

# Selection of Domestic Production Soybean Varieties With the location of planting against the results of production

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# Selection of Domestic Production Soybean Varieties With the location of planting against the results of production

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## ABSTRACT

To overcome food security, the government has a National Long Term Plan (RPJN) for 2005- 2025 which concludes that until 2019 Indonesia still has a national soybean deficit of more than 229%. The objectives of this study were: To carry out domestic production of soybeans in various locations in order to meet needs. This research was conducted by means of experimentation using 5 superior varieties grown in 3 districts in Malang district, East Java province, Indonesia. Processing and data analysis using experimental design, namely random block design with a 95% confidence level. The results showed that the cause of different production results was not due to the use of different varieties. Domestically produced soybean varieties have their respective profiles. Many factors in the selection of domestically produced soybean varieties include size and color.

**Keywords: soybean varieties, domestic production of soybeans, production results**

## 1. INTRODUCTION

The benefits of soybeans are so great and have many uses, that industry players are interested to develop various industrial sectors made from soybeans. Up to you 2019 (Preliminary Study of the National Medium Nelly Budiharti; J.R. Heksa Galuh W; Sony Haryanto; Ngoc Anh Tran, Volume 9 Issue 4, pp 113-116 April 2021

Term Development Plan / RPJMN, Directorate of Food and Agriculture, 2013: 169), it is estimated that soybean imports amounted to 226%. East Java is the largest soybean producer in Indonesia (ranked 1st), on average 42.93% of Indonesia's total soybean production. The next largest supplier is Central Java (ranked 2nd), 18%. West Nusa Tenggara (3rd place), 8.79% and Aceh and West Java alternately entered in the 4th rank giving each contribution of 6.10% and 5.62%. There is a very large difference between the supplier of rank 1 and rank 2,3 and ranked 4th especially with suppliers from other provinces throughout Indonesia (National Soybean Production Development 2010-2013, BPS 2013: No.73 / 11 / Th. XVI, November 1, 2013: 8). Jember and Banyuwangi are the largest soybean production in Java Timur (BPS 2013). So it is very necessary to make efforts to plant in other areas. In this case, the researcher planted it in Malang Regency, because Malang had already become the city icon of tempe crepe food craftsmen, but soybean farmers are very small, namely only amounting to 11.67 Kw / ha [1-10]

## 2. RESEARCH METHOD

Research was carried out by experiment 5 superior seeds that were applied in 3 sub- districts in Malang Regency, East Java Province, Indonesia. Data

processing and analysis using an experimental design, namely Block experimental design with a random model. In Cultivation There are many varieties of soybean produced domestically, so the model used is random, the meaning that the conclusion applies to all varieties of soybean production in other countries not only for these 5 varieties[11-18].

### 3. RESULT AND DISCUSSION

From the experimental results, by planting domestically produced soybeans in accordance with the theory and guidelines of the soybean plant research and development unit, department of agriculture, especially food crops, Jember Regency, East Java Province, Indonesia. Production data of 5 domestically produced soybean varieties are as follows:.

Table 1: Production Results of 5 Domestic Production Soybean Varieties (Tons / ha)

Block(Planting Location)	Variety				
	Raja Basa	Mutiara 1	Dega 1	Dena 1	Grobo gan
Pakis Haji	2.05	2.4	2.78	2.05	2.77
Singosari	2.2	2.7	2.77	2.10	2.78
Tumpang	2.4	2.7	2.91	1.9	3.01
Amount	6.65	7.8	8.46	6.05	8.65
Average	2.22	2.6	2.82	2.02	2.88

Hypothesis: Variance ( $\sigma^2$ ) = 0 = There is no difference in the use of varieties with vegetables on soybean production

Table 2. Analysis of Variance of 5 Domestic Soybeans

Variation Sources	Degree of Freedom (DF)	Sum of Squares (SS)	Average Sum of Squares	F of Calculate
Average	1	94.301	94.301	
Block (Planting Location)	2	63.021	31.51	3.422
Treatment (Variety)	4	-38.546	-.637	
Margin error	8	-22.529	-2.816	

With the confidence level of 95%, the F value was  $0.05 (4, 8) = 3.84 \rightarrow$  with F calculate <F table; the hypothesis was confirmed. It meant that there was no difference in the production due to the varieties.

The results showed no differences in the production of various soybean varieties grown alongside / intercropped with vegetables. The differences in the production of various varieties that occur are not due to planting with vegetables / intercropping but indeed each soybean has its own profile, (Source: UPTD Bangsal Sari Jember and Balitkabi Gadang Malang, East Java Province, Indonesia).

3.1 The profile of the production of each variety is as follows (Source: UPTD Bangsal Sari Jember and Balitkabi)

3.2 Gadang Malang, East Java Province, Indonesia): (Ton / Ha)

1.Rajabasa: Potential results 3.9, average = 2.05

2.Mutiara : Potential results 4.1, average = 2.4

3.Dega 1 : Potential results 3.82, average = 2.78

4.Dena1 : Potential results 2.9, average = 1.7

5.Grobogan : Potential results 3.4, average = 2.77  
a block again. Also a feature of block design is that each treatment only has 1 observation data, if the observation data is 2 or more, the analysis is said to use a 2-factor design [19]

Soybeans have their respective profiles in addition to the potential for production, namely: diameter size, color, leaf width, tree height, as well as different uses, for example for tempeh, tofu, soy sauce, medicine, beauty, milk, flour, meat Imitation, Salad Oil, M. Fried, White Butter, Margarine, Wetting Agent, Solvent, Emulsifier, Stabilizer, Lubricant, Rerotlen, Ice Cream, Yogurth, Baby food, Soy cheese, etc., [19]

#### 4. CONCLUSION

1. Domestic production soybean varieties does not affect the yield obtained
2. Each variety has the potential for production according to the variety profile
3. Variety selection is not based solely on production but there are still many factors including the size and color of soybeans

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