Journal of Agri Socio-Economics and Business (JASEB)
Available online at : https://ejournal.unib.ac.id/index.php/jaseb/index
DOI: 10.31186/jaseb.1.1.1-14

RICE MARKETABLE SURPLUS, MARKETED SUPPLY AND ITS DETERMINANT FACTORS IN MUKOMUKO DISTRICT

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How to Cite :
Mustaman, H., K Sukiyono, Nusril, 2019. Rice Marketable Surplus, Marketed Supply And Its Determinant Factors In Mukomuko District. *Journal of Agri Socio-Economics and Business*. 1 (1): 1-14. DOI: https://doi.org/10.31186/jaseb.1.1.1-14

ARTICLE HISTORY
Received [05 August 2019]
Revised [18 August 2019]
Accepted [20 August 2019]

KEYWORDS
marketable surplus,
marketed supply,
rice,
rice stock

ABSTRACT

This research aims to estimate the marketable surplus and marketed supply of rice in Mukomuko Regency. This research is also aimed at identifying determinant factors of marketed supply and predicting rice availability in Mukomuko Regency. Data collected were primary and secondary data. The research location is determined using a cluster sampling method with 130 respondent selected using Stratified random sampling. The data analysis was used quantitative descriptive and regression analysis estimated. The result shows that percent marketable surplus and marketed supply of rice is 83.43% and 85.27 per ha per planting season respectively. The factors influencing the marketed supply of rice is Rice production and price. The rice availability from 2017 to 2020 is projected to increase by 44.56%. Consumption is projected to increase by 20.407 Kg in 2020. For the next 5 years, i.e.,2018-2022, rice availability and surplus positively increase.

INTRODUCTION

The Indonesian economy is supported by sectors, one of which is the Agriculture sector. The contribution of the agricultural sector is the second largest of the national economy, so agriculture can be used as a hope to support the Indonesian economy. In the second quarter of 2017, the agricultural sector made a positive contribution to the Indonesian economy, with the amount of Indonesia's GDP (gross domestic product) reaching Rp 3,366.8 trillion (BPS, 2017). The food crop subsector is one of the agricultural sectors that have the potential to be developed. According to Wibowo (2000), in agricultural development, the food crop sub-sector has a strategic and important position. Food is the core of basic human needs where rice/paddy is the largest carbohydrate-producing food. Indonesia's Gross Domestic Product (GDP) in 2012-2016 shows that the food subsector has the second-highest number as presented by Table 1.

Table 1. Indonesia's Gross Domestic Product according to agricultural subsectors in 2012 - 2016 (Billion Rupiah)

Subsector	2012	2013	2014	2015	2016
Crops	305.670,5	332.111,9	343.252,3	397.408,6	424.898,4
Plantation crops	323.361,6	358.172,4	398.260,7	405.291,5	429.682,0
Ranch	130.614,2	147.981,9	167.008,0	184.151,5	200.611,3
Forestry	65.882,2	69.599,2	74.618,0	82.859,5	85.545,0
Fishery	184.254	210.670,2	245.488,0	288.916,6	317.091,8
Agriculture	1.009.782,5	1.118.535,6	1.228.627,0	1.358.627,7	1.457.828,5

Source: Central Statistics Agency, (2017).

In Indonesia, rice is the main food ingredient. Rice of need in Indonesia continues to increase with increasing population and an increase in per capita rice consumption per year (Riyanto et al., 2013). Food Commodity Production in 2016 for paddy commodities is at 79,141 tons per year, the production increase is quite large when compared to 2015 which was 75,397 tons (Directorate General of Food Crops, 2016). In 2014, the Bengkulu Provincial Government through the Bengkulu Province Agriculture Service realized the Bengkulu Province had a surplus of 10 million tons of rice. To support the Bengkulu Province surplus of 10 million tons of rice, the Bengkulu Province Agriculture Service planted rice to plant rice seedlings in the BP 2 rice fields in the Seluma District (Bengkulu Province BPS, 2014).

Mukomuko Regency is one of the new districts in Bengkulu Province, which is divided from North Bengkulu Regency. Rice farming in Mukomuko Regency is still an agricultural activity occupied by the community. The land area and rice production in Mukomuko Regency are presented in Table 2.

Table 2. Harvest area and Production of rice in Mukomuko Regency 2014-2015

Description	Paddy Field		Rice Field		Total	
	2014	2015	2014	2015	2014	2015
Harvest area (Ha)	10.416	13.601	2.851	1.087	13.267	14.688
Production (Ton)	48.033	69.359	8.669	3.245	56.702	72.604

Source: Central Statistics Agency, (2017).

Potential rice yields in Mukomuko Regency, the researchers suspect that not all production is marketed all, but some are used for 1) the consumption of farmer households themselves, 2) paying rent for land/paddy fields, seed costs, and others. The amount of rice produced in Mukomuko Regency is only partially marketed to fulfill other needs (marketable surplus). Therefore, the researcher was interested in researching Marketable Surplus Analysis and the Factors Affecting Marketed Supply and the Availability and current needs of Rice in the next five years in Mukomuko District. This study aims to estimate the amount of Marketable Surplus in Mukomuko District, to know and analyze the factors that influence rice supply market in Mukomuko District, and to find out the availability and needs of rice in Mukomuko District now and predict the need for rice in the next five years in Mukomuko Regency.

RESEARCH METHODS

Method of Determining Research Locations

This research was conducted on rice farmers in Mukomuko District, Bengkulu Province. Location selection is done in clusters, namely by selecting the location of the smallest groups or units (Nazir 1983) with the consideration that this is one of the rice production centers in Mukomuko Regency, which has a large area and many people who still work as rice farmers. Other considerations are mastery of the problem, limited time and funds and the abilities possessed by the researcher. Time Research begins in August 2018.

Method of Determination Sample

The data in this study comes from primary data obtained through interviews. The respondents were taken using the stratified random sampling technique. According to Sukiyono (2018), stratified random sampling is a sampling method that is done by breaking or dividing populations into sub-populations or stratum or layers. Stratified random sampling in this study is based on two considerations namely based on IP (Cropping Index) and land area in each IP. Based on the sample calculation using the formula above, the sample results for each village are found in Table 3.

Table 3. Distribution of Samples based on sample villages in Mukomuko District

No	Villages	Sub-district	Sample Amount (Person)
1.	Sumber Makmur	Lubuk Pinang	77
2.	Talang Buai	Selagan Raya	30
3	Tanjung Harapan	Ipuh	23
	Sample Total		130

Analysis of Data

Analysis of Marketable surplus rice

According to Strauss (1984) marketable surplus or MS is expressed as the difference between the number of products produced with the number of products allocated for various needs. Mathematically marketable surplus or MS is stated as follows based on expenditure data that is directly carried out by farmers (real data), namely:

MS = Tp – (SL + PB + UH + UG + K + PZ)

where MS is Marketable Surplus, Tp is Total Production (Kg/season), SL is Land Rental (Kg /season), PB is Use of Seeds (Kg/season), UH is Hardvester Wages (Kg/season), UG is Milled Wages (Kg/season), K is Consumption (Kg/season), PH is Payment of Zakat (Kg/season).

Analysis of Factors Affecting Marketed Supply

The Ordinary Least Squares Regression Model is used to identify factors that influence marketed supply by rice farmers. These factors are expected to have a significant relationship to the marketed supply of rice with multiple linear equations (Tiku.et al, 2012), as follows:

$MS = a_0 + b_1HB + b_2PLU + b_3P + a_1SP + e$

Where; Ms is Marketed Supply (%), HB is Rice Price (Rp/Kg), PLU is the Amount of Revenue Outside Rice Farming (Rp/season), P is Production, SP is Revenue Status for Rice Farming, SP is 1, If Rice Farming Acceptance Main Acceptance, SP is 0, If Acceptance Outside of Rice Farming Side Receipts, b, a is Regression Coefficient, a_0 is Constants, e is Disturbing Variables

Analysis of Availability of Rice and the next five years in Mukomuko District

Analysis of data for rice availability in Mukomuko District was carried out by descriptive data analysis. The availability of rice is obtained by summing the rice production of Mukomuko Regency, the rice stock that was issued and then the

imports reduced by the rice export of Mukomuko Regency. The availability of rice in Mukomuko Regency can be formulated as follows:

KTSb = PROD + (Ib-Xb) + Sb

Where; KTSb is Rice Availability (Kg/Year), PROD is Rice Production (Kg/Year), Ib is Import (Kg/Year), Xb is Export (Kg/Year), Sb is Rice Stock (Kg/Year).

In this analysis, we will discuss the number of people and the amount of rice consumption to calculate the stock of rice that must be stocked and the potential of rice that can be sold through the results of marketable and marketed supply analysis in Mukomuko District. To analyze the availability of rice problems for the next five years in Mukomuko Regency will use quantitative data analysis for forecasting using the least-squares method to obtain a linear trend. According to Supranto (1993), the linear trend equation model for rice commodities is as follows:

Y = a + bX

Where; Y is Availability of rice (Kg), X is Time (years), a and b is Constants.

RESULTS AND DISCUSSION

Characteristics of Respondents

The characteristics of rice farmers in this study include age, formal education, number of families, and experience in rice farming as presented in Table 4.

Table 4. Characteristics of rice respondents in Mukomuko District

No	Information	Amount (person)	Percentage (%)	Average
1	Age (Year)*			
	22 - 39	37	28,46	
	40 - 57	75	57,69	46
	58 - 75	18	13,85	
2	Education (Year)			
	Never school	2	1,54	
	Elementary School	67	51,54	
	Junior high School	30	23,08	8
	Senior high School	27	20,77	
	University	4	3,08	
3	Number of family (Person)*			
	(0-2)	48	36,92	
	(3-5)	81	62,31	3
	(6-8)	1	0,77	
4	Experience (Year)*			
	2 - 15	60	46,15	
	16 - 31	49	37,69	19
	32 - 47	21	16,15	

Source: Primary Data processed, 2018.
*Ket: Characteristics that there are signs * obtained from the formula interval.*

The results of research in Mukomuko Regency showed that the largest percentage of the age of rice farming respondents in the study area was in the age group between 40 until 57 years which was 57.69%, and the lowest percentage was in the age group of 58 between 75 years which was 13,85%. The average age of respondents in the study area is 46 years, this shows that farmers in the study area are in productive age. The more a person's age increases, the physical condition of the person decreases to do a job or activity such as rice farming.

Education is one of the factors that support the success of farmers in carrying out their farming. The average length of formal education of farmers in the study area is 8 years (graduating from elementary school). Farmers who have completed elementary school education are 51.54%. From these data, it can be concluded that the education level of farmers in the study area is still low. The low level of formal education that farmers have is due to past economic conditions that do not support them to get a better education. While the average number of dependents of farmer families in the study area is as many as 3 people. The largest percentage of the number of family between 3 and 5 people is 62.31%, so it can be concluded that the average number of family in the study area is not too large because almost half have 2 family members, 36.92%. This shows that the greater the number of families, the greater the costs that must be incurred to meet family needs, including the need for consumption. The results showed that the average experience of rice farmers in farming was ± 19 years at intervals of 2 to 47 years. So it can be concluded that farmers in the study area are quite experienced. A farmer will tend to learn from previous experience, so he has an idea of what will be done in the next production increase.

Marketable Surplus

Production and Allocation of Use, in Mukomuko District farmers usually plant rice twice a year. However, in calculating the size of the marketable surplus, researchers only counted one farm for one year. The average amount of production obtained by farmers when the harvest season arrives after being allocated with various needs. Table 5 presents the average production and allocation for rice farmers in Mukomuko District below.

Table 5. Average production and allocation of rice farmers in Mukomuko District.

Description	Product	Consump	Seed	Harvest Wage	Milled Wage	Rent Land	Zakat	*MS*
Sumber Makmur								
Paddy (Kg/Season)	6696.75	195.11	11.23	732.66	41.81	24.55	75.65	5615.75
Rice (Kg/Season)	4218.95	122.92	7.08	461.57	26.34	13.25	47.66	3540.14
Paddy (Kg/Ha)	6737.88	196.30	11.30	737.16	42.07	24.70	76.12	5650.24
Rice (Kg/Ha)	4244.86	123.67	7.12	464.41	26.50	13.33	47.96	3561.88
(%)	100	2.91	0.17	10.94	0.62	0.31	1.13	83.91
Talang Buai								
Paddy (Kg/Season)	3940.00	122.29	10.13	461.17	26.20	0.00	6.00	3314.20
Rice (Kg/Season)	2482.20	77.04	6.38	290.54	16.51	0.00	3.78	2087.95
Paddy (Kg/Ha)	4874.23	151.28	12.54	570.52	32.42	0.00	7.42	4100.04
Rice (Kg/Ha)	3070.76	95.31	7.90	359.43	20.42	0.00	4.68	2583.03
(%)	100	3.10	0.26	11.70	0.66	0.00	0.15	84.12
Tanjung Harapan								
Paddy (Kg/Season)	3103.26	147.83	11.83	337.31	31.68	0.00	116.46	2458.16
Rice (Kg/Season)	1955.05	93.13	7.45	212.51	19.96	0.00	73.37	1548.64
Paddy (Kg/Ha)	6733.49	320.75	25.66	731.90	68.73	0.00	252.70	5333.75
Rice (Kg/Ha)	4242.10	202.08	16.17	461.10	43.30	0.00	159.20	3360.26
(%)	100	4.76	0.38	10.87	1.02	0.00	3.75	79.21
Production Mukomuko district (Average (Kg))								
Paddy (Kg/Season)	5424.81	169.94	11.08	600.06	36.42	14.54	66.80	4525.97
Rice (Kg/Season)	3417.63	107.06	6.98	378.04	22.94	9.16	42.08	2851.36
Paddy (Kg/Ha)	6331.70	198.35	12.94	700.38	42.50	16.97	77.97	5282.60
Rice (Kg/Ha)	3988.97	124.96	8.15	441.24	26.78	10.69	49.12	3328.04
(%)	100	3.13	0.20	11.06	0.67	0.27	1.23	83.43

Source: Primary Data processed, 2018.
MS stands for Marketable Surplus

The average rice production in Mukomuko Regency is 6331.70 Kg / Ha for rice or 3988.97 Kg/Ha for rice. Information on yields found in the Agriculture of Mukomuko District for milled dry rice is 63%. Based on Table 5, the average rice production rate in Mukomuko Regency is quite large with an average cultivated area

of 0.86 Ha. The average production per planting season is 5424.81 Kg/MT for paddy and rice is 3417.63 Kg/MT. This shows that Mukomuko Regency can maximize agricultural land, especially rice, although Mukomuko Regency itself is known as one of the palm-oil producing areas in Bengkulu Province. This is what makes rice production in the Regency abundant and can meet the food needs of the Regency without having to import from outside the Regency.

The results of the research in Mukomuko Regency are shown in Table 5. The percentage of allocations that are quite large is for household consumption which is equal to 3.13%. This is because even though the number of family members in Mukomuko Regency is classified as moderate, namely 3 people, but the absorption of calories for household carbohydrate needs are still quite high at 104.1 kg/cap/year (Food Security Agency, 2018). The amount of consumption used by farmers depends on the number of family members or not. Because the more family members, the more rice will be consumed and vice versa.

The amount of production allocated by farmers to seeds in Mukomuko Regency is 0.20%. Farmers in the study area use seeds originating from previous harvests. If the seeds purchased by farmers are allocated directly from their production, then the percentage of seeds allocated by farmers for seedlings is greater. The number of seeds used by farmers is following their habits from year to year.

In Mukomuko District, farmers when harvesting use tools to harvest and to facilitate the harvesting process. In Table 5, it can be seen that the amount of production allocated to harvest equipment wages is 11.06%. Based on information obtained from farmers and based on data from the Mukomuko District Agricultural Department, the amount of milled rice grain yield was 63%. The harvest tool used by farmers when they harvest. Usually, the costs incurred for harvesting equipment are using a 10: 1 system where 1 sack is equal to 70 kg. This means that when farmers harvest up to 10 sacks of paddy, they oblige to share 1 sack of paddy for the harvest equipment rents.

In Mukomuko Regency, some farmers sell their products in the form of rice and some in the form of dry grain/dry unhulled paddy. Based on Table 5, the total allocation of rice production in Mukomuko Regency used for the average milled wage is 0.67%. The rice yields of farmers are not directly ground after harvest but must be dried first. The mill will reduce the weight of the final mill by around 63%. Usually, each RMU (Rice Milling Unit) offers facilities for consumers in the form of providing warehouses and drying places for free.

In this study, there is an average land area for rice farmers who rent is 0.86 Ha. Usually, for payment of land rent for rice farmers, a profit-sharing system applies between owners and cultivators. In Table 5, the allocation of rice production to rent land in Mukomuko Regency is 0.27%. The system applied is 3: 1 which means that each farmer harvests the farmer is obliged to issue 1 sack each to get 3 sacks, equivalent to 70 kg of rice. A large amount of production allocated for leasing land in Mukomuko Regency will reduce the amount of rice that farmers can market.

Bengkulu Province especially Mukomuko Regency is dominantly Muslim. In Islamic teachings, there are rules for issuing zakat from agricultural products provided that the agricultural produce is broken up to the threshold of the Nisab. The results of the study indicate that there is an allocation in zakat payments from total production at an average of 1.23% per year. Zakat is paid at different times of harvest or in other words they only give a small amount to those who are less fortunate and do not issue zakat as determined.

The marketable surplus is the quantity or amount of rice production that can be marketed by farmers. Table 5 informs that the average total rice production in Mukomuko Regency is 5282.60 Kg/Ha or 4525.97 Kg/MT while the average total rice production is 3328.04 Kg/Ha or 2851.36 Kg/MT. The marketable surplus in Mukomuko Regency has a percentage of 83.43%. Not all rice yields can be sold directly to the market, first allocated to various needs such as household consumption needs, the need to use seeds in the next planting season, for harvest costs or wages, payment of land rent. The size of the marketable surplus is not only influenced by the area of land, the type of commodity or the location of the research but from a large number of production products allocated for household needs. In other words, the more products that farmers allocate to household needs, the smaller the amount of surplus marketable that farmers get.

Factors Affecting Marketed Supply of Rice Farmers

Marketed supply is the quantity or amount of a product that is marketed by farmers after harvest. Marketed supply for the average rice production in Mukomuko Regency, which is 2838 Kg / Ha rice or 85.27%. The amount of marketed supply is sometimes not the same as the amount of marketable surplus. The reason is that some of their products are used as stocks which will be used for urgent needs. This can be seen in Table 6 below:

Table 6. Comparison of Total Marketable Surplus with Marketed Supply Rice in Mukomuko District.

No.	Description	Amount (Kg/season)	Average (Kg/season)	Average (Kg/Ha)
1.	*Marketable Surplus* of Rice	370.677	2851	3328
2.	*Marketed Supply* of Rice	316.076	2431	2838
3.	Rice Of Stock (Kg)	54.601	420	490

Source: Primary Data processed, 2018.

Marketable surplus amount in the research location is equal to 370,677 Kg / MT with an average per planting season which is 2851 Kg and the average per hectare is 3328 Kg. As for the amount of rice that is ready for a sale (marketed supply), which is 316,076 Kg / MT, with an average per planting season of 2431 Kg and Per Hectare which is 2838 Kg. While rice stocks stored in farm households are

54,601 Kg / MT with an overall average of 420 Kg / MT and 490 per hectare. This shows that farmers in Mukomuko District still reserve their crops for the benefit of the next planting season. The stock of rice is usually used when there is an urgent need for money to be sold. Below is the estimation of multiple linear regression models using 2018 data in Mukomuko District.

Table 7. Estimation results of the models that influence marketed supply in Mukomuko District.

No	Independent variable	Coefficient	SE	$t_{statistic}$
1	Price of Rice (X1)	-0,4891	0,1110	-4,4058**
2	Receiving Non-Rice Farming (X2)	0,00290	0,0037	0,7786
3	Production of Rice (X3)	0,8324	0,0188	44,289**
4	Status of UT Acceptance of rice (D1)	-158,965	98,5197	-1,6135
	Constants	4101,13	1059,85	
	R^2	0,9528		
	$F_{-statistic}$	630,545		

*Note: *, **, and *** are significant at 90%, 95% and 99% level respectively*

The estimation results above, R^2 or the coefficient of determination is 0.95. This percentage shows that the effect of the variable price of rice, non-rice farming acceptance, cropping index, and acceptance status is 95%. While the remaining 5% is influenced by other factors which are not included in this estimate, such as variable land area, price of other goods. The effect of independent variables together on the dependent variable is tested using F-test. From Table 7, the magnitude of the count (630,545) is greater than F_{-table} (1,343) at α = 0.05. This means that the independent variables together have a significant effect on the dependent variable at the confidence level of 95%.

Partially the influence of each non-independent variables used the t-test at a confidence level of 95%. From the results of the t-test, it is known that the rice production variable which influences the marketed supply variable. This can be seen from the t-statistics > t_{-table} at the confidence level of 95%. Rice farmers in Mukomuko District tend to choose when the product produced is small, but the production costs are high so they decide to sell all of their crops to cover the high production costs. But before selling all of the production, the farmers issue important priorities first and those advantages will be sold in the market. That is, the more the amount of production that farmers receive when the harvest season, the more the amount of marketed supply that can be marketed by farmers after being reduced for various purposes. This is what causes the production variable in Mukomuko Regency to have a significant effect and is positively related to marketed supply. The same results were also seen in previous studies, namely Chaucan and Chabra (2005) and Nusril,

Hadi and Sukiyono (2007). The study said that the higher the level of production, the number of marketed supply or sales will increase as well.

Availability of Rice in Mukomuko District

The availability of rice in Mukomuko Regency can be seen from the rice produced by farmers, as listed in Table 8 below

Table 8. Availability of Rice in Mukomuko District

No.	Year	harvest of area (Ha)	Productivity (Ton/Ha)	Production of Rice (Ton)	Import (Ton)	Availability (Ton)	
						Paddy	Rice
1	2012	16.492	3,27	53.851	-	53.851	33.926
2	2013	15.890	4,79	76.185	-	76.185	47.997
3	2014	13.257	4,28	56.720	-	56.720	35.734
4	2015	14.688	4,86	71.339	-	71.339	44.944
5	2016	14.930	5,48	81.869	-	81.869	51.577
6	2017	16.354	5,54	90.600	-	90.600	57.078
7	**2018**	**17.944**	**6,10**	**101.963**	**-**	**101.963**	**64.237**
8	**2019**	**17.944**	**6,51**	**115.541**	**-**	**115.541**	**72.791**
9	**2020**	**17.944**	**6,91**	**130.976**	**-**	**130.976**	**82.515**
10	**2021**	**17.944**	**7,31**	**148.266**	**-**	**148.266**	**93.407**
11	**2022**	**17.944**	**7,71**	**167.412**	**-**	**167.412**	**105.469**

Source: Food Security Agency, 2012-2017

In Table 8, the availability of rice can be obtained from the sum of the amount of production coupled with the amount of imports fewer exports and added with rice stocks. This is in line with rice productivity in Mukomuko Regency, where from 2012 to 2017 it always increases and is projected to continue to increase every year until 2022. This land area and productivity also affect rice production itself, wherein the project of rice production in Mukomuko Regency will increase. The percentage increase from 2017 to 2020 alone has reached 44.56%. This figure is considered very reasonable because Mukomuko Regency itself is in the process of re-printing rice fields from the previous oil palm plantations.

Table 9. Projection of Rice Needs in Mukomuko District

No.	Tahun	Consumption (kg/cap/year)	Population (Person)	Consumption (Ton)	Eksport (Ton)	The demand for Rice (Ton)
1	2017	104.1	185,499	19,310	-	19,310
2	2018	104.1	187,354	19,504	-	19,504
3	2019	104.1	191,644	19,950	-	19,950

4	2020	104.1	196,033	20,407	-	20,407
5	2021	104.1	200,522	20,874	-	20,874
6	2022	104.1	205,114	21,352	-	21,352

Sources: Secondary forecast data (Food Security Agency, 2012-2017) and BPS (2018).
Note: Population growth rate: 2.29%.

Based on the data in Table 7 and 8, the availability of rice in Mukomuko Regency has greatly exceeded the rice demand for the Mukomuko Regency community. This can be seen more clearly from Table 9 below.

Table 9. Recapitulation of production forecasting and rice needs in Mukomuko District

No.	Years	Production (Ton)	*Marketable Surplus* (83.43%)	Consumption (Ton)	Surplus/Deficit (Ton)
1	2017	57.078	47.620	19.310	28.310
2	2018	64.237	53.593	19.504	34.089
3	2019	72.791	60.730	19.950	40.779
4	2020	82.515	68.842	20.407	48.435
5	2021	93.407	77.930	20.874	57.055
6	2022	105.469	87.993	21.352	66.641

Source: Secondary forecast data (Food Security Agency, 2012-2017).

Based on Table 9, it can be seen that for Mukomuko District in 2017 with a percentage of the marketable surplus of 83.43%, it was concluded that in that year there was a rice surplus of ± 28 thousand tons. This figure shows that Mukomuko Regency can already be said to be self-sufficient and even surplus in rice commodities. Mukomuko Regency in the following years, namely in 2018-2022, the rice adequacy is projected to increase as shown in Table 9. In 2018 the surplus-value of rice was 34,089 tons, this increased in 2019 with an increase of 6,690 tons to 40,779 tons. The projection of surplus value also occurs in 2020 with the amount of 48,435 tons, up from the previous year of 0.84%. A similar thing also happened in 2021, where the surplus-value of rice was at the figure of 57,055 tons and in 2022 a surplus of 66,641 tons of rice. Based on the projected rice production, the government has a strategic role in the effort to create the Mukomuko Regency area as a rice industry in Bengkulu Province. The results of this projection can also be used as information material to create a policy on the creation of the rice industry.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Marketable surplus of rice in Mukomuko Regency is 83.43%. It equals to 370,677 Kg with an average of 2851 Kg per planting season and 3328 Kg per ha. The remaining, 16.57%, is used for consumption needs, seeds, zakat, land rent, harvested equipment rents, and milled wages.

Market supply of rice in Mukomuko Regency is 85.27% or 316,076 Kg / Mt, with an average per planting season of 2431 Kg and Per Hectare of 2838 Kg. The factors that influence the marketed supply of rice are Rice production itself.

Availability of rice in Mukomuko Regency with a percentage increase from 2017 to 2020 alone has reached 44.56% with a projected figure of 82,515 in 2020. For projected consumption for 2020, it is 20.407 Kg. Forecasting the next 5 years from 2018-2022 shows an increase in the availability of positive rice and surplus rice in Mukomuko Regency.

Recommendation

High marketable surplus, as well as marketed supply, imply that the rice availability in Mukomuko District is surplus. For that reason, the Government must enlarge its rice markets for price fluctuation forestalling. However, the effort to increase marketable surplus should also be prioritized by improving input used or intensification and protecting land conversion, especially paddy sawah.

It is recommended to increase the crop index from two hundred into three hundred. This can increase the amount of rice production for the farmers later. The government has a strategic role in the effort to create the Mukomuko Regency area as an industrial rice area in Bengkulu Province. The results of this projection can also be used as information material to create a policy on the creation of the rice industry.

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