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DETERMINANTS OF FARMERS' INTEREST IN CULTIVATING HERBAL CROPS IN THE SPECIAL REGION OF YOGYAKARTA: A STUDY ON MOTIVATIONAL AND ECONOMIC INFLUENCES

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ABSTRACT

Herbal plants are horticultural commodities rich in health benefits. In DI Yogyakarta, these plants are frequently used to make traditional herbal medicine (jamu), serving as natural remedies for the community. Despite having significant land amounts and relatively good production levels, the overall yield of DI Yogyakarta's herbal plants remain suboptimal. This is attributed to the low number of farmers and their low time allocation for cultivation, which stemmed from decreasing interest among farmers in herbal plant cultivation, influenced by time constraints and economic challenges. Identifying factors that could increase farmers' interest in herbal plant cultivation is essential to enhance interest. This study aims to analyze how motivation, needs, family support, availability of facilities, ease of cultivation, production capacity, and quality, price stability, and income influence farmers' interest in cultivating herbal plants in DI Yogyakarta. The research was conducted from April 2024 to May 2024. This research used a quantitative survey method. The samples were 20 farmers (KT Lombok Ijo), 15 farmers (KWT Sekar Kenanga), and 22 farmers (KWT Sumber Rejeki). Data analysis employed descriptive analysis and multiple linear regression. Results showed that needs and price stability affected farmers' interest in cultivating herbal plants in DI Yogyakarta, indicating that the fulfillment of primary needs and price stability during weather changes proven to affect farmers' interest in cultivating herbal plants. DI

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Yogyakarta's government should boost farmers' interest by aligning it with the actual conditions faced by farmers.

Keywords: Agricultural Policy, Farmer Motivation, Herbal Crops, Horticulture, Price Stability

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INTRODUCTION

Herbal plants, known for their medicinal benefits, have gained popularity since the Covid-19 pandemic, driven by a societal shift towards a healthier, 'back to nature' lifestyle, as well as the public's awareness of the use of herbal plants as natural remedies to enhance the body's immunity against Covid-19. People are increasingly aware of their potential as alternative healing materials and body resistance enhancers, and they are widely consumed for a healthier lifestyle (Angelina et al., 2020). The popularity of herbal plants also arises from the advantages of herbal medicines over synthetic drugs and their health benefits. Herbal plants exhibit low side effects and can serve as an alternative to expensive synthetic drugs (Ahad et al., 2021). For those who are affected by COVID-19, consuming herbal plants as natural remedies can offer antiviral benefits, reduce inflammation, and boost immunity; for those not affected by COVID-19, consuming herbal plants can enhance body wellness (Lim et al., 2021; Natalia et al., 2022).

The popularity of herbal plants as natural remedies has made them a popular commodity for domestic and international consumption. The global demand for herbal/medicinal plants now reaches 1.2 million tons, increasing at an average rate of 6%-7% annually (Ariyanto & Indaryani, 2022). The WHO also estimates that, at present, approximately 80% of the global population consumes herbal plants to maintain health (WHO, 2019). This notable consumption of herbal plants is also observed in Indonesia. According to Kementerian Kesehatan (2022), 79% of Indonesia's 270 million people consume processed herbal plants in traditional medicine.

As the global demand for herbal plants continues to grow, this trend is mirrored in Indonesia, particularly in regions like The Special Region of Yogyakarta (DI Yogyakarta) Province. DI Yogyakarta is a province renowned for its herbal plant products, particularly jamu. Jamu has gained widespread recognition among Indonesian people (Novrian, 2021). DI Yogyakarta Province is a pioneer of Indonesia's famous herbal plant products and has extensive

harvest land for herbal plants. DI Yogyakarta's area of herbal plant harvest land is 692.37 hectares (Badan Pusat Statistik, 2022). The DI Yogyakarta's fairly extensive herbal plant harvesting land makes it one of the provinces with a fairly good production volume of herbal plants. The amount of herbal plant production in the DI Yogyakarta Province in 2022 is 17,292 tons (Badan Pusat Statistik, 2022). This fairly good production volume is attributed to the extensive harvest land and the suitability of the land. The suitability of the land is driven by the characteristics of DI Yogyakarta, an area with high rainfall due to its tropical climate and rich volcanic material due to the activity of Mount Merapi. Volcanic soil has good potential for agricultural production because of its rich nutrient content (Yatno et al., 2016). The high intensity of rainfall increases the degradation of nutrient content from volcanic rocks, thereby enriching the soil's nutrients, which in turn enhances agricultural production (Gani et al., 2021). In addition to land suitability, sustained demand from the community in DI Yogyakarta also plays a role. This is because herbal products like traditional medicine (jamu) have become local wisdom regarding alternative treatment. For most Indonesians, jamu symbolizes local wisdom in maintaining health (Widjaja, 2024). Consequently, this sustained demand results in high production volume to meet the demand.

Despite the favorable growing conditions and the cultural significance of herbal plants in DI Yogyakarta, the production level of DI Yogyakarta's herbal plants in 2022 is considered less than in 2018, which 2018 is 18,264 tons. The problem is not limited to the amount of herbal plant production, which has yet to reach its peak in 2018, but also includes problems related to the low production of herbal plants compared to other horticultural plants in the same region. The production of seasonal vegetable and fruit plants in the DI Yogyakarta Province in 2022 was 108,785 tons; annual fruit and vegetable plants were 286,254 tons. Meanwhile, there were 17,292 tons of herbal plants (Badan Pusat Statistik, 2022). This lesser amount of herbal plant production in 2022 could indicate that farmers' interest in cultivation is low. The number of farmers interested in cultivating herbal plants in the DI Yogyakarta Province is only 33,609 people, compared to 470,423 total horticultural farmers, or 7.14% of the total number of horticultural plant farmers in the province (Badan Pusat Statistik, 2013).

These production level problems impact the local economy and risk undermining the traditional use of herbal plants in health practices. Understanding the determinants of farmers' interest is therefore critical to reversing this trend and ensuring the sustainability of herbal plant cultivation in the region. One determinant that can help reverse those problems is the government's effort to fulfill the availability of facilities/infrastructure that can support the cultivation of herbal plants, such as transportation, marketing, capital, energy, production facilities, and market price guarantee. This is evidenced by the farmers in Desa Pekandangan Barat, where the availability and

fulfillment of production facilities in the form of water supply, which farmers utilize for cultivating herbal plants, has led to a high interest among farmers in cultivating herbal plants in West Pekandangan Village (Meilani et al., 2022).

In DI Yogyakarta, efforts to fulfill the availability of facilities/infrastructure have been made in the form of capital provided to farmer groups. However, based on interviews with farmers cultivating herbal plants in DI Yogyakarta, namely those in the successful farmer groups, such as Farmer Group (KT) Lombok Ijo, Women's Farmer Group (KWT) Sekar Kenanga, and Women's Farmer Group (KWT) Sumber Rejeki, it is known that the fulfillment of facilities/infrastructure alone is not enough. This is evidenced by the constant or decreasing number of farmer members, even though they have received capital to develop their cultivation. This highlights that other factors beyond facility fulfillment also play a role in farmers' interest in cultivating herbal plants. Interest is affected by internal factors like motivation and needs and external factors like family and availability of infrastructure/facilities (Reber & Reber, 2010). Ease of cultivation, production, price stability, and income can also affect farmers' interests (Arianti et al., 2020; Dewi & Jumrah, 2023; Firmansyah, 2020; Arimbawa & Rustayuni, 2018).

This study aims to analyze the effect of factors of motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality, price stability, and income that affect farmers' interest in cultivating herbal plants in DI Yogyakarta Province.

RESEARCH METHOD

Time and Location

The research was conducted from April 2024 to May 2024 on farmer members of the Lombok Ijo Farmer Group (KT Lombok Ijo) in RT 13/RW 04, Demangan Village, Gondokusuman District, Yogyakarta City, The Special Region of Yogyakarta Province, then on farmer members of the Sekar Kenanga Women's Farmer Group (Kelompok Wanita Tani = KWT Sekar Kenanga) in Ngelosari Hamlet, Srimulyo Village, Piyungan District, Bantul Regency, The Special Region of Yogyakarta Province, and on farmer members of the Sumber Rejeki Women's Farmer Group (KWT Sumber Rejeki) in Karanglo Hamlet, Sidomoyo Village, Godean District, Sleman Regency, The Special Region of Yogyakarta Province.

The location selection was done deliberately (purposive), guided by the reasoning that the KT Lombok Ijo, KWT Sekar Kenanga, and KWT Sumber Rejeki are high-achieving farmer groups. The achievements of the KT Lombok Ijo include winning the city-level farmer group competition in Yogyakarta and the healthy herbal concoction competition organized by PKK DI Yogyakarta and PT. Bintang Toedjoe, and winning the competition for using yard land with family

herbal medicinal plants (TOGA) organized by PKK DI Yogyakarta and PT. Bintang Toedjoe. The achievements of the KWT Sekar Kenanga include winning the herbal plant competition at the Bantul Regency level and the herbal plant competition at the Special Region of Yogyakarta Province level. The achievements of the KWT Sumber Rejeki include winning the farmer group competition at the Sleman Regency level. These high-achieving farmer groups are selected because their achievements reflect the farmers' interest in cultivation. Interest strongly influences achievements in work/activities because with interest, farmers will strive to complete their work/activities well, and the excellent work/activities carried out can result in achievements (Mahdiana, 2018).

The location selection was also based on the characteristics of the research location that already met the criteria for the research location (fit in). The research location criteria are the farmer group consisting of several members who cultivate the same commodity and the farmer group that makes herbal plants their primary commodity. KT Lombok Ijo is a farmer group consisting of 20 farmers who cultivate herbal plants in their home yards and on unused land around the head of the head of the farmer group. KWT Sekar Kenanga is a group of 15 female farmers who cultivate herbal plants in the village head's houseyard. KWT Sumber Rejeki is a group of 22 female farmers who cultivate herbal plants on land around the head of the head of the farmer group.

Sample Determination and Collection

The population in this study consists of farmer members from the Farmer Group (KT) Lombok Ijo, Women Farmer Group (KWT) Sekar Kenanga, and Women Farmer Group (KWT) Sumber Rejeki, totaling 57 people. The sample collection method in this study was a census method (total sampling), wherein every individual within the population is utilized as a sample (Sugiyono, 2019). The selection of sample collection was done through total sampling because the number of farmer members from KT Lombok Ijo, KWT Sekar Kenanga, and KWT Sumber Rejeki does not exceed 100 members. If the population size is less than 100 people, then the sample size is taken in its entirety, but if the population size is more significant than 100 people, then 10%-15% or 20%-25% of the population size can be taken (Arikunto, 2017). The sample size comprised 57 farmers, subdivided into 20 farmers from KT Lombok Ijo, 15 from KWT Sekar Kenanga, and 22 from the KWT Sumber Rejeki.

Sources and Techniques of Data Collection

The data sources utilized in this study are derived from primary and secondary data. Primary data includes farmers' age,' gender, education, and information about motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality,

price stability, and income from cultivating herbal plants. Primary data was obtained through structured interview activities conducted directly using a closed questionnaire list of respondents who are members of KT Lombok Ijo, KWT Sekar Kenanga, and KWT Sumber Rejeki. The initial interview activity was conducted with the respondents of KWT Sekar Kenanga through an individual question-and-answer process that referred to a list of closed questionnaire questions prepared by the researcher. Then, after a few days, the interview activity continued with the respondents of KT Lombok Ijo through a similar question-and-answer process conducted with the respondents of KWT Sekar Kenanga. Subsequently, after a few days had passed from the interview activities at KWT Sekar Kenanga and KT Lombok Ijo, the interview activity was continued with the respondents of KWT Sumber Rejeki through a similar question-and-answer process that had been conducted with the respondents of KWT Sekar Kenanga, and the respondents of KT Lombok Ijo. The questionnaire was designed based on the indicators of each variable. The validity of the questionnaire was tested using validity and reliability tests on data obtained from 30 farmers from the Women Farmers Group (KWT) Mekar located in Ngalian Hamlet, Widodomartani Village, Ngemplak District, Sleman Regency, Special Region of Yogyakarta Province. An item in the questionnaire in the validity test can be considered valid if the significance value is ≤ 0.05 (Kitagawa, 2015; Ghozali, 2018). Variables in the questionnaire statement are said to be reliable if the Cronbach's Alpha value is ≥ 0.6 (Priyatno, 2016).

Secondary data was obtained through literature studies with data sources including journals, books, proceedings, theses, and dissertations relevant to the research. The scope of the secondary data, in detail, included data on the demand for herbal plants, the area of harvest land, the amount of production, the number of farmers, and theories of interest for herbal plant farmers sourced from the Google Scholar platform, as well as website from institutions and agencies, such as Badan Pusat Statistik and World Health Organization (WHO).

Data Analysis Method

The data analysis methods used in this study are the descriptive and multiple linear regression methods. The selection of descriptive analysis was conducted to describe the object and its regression value, for which data has already been obtained in more depth, based on the facts that occurred at the research location. Descriptive analysis is a method of data analysis by describing or illustrating the collected data as it is (Sugiyono, 2019). The descriptive analysis method is used to analyze the respondent's profile, as well as the respondent's statements related to regression value sourced from multiple linear regression analysis, which consists of motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality,

price stability, and income towards the interest of farmer group members to cultivate herbal plants.

The multiple linear regression analysis method is used as a hypothesis testing instrument to determine the effect of motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality, price stability, and income on the interest of farmer group members to cultivate herbal plants. The selection of multiple linear regression analysis was conducted to obtain the significance (affect) value of several independent variables tested against its dependent variable. Multiple linear regression analysis determines the effect between two or more independent variables with one variable (Uyanık & Güler, 2013; Priyatno,2016).

The data must meet the Best, Linear, Unbiased, and Estimated (BLUE) criteria before using multiple linear analyses. The fulfillment of the BLUE criteria is carried out through a normality test with the condition that the data is usually distributed, that is, the significance value is ≥ 0.05; a multicollinearity test with the condition that the data does not experience multicollinearity, that is, if the VIF value is < 10 and the tolerance value is < 0.1; a heteroscedasticity test with the condition that the model does not experience heteroscedasticity, that is, if the scatterplot pattern does not form a regular pattern (wavy widening then narrowing), then there is no clear pattern such as points scattered above and below the number 0 on the Y-axis (Ghozali, 2018).

Data that has met the BLUE criteria then undergoes a hypothesis test using the R-squared test, F-test, and t-test. The R-squared value is said to be strong if it is > 0.67, moderate if it is > 0.33 or < 0.67, and low if it is > 0.19 or < 0.33 (Chin, 1998). The acceptance criteria for the Ha from the F-test is if the significance value is ≤ 0.05; the acceptance criteria for the Ha from the t-test is if the significance value is ≤ 0.05. The regression equation used in this study is as follows.

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + e$$

Description:

Y	=	Interest of farmers in cultivating herbal plants (score)
a	=	Constant
b	=	Regression coefficient
X_1	=	Motivation (score)
X_2	=	Needs (score)
X_3	=	Family support (score)
X_4	=	Availability of facilities/infrastructure (score)
X_5	=	Ease of cultivation (score)
X_6	=	Production capacity and quality (score)
X_7	=	Price stability (score)
X_8	=	Income (score)
e	=	Standard error

RESULT AND DISCUSSION

Respondents Characteristics Based on Age

The age of respondents in this study can be classified into three groups: age < 15 years, classified as non-productive age; age 15 – 60 years, classified as productive age; and age > 60 years, classified as non-productive age (Hakim, 2020). The number and percentage of research respondents based on productive and non-productive age groups can be seen in Table 1.

Table 1. Number and Percentage of Research Respondents Based on Age

Age (Years)	Number (People)	Percentage (%)
< 15	0	0.00
15 – 60	45	78.95
> 60	12	21.05
Total	57	100.00

Source: Primary data, 2024

Based on Table 1., it was found that the respondents of the study were dominated by farmers of productive age (15 – 60 years). The productive age influences the emergence of enthusiasm and passion of farmers to cultivate herbal plants. This was proven by the statement of one of the respondents of productive age (21 years old). According to her statement, she feels enthusiastic about carrying out the cultivation of herbal plants. She added that if based on a scale of 0 – 5, her enthusiasm is at scale 4. She added that enthusiasm arises when cultivating herbal plants because the activity will yield herbal plant products that can be used as beauty products, medicines, or additional cooking ingredients. The herbal plant products include aloe vera, which can be used as a hair mask or can also be used as an alternative medicine to relieve blister wounds, then turmeric, which can be used as an alternative medicine to relieve stomach ulcers and menstrual pain or also can be used as a spice in cooking, then ginger which can be used as an alternative medicine that can alleviate the symptoms of flatulence or also can be used as a spice in cooking. This is in line with the statement of (Setiyowati et al., 2022), which states that the productive age group generally has high enthusiasm and passion for running their farming business.

The interest in productive activities of cultivating herbal plants is described by a respondent of productive age (40 years old) with a solid desire to voluntarily participate in the cultivation of herbal plants and their processing. She added that if counted, the cultivation and processing of herbal plants that she did voluntarily amounted to more than two times. She further added that her strong desire was based on the motivation to continue increasing her knowledge of herbal plants, which includes the correct cultivation and processing methods.

For her, the insight related to the cultivation and processing of these herbal plants is expected to make her a more helpful individual in her family and community. This is in line with the opinion of (Sudrajat et al., 2022), which states that productive age influences a person's desire to carry out productive activities, such as improving skills and knowledge. According (Suyono & Hermawan, 2013) the desire and emergence of creativity in productive activities are supported by better knowledge and insights from the productive age group, and also they feel a high sense of responsibility towards the tasks they undertake.

Respondents Characteristics Based On Gender

Gender is a factor that can affect farmers' interest in and choice of cultivating a certain type of plant. Table 2 shows the number and percentage of research respondents based on gender characteristics.

Table 2. Number And Percentage Of Research Respondents Based On Gender

Gender	Number (People)	Percentage (%)
Male	6	10.53
Female	51	89.47
Total	57	100.00

Source: Primary data, 2024

Based on Table 2., it was found that female farmers dominated the respondents. The high dominance of the female gender in this study is partly due to the selection of locations that included two women's farming groups in the sample. Regardless of the inclusion of the two women's farming groups, the dominance of the female gender still occurred in KT Lombok Ijo, whose members are not only female. The female gender was recorded as many as 14 people or 70% of the total farmer respondents of KT Lombok Ijo, which amounted to 20 people. This number contrasts with male farmer respondents, where only six people, or 30% of the total farmer respondents of KT Lombok Ijo. This is in line with the research results of (Widyanata et al., 2021), which state that respondents in the cultivation of herbal plants are primarily female.

The high dominance of women interested in cultivating herbal plants is due to the role of women who strive to provide easily accessible food and natural medicines for their families. This is in response to the statements of several female farmers from KT Lombok Ijo, KWT Sekar Kenanga, and KWT Sumber Rejeki, who farm at their homes. They stated that the cultivation of herbal plants is not merely done to fill their spare time but also to fulfill their and their family's needs for additional ingredients in cooking, food, herbal medicine, and as first aid for sick family members. An example of the fulfillment of food needs due to the cultivation of herbal plants carried out by these female farmers is the need

for herbal drink preparations such as wedang jahe, wedang uwuh, and wedang seruni. An example of the fulfillment of first aid needs for sick family members is if a family member has a cough, they can be given a mixture of lime and soy sauce or a drink mixture of ginger and lemongrass. This is in line with the opinion of (Bertham et al., 2011), which states that women play a role in the effort to provide easily obtained food and herbal medicines for their families. And also in line with the opinion of (Rahmah et al., 2013), which states women role in various aspect are increasing especially their effort to improve the welfare of their family, this is due to their characteristics such as diligent, conscientious, hardworking, patient, honest and tough.

The high dominance of women interested in cultivating herbal plants is also due to the characteristic of herbal plants that do not require extensive land, so female farmers can start cultivating herbal plants in narrow lands around them and make the cultivation of herbal plants their leisure time. This is due to the observations made on the cultivation area owned by KT Lombok Ijo, which is relatively narrow (±90 m2), and the fact that the majority of the gender in this farmer group is female. The minimal size of the cultivation area is due to the herbal plant cultivation zone owned by KT Lombok Ijo, which is classified as a residential zone in urban areas, where the space is relatively narrow. However, the minimal size of the cultivation area owned by KT Lombok Ijo does not diminish the desire of the female farmers from KT Lombok Ijo to cultivate herbal plants. According to their statement, they are happier if the unused narrow area/space is made into productive space, and also make the management of the non-productive land their leisure time activity while at home. This is in line with the opinion stated by (Yani et al., 2020), which states that the cultivation of medicinal plants or spices such as ginger, turmeric (kunyit), aromatic ginger (kencur), curcuma (temulawak) can be done on narrow/limited space, so it can be a strategy in the utilization of limited land to support food resilience.

Respondents Characteristics Based on Education

The education of respondents in this study is divided into four categories, namely Elementary School (SD), Junior High School (SMP), Senior High School (SMA), and Higher Education (Perguruan Tinggi).

Table 3. Number and Percentage of Respondents Based on Education

Education	Number (People)	Percentage (%)
Elementary School	1	1.75
Junior High School	10	17.54
Senior High School	35	61.41
Higher Education	11	19.30
Total	57	100.00

Source: Primary data, 2024

Based on Table 3., it was found that the respondents were dominated by farmers with senior high school education, followed by farmer respondents with higher education. This indicates that most farmer respondents already have a good level of education, as proven by the fulfillment of the minimum 12-year compulsory education program launched by the Indonesian Government. The fulfillment of the compulsory education program for 12 years indicates that the farmer respondents have been equipped with basic knowledge that can support their activities, both during the cultivation of herbal plants and other activities. This is in line with the statement expressed by (Setiyowati et al., 2022), which states that formal education aims to increase a person's knowledge, attitudes, and skills so it can influence a person's way of thinking and perception to convey knowledge in decision making, problem-solving and in taking action.

The excellent level of education that farmer respondents have pursued indeed affects the amount of knowledge that can be obtained and understood by these farmer respondents. The knowledge includes exposure to information related to the advantages of cultivating herbal plants that farmers can get from various sources. According to the statement of a farmer respondent, the information she obtained related to the advantages of herbal plants includes seeds that can be planted quickly, harvest results can be stored for a long time, selling prices that tend to be stable and relatively high, and some herbal plants such as turmeric, and lemongrass do not produce waste. The farmer's interest in and consideration of starting to cultivate herbal plants emerged through exposure to information related to these advantages. This is in line with the opinion of (Kemala & Alawiyah, 2016), which states that a good level of farmer education will make the information obtained more quickly accepted and understood by the farmer. The statement is reinforced by the opinion from (Muntasiroh et al., 2023) that a farmer's knowledge and level of education affect the farmer's decision.

The excellent level of education that the farmer respondents have pursued also improves the attitudes that farmer respondents have towards environmental problems. This was proved by the statement of a farmer respondent who is considered well-educated (senior high school). She stated that many green and agricultural lands have begun to be converted into shopping buildings, warehouses, and housing around her herbal plant's cultivation land. She added that the land conversion incident made her sad because it increasingly reduced the land that could be cultivated and the greenness that could be preserved. She also added that the difficulty of finding agricultural lands recently made her continue to strive to cultivate herbal plants, not only to get the goodness of herbal plants in terms of treatment but also as an effort to be able to maintain the "green" nature and sustainability of the surrounding environment. This is in line with the statement of (Wulandari et al., 2018), which states that the

level of education will affect the knowledge and attitudes of the community related to various things. And also in line with the statement of (Hnatyuk et al., 2024), which states that education fosters the community understanding of sustainable development and fosters an active community participation in solving environmental issues.

Factors Affecting Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

R-Squared Test

Based on the analysis, the R-squared (R2) value from motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity, quality, price stability, and income is 0.499. The R^2 value of 0.499 suggests that the obtained value is of moderate significance, as it lies within the range of 0.33 and 0.67. The R^2 value is said to be moderate if it is > 0.33 or < 0.67 (Chin, 1998). This indicates that the independent variables (motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality, price stability, and income) simultaneously influence the dependent variable (interest) by 49.9%. The remaining 50.1% is influenced by other variables not examined in this study, such as water availability, experience, income, and education. Variables that can affect farmers' interest in cultivating herbal plants (medicinal chili) in Pekandangan Barat Village include water availability, while variables affecting farmers' interest in cultivating herbal plants (patchouli) in Aceh Jaya Regency include factors such as experience, income, and education (Meilani et al., 2022; Anggraini et al., 2019).

F-Test

Based on the analysis conducted, the significance value of the independent variables (motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality, price stability, and income) simultaneously is 0.000. The significance value result, which is less than 0.05, concludes that H0 is rejected and Ha is accepted, or there is a simultaneous influence of motivation, needs, family support, availability of facilities/infrastructure, ease of cultivation, production capacity and quality, price stability, and income on the interest of farmer group members in cultivating herbal plants in TheSpecial Region of Yogyakarta Province. This means that if the farmer members of the farmer group in The Special Region of Yogyakarta Province have a high motivation to cultivate herbal plants, a high level of need fulfillment, family that impacts the desire to cultivate herbal plants, adequate level of facilities/infrastructure availability for cultivating herbal plants, a high ease of cultivating herbal plants, good capacity and good quality

of herbal plant production, stable herbal plant price, but poor income from the harvest of herbal plants, it will decrease the interest of farmer group members to cultivate herbal plant.

t-Test

Based on the analysis conducted, the results of the t-test are presented in Table 4.

Table 4. Results of The t-Test

Variables	Regression Coefficients	Sig.
Constant	1.418	0.498
Motivation (X_1)	0.106	0.380
Needs (X_2)	0.397	0.021
Family Support (X_3)	0.086	0.406
Availability of Facilities/Infrastructure (X_4)	0.200	0.158
Ease Of Cultivation (X_5)	0.073	0.609
Production Capacity and Quality (X_6)	-0.174	0.188
Price Stability (X_7)	0.346	0.001
Income (X_8)	0.005	0.958

Source: Primary data, 2024

Effect of Motivation on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable motivation partially obtained is 0.380. The significance value is more significant than 0.05 (0.380 > 0.05), indicating that Ha is rejected or partially there is no effect of motivation on the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. This contrasts with Amalia's opinion (2015), which states that motivation significantly affects the interest in farming and continuing family farming.

Based on Table 4, the regression coefficient value of the motivation variable is obtained at 0.106. This value indicates that every increase of 1 unit from the motivation variable will affect the interest variable by 0.106 units. The positive regression coefficient value shows that the motivation and interest variables are interrelated. This is in line with respondent farmers' feelings, where they feel that their motivation for cultivating herbal plants is relatively low due to the busyness factor. As a result, their interest in cultivating herbal plants also decreases.

The motivation variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is caused by the factor of some respondent farmers who do not fully feel or even never feel

the desire to continue their herbal cultivation activities is based on the motivation to earn additional income. This is strengthened by the interview results with several respondent farmers, where most of them stated that the income/revenue they get from cultivating herbal plants is only 1 – 49%, while the rest they get from the results of other work/business that does not involve herbal plant cultivation. The interview results were also strengthened by the statement of most respondent farmers, who stated that they were not satisfied with the income/revenue they got from cultivating herbal plants. This is in line with the opinion of (Baguna and Kaddas, 2021), which states that the income from herbal plants is more minor than plantation and crops cultivated by farmers.

The motivation variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is also caused by the busyness of respondent farmers, which reduces their motivation to cultivate herbal plants, especially on weekdays. This is because some respondent farmers, such as those from KT Lombok Ijo, are also active workers, so the time they need to cultivate herbal plants is only available in the afternoon or on weekends. This is experienced by a respondent farmer from KT Lombok Ijo, a teacher in one of the educational institutions, so she has to strategize and manage her time well to teach and cultivate herbal plants. In fact, in some studies, farmers' motivation has always been an essential factor that affects their performance in farming (Yang et al., 2023).

Effect of Needs on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable needs partially obtained is 0.021. The significance value is less than 0.05 (0.021 < 0.05), indicating that Ha is accepted or partially there is an effect of needs on the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. This is in line with (Saputra, 2018), which states that the needs a person wants to fulfill lead that person to be interested in doing something.

Based on Table 4, the regression coefficient value of the needs variable is obtained at 0.397. This indicates that every increase of 1 unit from the needs variable will affect the interest variable by 0.397 units. The positive regression coefficient value shows that the needs and interest variables are interrelated. This is in line with the facts on the respondent farmers, where most respondents feel that the success rate of fulfilling their primary needs increases as a result of cultivating herbal plants. This impact makes most farmers increasingly interested in cultivating herbal plants based on the desire to meet primary needs.

The needs variable that affects the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is based on the fulfillment of the needs of respondent farmers while they cultivate herbal plants. These

needs include clothing, food, and shelter, where most respondent farmers state that 1 – 2 of these needs have been met due to cultivating herbal plants. This is proven by the statement of one of the respondent farmers from KWT Sekar Kenanga, who said that by cultivating herbal plants, two primary needs are met: clothing and food. According to her, this food need is fulfilled due to cultivating herbal plants at home. She added that when she wants to cook and needs herbal plants as a spice, she can take herbal plants like turmeric and put the turmeric as a spice. The same thing also happens with the fulfillment of food needs that involve drinks; with herbal plants at her home, when she needs herbal drinks like ginger, she can immediately take the ginger plant and process it directly.

The respondent farmer added that cultivating herbal plants together in a farmer group also indirectly makes her obtain clothing needs, namely a t-shirt and veil that she got at the time of profit sharing. Although it does not commonly happen because profit sharing is only done when the sale of processed herbal plants has met the target, it is enough to make her happy and grateful. This is in line with the opinion of (Adri, 2022), which states that the cultivation of herbal plants fulfills the primary needs of its farmers, which includes clothing, food, and shelter.

Effect of Family Support on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable family support partially obtained is 0.406. The significance value is more significant than 0.05 (0.406 > 0.05), indicating that Ha is rejected or partially there is no effect of family support on the interest of farmer group members in cultivating herbal plants in the Special Region of Yogyakarta Province. This is in line with the opinion of (Sophan et al., 2022), which states that there is no effect between family support and a person's interest in doing work/activities in agriculture.

Based on Table 4, the regression coefficient value of the family support variable is obtained at 0.086. This indicates that every increase of 1 unit from the family support variable will affect the interest variable by 0.086 units. The positive regression coefficient value shows that the family support and interest variables are interrelated. This is in line with the facts about the respondents' farmers, where most respondents feel that the family's role in cultivating herbal plants is relatively low. As a result of the low role of the family, their interest in cultivating herbal plants also decreases.

The family support variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is because most respondent farmers feel that the family is not the only most crucial source of information in farming herbal plants or it can be said that other sources play a more significant role in information dissemination. According to a respondent farmer from KWT Sumber Rejeki, meaningful information about cultivating

herbal plants is obtained from more than just the family. She added that information is now straightforward to access and is diverse. One of the most important sources of information is the internet. This is because the Internet is one of the most comprehensive sources of information; various things that are not yet known can be searched through the internet. This aligns with the opinion (Prayoga, 2018) that currently, farmers can use the Internet to search for agricultural information, such as information related to cultivation, fertilization, harvesting, and marketing of certain commodities.

Another respondent farmer, who comes from KWT Sumber Rejeki, made a similar statement. She stated that other sources also play a role in becoming the essential source of information related to the cultivation of herbal plants besides the family, namely neighbors and friends. According to her, the closeness between her and her neighbors or friends is one of the factors that makes her get information from them. This is because the presence of trust between each other will create a sense of comfort in a person, and then that comfort can lead to the willingness of those people to provide information that they know and believe is true. This trust and closeness factor is also the basis of how the information obtained from neighbors and friends becomes more critical and trustworthy. This is in line with the opinion of (Erlindawati, 2015), which states that the source of information in cultivation comes not only from the family.

Effect of Availability of Facilities/Infrastructure on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4, the significance value of the independent variable availability of facilities/infrastructure partially obtained is 0.158. The significance value is more significant than 0.05 (0.158 > 0.05), indicating that Ha is rejected or partially there is no effect of the availability of facilities/infrastructure on the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. This is in line with the opinion of (Susanti et al., 2022), which states that there is no influence between infrastructure and the cultivation of herbal plants in the form of cardamom.

Based on Table 4., the regression coefficient value of the availability of facilities/infrastructure variable is obtained at 0.200. This indicates that every increase of 1 unit from the availability of facilities/infrastructure variable will affect the interest variable by 0.200 units. The positive regression coefficient value shows that the availability of facilities/infrastructure and interest variables are interrelated. This is in line with the facts on the respondent farmers, where most respondents feel that the level of fulfillment of facilities/infrastructure that suits their needs at the location of herbal plant cultivation is relatively low. This lowness decreases their interest in cultivating herbal plants based on the desire to use these facilities/infrastructure.

The availability of facilities/infrastructure variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is due to most respondent farmers stating that most of the available facilities/infrastructure are not in line with their needs to cultivate herbal plants. One of the respondent farmers who representing the farmer group stated that the facilities/infrastructure that she and other farmers get from the Yogyakarta City Government through the Yogyakarta City's Department of Agriculture are not sufficient for them, so they sometimes still have to fulfill their own needs for their facilities/infrastructure. The facilities/infrastructure they get from the Yogyakarta City's Department of Agriculture are in the form of assistance for planting seeds and planting media.

Based on additional statements from the farmer, it was found that recently, the Yogyakarta City's Department of Agriculture has not assisted them, so their cultivation activities are quite hampered due to the fulfillment of plant seeds and planting media that they have to do themselves. As a result, in addition to the increased costs to meet all cultivation needs that the government previously bore, the income they get from cultivating herbal plants decreases. The decrease in income is the impact of the difficulty of fulfilling some necessary cultivation needs to support production (fertilizers, pesticides) due to the use of cost funds to meet the needs of plant seeds and planting media. This is in line with the opinion of (Awaluddin & Hendra, 2018), which states that the provision of facilities/infrastructure is required to be able to adjust to existing needs and then later, based on an assessment of these needs, mature planning, organizing, implementing, and supervision is carried out.

Effect of Ease of Cultivation on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable ease of cultivation partially obtained is 0.609. The significance value is more significant than 0.05 (0.609 > 0.05), indicating that Ha is rejected or partially there is no effect of ease of cultivation on the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. This is in line with the opinion of (Hamyana et al., 2020), which states that the ease of cultivation, which is a characteristic of innovation, does not affect the interest of farmers to cultivate.

Based on Table 4., the regression coefficient value of the ease of cultivation variable is obtained at 0.073. This indicates that every increase of 1 unit from the ease of cultivation variable will affect the interest variable by 0.073 units. The positive regression coefficient value shows that the ease of cultivation and interest variables are interrelated. This is in line with what respondent farmers experienced and felt, where they feel that the cultivation of herbal plants is quite tricky due to the presence of pests that are difficult to eliminate, so this makes

their interest in cultivating herbal plants also decrease if the pests are still present in their herbal plant's cultivation area.

The ease of cultivation variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is due to the presence of several pests or diseases of herbal plants that, according to respondent farmers, are difficult to eliminate, thus complicating the cultivation of herbal plants. According to a respondent farmer from KWT Sumber Rejeki, she feels that the herbal plants she cultivates are often infected by pests or diseases that are difficult to eliminate. According to her statement, one of the pests that infect her herbal plants is snails. She has undertaken efforts to eradicate the snails through routine checks and removal of snails present in her cultivation area. However, these efforts have not successfully resolved the pest issue, as a few days later, upon inspecting her field, she still found the presence of snails therein. She added that the impact of the snail pest attack is that the leaves of the herbal plants she cultivates are damaged due to being gnawed by the pest, so the quality of the harvested herbal plants affected can decrease. The decrease in the quality of the herbal plants she harvests will later result in a decrease in buyer demand and lead to a decrease in the income she receives. She added that she feels less satisfied with her income due to the decrease in her income. The low demand from buyers is because most buyers generally want good quality herbal plant products (good appearance and not looking defective). The issue related to snail pests can be addressed through supportive policies, such as extension programs that educate farmers on efforts to improve pest management. Education related to improving pest management can be implemented by utilizing natural substances that act as natural molluscicides. Natural molluscicides such as garlic extract, nut powder, tobacco powder, tuba root extract, and neem leaf extract (Picardal et al., 2018; Hafsah et al., 2021; Harahap, 2020; Kardinan & Iskandar, 1997; Hasibuan et al., 2021). The selection of natural molluscicides and natural pesticides over chemical ones is due to the characteristics of natural pesticides, such as their biodegradable and non-polluting properties (Kurniawan, 2022).

Another farmer from KT Lombok Ijo has also complained about the difficulty of cultivation due to herbal plant pests. She complained that white lice pests often disturbed the ginger plants she cultivated around her home yard. She added that she had been given plant spray medicine she had bought from the agricultural store, but the pests had not yet disappeared. This certainly has an impact in terms of sales because the income obtained from sales is not maximal. The non-maximal income from the sale of herbal plants is because of the buyer tendency who prefer to buy good quality herbal plant production, so from the beginning, she will sort out which ginger is not affected by pests or prefer to sell other suitable herbal plants that happen to be available such as galangal, kencur, sambiloto, or cat's whiskers. The respondent farmer added that if the herbal

plants affected by the pests are used or processed to become food or drink for her and her family to consume, she also feels reluctant because of their poor appearance and fears it will cause some effects that are not good for health. This aligns with the statement (Sumarwoto et al., 2021) that herbal plants have several pests and diseases.

Effect of Production Capacity and Quality on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable production capacity and quality partially obtained is 0.188. The significance value is more significant than 0.05 (0.188 > 0.05), indicating that Ha is rejected or partially there is no effect of production capacity and quality on the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. This contrasts with the research results of (Kurniawan & Nagoya, 2022), which state that the large amount of herbal plant production makes farmers in North Pontianak District have an excellent interest perception in cultivating herbal plants.

Based on Table 4., the regression coefficient value of the production capacity and quality variable is obtained at -0.174. This indicates that every increase of 1 unit from the production capacity and quality variable will affect the interest variable by -0.174 units. The negative regression coefficient value shows that the relationship between production capacity and quality with interest variables is inversely proportional. This is in line with the facts on the respondent farmers, where some of the respondent farmers feel that the quality of production from herbal plants is relatively low because they do not perform good care, which increases their interest in cultivating herbal plants with good care.

The production capacity and quality variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is due to the frequent changes in the amount of production caused by changes in weather and climate. This aligns with the statement made by a respondent farmer from KWT Sekar Kenanga. She stated that in the cultivation of herbal plants that she undertook, she often encountered problems with changes in the amount of production due to changes in weather and climate. She added that if it could be counted, the frequency of changes in the amount of production over the last three months would be more than four times. According to her, the change in the amount of herbal plant production is due to the increasingly uncertain climate and weather factors. She gave an example of an event a few months ago where climate instability resulted in a prolonged dry season.

As a result of the event, she experienced difficulties in planting and growing herbal plants on her land. This is because the hot temperature and the

intense sunlight caused the soil to dry and even harden, so the soil was difficult to dig and plant on. Meanwhile, on the part of the soil that had previously been grown with herbal plants, the barren and dry soil will make the temperature that is already hot even hotter due to the absence of water or humidity, so this causes the herbal plants she owns to wilt or even die (due to heat stress) if not watered. The respondent farmer then added that if she wanted to continue planting and growing herbal plants during the prolonged dry season, there needs to be some effort, costs, and additional time to water those soils. This is in line with (Nurllah & Iswari, 2019), which states that weather constraint factors significantly affect the production of herbal plant commodities.

The production capacity and quality variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is also due to the poor appearance (quality) and quantity of herbal plant yields obtained by some herbal plant farmers. Based on observations, the poor appearance (quality) and quantity of herbal plant yields are due to the simplicity of the cultivation conducted by most respondent farmers. Simple cultivation has not implemented Good Agricultural Practices (GAP), a certification of agricultural production processes. The systematics of this certification is by providing specific standards that must be met by farmers so that the products produced by these farmers can be classified as GAP-certified products, better known as IndoGAP, numbered SNI 8969:2021.

The standard of GAP itself prioritizes adopting environmentally friendly technology and sustainable production, so the hope is that in addition to benefiting from environmentally friendly cultivation activities, respondent farmers will also be exposed to effective and efficient cultivation technology. The exposure of farmers to effective and efficient cultivation technology is expected to increase the quality and quantity of their herbal plant production. This aligns with the opinion of Khusna (2022), who states that GAP prioritizes adopting advanced environmentally friendly technology, safe-to-consume harvested products, and a sustainable production system. The opinion is strengthened by (Prayoga et al., 2019), which states that agricultural modernization through updating technology in cultivation will increase the effectiveness of farmers' work.

Effect of Price Stability on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable price stability partially obtained is 0.001. The significance value is less than 0.05 (0.001 < 0.05), indicating that Ha is accepted or partially there is an effect of price stability on the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. This is in line with the opinion of

(Setyawan & Sunaryanto, 2019), which states that a stable (fixed) price makes farmers still strive to cultivate horticultural plants.

Based on Table 4., the regression coefficient value of the price stability variable is obtained at 0.346. This indicates that every increase of 1 unit from the price stability variable will affect the interest variable by 0.346 units. The positive regression coefficient value shows that the price stability and interest variables are interrelated. This is in line with the facts on the respondent farmers, where most of the respondent farmers feel that the stability of the selling price of herbal plants is relatively high due to the stable selling price of herbal plants even though there is inflation. The selling price stableness then increases their interest in cultivating herbal plants even though there is inflation. The increasing interest of farmers in cultivating herbal plants, even though there is inflation due to the current inflation, is considered controlled and proportional inflation, so the stability of the selling price of herbal plants is still said to be maintained. This aligns with the statement (Saefulloh et al., 2023) that post-COVID-19, Indonesian inflation is getting better, proving that in 2021 and 2022, Indonesian inflation was recorded at 3.7% and 5.51%, respectively.

Price stability that affects the interest of farmers in cultivating herbal plants is caused by the tendency of the price of herbal plants to remain stable when there is a change in weather. This aligns with the statement of one of the herbal plant farmers from KWT Sekar Kenanga. According to her statement, the frequency of changes in the selling price of herbal plants due to weather factors is 1 – 4 times, or for her; it can be said that changes rarely occur. This is because even though there is the influence of extreme rainy weather, the demand for herbal plant products will remain stable or even increase due to the tendency of people who want to consume food or drinks that are warming. The people believe herbal plants themselves to be a type of plant that can be processed into processed products that, when consumed, will provide a warming effect on the body; examples of processed herbal plants that can warm the body are ginger drink (wedang jahe) and sekoteng. The demand that tends to remain stable or a bit increase makes the selling price of herbal plants tend to be stable, or if there are some changes, the increase does not have too much effect on farmers because generally, increased demand in the rainy season is also followed by an increase in the harvest of herbal plants (if compared to the dry season).

Effect of Income on Farmers' Interest in Cultivating Herbal Crops in The Special Region of Yogyakarta Province

Based on Table 4., the significance value of the independent variable income partially obtained is 0.958. The significance value is more significant than 0.05 (0.958 > 0.05), indicating that Ha is rejected or partially there is no income effect on farmer group members' interest in cultivating herbal plants in The Special Region of Yogyakarta Province. This is in line with the opinion of

(Meilani et al., 2022), which states that there is no effect between income and farmers' interest in cultivating herbal plants in the form of herbal chili (cabe Jammu).

Based on Table 4., the regression coefficient value of the income variable is obtained at 0.005. This indicates that every increase of 1 unit from the income variable will affect the interest variable by 0.005 units. The positive regression coefficient value shows that the income and interest variables are interrelated. This is in line with the facts on farmer group members, where they feel that the income from herbal plants is relatively low due to the strategy of harvesting herbal plants that is not done directly at one time or "prolonged," so this makes their interest to cultivate herbal plants using that strategy also decrease.

The income variable that does not affect the interest of farmers in cultivating herbal plants in The Special Region of Yogyakarta Province is the low percentage of income received by most respondent farmers from cultivating herbal plants. One of the respondent farmers from KT Lombok IJo said that the percentage of the amount of income she receives from cultivating herbal plants is not more than 50% of her total income per month, and the amount of income from cultivating herbal plants is also, according to her, tends to decrease every year. She added that the low income she receives is the impact of the changing trend of the community towards herbal plants. She added again, different from the pandemic times (2020-2021) when people flocked to buy herbal plant products due to the firm belief based on clinical evidence that herbal plants can boost the immune system and can also be a supplement in the healing of COVID-19. According to her, in the last one to two years, she did not find people's enthusiasm to buy herbal plant products as strong as that. Therefore, the decreasing enthusiasm of the people to buy herbal plant products resulted in a decrease in people's demand for herbal plants, which led to a decrease in income from the production of herbal plants she received. This is in line with the opinion of (Baguna & Kaddas, 2021) which states that the income from herbal plants is more minor than plantation and crops cultivated by farmers.

CONCLUSION AND SUGGESTION

Conclusion

The factors affecting farmers' interest in cultivating herbal plants in The Special Region of Yogyakarta Province are needs and price stability factors. Motivation, family support, availability of facilities/infrastructure, ease of cultivation, production capacity, quality, and income factors do not affect the interest of farmer group members in cultivating herbal plants in The Special Region of Yogyakarta Province. The factor of motivation does not have an effect because some of the respondent farmers do not fully feel, or even never feel, the

desire to earn additional income due to their busyness; the factor of family support does not have an effect because most of the respondent farmers feel that the family is not the only most crucial source of information in cultivating herbal plants; the factor of availability of facilities/infrastructure does not have an effect because most respondent farmers state that most of the available facilities/infrastructure do not align with their needs for cultivating herbal plants; the factor of ease of cultivation does not have an effect due to the presence of several pests or diseases of herbal plants that, according to respondent farmers, are difficult to eliminate, thus complicating the cultivation of herbal plants.; the factor of production capacity and quality does not have an effect due to the frequent changes in the amount of production caused by changes in weather and climate, and due to the poor appearance (quality) and quantity of herbal plant yields obtained by some herbal plant farmers.; the factor of income does not have an effect due to the low percentage of income received by most respondent farmers from the activity of cultivating herbal plants.

Suggestion

The Special Region of Yogyakarta Province's government should boost farmers' interest in cultivating herbal plants that are tailored to the region's prevailing issues by fulfilling or addressing unmet needs that have sparked interest in herbal plant cultivation, such as guaranteeing sufficient income for prospective farmers to meet the needs of clothing, food, and shelter; fulfilling a sense of safety and comfort for prospective herbal plant farmers, one of which is through efforts to guarantee easy access to selling herbal plants to prospective buyers; and guaranteeing the presence of cultivation assistance so that prospective farmers gain good knowledge and skills in cultivating herbal plants. In addition, to increase farmers' interest in cultivating herbal plants, the Government of The Special Region of Yogyakarta Province can also make efforts to guarantee that the price of herbal plants will remain stable in the future, especially during extreme weather, religious holidays, Ramadan fasting, New Year, elections, and during excessive inflation. However, aside from The Special Region of Yogyakarta Province's government, other provincial governments could also implement similar efforts, hoping that farmers will become increasingly interested and inclined to cultivate herbal plants.

Farmers could calculate the profitability of their herbal plant cultivation business if possible. If the profitability ratio indicates the business is not profitable, they may consider diversifying their farming business. The diversification of farming business that can be done is, for example, by conducting small-scale hydroponic farming that cultivates seasonal vegetables

that are low risk and can be harvested in a short time, so the hope is that the income of the farmer group members does not only depend on herbal plants and hopefully that this income can increase.

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