CASSAVA VARIETIES TESTING IN THE HOKENG VILLAGE, EAST FLORES DISTRICT, EAST NUSA TENGGARA

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INTRODUCTION

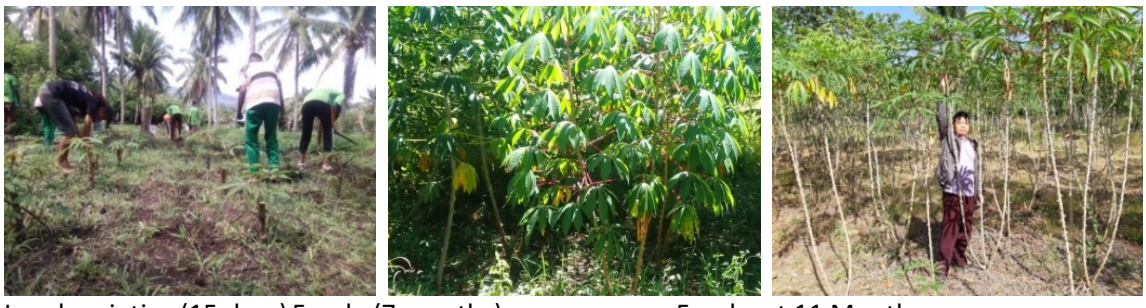
Cassava is the second important crop for East Nusa Tenggara people, apart from maize. It is one of the main diets for rural people. Therefore, cassava is found extensively in East Nusa Tenggara (mostly planted intercrop with maize), but the yield is very low (less than 10 t/ha). During RRA and house hold survey we observed that the reasons for low yield are: (1) low cassava density (1.250 to 2.500 plants/ha), (2) variety planted is low yield local variety with, and (3) no fertilizer application.The previous agronomical trials in the Sikka district showed that farmers prefer the Malang-4, Gajah and to some extend the Faroka varieties compare to the local varieties. Looking at the success of cassava farming in the Sikka district, farmers from the Hokeng village-East Flores District which located in the east of Sikka district were interested to participate in the trial.

The climate condition in the hokeng village is considerably wetter compared to the sikkadisctrit and located in higher altitude hence have higher humidity. In 2018, the team from UB and Unitri collaborate with farmer group and agriculture vocational school in the hokeng village to set up a variety trial. The aim of this trial were: (1) to obtain cassava varieties that are suitable to the agroecological condition in the hokeng village, and (2) to understand he preference of cassava variety tested by the farmers in the hokeng village.

METDOS AND DESIGN

The varieties selection trial was set up in the village of Hokeng, East Flores Regency, East Nusa Tenggara – Indonesia. The varieties tested were: (1) Faroka; (2) Gajah; (3) Malang-4; (4) Local varieties (2 varieties). These varieties were arranged in a complete randomized block design with three replicates.

Planting was done on 26 November 2017. Cassava cutting of about 25 cm was planted at plant distance of 1.0 x 1.0 m. Plot size was 5 x 5 m.The cassava was given 300 kg Urea/ha; 100 kg Super Phosphate 36 and 100 kg/ha Potassium Chloride. All phosphate and potassium fertilizer was applied at planting date; Urea was applied 3 times at 15 days after planting (dap) ; 60 dap and 90 dap (each was 1/3rd rate). Weeding was done manually at 15 dap; 60 da and 90 day. The condition of plants during the trials are shown in Figure 1.



Local varieties (15 days) Faroka(7 months) Faroka at 11 Months

Figure 1. Plants during trial

Results.

Thecassava was harvested on November 2018, and the various cassava varieties tested in the trial showed a significant influence on the cassava yield ($P < 0.05$) (Table 1). The highest yield was obtained by the Malang 4 variety with an average of 53.12 ton/ha. The local cassava varieties produced 28 ton/ha for the white flesh variety, and 35 ton/ha for the yellow flesh variety. When comparing between varieties tested, Gajah and Malang 4 varieties were the two most promising cassava varieties to be cultivated in the hokeng village.

During the field day, farmers also given a short questionnaire to understand the preference of farmers to the cassava tested. The results from the questionnaire is shown in the Figure 2. Most of the farmers are interested in planting the Malang 4 and Gajah varieties. Moreover, from the tasting done at the field day, the Malang 4 variety that usually has a bitter taste was liked by the farmers.

Table 1. Cassava Yield (ton/ha)

Variety	Cassava Yield(ton/ha)				
	Rep. I	Rep. II	Rep. III	Total	Average
Malang 4	45.35	59.48	54.55	159.38	53.12
Faroka	42.28	55.42	41.61	139.31	46.43
TambakUdang	35.73	47.55	39.44	122.72	40.90
Gajah	44.02	46.20	56.00	146.22	48.74
Local White	21.69	32.58	31.70	85.97	28.65
Local Yellow	31.06	35.25	40.93	107.24	35.64

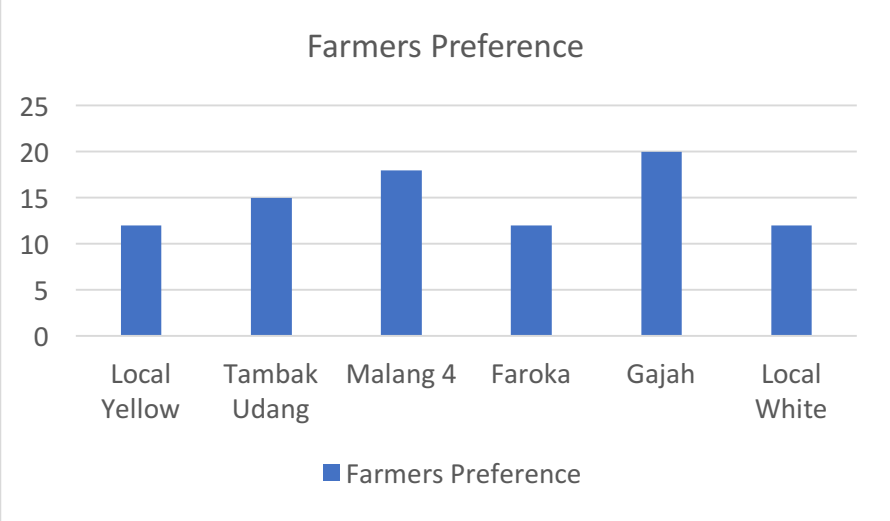


Figure 2. Farmers Preference toward various cassava varieties tested

Discussion and conclusion.

The main objective of this trial was to find the suitable cassava varieties to be planted in the hokeng village of East Flores District. The results from the trial showed that all varieties tested in the trials were preferably growth in the wetter climate and higher altitude of hokeng village. Based on the yield, both Malang 4 and Gajah produced the highest yield. Based on the farmers preference of

taste, the Malang 4 is also suitable to the palate of farmers in the hokeng village. Hence, for the 2018-2019 planting season, there are 15-20 farmers in the hokeng village were willing to participate in the adoption trial of malang 4 and gajah varieties. Cassava stem were provided from the previous trial and also from sikka regency (Pak Tommy). Moreover, the UB team also signed an agreement with the District Government of East Flores District to support the development of smallholder cassava farming in the hokeng village by working together with agriculture field extension office. In March 2019, the UB and ILETRI team were organized a workshop in the Sikka regency to discuss the business model of cassava farming in East Nusa Tenggara Province. Farmers, government official, trader, and researcher from multiple University in East Nusa Tenggara were invited to the workshop. One of the key point from the workshop was the necessity of a formal agreement between farmers and industry stakeholder (Pak Tommy) that regulates the commitment of farmers to plant cassava and the commitment from the industry to provide markets for the cassava.