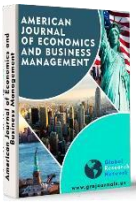

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Article

Characteristics, Quality And Production Process Of Sintanur Rice Varieties In Bondowoso District

Rini Purwatiningsih[1] , Andini Dya Prathita[2]

1,2 Institute for Research and Community Service, Bondowoso University
* Correspondence: rinipningsih@gmail.com

Abstract: Sintanur variety of rice is a type of rice variety that is classified as aromatic rice, where aromatic rice is rice that contains fragrant, fluffier and delicious aroma elements. Price comparisons between Sintanur rice varieties and other types of rice can be caused by several factors, for example quality, characteristics of the variety, and the taste of the rice produced. The aims of this research are (1) determine the characteristics of sintanur rice in Bondowoso Regency, (2) determine the quality of sintanur rice in Bondowoso Regency, and (3) determine the production process of sintanur rice in Bondowoso Regency. The research method is to use a purposive method. The locations of the Sintanur rice variety are located in five sub-districts in Bondowoso Regency, namely Tapen District, Pujer District, Tlogosari District, Tegalampel District, and Cermee District. Considering the research location, it is estimated that there are 10% of farmers who grow the Sintanur variety of rice in each sub-district. Sintanur rice variety is a type of rice that has geographical and climatic characteristics, production process characteristics, economic value characteristics and preference characteristics in Bondowowo Regency. The production process of the Sintanur rice variety in Bondowoso Regency includes land preparation and processing, seeding, fertilization, pest control, maintenance and harvest.

Keywords: Rice, Sintanur, Characteristics, Quality, Farming

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1. Introduction

Agriculture is an activity of utilizing biological resources carried out by humans with the aim of producing food, energy sources, industrial raw materials, and to manage the environment around their lives. Agriculture in a narrow sense can be said as a cultivation of plants into a land to meet human needs. Agriculture in a broad sense is defined as everything that includes agricultural activities, both food crops and horticulture, plantations, forestry, animal husbandry, and fisheries. One of the sub-sectors that is of major concern is the food crop sub-sector (Arifin, 2015). The food crop sub-sector is a sub-sector that covers all management activities on food crops, including prices, distribution, policies, production, productivity, and others. The types of crops included in the food crop sub-sector are rice, corn, soybeans, peanuts, green beans, cassava, and yam. The type of food crop that is widely consumed by the Indonesian people is rice [1].

According to [2] , rice is an important food crop in Indonesia. Rice plants are important because the staple food of the Indonesian people is rice which comes from rice, and of course rice is produced by rice plants. Rice is also a staple food in several countries, such as China, India, Thailand, Vietnam, and others. The rice plant is cultivated in all regions of Indonesia. The total production in Indonesia in 2022 is 55,670,209 tons and in

2021 the total production of rice plants in Indonesia is 54,415,294 tons. Rice production over the last two years is known to have increased[3]–[5]. The total productivity of rice in Indonesia in 2022 is 52.49 ku/ha and in 2021 is 52.26 ku/ha. The land area planted with rice in Indonesia in 2022 was 10,606,513 hectares, while in 2021 it was 10,441,801 hectares. The land area of rice plants in Indonesia is known to have increased which is also accompanied by an increase in the total productivity of rice plants cultivated in Indonesia.

Table 1. Land Area, Productivity, and Rice Production in Indonesia in 2021-2022

Province	Land Area (ha)		Productivity (ku/ha)		Production (ton)	
	2021	2022	2021	2022	2021	2022
Aceh	297 058	276 622	55,03	55,42	1 634 640	1 533 138
North Sumatera	385 405	423 522	52,00	50,33	2 004 143	2 131 672
West Sumatera	272 392	288 511	48,36	49,32	1 317 209	1 422 874
Riau	53 062	54 317	40,98	41 86	217 459	227 346
Jambi	64 412	63 761	46,29	45 37	298 149	289 277
Souh Sumatera	496 242	516 260	51,44	53 45	2 552 443	2 759 343
Bengkulu	55 705	58 664	48,67	49 46	271 117	290 156
Lampung	489 573	516 910	50,77	51,49	2 485 453	2 661 363
Ba-Bel Islands	18 278	15 909	38,57	39,38	70 496	62 641
Riau Islands	270	197	31,65	30,00	855	590
DKI Jakarta	560	536	58,03	51,18	3 249	2 741
West Java	1 604 109	1 685 295	56,81	57,09	9 113 573	9 620 534
Central Hava	1 696 712	1 699 436	56,69	56,37	9 618 657	9 579 069
DI Yogyakarta	107 506	112 148	51,77	51,78	556 531	580 686
East Java	**1 747 481**	**1 704 759**	**56,02**	**56,82**	**9 789 588**	**9 686 760**
Banten	318 248	338 454	50,38	52,50	1 603 247	1 776 812
Bali	105 201	114 791	58,83	60,27	618 911	691 819
West Nusa Tenggara	276 212	269 827	51,39	53,99	1 419 560	1 456 923
East Nusa Tenggara	174 900	185 738	41,85	41,83	731 878	776 867
West Kalimantan	223 166	272 116	31,90	29,94	711 898	814 743
Central Kalimantan	125 870	109 756	30,28	32,24	381 190	353 865
South Kalimantan	254 264	225 483	39,97	38,72	1 016 314	873 130
East Kalimantan	66 269	64 031	36,92	36,25	244 678	232 143
North Kalimantan	8 881	10 550	33,74	35,99	29 967	37 966
Sulawesi North	59 183	59 082	39,35	42,90	232 885	253 479
Central Sulawesi	182 187	173 239	47,59	44,54	867 013	771 525
South Sulawesi	985 158	1 042 107	51,67	51,25	5 090 637	5 341 021
Southeast Sulawesi	127 517	119 663	41,57	41,35	530 029	494 856
Gorontalo	48 714	48 498	48,12	51,49	234 393	249 709
West Sulawesi	59 763	71 470	52,05	51,03	311 072	364 683
Maluku	28 320	23 991	41,24	38,61	116 804	92 640
North Maluku	7 782	6 408	36,05	38,55	28 051	24 705
West Papua	6 415	5 476	41,98	43,89	26 927	24 032
Papua	64 985	48 988	44,05	39,01	286 280	191 109
Indonesia	**10 441 801**	**10 606 513**	**52,26**	**52,49**	**54 415 294**	**55 670 209**

Source: Statistics Indonesia, 2023

Based on Table 1, the region in Indonesia that has the largest rice production is East Java Province. In 2022, rice production in East Java Province is 9,686,760 tons, with a land area of 1,704,759 hectares and rice productivity of 56.82 ku/ha. In 2021, rice production is known to be 9,789,588 tons and the production is higher when compared to 2022. The land area of rice in East Java in 2021 is 1,747,481 hectares, so the total productivity of rice in 2021

is 56.02 ku/ha. Various regions in East Java cultivate rice as their staple food, either for their own consumption or to be marketed to other consumers. One of the areas in East Java that cultivates rice is Bondowoso District. Bondowoso District is one of the districts whose economic growth is supported by the agricultural sector. The agricultural sub-sector that supports the consumption and daily needs of the community is the food sub-sector, especially rice plants in fulfilling daily life[6]–[9].

Table 2. Land Area, Production, and Productivity of Rice in Bondowoso District in 2022

District	Harvested Area (ha)	Production (ton)	Productivity (ton/ha)
Maesan	3717	22890	6,158
Grujugan	3016	18894	6,264
Tamanan	3489	21886	6,273
Jambesari DarusSholah	3282	20149	6,139
Pujer	**6104**	**39473**	**6,466**
Tlogosari	**5697**	**36714**	**6,445**
Sukosari	3000	18411	6,137
Sumber Wringin	3611	22079	6,114
Tapen	**6878**	**44454**	**6,463**
Wonosari	5172	33507	6,478
Tenggarang	3989	25867	6,485
Bondowoso	2291	14373	6,273
Curahdami	2605	14153	5,432
Binakal	2140	11571	5,407
Pakem	2971	15472	5,208
Wringin	2064	10703	5,185
Tegalampel	**1545**	**9416**	**6,094**
Taman Krocok	663	3928	5,926
Klabang	3262	20029	6,140
Ijen	-	-	-
Botolinggo	2057	12593	6,121
Prajekan	2616	16098	6,153
Cermee	**4423**	**27765**	**6,278**
Bondowoso	**74594**	**460425**	**6,172**

Source: Bondowoso in Figures, 2023

Based on table 2, the sub-districts that have the highest land area include Tapen sub-district with a land area of 6,878 hectares, Pujer sub-district 6,104 hectares, Tlogosari sub-district 5,697 hectares, Wonosari sub-district 5,172 hectares, and Cermee sub-district 4,423 hectares. The five sub-districts cultivate rice plants with various types of varieties, one of which is the sintanur rice variety. Sintanur rice is a type of rice variety that is classified as aromatic rice or rice, where aromatic rice or rice is rice or rice that contains elements of fragrant, fluffy and delicious aroma. Planting aromatic rice can provide added value for farmers, this is because the price is relatively more expensive when compared to other types of rice varieties[10]–[12].

The price comparison between sintanur rice varieties and other types of rice can be caused by several factors, such as the quality of sintanur rice varieties that are better when compared to other varieties[13]–[15]. The characteristics of the type of variety also affect the quality to the taste of each rice produced. This can later affect the selection of rice that will be consumed by consumers, the better the quality of rice produced, the greater the need for people to meet the needs of healthy and safe food, so the objectives in this study are (1) to determine the characteristics of sintanur rice in Bondowoso Regency, (2) to

determine the quality of sintanur rice in Bondowoso Regency, and (3) to determine the production process of sintanur rice in Bondowoso Regency[16], [17].

2. Materials and Methods

The method of determining the research area is to use the purposive method. According to [18] purposive method is a research area that is selected based on certain considerations and objectives and is considered in accordance with the research objectives. The location of sintanur rice varieties is located in five sub-districts in Bondowoso Regency with the largest land area, namely Tapen Sub-district, Pujer Sub-district, Tlogosari Sub-district, Tegalampel Sub-district, and Cermee Sub-district. The location of the research related to the sintanur rice variety in the five subdistricts in Bondowoso district was chosen with the consideration that there were estimated to be 10% of farmers who planted sintanur rice varieties in each subdistrict. This research was conducted from January to March 2024.

The sampling method used in this study was purposive sampling. According to [18], the purposive sampling method is a method used for sampling in accordance with certain criteria set by the researcher. The population of this study is five sub-districts in Bondowoso Regency that have the highest land area for the rice commodity. In each sub-district, a sample of one village that has the highest land area in each sub-district will be taken, and then ten farmers will be selected with the criteria of farmers who plant or cultivate sintanur rice varieties.

The data collection method used in this research is using primary data. According to [19], primary data is data obtained from field surveys using natural data collection methods or directly to the informants concerned. The primary data collection method is a method of collecting data obtained directly in the field through a communication relationship between the researcher and the subject to be studied. Primary data obtained in the field is generally data obtained directly from the answers of sources or informants. Primary data collection in this study uses interviews, observation, and document use methods.

3. Results and Discussion

Identity of Respondents of Sintanur Rice Variety Farmers in Bondowoso District

Table 3. Identity of Respondents of Sintanur Rice Variety Farmers in Bondowoso District

No.	District	Number of Respondents	Age Average	Education	Farmer Group	Gapoktan
1.	Pujer	8	48	SD : 6 SMP : 1 SMA : 1	Sumber Hidup 1	Sumber hidup
2.	Tlogosari	12	46	SD : 5 SMP : 5 SMA : 2	Sumer Rejeki 9 Sumber rejeki 10	Permata
3.	Tapen	11	50	SD : 1 SMP : 2 SMA : 5 S1 : 3		Mandiri
4.	Cerme	11	51	SD : 1 SMP : 2 SMA : 7 S1 : 1		Sultan Jaya Dewi Sri
5.	Tegalampel	8	46	SD : 1 SMP : 2 SMA : 3 S1 : 2		Sekar Jaya

Jumlah	50	48	SD : 14 SMP : 12 SMA : 18 S1 : 6	-	-

Source: Primary data processed, 2024

Based on table 1 above, it is known that the number of respondents in this study amounted to 50 people spread across 5 sub-districts in Bondowoso District. Respondents came from several farmer groups. The average age of respondent farmers was 48 years. This shows that the average respondent farmer is a productive workforce. Farmer education consisted of: 28% had elementary school education, 24% had junior high school education, 36% percent had high school education and 12% had university education. This shows that the respondents are farmers who are educated and able to accept new innovations and adoption

Overview of Bondowoso District

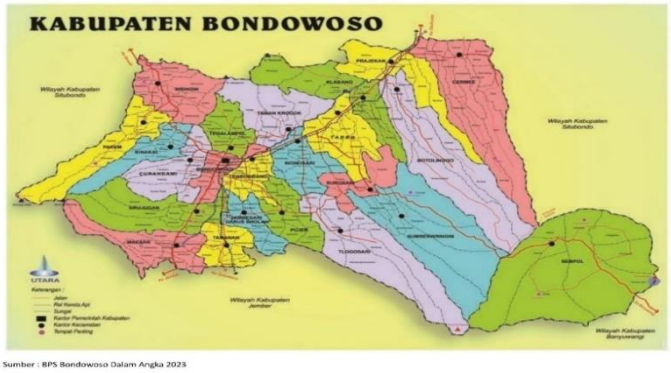

Figure 1. Map of Bondowoso District

Geographical Conditions

Bondowoso Regency is geographically located in the eastern part of East Java Province, approximately 200 km from the capital of East Java Province, Surabaya. Bondowoso Regency is located at 7"50'10" to 7"56'41" South latitude and 113"48'10" to 113"48'26" East longitude. Bondowoso Regency borders Situbondo Regency to the west and north, Banyuwangi Regency to the east, and Jember Regency to the south. It has an area of 1,518.774 km2 which is divided into 23 sub-districts, 209 villages and 10 urban villages.

The terrain in Bondowoso Regency consists of mountains and hills covering 44.4%, highlands 24.9% and lowlands 30.7% of the total area. Elevation from sea level averages ± 347 meters above sea level. The highest area is ± 1,130 meters and the lowest is ± 54 meters. [20]

Table 4. Area and Elevation of Subdistricts in the Research Area of Sintanur Rice Variety.

No.	District	Area (Km2)	Elevation (mdpl)
1.	Pujer	38.325	371
2.	Tlogosari	109.680	475
3.	Tapen	60.521	184
4.	Cerme	116.511	116
5.	Tegalampel	33.623	240

Source: Primary data processed, 2024

Based on the altitude data in Table 2 above, it is known that the cultivation of Sintanur rice in Bondowoso Regency can be done at an altitude of 116-475 masl. This is in

accordance with the recommendation of sintanur rice cultivation which is suitable for planting in the lowlands up to an altitude of 0-600 masl [21].

Climate Conditions

The climatic conditions of Bondowoso District in 2022 based on data from the Central Bureau of Statistics (BPS) in Bondowoso in Figures 2023 are presented in Table 3 below:

Table 5. Climate situation in 2022 Bondowoso District

Month	Average Climate State						
	Temperature (°C))	Humidity (%)	Wind speed (m/det)	Air pressure (mb)	Rain		
					Rainfall (mm)	Rainy day (hari)	Sunlight (%)
January	26,8	80,9	2,7	1003,1	335,2	21	4,1
February	27,5	79,4	3,4	1002,5	82,3	16	5,3
March	27,4	81,7	3,3	1002,4	279,6	16	5,7
April	27.9	76,9	3,6	1003,3	72,9	14	7,0
May	**28.1**	79,1	3,9	1003,7	40,8	10	7,3
June	27,2	79,5	3,5	1004,5	148,8	12	7,2
July	**26,2**	79,8	3,8	1005,0	15,7	7	6,4
August	26,4	77,8	3,9	1005,4	40,9	9	7,2
September	26,7	79,3	4,2	1005,8	63,0	9	7,5
October	26,4	84,1	3,5	1004,3	293,3	20	4,7
November	26,9	83,2	2,9	1003,5	324,9	16	4,8
December	27,4	78,5	3,6	1002,1	244,2	16	6,6
Average	27.08	73.3	3.3	1003.8	161.8	14	6.15

Source: Banyuwangi Meteorological Station in Bondowoso in Figures 2023

Climate suitability of Bondowoso Regency in the Sintanur Rice Observation Area

Bondowoso Regency has an average air temperature of 20.27 °C (degrees Celsius) with the lowest temperature occurring in July at 26.2 °C and the highest temperature at 28.1 °C. Weather fluctuations throughout 2022 reached 1.9 °C.2

According to (10), based on data from 116 BMKG observation stations, the average air temperature for the 1991-2020 period in Indonesia was 26.7 °C. The average air temperature in Bondowoso Regency is an average air temperature that is quite good for the cultivation of sintanur rice varieties.

Land Area, Irrigation System and Planting Season

Land Area

Respondent farmers were categorized into 4 groups based on the area of rice fields planted with sintanur rice varieties. Based on the results of the study it is known that 46% of respondents have a land area below 2500 m^2, 36% have a land area of 2501-5000 m^2, 8% have a land area of 5001-10000 m^2, and the remaining 10% have a land area above one hectare. This shows that sintanur rice cultivators are small farmers who have less than 5000 m^2 of land. The complete land area of respondent farmers is presented in Table 4 below.

Table 6. Respondents' Land Area for Cultivation of Sintanur Rice Variety

District	Land Area (M2)				Total
	0-2500	2501-5000	5001-10000	>10000	
Pujer	5	3	-	-	8
Tlogosari	11	1	-	-	12
Tapen	-	5	2	4	11
Cerme	5	4	1	1	11

Tegalampel	2	5	1	-	8
Total	23	18	4	5	50

Source: Primary data processed, 2024

Irrigation System

There are three types of water flow or irrigation points, namely technical irrigation, semi-technical irrigation and non-technical irrigation. Technical irrigation is an irrigation system where water flow can be regulated and or measured, semi-technical irrigation is an irrigation system with water that can be regulated but cannot be measured. While non-technical irrigation is an irrigation network where we cannot regulate the water and its size, such as rivers with swift currents [22].

Based on the results of research on respondents of sintanur variets rice farmers, most respondents use semi-technical irrigation, where irrigation management is regulated by an ulu-ulu banyu, who regulates the distribution of water flow for rice fields that become his working area. Ulu-ulu Banyu does not measure metrically how much water each rice field needs, but only based on the adequacy of the needs.

Table 7. Respondents' irrigation type for cultivating Sintanur rice variety

District	Irrigation System			Total
	Non-Technical	Semi-Technical	Technical	
Pujer	-	8	-	8
Tlogosari	-	12	-	12
Tapen	-	11	-	11
Cerme	-	6	5	11
Tegalampel	-	8	-	8
Total	0	45	5	50

Source: Primary data processed, 2024

Planting Season

The growing season is a specific time that is used as the starting stage for planting cultivated plants. In Indonesia, there are three growing seasons in one year [23]. The planting season for sintanur rice in the study area is categorized as follows:

Table 8. Sintanur Rice Planting Season Data

District	MT 1	MT 2	MT 3	Total
Pujer	-	6	2	8
Tlogosari	11	-	1	12
Tapen	-	6	5	11
Cerme	1	4	6	11
Tegalampel	7	-	1	8
Total	19	16	15	50

Source: Primary data processed, 2024

1. First planting season (MT-1) of Sintanur rice variety

Based on the results of the study, the number of respondents who cultivated Sintanur rice varieties in the first planting season MT-1) between November and March was 19 out of 50 respondents or 38%. The time span is the rainy season where the availability of water for abundant irrigation is farmers whose rice fields only have sufficient water during the rainy season, while the second and third growing seasons farmers do not cultivate rice. The only opportunity to cultivate sintanur rice is in the rainy season. With only one opportunity

during the year, cultivating the sintanur variety was the only opportunity to earn income. The regions with the highest number of farmers cultivating sintanur rice in MT 1 are Tlogosari, Tegalampel and Cermee.

2. Second planting season (MT 2) of Sintanur rice variety

Based on the results of the study, the number of respondents who cultivated Sintanur rice varieties in the second planting season (MT-2) between April and July was 16 out of 50 respondents or 32%. Farmers do not plant sintanur rice varieties in the first planting season due to the main characteristics of this variety which has several weaknesses if cultivated in the rainy season. Farmers prefer to cultivate sintanur rice varieties in the second planting season because plant growth is more optimal and can avoid some weather conditions that are bad for growth, such as rainfall and wind. The regions with the highest number of farmers cultivating sintanur rice varieties in MT-2 are Pujer, Tapen and Cermee.

3. Third planting season (MT 3)

Based on the results of the study, the number of respondents who cultivate sintanur rice varieties in the second planting season (MT-3) between August and October is 15 out of 50 respondents or 30%. Farmers choose to cultivate sintanur rice varieties in MT-3 because plant growth is more optimal with a limited amount of irrigation water and can avoid some bad weather conditions for growth, such as rainfall and wind. The regions with the highest number of farmers cultivating sintanur rice varieties in MT-3 are Tapen, Cermee, Pujer, Tlogosari and Tegalampel.

Production Process of Sintanur Rice Variety in Bondowoso District

1. Land Preparation and Processing

At this stage, all 50 respondent farmers or 100% use hand tractors in the land processing process. The hand tractor is not owned by the farmer, but the farmer uses it on a rental basis per hectare including the cost of labor to operate it. Tillage time depends on the size of the land. In general, costs vary depending on the region. Costs range from IDR 1,100,000 to IDR 1,400,000 per hectare.

A small number of farmers use several treatments before or after processing their paddy fields, namely:

a. Liquid organic fertilizer to improve soil structure
b. Application of solid organic fertilizer, if the land is cultivated during the dry season
c. Pest control, among others: snails using pesticides, if the land is cultivated during the rainy season
d. Weed control using herbicides

2. Seeds, Seedlings and nurseries

There are several ways in which farmers obtain seeds of the sintanur rice variety

a. Sintanur variety rice seeds used by farmers come from certified seeds obtained from agricultural kiosks or nearby agricultural stores.
b. Seedlings of the Sintanur variety used by farmers come from the first generation of certified seeds. Farmers conduct their own seeding to be used as seedlings in the next planting season. Farmers aim to save on the purchase of Sintanur variety rice seeds because the price of grain is more expensive than the price of rice grain in general.
c. Buying seeds from farmers who sell seeds. Based on the results of the research, there is one farmer who buys seeds. This is due to the shortage of seeds caused by crop losses due to pest and disease attacks.

The number of seeds used for seedlings varies depending on the number of seedlings planted in the planting hole and the spacing arrangement. The greater the number of seedlings planted in each planting hole, the greater the seed requirement for seedlings. Based on the research results, the number of seedlings required for each planting hole is 3-6 seedlings.

Plant spacing is done in several ways (a) Random planting system, (b) Row planting system. Only a small proportion of farmers use the random planting system, most have used the row planting system with the consequence of increasing planting costs. Farm laborers set a higher price if the landowner wants planting using the row planting system.

3. Fertilization

All respondents used two fertilizers during the cultivation process of Sintanur rice variety.

a. The first fertilization was done at 15-20 days after planting using a combination of 2 types of fertilizers, namely urea fertilizer and ponska fertilizer. The urea and ponska fertilizers used are subsidized fertilizers. Only a small proportion of farmers with a land area of more than 5000m2 use non-subsidized fertilizers when subsidized fertilizers are not available in the area.
b. The second fertilization is done at 35-45 days after planting using: (1) urea fertilizer, or (2) a combination of 2 types of fertilizer, namely urea fertilizer and urea and ponska fertilizer.

4. Pest and Disease Control

In 2022 in the respondent's area, it was found that 96% (48 respondents) did not have pest and disease attacks. Pesticide application is done only as a preventive measure against pest and disease attacks. A total of 2% of respondents (1 person) experienced crop failure due to brown planthopper attacks. It is known that the respondent's area, namely the Cindogo Village area, Tapen Subdistrict, is one of the endemic areas for the brown planthopper, which is the main pest of the sintanur rice variety. The remaining 2% (1 person) experienced crop failure for reasons unknown to the respondent.

Weed control is carried out by most respondents at 15-20 days after planting using herbicides. The use of herbicides is done to save the cost of plant maintenance, namely cleaning weeds in between plants (In madura language disebur arao).

5. Maintenance

Treatment of sintanur rice varieties aims to clean weeds between rice plants. Based on the results of the study, respondents conducted treatment 1-2 times in one growing season. This is influenced by the number of weeds in the field. The use of herbicides reduces the amount of weed-clearing labor, thus helping farmers save on maintenance costs.

6. Harvest and Production

Harvesting is done in 2 ways:

a. Slash system

Farmers sell the production of sintanur rice grain varieties to middlemen or collectors or rice milling factories. In this system, farmers do not know the amount of production they produce. The income received by farmers is net income after deducting harvesting costs and transportation costs. The disadvantage of this system is that farmers do not know the exact quantity of grain products they produce, while the advantage is that farmers will save more time and energy for harvesting.

b. Self-harvesting system

Farmers harvest, transport and sell their products directly to collectors or local rice mills. The advantages of this system are (1) farmers can know the quantity of grain production, (2) farmers know the price of grain directly, while the disadvantages of this system are that it requires costs and labor to harvest themselves. Harvesting costs include: (1) harvesting costs in the field with the calculation of costs per quintal. Based on the results of the study, the cost of harvesting to produce one quintal of dry paddy grain ranges from Rp.58,000,- to Rp. 70,000,-, (2) the cost of harvester consumption, (3) the cost of transporting grain to the collector's warehouse or rice milling factory. The amount of transportation

costs is calculated based on the rental price of the transport vehicle and the distance between the harvest location and the collector's warehouse or rice milling factory.

Characteristics of Sintanur Rice Variety

1. Farmers' Reasons for Cultivating Sintanur Rice Variety

There are several reasons why farmers in Bondowoso district plant Sintanur rice varieties. Based on the results of the research, in addition to the reason for higher prices, some farmers are reluctant to consume sintanur rice varieties because: (1) it has a less favorable pandan aroma, (2) it is referred to as one-day rice, meaning that the rice cooked today must be consumed in one day, (3) the rice it produces tends to be watery after a while in the rice cooker (magic com) even though it is not stale, (4) the texture of the rice is puny and not stiff, which tends to be less favored by respondents.

Although it is not a daily consumption rice, based on the research results, the reasons why respondents cultivate sintanur rice varieties in Bondowoso district are:

a. The price of dry paddy grain is higher than that of other rice varieties
b. Does not require excessive irrigation
c. Higher production yield compared to other rice varieties
d. Has a long stalk and more grains on each stalk
e. Resistant to pests and diseases
f. Easy maintenance

According to respondent farmers, there are some disadvantages to cultivating sintanur rice varieties:

a. Not resistant to over-watering
b. Easily collapsed
c. Not resistant to brown planthopper

2. Characteristics of Sintanur Rice Variety in Bondowoso District

Characteristics of Sintanur Rice Variety in Bondowoso District		
1. Characteristics based on geography and climate		
Height of place	:	116-475 meters above sea level
Rainfall	:	15,7-335.2 mm
Irrigation system	:	Semi-technical - technical
Temperature	:	26,2-28.1 ^{o}C
Wind speed	:	2.7-3,9 m/det
Planting season	:	MT-1, MT-2 and MT-3
2. Characteristics based on production process		
Seeds	:	Using certified seeds
Water Requirements	:	Does not require excessive watering
Resilience	:	Not resistenat to brown planthopper and golden snail
	:	Easy to collapse
Perawatan	:	Does not require special care
3. Characteristics based on economic value		
Price	:	Higher than other rice varieties
Production results	:	Higher than other rice varieties
4. Characteristics based on consumer preferences		
Aroma	:	Fragrant
Mentions	:	Rice for a day
Nature	:	Pulen
	:	Easy Watering Inside the Rice Cooker Machine

4. Conclusion

Sintanur rice variety is one of the rice types that has geographical and climatic characteristics, production process characteristics, economic value characteristics and preference characteristics in Bondowowo District. The production process of sintanur rice varieties in Bondowoso Regency includes land preparation and processing, seeding, fertilization, pest and disease control, maintenance and harvesting.

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