The Entrepreneurial Character of The Farmers and The Performance of Staple Food Farming in Daerah Istimewa Yogyakarta

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Abstract. Staple foods are essential for society; therefore, the government regulates the prices to ensure that only farmers with strong entrepreneurial skills engage in their production. The research was conducted in Daerah Istimewa Yogyakarta (DIY). This study aims to examine farm performance, describe the farmers' entrepreneurial character, and analyze the relationship between farm performance and the entrepreneurial character of staple food farmers in DIY. Simple random sampling was employed to conduct 120 farmers engaged in staple food farming. Data was collected by interviewing farmers utilizing a questionnaire. The Likert scale was used to conduct a descriptive analysis of the entrepreneurial character. Farming performance was measured using net revenue and profit. Then, the correlation between farming performance and staple food farmers' entrepreneurial characteristics was analyzed through the Spearman Rank correlation. The findings indicated that the entrepreneurial characteristics of staple food farmers were within the strong category, achieving a score of 3.83 with a percentage of 77.57%. Staple food farming in DIY during the planting season in February 2023 generated a net revenue of IDR 1,837,258.08 and a profit of IDR 1,248,437.08, indicating that farming is feasible. The farming performance of staple food farmers in DIY was positively correlated with their entrepreneurial characteristics.

1 Introduction

Agricultural crops cultivated by farmers can be in the form of food and non-food crops. Food plants that are always needed by the community as a source of energy for daily life are called staple foods, while those that have a high enough economic value are plants that are included in the horticultural group. In addition to being cultivated in paddy fields, gardens or yards, staple food crops are also cultivated on coastal lands lately, although there are not many types of plants. Prices of staple foods cannot be freely determined, limited to the highest price that can be given, especially rice, prices are under government control. Therefore, farmers who carry out farming of staple foods need special tips so that the profits obtained are satisfactory. These tips are influenced by the entrepreneurial characteristics of individual farmers.

Based on the description above, research was conducted with the object of the study of

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farmers of staple food crops in Daerah Istimewa Yogyakarta (DIY), which studied the relationship between entrepreneurial character and the performance of farmers of staple food crops in DIY. As is known, staple food crops are very much needed by the community because they are the main source of energy for life, which is definitely needed every day. In DIY, the areas that produce a lot of staple food crops are in the four regencies of the second level. Only in the city of Yogyakarta are very few because it is not an area that has agricultural land.

Research on Entrepreneurship, especially those related to business actors in the field of Agribusiness, is still rather rare. One of them is [1]**,** entitled: Analysis of the Entrepreneurial Spirit of Gapoktan Management Fund Management for Rural Agribusiness Development (PUAP) in Banjarangkan District, Klungkung Regency. This research, using table analysis method, gives the result that the entrepreneurial character and the application of agribusiness management by Gapoktan administrators are included in the good category. The Rural Agribusiness Development Program (PUAP) in Banjarangkan District, Klungkung Regency is included in the quite successful category. To grow and strengthen the entrepreneurial spirit of Gapoktan management, it is carried out through counseling or mentoring programs, and training in the field of agribusiness management.

Another research was conducted by [2] with the topic of Farmer Entrepreneurship and Chili and Rice Farming Performance in Sleman Regency. The results of the study stated: that the environmental factors that influence the entrepreneurship of chili farmers are the social and economic environment, while for rice farmers are the economic environment and the physical environment. For entrepreneurship, both have an effect on farm performance, management capacity and biological technical processes, with the entrepreneurial level of chili farmers being higher than rice farmers.

Based on this description, the formulation of the research problem is: What is the entrepreneurial character of staple food crop farmers in DIY? What factors correlate with it? Is farming of staple food crops economically viable? Is there a relationship between the entrepreneurial character of farmers and their business performance?

1.1 Research purposes

Based on the background and problem formulation as described above, in general, the purpose of this study is to obtain facts about the efforts of principal food crop farmers in carrying out their farming activities. In more detail, the research objectives are as follows:

1) Knowing the entrepreneurial character of staple food crop farmers in DIY;
2) Knowing the feasibility of farming staple food crops in DIY
3) Knowing the relationship between the entrepreneurial character of farmers with the performance of staple food crop farming.

The majority of Indonesian citizens work in agriculture, making this sector a fertile ground for nurturing new entrepreneurs. Farmers' entrepreneurial traits can be observed in their skillful land and capital management. The entrepreneurial nature of farming is essential, as a strong entrepreneurial mindset among farmers contributes positively to the development and success of their agricultural activities. According to [3], the success of a business can be gauged by factors such as business sustainability, profit margins, sales growth, workforce size, and other variables linked to farming success. This indicates that farmers' entrepreneurial character significantly influences their farming success.

Farm success can be evaluated through farming performance, which includes indicators like productivity, price, income, and profit generated by farmers [4]. Farming performance represents both the quality and quantity of output achieved by farmers in their agricultural activities. Higher farming performance is likely to enhance farmers' welfare levels. The entrepreneurial spirit involves having creativity, setting specific goals, and striving for life

success [5]. However, realizing creativity can be challenging, and even when achieved, it may lack market value without the ability to sell. Economically, the ability to market one's creations is crucial. Farmers with entrepreneurial traits are skilled in capital and land management and adapt well to natural and environmental changes. Entrepreneurship is deeply intertwined with agriculture and farmers' activities. Farmers who demonstrate strong entrepreneurial traits often show good business performance, which positively influences the success of their farms. Business success, as defined by [3], can be measured by factors such as business continuity, profit, sales growth, workforce size, personal satisfaction, and other variables related to farming success.

Economic growth relies heavily on individuals' readiness and motivation within a country or region to initiate and grow businesses successfully. Notably, entrepreneurial attitudes differ significantly between male and female small industry entrepreneurs, with a strong relationship between entrepreneurial attitudes, age, business duration, education level, gender, and family background, all contributing to the success of small industrial entrepreneurs. Among these, entrepreneurial attitude and education level provide the largest contributions [6]. However, among farmers, differences in entrepreneurial character between men and women are not necessarily present.

Individual characteristics that influence the success of small weaving and embroidery industries in Sumatra include the training and experience of the entrepreneurs. They exhibit strong entrepreneurial traits, marked by motivation, eagerness to seize opportunities, and confidence, with significant competencies in securing raw materials, market access, and capital availability. However, business success is also highly impacted by labor availability, especially productivity, sales volume, and sales growth [7].

Entrepreneurship involves a dynamic ability to constantly seek and capitalize on opportunities to create added value. It encompasses techniques, methods, systems, and various business strategies that can be learned. Analyzing entrepreneurship can include examining character, behavior, attitudes, personality development, group history, and an entrepreneur's interests, motivations, and ambitions to achieve success [8].

Character is a distinctive quality that enhances a person's appeal, potentially forming a reputation or an eccentric personality. Character develops through one's life experiences, and as Helen Keller noted, it is not shaped in comfort but rather through trials and mental hardships, which strengthen, clarify vision, inspire ambition, and ultimately lead to success [5].

1.2 Business Management

The ability to manage a business must be mastered by business actors. Including farming. Good management is the key to success. Managers must plan their work, organize their employees and other resources to support work, direct employees, control and evaluate work. The ability to manage human resources is important in business, which involves planning, organizing, directing, and evaluating all activities that directly involve employees and encouraging their productivity.

Abundant production must be able to be sold, so that the company generates profit, and the business is successful, then business actors must know how to promote the business, then the ability to manage sales is needed. It's important to use good sales principles to attract and continue to serve customers. Financial administration management skills are also required. The last important thing is to learn to protect the business. It is important to identify the risks entrepreneurs face due to business crime.

1.3 Production

The production function describes the physical relationship between production inputs and outputs, while the frontier production function represents this relationship at the frontier, positioned along the isoquant line. This isoquant line is the locus of points indicating the optimal combination of production inputs [9].

A significant weakness in our economy is the immobility of the real sector, limiting job opportunities despite the concentration of impoverished populations in this sector, particularly in agriculture. Business efficiency can be assessed by comparing revenue to production costs through the R/C ratio (Revenue/Cost Ratio), which includes both tangible and intangible costs [9]. Besides financial capital, factors such as human resources and business experience, measured by business duration, also impact business sustainability. Human capital is expected to correlate positively with business efficiency [10].

2 Research Methods

This study employs a descriptive method aimed at detailing specific research contexts, including people, government agencies, communities, and similar subjects. Additionally, a quantitative analysis approach is used to gather data from the past or present, focusing on the opinions, characteristics, and beliefs of a sample drawn from a defined population [11].

2.1 Sampling Method

This study was conducted in Yogyakarta Special Region (DIY), selected through purposive sampling. The focus was on staple food commodities, specifically rice, corn, and cassava, produced in different areas: Bantul, which is the largest rice-producing area, and Gunungkidul, the main producer of cassava and corn. Two types of data were collected for this study—primary and secondary. Primary data were obtained directly through interviews with respondents, covering aspects such as income, profits, entrepreneurial characteristics, and other relevant factors. Secondary data were gathered from literature, documentation, journals, books, and other sources related to the research topic, providing information on the area's general conditions, agricultural mapping, staple food production levels, population, and general agricultural conditions [12].

2.2 Data analysis

The research data analysis was conducted based on previously formulated objectives. This study aims to assess farming performance, which includes income and profit, to describe the entrepreneurial character of farmers, and to determine the relationship between farming performance and entrepreneurial character in the Special Region of Yogyakarta (DIY). Entrepreneurial character data were ranked using a Likert Scale, while farm performance was analyzed by calculating costs, revenues, income, and profits using established formulas.

Costs refer to expenses associated with acquiring production factors, encompassing both explicit costs (actual expenses) and implicit costs (non-actual expenses). Therefore, total cost is the sum of both explicit and implicit production costs [13].

The following is a formula for calculating the total cost:

$$TC = TEC + TIC \tag{1}$$

where, *TC* was Total Cost; *TEC was* Total Explicit Cost; and *TIC* was Total Implicit Cost

Revenue can be calculated with the following formula:

$$TR = P \; x \; Q \tag{2}$$

Where, *TR* was Total Revenue; *P* was Price; and *Q* was Quantity.

To calculate income (Net Revenue), using the following formula:

$$NR = TR - TEC \tag{3}$$

where, *NR* was Net Revenue; *TR* was Total Revenue; and *TEC* was Total Explicit Cost.

Profit is the difference between the revenue and the total cost of production, including implicit costs and explicit costs [14]. The amount of profit earned in the business must be more than zero, if the profit does not reach zero then the business is a loss, but if the profit value is equal to zero it is called break even.

The formula for profit is as follows:

$$\pi = TR - TC \tag{4}$$

where, π was Profit; *TR* was Total Revenue; and *TC* was Total Cost

The Likert scale is a tool for assessing attitudes, opinions, and perceptions of individuals or groups regarding social phenomena. Responses on this scale range from very positive to very negative and are typically scored from one to five [11]. In contrast, to examine the relationship between farming performance and the entrepreneurial characteristics of watermelon farmers, the Spearman Rank correlation method is appropriate. Spearman's rank analysis is applied to identify relationships or test the significance of an associative hypothesis between two variables when data are on an ordinal scale [11].

The formula used in calculating the Spearman Rank correlation in measuring the relationship between profits and the entrepreneurial character of watermelon farmers in Pleret Village is as follows:

$$rs = \frac{6 \sum d^2 i}{n(n^2 - 1)} \tag{5}$$

where, *rs* was spearman rank correlation coefficient; *d* was difference in ranking between variables; and *n* was number of samples

3 Results and Discussion

3.1 Staple Food Farmer Profile

The farmer profile is a key internal factor influencing both performance and capability in farm management. This profile encompasses age, education level, farming experience, land area, and land ownership status.

The age range of staple food farmers in DIY is between 22 and 66 years, with 50% in the productive age bracket (44-54 years, or 61 farmers), allowing them to engage fully in all farming activities from planting to post-harvest. Formal education plays a significant role in shaping farmers' understanding of farming advancements. The study shows that the majority of staple food farmers in DIY, specifically 90 farmers (75%), have completed secondary education (SMA/SMK), equipping them with insights to develop their farms effectively.

Experience in farming is a critical metric, as prolonged experience enhances a farmer's ability to handle farm-related challenges. In DIY, the farming experience among staple food farmers spans from 1 to 49 years, with 47.5% having between 13 and 24 years of experience, often accumulated over generations.

Land ownership status influences farmers' financial outlay, as land renters incur additional expenses. The study indicates that a substantial portion, 85%, of staple food farmers in DIY own their land, while the remaining 15% rent. Furthermore, farmland size directly impacts yields: 65% of DIY farmers (78 farmers) have arable land between 450 and 4,449 m², while the remaining 35% work larger plots of 4,450 to 16,450 m².

3.2 Analysis of Staple Food Farming

Farming analysis is useful to determine the performance of farming which is measured based on the amount of costs, income and profits received by watermelon farmers.

3.2.1 Explicit Cost

The explicit costs involved in cultivating watermelon on coastal lands in Pleret Village encompass expenditures for production facilities, depreciation of equipment, external labor, and additional expenses. These production input costs include expenditures for essential items in staple food farming, such as seeds, fertilizers, pesticides, and miscellaneous costs. Equipment depreciation includes tools commonly used in staple food farming within the DIY region, such as diesel engines, tractors, spray tanks, hoes, hoses, plastic infusion tubes, sickles, rickshaws, buckets, rakes, and plastic mulch.

Labor costs for non-family members are necessary when outside labor is hired, requiring farmers to spend additional resources during the farming process. Additionally, some farmers rely on leased land for their operations, with land rent being a tangible expense for staple food cultivation. The total explicit costs borne by staple food farmers in the DIY area over a single planting season comprise production facilities, non-family labor (TKLK), equipment depreciation, and land rental expenses. Table 1 shows that these explicit costs for staple food farmers with an average land size of 1,000 m² in the DIY region amount to IDR 732,996.

3.2.2 Implicit Cost

Implicit costs refer to expenses that are not directly incurred during farming operations but are calculated as costs to understand the full economic impact. These costs include family labor, rent for self-owned land, and interest on self-provided capital. Family labor costs represent unpaid labor that, while not actually incurred, must be factored into the overall farming expenses. Similarly, self-owned land does not generate a tangible rental expense; however, this notional rent aids farmers in assessing the total resources invested in their farming. The interest cost on self-owned capital is considered an opportunity cost—estimated based on the prevailing local bank loan interest rate of 9% annually, or 2.25% over a four to six-month staple food farming season.

The total implicit costs for staple food farmers in the DIY region include family labor, land rental, and own capital interest, amounting to IDR 588,821.6. When combined, the total production cost—which incorporates both implicit and explicit costs—is calculated to be IDR 10,088,827 per planting season, as shown in Table 1.

Table 1. Total Cost of Staple Food Farming in DIY (per 1000 m^2)

Total Cost	**Value (IDR)**
Explicit cost	732,996.0
Implicit cost	588,821.6
Total	**1,321,817.6**

3.2.3 Revenue and Profit

Revenue represents the total earnings farmers obtain from their farming activities. Analysis reveals that staple food farmers in the Special Region of Yogyakarta (DIY) earn a total income of IDR 2,570,254.08 per 1,000 m² during one planting period. Net revenue, or the income after deducting explicit costs within one planting season, amounts to IDR 1,837,258.08. Profit, calculated as the difference between total revenue and total costs, or between net revenue and implicit costs, shows that staple food farmers in DIY gain IDR 1,248,437.08 per planting period (see Table 2).

Table 2. Profit of Staple Food Farming in DIY

Description	**Value (IDR)**
Production (Kg)	600.74
Price (IDR/Kg)	4,278.48
Revenue (IDR)	2,570,254.08
Explicit cost (IDR)	732,996
Net Revenue (IDR)	**1,837,258.08**
Implicit cost (IDR)	588,821
Profit (IDR)	**1,248,437.08**

3.2.4 Entrepreneurial character of the Farmer

Entrepreneurial character is a crucial trait for farmers, as it supports the growth and sustainability of their farming ventures. Staple food farmers who exhibit entrepreneurial qualities show resilience and a willingness to take risks, such as facing potential crop failures, while remaining committed to improving and expanding their farms [15]. This research examines five key entrepreneurial traits as variables: achievement motivation, business networking, adaptability to change, future orientation, and leadership.

1) Achievement motivation

Achievement motivates the farmers' drive to succeed in managing their farms. Data analysis shows that staple food farmers in DIY exhibit a high level of achievement motivation, with an average score of 4.4. This indicates that most staple food farmers in the region are highly motivated to continuously succeed in their farming endeavors, aligning with the strong achievement motivation observed among chili farmers in Sleman Regency, who have an average score of 4.43. These scores demonstrate a high level of enthusiasm, commitment, hard work, and resilience among chili farmers in Sleman, who are persistent in developing their farms [2].

2) Business Network

A business network is essential for farmers to grow their operations, particularly as they often rely on support from others to market their products effectively. Research on MSME business networks in Banyumas Regency suggests that broader connections with financial institutions, suppliers, and other intermediaries enable businesses to thrive. However, the business networks of MSMEs in Banyumas are still underdeveloped, indicating a need for further improvement (16).

Similarly, a study on the impact of entrepreneurial traits on the success of household furniture businesses in Jambi Timur District found that a strong business network positively influences business success, enhancing growth and competitiveness in the industry (17). Analysis shows that staple food farmers in DIY have a relatively robust business network, with an average score of 3.78, suggesting that most of these farmers maintain extensive networks to support the development of their staple food farming.

3) Ability to Face Change

The ability to adapt to change is an essential trait for farmers, as rapid advancements in the globalization era require them to integrate technology into their farming practices. Data analysis reveals that the adaptability of staple food farmers is classified as strong, with an average score of 3.47. The relatively high scores across four sub-indicators indicate that these farmers are highly motivated to embrace and keep up with current developments.

4) Future Orientation

Future orientation reflects a farmer's ability to envision and plan for long-term success in farming. Farmers who are future-oriented demonstrate innovation and creativity, aligning with the entrepreneurial principle of striving for continuous business advancement [18]. Data analysis shows that staple food farmers in DIY score an average of 3.25 in future orientation, categorizing them as moderately strong in this trait. This suggests that they are fairly forward-thinking and have already begun considering the long-term sustainability of their farming practices.

5) Leadership

Leadership in farming is demonstrated through the farmer's ability to guide and influence fellow farmers toward achieving shared goals. For a business to succeed, a farmer must build a supportive organization that can provide assistance during challenges. To achieve optimal outcomes, tasks should ideally be delegated to individuals with the right expertise. Consequently, a successful farmer or entrepreneur must assess the capabilities of those involved in their business to ensure effective teamwork and goal attainment [19].

3.2.5 Entrepreneurial Character Level

In essence, all staple food farmers in DIY possess entrepreneurial characteristics, though the degree of these traits varies among them. Ranking the entrepreneurial traits from highest to lowest score reveals the following order: leadership, adaptability to change, future orientation, achievement motivation, and business network. Data analysis shows that the entrepreneurial character among staple food farmers in DIY is generally strong, with an overall average score of 3.83 and a score achievement percentage of 80.12%. This indicates a strong inclination among these farmers to innovate and advance their practices, such as adopting irrigation technology to benefit their farming operations.

Specifically, the leadership trait among staple food farmers in DIY falls into the very strong category, with an impressive average score of 4.31. This reflects a highly developed leadership spirit among these farmers, as further detailed in Table 3.

We can compare the findings of similar studies. The general level of entrepreneurship in agribusiness (regardless of subsystems or commodities) indicates that self-knowledge test results are categorized as strong (55%) and moderate (45%). Over half (>50%) of those in the strong category are involved in the off-farm subsystem. Conversely, the level of entrepreneurship determined through character tests tends to fall within the low category (63%) with a high minority (37%) displaying relatively high scores. This character assessment reveals that horticultural farmers generally have higher entrepreneurial potential than crop farmers. When the level of agribusiness entrepreneurship is viewed based on subsystem (on-farm vs. off-farm), a significant correlation at the $\alpha = 25\%$ level is observed in self-knowledge test results, though not in character test results. This study was conducted in the Bogor area from June to December 2013, involving 108 respondents (55 from the on-farm and 53 from the off-farm subsystem) [20].

Further research on the relationship between entrepreneurial characteristics and the success of horticulture farming, conducted among horticultural farmers in Cibodas Village, Lembang District, West Bandung Regency, demonstrated that the average respondent was

male, within the productive age range, had completed nine years of education, and possessed an average land area of 417.34 Tumbak. The entrepreneurial characteristics of these farmers were rated as "Good," at 77.05%, while farming success also fell under the "Good" category, at 77.2%. The findings indicate a positive correlation across all characteristics studied [21].

Table 3. Score of Entrepreneurial Characters of Staple Food Farmers in DIY

No.	Variable	Application Score			
		Score	Average	Total	Achievement Score (%)
Achievement motivation					
1	Extroversion	4.75	4.4	17.6	88
2	Achievement Needs	4.20			
3	Execution	4.23			
4	Supervision	4.22			
Business Network					
5	Business Group	3.88	3.78	11.34	75.6
6	Financial institutions	3.78			
7	Educational Institutions	3.68			
Ability to Face Change					
8	Profit growth	3.30	3.47	13.88	86
9	Development of IT utilization	3.93			
10	Creativity	3.0			
11	Product Diversification	3.65			
Future Orientation					
12	Development of Utilization of Production Technology	3.53	3.25	9.75	65
13	Skill	3.28			
14	Market Orientation	2.94			
Leadership					
15	Independent (dare to act)	4.00	4.31	17.24	86
16	Dare to take risks	4.08			
17	Self Confidence	4.90			
18	Organizing	4.26			
Total Entrepreneurial Character Score			**3.83**	**69.81**	**77.57**
Category			**Strong**		

Research on young farmers' behavior in horticultural agribusiness in Bandung Barat District showed that young farmers' approach to managing agribusiness generally aligns with that of the previous generation. However, young farmers are more proactive in seeking information and adapting to change by implementing innovative strategies. This study surveyed 120 randomly selected farmers under the age of 40 [22].

Another study on the entrepreneurial behavior of mango farmers in Majalengka District, West Java Province, surveyed 100 respondents who relied on mango farming as their primary income source. The results indicate that a portion of these farmers (15%) operate mango agribusiness with an entrepreneurial focus, aimed at income generation and business development, while the majority (85%) remain income-oriented without an entrepreneurial vision for expanding their business [23].

3.2.6 Relationship between Farming Performance and Entrepreneurial Character

Farming performance is defined as the efforts made by farmers to demonstrate their best work in their farming activities. Research in Bangladesh has shown that entrepreneurial character positively influences business success [24]. In another study examining the relationship between entrepreneurial characteristics and competence among dairy farmers in Bogor

Regency, findings reveal a correlation between entrepreneurial character and competence, indicating that enhancing farmers' entrepreneurial character is essential for improving their entrepreneurial competence [25].

In this study, farming performance is measured by net revenue and profit, which vary among farmers depending on factors such as land size and production outcomes. Table 4 presents data showing that six farmers with a low average income of IDR 1,129,977.8 also exhibit very weak entrepreneurial character. This low income may be due to a tendency among these farmers to give up easily when faced with challenges instead of persisting. Conversely, farmers with a relatively high income of IDR 7,806,204.5 exhibit a strong entrepreneurial character. These farmers are resilient in managing their farms, maintain effective communication with other farmers and middlemen, and stay well-informed on market prices and cultivation techniques. Thus, the stronger the entrepreneurial character, the higher the income, indicating successful farming outcomes.

Table 4. Income and Profit Results of Staple Food Farming Based on Entrepreneurial Character of Farmers in DIY

Farming Performance	**Level of Entrepreneurial Character**				
	Very Weak	**Weak**	**Quite**	**Strong**	**Very Strong**
Level of Net Revenue (IDR)					
Low			-	-	-
Currently	1,129,977.8	1,476,085.3	1,846,059.8	3,304,4009.6	-
High	-	-	-	-	7,806,204.5
Level of Profit (IDR)					
Low	436,481	860,535.8	-	-	-
Currently	-	-	1,664,976.1	3,113,385.8	-
High	-	-	-	-	7,625,818.6

Similarly, profit levels among farmers are directly proportional to their level of entrepreneurial character. Farmers with very weak entrepreneurial characters tend to achieve the lowest profit levels, while those with very strong entrepreneurial characters attain significantly higher profits. Furthermore, the entrepreneurial character of farmers shows a positive correlation with their farming success, with key traits such as self-confidence, future orientation, responsibility, and leadership playing a significant role in successful farming operations [14, 21].

To analyze the relationship between farming performance and the entrepreneurial character of staple food farmers in the Special Region of Yogyakarta (DIY), the study employs Spearman Rank correlation analysis using SPSS software.

Table 5. Results of Spearman Rank Correlation Analysis on Farming Performance with Entrepreneurial Character of Staple Food Farmers in DIY

Farming Performance	**Correlation coefficient**
Net Revenue	0.552**
Profit	0.693**

As shown in Table 5, income and profits are related to the entrepreneurial character of staple food farmers in the Special Region of Yogyakarta (DIY). The farming performance coefficient for income is 0.552, indicating a medium-level, positive correlation between income and entrepreneurial character. Additionally, the farming performance coefficient for profit is 0.693, signifying a strong, positive correlation between profit levels and the entrepreneurial character of these farmers. This suggests that farming performance, represented by both income and profit, positively correlates with the entrepreneurial character of staple food farmers in DIY. Thus, the stronger the entrepreneurial character of these farmers, the more adept they are in managing their farming activities effectively.

4 Conclusions and Recommendations

4.1 Conclusion

The study results indicate that staple food farming in the Special Region of Yogyakarta (DIY) yields an average net revenue of IDR 1,837,258.08, while the average profit earned by staple food farmers is IDR 1,248,437.08. The entrepreneurial character of these farmers falls into the strong category, with an average score of 3.83. Among the five indicators of entrepreneurial character, leadership scores the highest, while business networking scores the lowest. Farming performance shows a positive correlation with entrepreneurial character, suggesting that the stronger a farmer's entrepreneurial character, the higher the income and profit generated.

4.2 Recommendation

Staple food farmers in the Special Region of Yogyakarta (DIY) should keep records of their farming expenses. This practice allows them to track input costs accurately, ensuring that watermelon farmers, in particular, can effectively monitor their earnings. Indicators suggest that the current business network among these farmers is weak; therefore, government intervention is necessary to help revitalize the role of food farmer groups in DIY. This support could be provided through counseling and training programs focused on strengthening and expanding business networks, equipping farmers with the skills and connections needed for more sustainable operations.

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