ISSN : 1412-8837
e-ISSN : 2579-9959
JURNAL AGRISEP
Kajian Masalah Sosial Ekonomi Pertanian dan Agribisnis

DOI: 10.31186/jagrisep.21.2.409-424

STUDY OF INCOME AND THE CHARACTERISTICS OF CERTIFIED SEEDS BREEDING BUSINESS AND *SUSTAINABILITY* EFFORTS IN BENGKULU TENGAH DISTRICT

Kajian Pendapatan dan Karakteristrik Usaha Penangkaran Benih Padi Bersertifikat di Kabupaten Bengkulu Tengah dan Upaya Keberlanjutannya

Anton Feriady[1)]; Maheran Mulyadi[2)]; Elni Mutmainnah[3)]
[1),2),3)]Department of Agribusiness, Faculty of Agriculture and Animal Husbandry, University of Muhammadiyah Bengkulu, Bengkulu, Indonesia
Email: antonferiady@umb.ac.id

ABSTRACT

This study aims to examine the income and characteristics of certified rice seed breeding businesses in Central Bengkulu Regency which has a recommendation as a certified rice seed breeder from the BPSB (Seed Monitoring and Certification Center) Office of Horticulture and Plantation Food Crops Bengkulu Province.The data analysis method used in this research is using a mix method, namely the combination of quantitative and qualitative which is carried out simultaneously.The results showed that the breeding business of certified rice seeds in Bengkulu Tengah Regency was profitable, amounting to Rp. 23,719,248/planting season and based on the study of its characteristics it was necessary to improve and evaluate the role of the Seed, Plant Supervisor as a supervisor to the mentoring role seeing farmers who cultivate certified seeds in Central Bengkulu Regency has the characteristics of being male, with the highest average age being above 63 years, with an average land tenure of 0.5 to 1 hectare with the status of own land and having a number of dependents. mostly between 3 to 4 people. It is recommended to strengthen the capacity of captive farmers who do not continue through a selection process based on: age, gender, education, number of dependents, and land area owned. as well as improving the skills and knowledge of breeder farmers regarding certified rice seeds and their business prospects.

Keyword: breeders, certified seeds, characteristics, income

ABSTRAK

Penelitian ini bertujuan untuk mengkaji pendapatan dan karakteristik usaha penangkaran benih padi bersertifikat di Kabupaten Bengkulu Tengah yang memiliki rekomendasi sebagai penangkar benih padi bersertifikat dari BPSB (Balai Pengawasan dan Sertifikasi Benih) Dinas Tanaman Pangan Hortikultura dan Perkebunan Provinsi Bengkulu. Metode analisa data yang digunakan dalam penelitian ini adalah menggunakan jenis mix metode, yaitu penggabungan kuantitatif dan kualitatif yang dilakukan secara bersamaan. Hasil penelitian, menunjukkan usaha penangkaran benih padi bersertifikat di Kabupaten Bengkulu Tengah menguntungkan, sebesar Rp.23.719.248/musim tanam dan berdasarkan kajian karakteristiknya perlu di tingkatkan dan dievaluasi peran Pengawas Benih,Tanaman sebagai pengawasan ke peran pendampingan melihat petani yang mengusahakan benih bersertifikat di Kabupaten Bengkulu Tengah memiliki karakteristik berjenis, kelamin laki-laki dengan, rata-rata umur terbanyak di .atas 63 tahun, dengan, rata-rata penguasaan lahan yang dimiliki 0,5 sampai dengan 1 hektar dengan status lahan milik sendiri serta memiliki jumlah tanggungan keluarga terbanyak antara 3 sampai dengan 4 orang.Disarankan perlu penguatan kapasitas petani penangkar yang tidak berlanjut melalui proses seleksi berdasarkan : umur, jenis kelamin, pendidikan, jumlah tanggungan keluarga, dan luas lahan yang di miliki. serta peningkatan ketrampilan dan wawasan petani penangkar tentang benih padi bersertifikat dan prospek usahanya.

Kata kunci: pendapatan, karakteristik, penangkar, benih bersertifikat

INTRODUCTION

Seed is one of the important production facilities to be considered in farming activities because good quality seeds will be able to support increased production and productivity (Tengah, Kota, & Dusun, 2019). The quality of a seed determines the production of rice produced, superior varieties play an important role in increasing the productivity of rice farming (Sayaka, 2015). In an effort to increase rice production, the government through the Ministry of Agriculture encourages farmers to use superior and quality seeds.

One of the important factors thataffect the increase in production rice is a superior seed and quality, because it can increase crop productivity paddy. The use of superior seeds can increase harvest frequency to three times a year. Thing this if accompanied by an increase harvested area will increase rice production in real terms (Raditya & Asriani, 2015)

Quality rice seeds provide benefits in the form of uniform plant growth, produce healthy seeds with normal roots, ripen and harvest simultaneously and are resistant to pests and diseases, as well as high productivity. This advantage can increase production which has an effect on increasing farmers' income (Kolo & Tefa, 2016). Quality seeds also make the biggest contribution to production compared to the application of other technologies. The use of superior rice

varieties with high yields, responsive to fertilization and tolerant of major pests and diseases has been shown to increase productivity, production efficiency, and food sufficiency (Syahri & Somantri, 2016). Quality seed is also an absolute requirement that needs to be met in the provision of agricultural production facilities. The use of certified seeds is a very decisive first step towards the next expected input in the production process. The current use of certified seeds for rice commodities is still low and has not been able to provide seeds according to the six criteria, namely right quality, right variety, right amount, right place, right time and right price (Laksmi et al., 2017).

Seed breeding effort is to obtain varieties in guaranteed quantity, quality, time, place and variety purity so that maximum crop management is required (Purwanta et al., 2019). Based on the initial survey, there are still few certified rice seed breeding in Bengkulu Tengah Regency. Seed breeding is carried out in groups by forming a breeder farmer group. There are four breeding farmer groups that exist and are actively breeding.

The lack of certified rice seed breeding farming in Central Bengkulu Regency compared to the existing paddy and non-rice field areas, and the location of Central Bengkulu Regency which is a cross-district/city area, close to source seeds, this is a potential to develop seed captive farming. certified rice with high production. The availability of rice seeds is the main goal of the government program in rice seeding based on the six principles, namely the right variety, the right quantity, the right quality, the right time, the right location and the right price (Purwanta et al., 2019), on the other hand the government continues to encourage business improvement seeds and encourage the use of certified rice seeds. This is a business opportunity for farmer groups, business entities, and certified rice seed captive farmers to develop more in Central Bengkulu Regency.

The area of agricultural land for rice production in Bengkulu Tengah Regency reaches 5,945 hectares consisting of 3,130 hectares of irrigated rice fields and 2,815 hectares of non-irrigated rice fields (BPS, 2021b). In 2019, the area of paddy harvested in Bengkulu Tengah Regency was 2,025.29 hectares, the total production of GKG (dry milled rice) produced was 7,524.72 tons with total rice production of 4,311.65 tons. The average productivity of rice plants in Bengkulu Tengah Regency is 3.2 tons/hectare, while the average productivity of rice plants at the provincial level is 4.6 tons/hectare (BPS, 2021b).

This research needs to be done to examine the income and characteristics of certified rice seed breeders in Central Bengkulu Regency and their sustainability efforts. The problem formulation of this research is how to study the income and characteristics of certified rice seed breeding business in Central Bengkulu Regency and its sustainability efforts.

Nuswardhani (2019) explain: uptake of certified rice seeds can be increased directly or indirectly. Directly through the attached attribute directly with the

seed and indirectly through factors outside the seed. Seed factors that can increase the uptake of rice seeds certified are: the quality of certified seeds must be improved, because it is still mixed with other varieties, mixed with other plant seeds, and growth is not good Increase the availability of certified seeds by adding producers of seed breeders and kiosks of production facilities in areas in need.

Factors outside the seed that can increase the uptake of rice seeds certified ased are: improving the education level of farmers. the success of rice farming from the personal experience of key farmers is transmitted to other farmers, ownership status and area farmers need and interest in certified rice seeds

RESEARCH METHOD

This research uses mixed method research, namely the combination of quantitative and qualitative which is carried out simultaneously (Sarwono, 2013). Quantitative research will be conducted to determine the income of seed breeding farming. Then the descriptive qualitative research method, which describes the description of the socio-economic condition of breeder farmers in general related to access to marketing of certified rice seeds such as the community, such as land availability, the role of the government, the availability of seed sources, the role of PBT, market access and selling prices of seeds.

The location of the research was carried out in Central Bengkulu Regency. The determination of the research location was carried out purposively, with the consideration that the location of this research was a group of certified rice seed breeders who already had a recommendation as a certified rice seed breeder from BPSB (Seed Monitoring and Certification Center) Department of Horticulture and Plantation of Bengkulu Province, namely in Taba Penanjung sub-district (Tunas Muda farmer group) Pondok Kelapa sub-district (Sido Urip farmer group) and Karang Tinggi sub-district (Sinar Kelbang farmer group, and Padang Segaro farmer group)

The method used in sampling in this study is the census method in which the entire population is included in the group of certified rice seed breeders as samples. Part of the number and characteristics possessed by the population, samples taken from the population must be truly representative (Sugiyono, 2013)

The data obtained through the questionnaire will be tabulated and analyzed quantitatively descriptively. Some of the variables analyzed are related to the study of farmer characteristics, such as the income of seed captive farming, which is calculated based on the following equation (Soekartawi, 2013):

π = TR-TC

notes: TR = Q ×PQ and TC = FC + VC

π = Income; TR = Total Revenue (Total Revenue); TC = Total Cost (total cost); Q = Production Volume; PQ = Price during research; FC = Fixed Cost; VC = Variable Cost

Furthermore, a description of the socio-economic condition of captive farmers is described in general related to access to marketing of certified rice seeds such as the community, such as land availability, the role of the government, the availability of seed sources, the role of PBT, market access and the selling price of seeds. All variables will be tabulated and described.

RESULT AND DISCUSSION

Characteristics of Respondents

Characteristics of respondents are conditions that describe the condition of respondents in general. These characteristics will affect a person in carrying out an activity that shows his life in a better direction. A person's characteristics can be influenced by actions in terms of the mindset and insight they have. The social characteristics of respondents in this research area, namely: age, education, experience in rice farming, land area and number of family members in one family.

Farmer's Age

Based on the results of the study, certified rice seed breeders used as respondents in this study were farmer groups/farmers who had recommendations from BPSB as many as 48 breeders, spread over 3 sub-districts in Central Bengkulu Regency.

Productive age is capital for developing farming and can affect the motivation and ability of farmers to manage their farming (Asaad & Bananiek, 2018). Age affects performance in a business where entrepreneurs who are still productive have the ability to work better than those who are not.

The characteristics of certified seed breeders in Bengkulu Tengah Regency are the majority are male with an average age of over 60 years, which is 27%. Physically, that age is no longer productive age to work as a rice seed breeder who prioritizes a lot of physical activity, but at this age farmers are very mature in making decisions and of course experienced, then the smallest breeder between the ages of 54-59 years is 6 %. According to BPS (2011) in Lubis (2017) productive age is between the ages of 15 - 64 years (Lubis, 2017). At a productive age in general, it is still possible for a person to have the desire to improve skills and increase knowledge in managing their farming (Yusmel et al., 2019).

Age can influence a person in making a decision. Age can also be a measure of the success of farming activities. Farmers who have a productive age will usually work better and more optimally than farmers who are of unproductive age (Gusti et al., 2022). In detail can be seen in Table 1.

Table 1. Characteristics of Breeders Based on Age

No.	Age (years)	Amount	Persentase (%)
1.	26-30	4	8
2.	31-38	5	10
3.	39 -43	8	17
4.	44 -48	7	15
5.	49 -53	8	17
6.	54 -59	3	6
7.	>60	13	27
	Amount	48	100

Source: Primary data processed (2022)

Education

Education is one of the determinants of the level of progress of a region. The more highly educated people, the higher the level of progress of the region tends to be. Mosher in Saputra (2012) said that the level of education is a determining factor in business development and increasing productivity, in general, if the level of education is high, productivity is also high. As a person's education level affects the way of thinking, acting in making a decision. The higher the level of education, the wider the absorption capacity (Neonbotaa & Kuneb, 2016). Based on the results of the study, Table 2 shows that on average, rice seed breeders have received formal education, 23% of basic education, 71% of secondary education, and only 6% whose education has reached the undergraduate level. In Bengkulu Tengah Regency the average formal education of captive farmers is secondary level education. For rice seed breeding business with secondary education level (formal) is sufficient. A person's level of education can change the pattern of thinking, better reasoning power, so that the higher the education, the more rational. In general, farmers with higher education will have a better way of thinking, thus enabling them to act more rationally in managing their farms (Mulieng et al., 2018)

Musafiri (2016) in (Sujaya et al., 2018) states that education is the dominant factor in increasing farmer household income. This education will affect their willingness to follow new innovations and their way of making decisions. Non-formal education as this is also carried out by the Provincial/District Agriculture Office by inviting members of the rice

breeder farmer groups in Central Bengkulu Regency to get information and training on rice seed breeders. Likewise, with the advancement of information systems today, breeder farmers can directly access the information needed.

Table 2. Characteristics of Farmers Based on Formal Education

No	Length of Education (years)	Amount	Persentase (%)
1.	0-6	11	23
2.	7-12	34	71
3.	≥13	3	6
	Amount	48	100

Source: Primary data processed (2022)

Rice Farming Experience

Experience in breeding rice farming shows that a person has been a rice breeder for a long time. Because with experience a person will increasingly master the technology in breeding rice seeds, so that there will be a greater chance of success to achieve maximum production. Farming experience is no less important factor in supporting farming activities. Farmers who have longer work experience will find it easier to make the best decisions at the most appropriate time (Putri et al., 2016).

The success and increase in production, both in quantity and quality or quality, cannot be separated from the knowledge and experience of the human resources themselves, because with experience a person will increasingly master technology in breeding rice seed farming.

The experience of certified rice seed breeders in Central Bengkulu Regency can be seen in table 3 below:

Table 3. Characteristics of Breeder Farmers Based on Farming Experience Rice in Central Bengkulu Regency

No	Experience (years)	Amount	Persentase (%)
1.	4-8	7	15
2.	9-13	4	8
3.	14 -18	9	19
4.	19 -23	10	21
5.	24 -28	7	15
6.	29-33	11	23
	Amount	48	100

Source: Primary data processed (2022)

Based on the data above, the highest experience of farming rice seeds is between 29-30 years, which is 23%. Thus, farmers in Bengkulu Tengah

Regency are very experienced and master the technology of breeding certified rice seeds. Hernanto in Saputra (2012), farming experience is a capital in an effort to develop farming, farming experience plays a role in the process of farming activities. The longer a farmer does farming activities, the more experienced he will be, this happens because the farming process is a process that requires learning so that farming experience plays a role in increasing agricultural production.

Land Area

Land is a means of production for farming, including one of the factors of production and manufacturing of agricultural products. Land is a physical natural resource that has a very important role for farmers (Mandang et al., 2020). The land managed by certified rice seed breeders ranges from 0.5 to 1.0 ha. The status of the land owned by these farmers is entirely their own. Based on table 13 the average land tenure of 0.5 - 1 hectare is 83%, the land area of 0.25 hectares is 10%, and only 6% owns 2 - 2.5 hectares. This land area greatly affects the scale of the business, and the scale of this business will ultimately affect the efficiency or not of an agricultural business. Land that is too large does not mean it can provide high production yields, but land that is too narrow is also inefficient in land management (Waldi et al., 2019)

Farmers who have wider agricultural land than farmers who on average have a narrow plot of land (0.5-2.5 ha) are more willing to take risks, these farmers are brave to face failure from each experiment. The area of land cultivated by farmers can affect farmers' income. If the area under cultivation increases, the income of farmers will increase (Listiani et al., 2019).

In detail, the area of land owned by the breeder farmers is presented in the following table:

Table 4. Characteristics of Breeder Farmers Based on Land Areas owned.

No.	Land Area (hectares)	Amount	Persentase (%)
1.	0.25	5	10.4
2.	0.50	18	37.5
3.	0.75	6	12.5
4.	1.00	16	33.3
5.	2.00- 2.50	3	6.3
	Amount	48	100

Source: Primary data processed (2022)

Number of Family Members

The number of dependents is the number of people (household members) who still occupy or inhabit one house with the head of the household, and are still the household's dependents in meeting their daily needs (Hanum, 2018).

The number of dependent family members affects the motivation of certified rice seed breeders in doing their business. Based on table 5. It shows that the number of family dependents, certified seed breeders on average have the largest number of family dependents between 3 - 4 people, which is 54%. The number of family dependents is very influential, because the more the number of family dependents, the more household expenses, so farmers do seed breeding in order to increase income (Noviyanti et al., 2020)

The number of family dependents will determine the number of family needs. The more family members, the more the number of family needs that must be met. And vice versa, fewer family members means fewer needs that must be met by the family (Marpaunget al., 2020). Thus, it can be said that the more family members owned by farmers, the more expenses for farmers' living expenses. Based on research, the number of dependents of breeder farmer families in Central Bengkulu Regency is 3-4 people or 54%, so seed breeders must have other businesses. to meet his needs. In addition to breeding rice seeds, rice seed breeders in Central Bengkulu Regency also have oil palm plantations. coffee and rubber and other businesses. The number of family members of rice seed breeders is presented in the following table:

Table 5. Characteristics of Breeder Farmers Based on Number of Family Members

No	Number of Dependens (person)	Amount	Persentase (%)
1.	0-2	20	42
2.	3-4	26	54
3.	≥5	2	4
	Amount	48	100

Source: Primary data processed (2022)

Rice Seed Breeding Production Cost Analysis

Production cost analysis is used to calculate the total cost of certified rice seed breeding business in Central Bengkulu Regency while the costs incurred include fixed costs and variable costs. The fixed costs incurred by farmers consist of land rental costs and costs for purchasing agricultural equipment. While the variable costs consist of the cost of production facilities such as the purchase of seeds, fertilizers, pesticides/drugs, labor wages, packaging costs and

certification costs. On average, the respondents spent a production cost of Rp. 14,313,043 per growing season (Table 6).

Table 6. Production Cost of Certified Rice Seed Breeding Business.

Type of Production Cost	Cost (Rp)	Total Cost (Rp)
A. Fixed Cost	-	5,474,270
Rent Land	3,143,229	-
Purchase of Tools	2,331,041	-
B. Variabel Cost	-	8,837,772
Purchase of Seeeds	205,833	-
Purchase Fertilizer	2,273,942	-
Purchase of medicies	330,833	-
Labor	770,000	-
Agricultural Machine Tool & Transportation	2,554,687	-
Packaging	2,286,944	-
Certification	416,218	-
Total Cost	-	14,313,043

Source: Primary data processed (2022)

Based on the table above, the production costs of the rice seed breeding business in Bengkulu Tengah Regency vary greatly depending on the area of land owned, the wider the land owned, the greater the costs incurred, land as one of the factors of production is a factory for agricultural products where production is running and the source of production output is out. The production factor of land has most important position. This is evident from the amount of remuneration received by the landcompared to other factors or it can be said that the size of production from farming. Among other things, it is influenced by the size of the land used by farmers. The area of agricultural land will be affect the scale of the business which will ultimately affect the efficiency or not of a business agriculture. (Pradnyawati & Cipta, 2021)

Table 6 shows production costs with an average area of 0.78 ha for captive breeding. Because based on the calculation, the average breeding business for rice seeds in Central Bengkulu Regency is 0.78 ha.

Analysis of Revenue and Revenue of Rice Seed Breeding

The revenue from the rice seed breeding business is the multiplication between the production produced and the selling price. Certified rice seed breeding business in Bengkulu Tengah Regency with an average production cost of Rp. 14,313,043 per planting season, the breeder farmers obtained an average production of 4,677 kg. With the selling price of seeds per kilogram of Rp. 8,150,

the revenue is Rp. 38,032,291. While the income obtained from the rice seed breeding business is Rp.23,719,248 (difference between total revenue minus total production costs) per growing season (Table 7). The income earned by seed breeders in Bengkulu Tengah Regency is quite large compared to the capital that has been spent. Thus, judging from the analysis that has been carried out, the rice seed breeding business is a quite profitable farming business to do. In one year, there are two growing seasons.

Table 7. Revenue, Income from Rice Seed Breeding Business

No.	Description	Average
1	Land Area	0,78 ha
2	Production Quantity	4.677 kg
3	Price	Rp.8.150
4	Production Cost	Rp.14.313.043
5	Revenue	Rp.38.032.291
6	Income	Rp.23.719.248

Source: Primary data processed (2022)

Seed Breeding Business Sustainability Efforts

The variables analyzed in the effort of business continuity are variables that have an important role in farmers' decisions in certified seed breeding efforts. The six variables are age, length of education, gender, land area, number of dependents in the family and the role of PBT Seed Supervisor. Seed breeding activities of lowland rice sources will continue if they maximize the role of farmer groups in creating a seed market. The factor of continuous motivation to members by the management in implementing seed breeders (Amiruddin et al., 2016). In detail, these variables are as follows:

Age is one of the determinants of a person in making a decision to do business. The age of the farmer will affect his work productivity or his role in making decisions from various alternative jobs. The age of the farmer has a relationship with the farmer's ability to work. If viewed from a physical point of view, the older a person's age after passing a certain age limit, the less ability to work (Tumani et al., 2017). This means that the older a person gets, the more mature and wise they will be in making and determining decisions and the more open they will be to new things and motivation in farming. The age factor also plays a role in considerations and work ethics as well as effectiveness in work.

The length of education is very important to the farmer's decision to breed. The level of education will affect the way of working, the ability to make a person's decision, the speed of adoption of new innovations, farm management to marketing (Suwardi et al., 2019). The length of education will increase the chances of farmers to decide to breed. There are about 6% of farmers whose education is more than 12 years. This figure is assumed by farmers to have

attended secondary level education. Then there are 21 percent of farmers in Central Bengkulu Regency who only take elementary school education. This means that in Bengkulu Tengah Regency generally farmers have attained secondary level education. This means that the role of the intensity of agricultural instructors and PBT in providing motivation and reinforcement greatly encourages the motivation of farmers to carry out certified seed breeding businesses.

Land area has a role in the decision to breed or not. The wider the land owned by the farmer, the larger the decision of the farmer to breed. The wider the area of land managed by farmers, the greater the level of income that will be received by farmers, and vice versa, although this is not absolute (Sari, 2019). The average farmer owns a land area of 0.5-1 hectare by 83%. From this range, only 3 people have a land area of 2-2.5 hectares, the rest is 0.5 hectares.

The number of family dependents has an influence on the sustainability of the captive business, meaning that the more the number of dependents, the greater the tendency of farmers to breed. The number of dependents in the family is closely related to meeting the needs of the family. The dependents of the farmer's family consist of his wife, children and people whose lives are financed by the farmer. The number of family dependents affects the respondents' expenses (Mulyaqin et al., 2016). The number of family members is one of the supporting factors for success in farming. The average number of family dependents on captive farmers is 3 people.

The availability of production inputs has an influence on the sustainability of the breeding business, meaning that the more availability of production inputs will increase the tendency of farmers to decide to breed rice seeds. Availability of seeds certified superiority in farming activities is an absolute requirement, although In the cost structure of rice farming, the proportion of expenditure on seed costs does not up to 5% of total expenditure, compared to fertilizer (7-14%), land (14-34%), and labor (30-62%) (Nuswardhani, 2019).

The price of seeds has an influence on the sustainability of the breeding business if the lower the price of captive seeds produced by farmers will increase the tendency of farmers to decide to breed rice seeds. the price of seeds depends on the selling price of rice paddy rice, the higher the selling price of grain, the price of seeds also increases, especially the yield of certified rice seed production.

The role of Plant Seed Supervisor (PBT) has a great influence on the decision whether to breed or not, meaning that the smaller the role of PBT will increase the tendency of farmers to decide to breed rice seeds. Plant Seed Supervisors have the main duties and functions in the seed certification process. Meanwhile, the guidance and assistance of farmers in farming is carried out by Agricultural Extension Officers. The synergy between PBT and agricultural extension workers to encourage and convince farmers to breed certified seeds to the labeling process needs to be improved.

The role of the government will increase the tendency of farmers to decide to breed rice seeds. The role of the extension agent has an important influence on increasing the knowledge, attitudes, and skills of farmers. The role of agricultural extension workers greatly determines the success of agricultural development, and can be said to be the front line to improve the quality of farmers today, because extension workers go directly to the field and convey various important information so as to support farmers in using new high-yielding varieties (Noviyanti et al., 2020).

Market access has an important role, he market is considered relevant because it affects business continuity, the existence of the market has always been a focus point that functions as a center or access as a place of exchange and opens a way or space to distribute goods supported by its existence as a means of providing and disseminating information, so that consumers who come not only come from only the area, but from outside the area too, meaning that the smaller the market access for captive seeds produced by farmers, it will increase the tendency of farmers to decide to breed rice seeds, market access is very important so that agricultural products can be optimally absorbed, including improving supporting sub-sector infrastructure such as transportation and warehousing as well as retail trade, encouraging partnerships with offtakers, and increasing consumer purchasing power by opening up wider market access for profit sharing. agriculture, especially for certified rice seed products which can later improve the welfare of farmers (Arnita et al., 2019).

CONCLUSION AND SUGGESTION

Conclusion

The certified rice seed breeding business in Bengkulu Tengah Regency is profitable, amounting to Rp. 23,719,248/planting season, but based on the study of its characteristics it is necessary to improve and evaluate the role of the Plant Seed Supervisor as a supervisor/controller to the mentoring role to see Farmers who cultivate certified seeds in the Regency Bengkulu Tengah has the characteristics of male sex with the most average age being above 63 years, with an average land tenure of 0.5 to 1 hectare with the status of own land. Have the largest number of family dependents between 3 to 4 people.

Suggestion

1. It is necessary to strengthen the capacity of captive farmers who do not continue through a selection process based on: age, gender, education, number of dependents, and the area of land owned. as well as increasing the skills and knowledge of breeder farmers regarding certified rice seeds and their business prospects.

2. Increasing and evaluating the role of the Plant Seed Supervisor from the role of supervision/controller to the role of mentoring or fostering farmer groups/farmers of certified rice seed breeders.
3. There is a need for further research on the sustainability of certified rice seed breeding in Central Bengkulu Regency with various other variables, or adding a new number of samples that have not been analyzed in this study.

REFERENCES

Arnita, V., M., Eky Ermal, & Nasution, D. A. D. (2019). Pengaruh Pasar Tradisional Terhadap Perkembangan Pendapatan Asli Daerah di Pulau Samosir Danau Toba. *Jurnal RAK (Riset Akuntansi Keuangan),* 4(2), 50–60. doi: 10.31002/rak.v4i2.2129

Asaad, M., & Bananiek, S. N. (2018). Faktor-faktor yang Mempengaruhi Peluang Pengembangan Teknologi Produksi Benih Kedelai di Sulawesi Tenggara. *Jurnal Pengkajian Dan Pengembangan Teknologi Pertanian*, 21(1), 37-48. doi: 10.21082/jpptp.v21n1.2018.p37-48

BPS. (2021). Bengkulu Tengah Dalam Angka. BPS Bengkulu Tengah.

Gusti, I. M., Gayatri, S., & Prasetyo, A. S. (2022). The Affecting of Farmer Ages, Level of Education and Farm Experience of The Farming Knowledge About Kartu Tani Beneficial and Method of Use in Parakan Distric, Temanggung Regency. *Jurnal Litbang Provinsi Jawa Tengah*, 19(2), 209–221. doi: 10.36762/jurnaljateng.v19i2.926

Hanum, N. (2018). Pengaruh Pendapatan , Jumlah Tanggungan Keluarga dan Pendidikan Terhadap Pola Konsumsi Rumah Tangga Nelayan di Desa Seuneubok Rambong Aceh Timur. *Jurnal Samudra Ekonomika*, 2(1), 75–84. doi: 10.1234/jse.v2i1.779

Kolo, E., & Tefa, A. (2016). Pengaruh Kondisi Simpan Terhadap Viabilitas dan Vigor Benih Tomat (*Lycopersicum esculentum Mill*). *Savana Cendana*, 1(3), 112–115. doi: 10.32938/sc.v1i03.57

Laksmi, N. M. A. C., Windia, W., & Suamba, K. (2017). Strategi Pengembangan Usaha Perbenihan Padi Bersertifikat di Subak Guama, Kecamatan Marga, Kabupaten Tabanan. *Jurnal Manajemen Agribisnis (Journal Of Agribusiness Management)*, 5(1), 22–32. doi: 10.24843/jma.2017.v05.i01.p03

Listiani, R., Setiadi, A., & Santoso, S. I. (2019). Analisis Pendapatan Usahatani Pada Petani Padi di Kecamatan Mlonggo Kabupaten Jepara. *Agrisocionomics: Jurnal Sosial Ekonomi Pertanian*, 3(1), 50–58. doi: 10.14710/agrisocionomics.v3i1.4018

Lubis, D. (2017). Analisis Pendapatan Petani Penggarap Dengan Akad. *Jurnal Ekonomi Islam*, 2(3), 310–315

Mandang, M., Sondakh, M. F. L., & Laoh, O. E. H. (2020). Karakteristik Petani Berlahan Sempit di Desa Tolok Kecamatan Tompaso. *Agri-Sosioekonomi*, 16(1), 105-114. doi: 10.35791/agrsosek.16.1.2020.27131

Marpaung, Y., Rotinsulu, D. C., & Rorong, I. P. F. (2020). Analisis Dampak Penggunaan Dana Desa Terhadap Perekonomian Masyarakat di Kecamatan Ratatotok Kabupaten Minahasa Tenggara. *Jurnal Pembangunnan Ekonomi Dan Keuangan Daerah*, 21(2), 76–93. doi: 10.35794/jpekd.32823.21.2.2020

Mulieng, Z. F., Amanah, S., & Asngari, P. S. (2018). Persepsi Petani Terhadap Kompetensi Penyuluh Pertanian Tanaman Pangan di Kabupaten Aceh Utara. *Jurnal Penyuluhan*, 14(1), 159–174. doi: 10.25015/penyuluhan.v14i1.17556

Mulyaqin, T., Astuti, Y., & Haryani, D. (2016). Faktor yang Mempengaruhi Petani Padi Dalam Pemanfaatan Sumber Permodalan : Studi Kasus di Kabupaten Serang Provinsi Banten. *Seminar Nasional BPTP Jambi*, 2(1), A1-A8.doi: 10.13140/RG.2.2.15776.17921

Noviyanti, S., Kusmiyati, K., & Sulistyowati, D. (2020). Adopsi Inovasi Penggunaan Varietas Unggul Baru Padi Sawah (Oryza Sativa L.) di Kecamatan Cilaku Kabupaten Cianjur Provinsi Jawa Barat. *Jurnal Inovasi Penelitian*, 1(4), 771–782. doi: 10.47492/jip.v1i4.144

Nuswardhani, Sri Karuniari. (2019). Kajian Serapan Benih Padi Bersertifikat di Indonesia Periode 2012–2017. *Agrika 13(2), 162-176*. doi: 10.31328/ja.v13i2.1207

Pradnyawati, I., Bintang, A.B., & Cipta, Wayan. (2021). Pengaruh Luas Lahan, Modal dan Jumlah Produksi Terhadap Pendapatan Petani Sayur di Kecamatan Baturiti. Ekuitas: *Jurnal Pendidikan Ekonomi*, 9(1), 93-100. doi: 10.23887/ekuitas.v9i1.27562

Purwanta, I. P. A., Putu, I. D., Suardi, O., & Diarta, I. K. S. (2019). Pengaruh Karakteristik Petani, Motivasi Petani dan Peran Pendamping Terhadap Perilaku Petani Penangkar Dalam Mendukung Ketersediaan Benih Padi di Kabupaten Tabanan. *Jurnal Manajemen Agribisnis*, 7(2), 104–111. doi: 10.24843/JMA.2019.v07.i02.p03

Putri, R. E., Astuti, L. T. W., & Yanti, N. (2016). Adopsi Petani Terhadap Teknologi Pengendalian Jamur Akar Putih pada Tanaman Karet (Hevea Brasilliensis Muel. Arg) Di Kejuruan Muda – Aceh Tamiang. *Agrica Ekstensia*, 10(2), 8–18

Raditya, R., & Asriani, P. S. (2015). Comparation Analysis of Paddy Farming Between Certified Seeds and Non Certified Seeds User In Kemumu Village Arma Jaya Subdistrict Bengkulu Utara Regency. *Agrisep*, 15(2), 177–186

Sari, L. (2019). *Analisis Pendapatan Petani Padi di Desa Bontorappo Kecamatan Tarowang Kabupaten Jeneponto*. [Thesis}. Makassar: University of

Makassar, Makassar). Retrieved from http://eprints.unm.ac.id/id/eprint/13907

Sarwono. (2013). *Mixed Methods Cara Menggabung Riset Kuantitatif dan Riset*. Jakarta: Elex Media Komputindo

Sayaka, B. (2015). Sistem Perbenihan Padi dan Karakteristik Produsen Benih Padi di Jawa Timur. *Analisis Kebijakan Pertanian*, 13(2), 185–202. doi: 10.21082/akp.v13n2.2015.185-202

Neonbotaa, S. L., & Kuneb, S. J. (2016). Faktor-Faktor yang Mempengaruhi Usahatani Padi Sawah di Desa Haekto Kecamatan Noemuti Timur. *Agrimor*, 1(3), 32–35. doi: 10.32938/ag.v1i03.104

Soekartawi. (2013). *Agribisnis Teori dan Aplikasinya*. Jawa Barat: Raja Grafindo

Sugiyono. (2013). Metode Penelitian Kuantitatif, Kualitatif, R&D. Jawa Barat: Alfabeta

Sujaya, D. H., Hardiyanto, T., & Isyanto, A. (2018). Faktor-faktor yang Berpengaruh Terhadap Produktivitas Usahatani Mina Padi di Kota Tasikmalaya. *Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 4(1), 25–39. doi: 10.25157/ma.v4i1.834

Syahri & Renny Utami Somantri. (2016). The Use of Improved Varieties Resistant to Pests and Diseases to Increase National Rice Production. *Jurnal Penelitian dan Pengembangan Pertanian*, 35(1), 25–36. doi: 10.21082/jp3.v35n1.2016.p25-36

Waldi, R. D., Saharjo, B. H., & Albar, I. (2019). Pengaruh Faktor Internal dan Eksternal Petani terhadap Pencegahan Kebakaran Lahan Gambut. *Journal of Tropical Silviculture*, 10(2), 83–88. doi: 10.29244/j-siltrop.10.2.83-88

Yusmel, M. R., Afrianto, E., & Fikriman, F. (2019). Faktor-faktor Sosial Ekonomi yang Mempengaruhi Keberhasilan Produktivitas Petani Padi Sawah di Desa Seling Kecamatan Tabir Kabupaten Merangin. *JAS (Jurnal Agri Sains)*, 3(1). doi: 10.36355/jas.v3i1.26