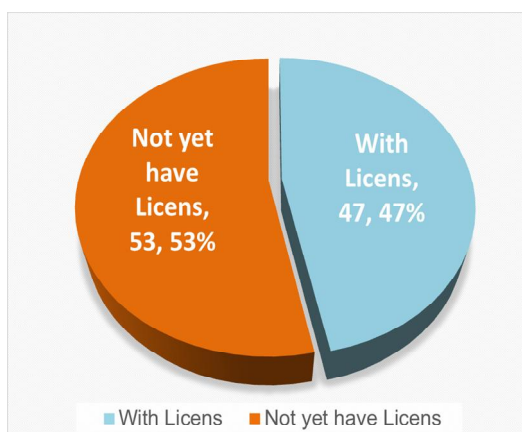
Cassava Fresh Value Chain in Battambang Province					
Discription	Purchase Price	Cost	Selling price	Gross margin	Net Margin
farmer		45.75	60.8	60.8	15.05
Small trader (Mitdol men)	60.8	3.51	66	5	2
Large trader (SayLo)	66	3.51	73.77	8	4
Cambodia factory	73.77				
Total Value added (USD/T)					21

Cassava Fresh Value Chain from Cambodia to Thailand					
Discription	Purchase Price	Cost	Selling price	Gross margin	Net Margin
farmer		45.75	60.8	60.8	15.05
Small trader (Mitdol men)	60.8	3.51	66	5	2
Large trader (SayLo)	66	11.23	85	19	8
Thailand Factory	85				
Total Value added (USD/T)					24.51

Compare Local and International Market

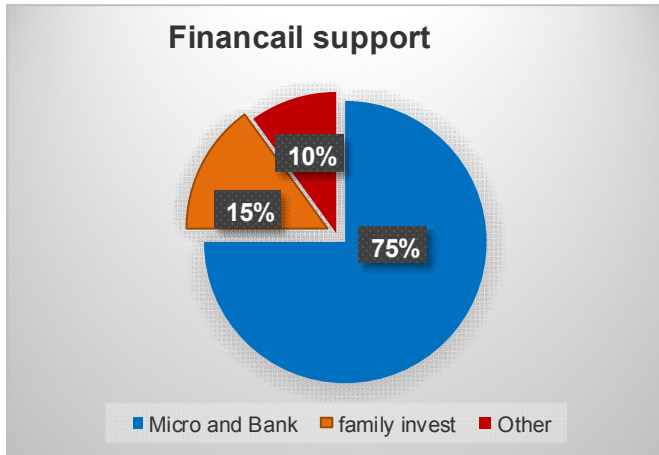
Cassava Average price UDA/T	Local	Export
Cassava Fresh	73.77	85
Cassava Slice	185.9	216
Cassava Starch	490	470

LICENSE OWNERSHIP



The License Ownership that it has had not license total around 53.53% and with license total 47.47%.

CASSAVA FINANCIAL SUPPORT



Cassava Production of farmer implementation financial that support by Micro and bank for product of farm amount around 75%, which some farmer gets from family invest maybe 15% and 10% from other.

CONCLUSION

CHALLENGE FOR FARMER, TRADER AND FACTORY

- High interest rate, Transportation cost, electricity cost, agriculture input cost
- Lest irrigation system for processing
- Recognise different chains in terms of the products (starch, bio-fuel, animal feed) and the pathways
- Registration Processing.

Recommendation to Farmer Trader and Factory

- Market information, extension, feedback loops and value chain communication
- Attracting investment for local processing
- Ensuring reliability of supply (quality and quantity to meet emerging demand).

Recommendation

Cassava historically has had limited importance in the diet of Cambodians. Therefore, it would probably be difficult for cassava to gain acceptance as a major staple food in Cambodia. Potential future production of cassava in Cambodia will reflect current farmers' practices of cassava and other alternative upland crops. Therefore, it's important to promote newly

introduced cassava varieties, appropriate strategies for cassava, and the transfer of improved production technologies for sustainable cassava-based production systems. Currently, such information is not available for agriculture researchers, extension staff, and farmers in Cambodia.

Cassava is important to promote newly introduced cassava varieties, appropriate strategies for cassava, and the transfer of improved production technologies for sustainable cassava-based production systems.

To obtain a comprehensive result about cassava value chain, we should conduct a survey starting from the farmer, trader, processing industry and final consumer.

- Information of cost production is difficult to collect by the pilot survey. It might be calculated through a specific survey.
- The scope of the survey should be wider which include area, respondent and budget.



References

- Annual Report Conference Agriculture Forestry and Fisheries 2017-2018 and Direction 2018-2019.
- Annual Report Conference Agriculture Forestry and Fisheries 2016-2017 and Direction 2017-2018.
- Annual Report Conference Agriculture Forestry and Fisheries 2015-2016 and Direction 2016-2017.
- Annual Report of Provinces Department of Agriculture Forestry and Fisheries Battambang and Pailin 2016 and 2017.
- Agricultural Census 2013.
- Interview and report from Trader/Saylo, Factory and Industry Battambang and Pailin.