

Farmers Perceptions of the Price of Certified Rice Seeds in Padang City West Sumatra Province, Indonesia

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Abstract — In the Strategic Plan Document (RENSTRA) of the Agriculture Service in Padang City for 2019–2024, it is determined that rice is a strategic commodity. One effort to increase rice production is a policy of increasing the use of certified rice seeds at the farmer level. Lowland rice production in Padang City shows a downward trend in the period 2018 to 2020. Total rice production in 2018 was 104,561 tons and rice production in 2020 was 80,092 tons, this condition shows a decline in rice production from 2018 to 2020 of 23.45%. The decline in rice production in Padang City is thought to be caused by farmers not responding well to the use of certified rice seeds. The price of certified rice seeds in Padang City is Rp. 11,000 – Rp. 15,000 per kg and the price of uncertified rice seeds in Padang City is Rp. 5,500 – Rp. 7,500 per Kg. The aim of this research is to describe farmers perceptions of the price of certified rice seeds in Padang City. Data collection was carried out using interviews and questionnaires. The sampling technique used was purposive sampling. The total research sample was 96 farmers taken from 6 sub-districts in Padang City. The selected subdistrict is an area designated by the Padang City Agricultural Service as a food area. Based on research results, farmers perceptions of the price of certified rice seeds in Padang City are 42.7% of farmers perceptions of the price of certified rice seeds at affordable prices, Farmers perception of the suitability of the price of certified rice seeds in accordance with the benefits obtained is 77.1%, Farmers perception of the suitability of the price of certified rice seeds according to the quality obtained is 90.6%, The perception of farmers regarding the price of certified rice seeds compared to the price of non-certified rice seeds is that all respondent farmers said that the price of certified seeds has a high price.

Keywords— : Seed, Rice, Certified, Farmer, Padang.

I. INTRODUCTION

Rice is a strategic commodity and a national priority in the RPJMN 2020-2024. Increasing rice production needs to continue to be increased in line with the projected population growth rate. Based on the Strategic Plan Document (RENSTRA) of the Padang City Agricultural Service for 2019 – 2024, rice is also a strategic commodity. One effort to increase rice production and to improve the welfare of farmers and their families is through a policy of increasing the use of certified rice at the farmer level.

Rice production in Padang City in 2020 was 80.092 tons with an average productivity of 5.56 Tons/Ha. The average productivity of lowland rice in Padang City is still low when compared to the productivity of using certified seeds, which is 5.6 – 7.0 Tons/Ha. (Dinas Pertanian Kota Padang, 2021), and the achievement of lowland rice production in Padang City in 2019 was 86.559 tons and in 2018 the production was 104.561 tons. The decline in the amount of lowland rice production in the 3 years was caused by land conversion, planthopper pest attacks and the low use of certified rice seeds. Some of the activities that have been carried out to control planthopper pests in Padang City are rotation of superior rice varieties based on the level of resistance and biotype level of brown planthoppers. (Dinas Pertanian Kota Padang, 2020), However, according to Rustam (2022) the use of quality and labeled or certified rice seeds in West Sumatra is still relatively low compared to other provinces, this is reflected in

the fact that before the direct seed assistance program was launched, it was only less than 30%. Based on this, researchers are interested in describing farmers perceptions of the price of certified seeds in Padang City.

One of the reasons for the decline in rice production in Padang City is the result of farmers not responding well to the use of certified superior rice seeds or the low interest of farmers in using superior rice seeds, and the low use of certified rice seeds, allegedly due to the price of certified rice seeds being higher than the price of non-certified rice seeds. The price of certified rice seeds in Padang City is Rp. 11.000 – Rp. 15.000 per Kg, and the price of uncertified rice seeds in Padang City is Rp. 5.500 – Rp. 7.500 per Kg.

II. RESEARCH METHODS

The method used in this research is qualitative method. Data collection was carried out using interviews and questionnaires. Interviews were used to obtain information from key informants regarding the use of certified superior rice seeds in Padang City, while the Questionnaire is used to collect data at the farmer level, namely farmers who use certified rice seeds in Padang City. The population in this study were all farmer consumers who used rice seeds in the rice crop area in Padang City. The sampling technique used was purposive sampling. The consideration is farmers who have used certified rice seeds since 2019. The population size or number of farmers consuming certified superior rice seeds is not yet known with certainty, so the number of samples taken in this study uses the concept of normal distribution using the formula from Sugiyono (2011) with a margin of error of 10%, and a sample size of 96 farmers was obtained.

$$n = \frac{Z^2pg}{e^2} = \frac{(1,96)^2 \cdot (0,5)(0,5)}{(0,1)^2} = 96$$

The sample distribution of 96 farmers was taken proportionally in food crop areas. The food crop areas in Padang City are; 1). Kuranji Subdistrict, 2). Koto Tengah Subdistrict. 3). Pauh Subdistrict, 4). Lubuk Begalung Subdistrict, 5). Bungus Teluk Kabung Subdistrict, 6). Lubuk Kilangan Subdistrict.

To answer the research objectives, the topics and sources of research data collected in the research can be seen in Table 1.

Table 1. Research Data Topics

Research Purposes	Data Topics	Source of Data
Describe farmers perceptions of the price of certified seeds in Padang City	Affordability of prices for certified rice seeds The price of certified rice seeds is in accordance with the benefits obtained. The price of certified rice seeds depends on the quality of the seeds obtained. Price of certified rice seeds compared to other seeds.	Farmer

III. RESULT AND DISCUSSION

3.1. Characteristics of Sample Farmers

The research was carried out in Padang City, West Sumatra Province in 2023. The population of Padang City in 2020 is 909,040 people (Firlan, 2021), while the area of rice fields in Padang City in 2018 was 6.418 Ha, with Gardening Intensity (IP) 2 and 3 planting times a year. (Dinas Pertanian Kota Padang, 2019). The number of respondents in this study was 96 farmers and their characteristics are shown in Table 2.

Tabel 2. Characteristics of Sampel Farmer

No.	Sample characteristics	People (Percentage %)
1.	Gender:	
	a. Man	84 (87,5)
	b. Woman	12 (12,5)
2.	Age of Farmer (Years):	10 (10,4)
	a. 19 – 39 years	86 (89,6)
	b. ≥ 40 years	
3.	Rice Field Area (Ha):	65 (67,7)
	a. < 1 Ha	31 (32,3)
	b. ≥ 1 Ha	
4.	Certified Rice Varieties that Farmers Prefer:	2 (2,1)
	a. <i>Batang Piaman</i>	68 (70,8)
	b. <i>IR-42/PB-42</i>	5 (5,2)
	c. <i>Anak Daro</i>	18 (18,7)
	d. <i>Cisokan</i>	2 (2,1)
	e. <i>Bujang Marantau</i>	1 (1,1)
	f. <i>Banang Pulau</i>	

The sample of farmers in this study was male with a total of 87.5%. Many farmers are over 40 years old, namely 89.6%, so if we look at age, the farmer category is not included in the millennial category. The area of rice fields planted with certified rice seeds is 67.7% of the area under 1 Ha, and the area of more than 1 Ha is 32.3%. The certified rice seed variety most preferred by farmers in Padang City is IR-42/PB-42 or 70.8%.

B. Farmers Perceptions of Certified Rice Seed Prices in Padang City.

The price of certified superior rice seeds is the amount of value exchanged by farmers to obtain benefits from the use of certified rice seed products agreed upon by the buyer and seller through bargaining or has been determined by the seller at the same price for all buyers. According to Kotler and Keller (2016), price indicators are price affordability, price suitability to product quality, price suitability to benefits and price compared to competitors.

1. Affordability of Certified Rice Seed Prices.

The affordability of the price of certified rice seeds is the ability of farmers to purchase certified rice seeds in accordance with the price of certified rice seeds set by the producer. Farmers choose to use certified rice seeds which are affordable to buy. Farmers perception of the affordability of certified rice seed prices was 42.7%, and as many as 57.3% of farmers said the price of certified rice seeds was less affordable.

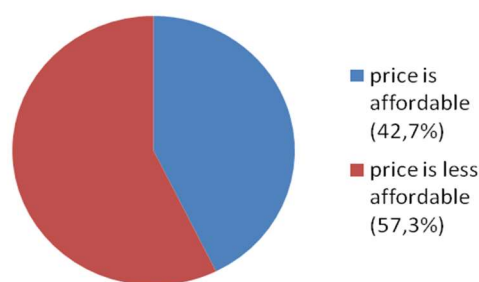


Figure 1. Farmers Perceptions About the Affordability of Certified Rice Seed Prices.

2. *The Price of Certified Rice Seeds is in Accordance with the Benefits.*

The suitability of the price of certified rice seeds to the benefits obtained is the farmer assessment of the suitability of the price of certified rice seeds to the benefits farmers receive if they use certified rice seeds. Consider using certified rice seeds because the perceived benefits will be greater than or equal to the price paid to buy certified rice seeds. Farmers perception of the suitability of the price of certified rice seeds with the benefits received by farmers is 77.1%, and as many as 22.9% of respondent farmers said the price of certified rice seeds was not commensurate with the benefits received.

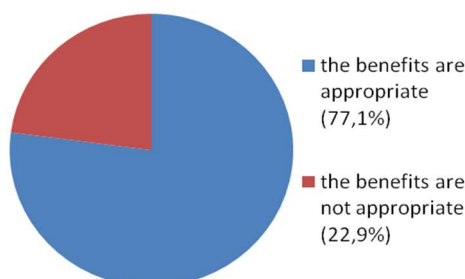


Figure 2. Farmers Perceptions Regarding the Suitability of Rice Seed Prices

Certified with Benefits.

3. *The Price of Certified Rice Seeds Depends on The Quality of the Seeds.*

The suitability of the price of certified rice seeds to the quality of the seeds obtained is the farmers perception of the quality of certified rice seeds in accordance with the price paid. Farmers perception of the suitability of the price of certified rice seeds with the quality of the seeds received is 90.6%, and as many as 9.4% of respondent farmers said that the price of certified superior rice seeds was not commensurate with the quality of the seeds obtained.

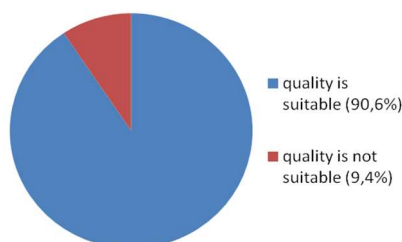


Figure 3. Farmers Perceptions Regarding the Suitability of Rice Seed Prices

Certified with Acceptable Seed Quality

4. Prices of Certified Rice Seeds Compared to Competitor Seeds.

The price of certified rice seeds compared to competitor seeds is farmers who consider and compare the price of certified rice seeds with the prices of non-certified rice seeds. Farmers perception of the price of certified rice seeds compared to the price of uncertified rice seeds is that all respondent farmers said the price was higher than the price of uncertified rice seeds..

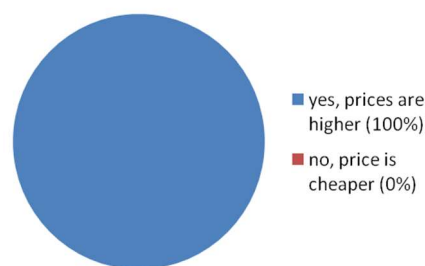


Figure 4. Farmers Perceptions Regarding the Price of Certified Rice Seeds Compared with Uncertified Rice Seeds.

IV. CONCLUSION

The certified rice seeds that are most in demand by farmers in Padang City are the IR-42/PB-42 rice variety, namely 70.8% and Cisokan at 18.7%. If we look at their age, 89.6% of the farmers who use certified rice seeds in Padang City are over 40 years old and this age is no longer in the millennial category. Farmers using certified rice seeds in Padang City said that the price of certified rice seeds at an affordable price was 42.7% and 57.3% said the price was less affordable. Farmers perception of the suitability of the price of certified rice seeds with the benefits obtained is 77.1%, and farmers perception of the suitability of the price of certified rice seeds with the quality obtained is 90.6%, and farmers perceptions of the price of certified superior rice seeds compared to the price of non-certified rice seeds shows that the price of certified rice seeds is high with a value of 100%.

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