

The Technology Services Of Cassava And Sugar Cane Cultivation At Starch Technology Center In 2016

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Abstract: The current agricultural system should be able to create agriculture that has high productivity but with low cost input. The agricultural system is an efficient and environmentally friendly agricultural system which capable of utilizing the potential of local resources optimally for the purpose of sustainable agriculture development. This low input farming system is better known as Low Input Sustainable Agriculture (LISA). Optimization of Integrated Farming System intended to exploit the potential of local resources for the purpose of sustainable agricultural development.. Integrated agriculture is a system that reuses or recycles the waste arising from the system. For the utilization process to occur effectively and efficiently, it should be integrated agricultural production in one area. In the area there are sectors of production of crops, livestock and fishery are interconnected to obtain an area that has a complete ecosystem in which all components of production will not be waste because it will be utilized by other components. The main characteristic of crop-cattle integration is the presence of synergism or mutually beneficial linkages between crops and livestock. Livestock uses plant waste as a source of feed and plants get organic fertilizer from livestock manure.

Keywords: low cost input, agriculture, productivity, optimization,

1 INTRODUCTION

The current agricultural system should be able to create agriculture that has high productivity but with low cost input. The agricultural system is an efficient and environmentally friendly agricultural system which capable of utilizing the potential of local resources optimally for the purpose of sustainable agriculture development. This low input farming system is better known as Low Input Sustainable Agriculture (LISA) The maximum of Integrated Farming System intended to exploit the potential of local resources for the purpose of sustainable agricultural development. Integrated agriculture is a system that reuses or recycles the waste arising from the system. For the utilization process to occur effectively and efficiently, it should be integrated agricultural production in one area. In the area there are sectors of production of crops, livestock and fishery are interconnected to obtain an area that has a complete ecosystem in which all components of production will not be waste because it will be utilized by other components. The main characteristic of crop-cattle integration is the presence of synergism or mutually beneficial linkages between crops and livestock. Livestock uses plant waste as a source of feed and plants get organic fertilizer from livestock manure. With the spirit contained in the 9 agenda Priority change (nawacita) of President Joko Widodo and Vice President Jusuf Kala, namely point 3,; Build Indonesia from the periphery by strengthening the areas of the village within the framework of the unitary state and the seventh point: economy by moving the strategic sectors of the economy (domestic) has become the basis of a strong footing in the framework of implementation of regional development throughout the archipelago. With the aim of strengthening regional development in order to improve people's welfare and quality of human life and reduce unemployment rate and reduce the number of poverty through the provision of employment and industrial development through technology mastery.

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Package of cultivation technology of liver and sugary plants, starch product production and processed starch is the result of technological innovation that can increase the added value and have high economic value. In relation to this, and the more strategic role of Pati Technology Center in the region by promoting the application of technology based on local advantages, B2TP provides services to:

- Raw Materials Cultivation Technology Services;
- Technology Services Services of Starch Production and Derivatives;
- Laboratory Testing and Analysis Services Services.

The service activity of Starch Technology Services, in its implementation embraces the system of working breakdown structure (STKK), and in the year 2016 has been divided into several working groups or WBS (work breakdown structure) that is WBS 1.: Cultivation Technology Services starch raw materials; WBS 2: Technology Services of starch production and its derivatives; WBS 3: Laboratory Testing and Analytical Technology Services.

II. Method

The metode of cassava cultivation as table 1 below.

Table 1. The Activity of cassava cultivation

NO	Activities	DETAILS ACTIVITIES IMPLEMENTATION OF MONTH-											
		1	2	3	4	5	6	7	8	9	10	11	12
1.	Land Processing												
	Plow1	***											
	Plow2	***											
	Ridging	***											
2	Planting	***											
3	Replanting			***									
4	Fertilization 1			***									
5	Fertilization 2					***							
6	Weeding 1			***									
7	Weeding 2					***							
8	Destroy of mimosa pudica					***							
9	Post Emergence								***				
10	Harvest										***		

Measures of Success ie Production average = 18.80 tons/ha

The method of sugar cane cultivation as table 2 below.

Table 2. The Activity of sugar cane cultivation

NO Activities	DETAILS ACTIVITIES IMPLEMENTATION OF MONTH-											
	10	11	12	1	2	3	4	5	6	7	8	9
1. Land Processing	***											
2 Teratyen	***											
3 Replanting		***										
4 Fertilization			***	***								
5 Add-Ridging(Optional)												
6 Weed Control						***						
7 Skin dispose					***	***						
8. Harvest												***

Measures of Success ie average production =60.32 tons/ha



Figure : 1 Cultivation of cassava plants

III.1.2, The Technology services of Sugar cane

1. The cultivation activity of sugar cane with GM 25 variety implemented by CV Kresna partner on 30.35 ha of land in Tulang Bawang, age 12 months, with result of 1,800,5 tons, average productivity was 59,32 tons/ha.

2. Cultivation activities of sugarcane crops (ratoon 2) GM 25 varieties implemented by partners of PT. Gunung Madu Plantation on 18.40 ha land in Negara Bumi Ilir, 12 months old, with the result of 1,032.79 tons, average productivity per ha was 56.13 tons



Figure: 2 The Land preparation of sugar cane Cultivation

III. RESULT AND DISCUSSION

III.1 Raw Material Cultivation Technology Services

The results achieved by the working group: Raw Materials Technology Services (WBS1) are: Conducting cultivation of cassava and sugar cane in 2 (two) locations in the State of Negara Bumi Ilir and Tulang Bawang. Each outcome of WBS 1 activity will be described one by one in accordance with the activities undertaken by the work package below, as follows:

III.1.1.The Technology Services of Starch Raw Material

Cultivation activities of cassava plantation conducted by CV Kresna partners on 7.9 ha of land in Tulang Bawang, age 10 months, total productivity 148.4 tons, with average productivity was 18.80 tons/ha.



Figure 3. The Maintence of sugar cane plant



Figure 4. *The Harvesting of sugar cane*

IV. Progress Control Monitoring (PCM)

Progress control & monitoring of this program is a report of monitoring and controlling the activities of Starch Technology Services, especially in terms of financing and scheduling (financing and scheduling). This activity has been completed for 12 months. The implementation of this Starch Technology Services activity is broken down into 3 work breakdown structures (WBS), namely: WBS 1: Raw Material Cultivation Technologies; WBS 2: Technology Services for the Production of Starches and Derivatives, WBS 3: Laboratory Testing and Analysis Services. Implementation of this program / activity as a whole can be implemented on schedule, as well as achieved objectives and targets that have been set. Broadly the progress control & monitoring report of this program, as follows:

IV.1. Funding

This activity is financed from PNB in Budget of Starch Technology Center in Fiscal Year 2016.

IV.2. Scheduling

In general Implementation of programs / activities undertaken by WBS1, WBS2, and WBS3, can be implemented according to a predetermined schedule. However, there are some activities that the implementation schedule requires accurate adjustment and timing control, especially WBS 1. This should be done because the activities of WBS 1 is very dependent on the season, so that if there is a change of the season then the entire schedule that has been determined will change. While in the year 2016 has been happen the burning of plants and land occupation by the community, thus affecting the total fresh production of the crops.

V. Conclusions

Implementation of the work activities of Technology Services in fiscal Year 2016 produces several achievements, but there are still many things that need attention and followed up in 2017. Technology Services Cultivation of cassava and sugarcane is constrained by the problem of land area which is under cooperation. The existing land both in the State of Negara Bumi Ilir and Tulangbawang mostly occupied by the local community. This needs to be solved the land problem as soon as possible with the pattern of cooperation with third parties.

VI. Reference

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