

# **INCREASING THE ROLE OF CHAIN ACTOR FOR CASSAVA DEVELOPMENT (*Manihot esculenta* Cranz) IN NORTH SUMATRA, INDONESIA.**

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## **INTRODUCTION**

North Sumatra is one of the main province produce cassava in Indonesia. According to the Indonesian Bureau of Statistics, the mean yield of cassava in North Sumatra is about 30 t/ha, this is far higher compare to other province or national mean yield which only 20 t/ha. Most of cassava tubers used for industrial purpose. The study discussed here was aimed to investigate the system of cassava production and factors contribute for this high yield.

## **METHODS**

The Study was done using Rapid Rural Appraisal (RRA) approach, house hold survey and Focus Group Discussion (FGD). RRA was done in 2016, house hold survey was done in 2017, and FGD in November 2018. The study was done in Pematang Siantar District, Simalungun District, and Tobasa District.

RRA was done by interviewing some keys actors involve in cassava production chain, include farmers, traders, collectors, processors, and researchers. The house holds survey was done in Pematang Siantar District, Simalungun District, and Tobasa District in 2017 with 150 farmers as the sample. The key questions including production system (variety, farming system), marketing, processing and supporting system (production utilities, extension).

To understand the role and activity of the chain actors, a Focus Group Discussion (FGD) was done in November 2018. Forty (40) participants, include farmers, traders, collector, processors, government agencies and researchers (University and Research Institute) were actively presented their view for developing cassava in North Sumatra. Director of Directorate Legume and Tuber Crops of Agricultural Ministry talking about the National Policy of Cassava Program, The head of Province Agricultural Services talk about The Policy of Cassava Development in North Sumatra, The Head of BPTP North Sumatra talk about the cassava research program in North Sumatra, and the Team of ILETRI-UB presented the study result during 2016-2018.

## **RESULTS**

### **Production Chain Actors:**

Most of cassava production in North Sumatra is used for industrial purpose. In Siantar and its surrounding, the main cassava processor is PT Bumi Sari Prima which process cassava as tapioca starch. There are 5 main actors of cassava production system in North Sumatra (Figure. 1), i.e. Farmers as the producers, PT Bumi Sari Prima as the processor, and in between there are agent, collectors, and traders. In addition, there is a supporting actor who supply production utilities, mainly fertilizers and herbicides.

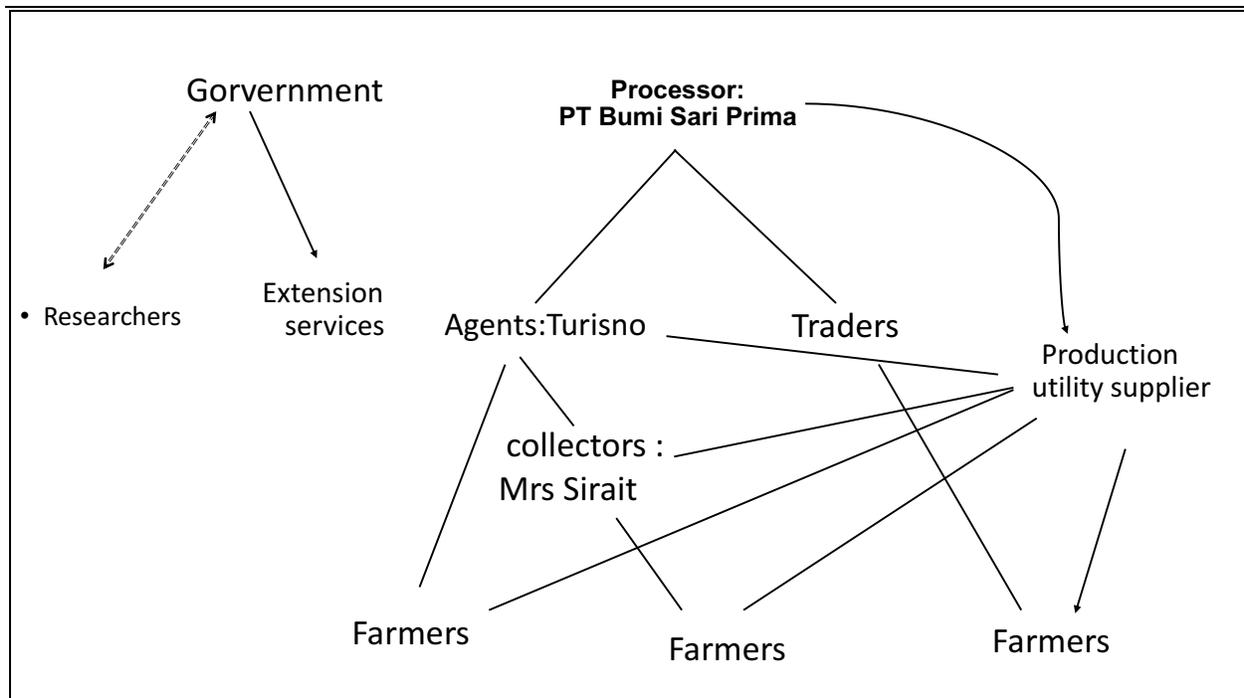


Figure 1. Cassava production system chain in North Sumatra

Agents help the factory to get the fresh cassava. In their activity Agents can directly contact farmers or cooperate with the collectors. Most of agents and collectors also planted cassava in their field (act as a cassava farmers). Agents and collectors often act as the agricultural extensionist to the farmers. If necessary collectors and agents help farmers in the process of production, such as provide cutting material, land preparation, harvesting, transporting to the factory, or lending the money for fertilizers and herbicide. If required, Agent could lend the money from factory, and collector lends the money from agents. As a feedback, farmers should sell their product through their collectors or agents. Agents and Collectors get the fee from the factory based on the amount of cassava passed on to the factory.

Traders, more or less works similar to the collectors. However, they have more choices because they are not strictly tied to the factory. Some traders also plant cassava on their land.

PT Bumi Sari Prima is the main processor in Siantar and its Surrounding. The price of cassava was determined by factory with the consideration of the tapioca price in common market. The factory did not use starch content as the criteria to determine the price. In 2017 the cassava price was very low, so only a few farmers planted cassava, so in 2018 PT Bumi Sari Prima experienced shortage of fresh cassava. To help farmers increasing their yield, in 2015 PT Bumi Sari Prima bought Malang 4 variety from ILETRI, Malang. However, the spread out of the variety to farmers was very slow.

It seems there was not enough attention from government for developing cassava in North Sumatra. The officer of Agricultural Services in Siantar said there was a program for developing cassava in Siantar, but till now there was no real action.

### **Production technology.**

Farmers grow cassava in monoculture system (cassava solely) with a simple technology. The cassava varieties commonly planted are local variety such as Malaysia, Adira-4, and Cikaret. Farmers used cutting from the previous crops or from their neighbor with no cost. Farmers used plant their cassava in very close distance (100 x 60 cm or 80 x 60 cm). There some traders working in agricultural

production utilities, but it is often face the difficulty of fertilizers availability, therefore farmers often did not fertilize their cassava, or if they did, they used un proper rate. Farmers sold their product in the form fresh tuber to the factory through collectors, agent, or traders to processor.

## **DISCUSSION AND CONCLUSION**

During FGD, there were some issue arises, i.e.:

1. Although at national policy cassava is not include in the priority commodities, all participant (farmers, traders, processor and government) agree that cassava plays important role in North Sumatra, therefore they support any program for developing cassava in North Sumatra.
2. The identified limitation of cassava development in North Sumatra are: (1) the availability of proper and good cassava variety; (2) the availability (amount and time) of production utilities; (3) production technology; (4) capital; (5) limited used of cassava (processors); (5) price fluctuation.
3. All production chain agrees to take a more action for increasing cassava production. However, there was still unclear share, responsibility and the advantage each actor involved in the program. The FGD concluded that government should more active to take role in the program, especially in providing cassava variety and technology. Government was also expected could solve the price fluctuation, for example by mediating farmers and processors for getting the agreement, or insurance. Agent, traders and collectors willing to take part in multiplying and providing cutting materials as far as clear what the advantage they got.
4. To minimize risk from price fluctuation, FGD support to develop other used of cassava. In addition, the practice of intercropping would also help the farmers.