Orchid Agribusiness Development Strategy in Magelang Regency

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ABSTRACT

The growth of the floriculture industry, particularly orchid production, in Indonesia has been in the spotlight in recent decades. Magelang Regency, as one of the significant orchid production centers, faces challenges in optimizing its orchid agribusiness potential, especially in Sidomulyo Village. Despite experiencing rapid growth, there are still obstacles such as access to capital, business management, marketing, and production sustainability. The Rural Agribusiness Business Development Program (PUAP) launched since 2012 has also not provided optimal results. This study aims to identify new strategies in developing orchid agribusiness in Magelang Regency, focusing on the application of eco-friendly agribusiness innovations and smart integrated farming systems. Through a hierarchical analysis approach (AHP) and primary data obtained from informants in Sidomulyo Village, this study prioritizes key factors in the development of orchid agribusiness, including capital, human resources, institutions, infrastructure, and marketing promotion. The results showed that the development of infrastructure facilities is a top priority in the development of sustainable PUAP in Magelang Regency, followed by promotion and marketing. The implementation of the smart integrated farming system model, especially in terms of providing sustainable cultivation inputs, is emerging as a key strategy to improve the efficiency and sustainability of orchid production. In conclusion, this study offers a new perspective in overcoming the challenges of orchid agribusiness development in Magelang Regency, emphasizing the importance of innovation and sustainability in every aspect of the business. It is expected that this research can make a significant contribution to the development of orchid agribusiness and inclusive and sustainable village development in the region.

Keywords: Orchid; Agribusiness innovation; PUAP development; Magelang Regency; Smart farming

ABSTRAK

Pertumbuhan industri florikultura, khususnya produksi anggrek, di Indonesia telah menjadi sorotan dalam beberapa dekade terakhir. Kabupaten Magelang, sebagai salah satu pusat produksi anggrek yang signifikan, menghadapi tantangan dalam mengoptimalkan potensi agribisnis anggreknya, terutama di Desa Sidomulyo. Meskipun mengalami pertumbuhan pesat, masih terdapat kendala-kendala seperti akses modal, manajemen usaha, pemasaran, dan keberlanjutan produksi. Program Pengembangan Usaha Agribisnis Perdesaan (PUAP) yang diluncurkan sejak tahun 2012 juga belum memberikan hasil optimal. Penelitian ini bertujuan untuk mengidentifikasi strategi baru dalam mengembangkan usaha agribisnis anggrek di Kabupaten Magelang, dengan fokus pada penerapan inovasi eco-friendly agribusiness dan smart integrated farming system. Melalui pendekatan analisis hierarki (AHP) dan data primer yang diperoleh dari informan di Desa Sidomulyo, penelitian ini memprioritaskan faktor-faktor kunci dalam pengembangan agribisnis anggrek, termasuk modal, sumber daya manusia, kelembagaan, sarana prasarana, dan promosi pemasaran. Hasil penelitian menunjukkan bahwa pengembangan sarana prasarana merupakan prioritas utama dalam pengembangan PUAP keberlanjutan di Kabupaten Magelang, diikuti oleh promosi dan pemasaran. Implementasi model smart integrated farming system, terutama dalam hal penyediaan input budidaya yang berkelanjutan, muncul sebagai strategi kunci untuk meningkatkan efisiensi dan keberlanjutan produksi anggrek. Kesimpulannya, penelitian ini menawarkan pandangan baru dalam mengatasi tantangan pengembangan agribisnis anggrek di Kabupaten Magelang, dengan menekankan pentingnya inovasi dan keberlanjutan dalam setiap aspek usaha. Diharapkan penelitian ini dapat memberikan kontribusi yang signifikan bagi pengembangan agribisnis anggrek dan pembangunan desa yang inklusif dan berkelanjutan di wilayah tersebut.

Kata kunci: Anggrek; Inovasi agribisnis; Pengembangan PUAP; Kabupaten Magelang; Smart farming

Introduction

Indonesia is a tropical country with great potential for floriculture. The growth of floriculture in the last two decades reached 12 percent, higher than that of medicinal plants, vegetables, and fruits. (Yacub & Sos, 2021). One of the floriculture commodities that has a very high aesthetic and economic value is orchids. Orchid production in 2021 reached 11,351,615 stems with more than 5,000 plant species. The beauty and artistic shape of the plant makes orchids have a high selling value, both as ornamental plants and cut flowers. Therefore, orchid plants have the potential to be developed in agribusiness.

One of the regions in Indonesia that has potential in orchid cultivation is Magelang District. The contribution of the agricultural sector to GRDP in Magelang District is around 21.31% and is concentrated in the horticulture sub-sector, with one of the leading sub-sectors being orchids. The total production of orchids in Magelang district reached 555,212 stems with a harvest area of 33,962 m2. The largest orchid potential in Magelang district is located in Sidomulyo village with a total of 15 individual gardens and one community orchid garden that acts as plasma.

Orchid agribusiness is predicted to continue to grow because of its diversity and distinctive characteristics as a tropical flower. This has led to high public interest in raising orchids for commercial purposes, given the potential local, regional and international markets (Badan Penelitian dan Pengembangan Pertanian, 2005). This encouraged the government to formulate a hands of strategy through the Development of Rural Agribusiness Enterprises (PUAP) in 2012, but until now the output generated from the PUAP program is still not optimal.

The application of eco-friendly agribusiness innovation with a smart-integrated farming system approach will be considered as an innovation for the PUAP program that is not optimal. (Amanor & Chichava, 2016; Koloskova, Y., N. Dalisova, 2019; Vergara-Camus & Kay, 2017). Based on the trickle-down effect strategy, rural areas in Magelang have human resource and institutional problems that cause a backwash effect. To overcome this, voluntary and collective-based village development is needed to achieve common goals. This approach is more in line with the needs, respects the initiative of local communities because it is bottom-up, increases capacity building and makes the community a subject (Córdoba, Selfa, Abrams, & Sombra, 2018; Zheng, Wang, & Lu, 2018).. The concept of integrated village development, which attempts to view village development as an integrated effort (Andriesse & Lee, 2017; Bowen & Morris, 2019).

The anti-thesis of the trickle-down effect is the innovative Rural Agribusiness Development (PUAP) through eco-friendly agribusiness. The urgency of this research focuses on the development of orchid cultivation in Sidomulyo Village which has experienced rapid growth in the last two years. This condition must be immediately balanced with the development of a comprehensive and sustainable agribusiness system from upstream to downstream, as well as by innovating the Rural Agribusiness Development (PUAP) which has not been optimal since its implementation in 2012.

Eco-friendly agribusiness innovation in this research tries to formulate the integration of smallholders into sustainable food value chains to reduce poverty and improve food security. The initiation of a pilot scale agribusiness innovation development model in the form of model farming activities in the orchid production center of Sidomulyo Village. The pilot scale orchid innovation model is further developed into an actual scale of agribusiness that is

sustainable and inclusive for rural communities. Therefore, the purpose of this research is to develop an implementation model of the Smart Integrated Farming System to Develop Rural Agribusiness Enterprises (PUAP) with an Eco-Friendly Agribusiness Innovation Approach in realizing inclusive and sustainable village development. Inclusive villages are defined as villages that accept differences positively and encourage their communities to participate in village development through three things including rural capital formation, agricultural sector technology, and agriculture with sustainable agribusiness systems (Bruni & Santucci, 2016; Gaffney, Challender, Califf, & Harden, 2019).. The model produced in this study is the priority strategy of the relevant stakeholders.

Materials and Methods

This research uses primary data obtained from informants (keyperson) in Sidomulyo Village, Candimulyo District, Magelang Regency. The key person in this research consists of ABGCM (Academician, Businessman, Government, Consumer, Media). By using data collection techniques through questionnaires, this research will use the Analytical Hierarchy Process (AHP) method to be able to develop a smart integrated farming system implementation model to develop rural agribusiness businesses (puap) with an eco-friendly agribusiness innovation approach in realizing inclusive and sustainable village development. This research will use five variables to develop policy strategies including (1) capital, (2) human resources, (3) institutions, (4) facilities and infrastructure, (5) promotion and marketing.

The AHP method is a comprehensive decision-making model that takes into account qualitative and quantitative matters. Through the Analitycal Hierarchy Proccess (AHP) method, several strategies will be produced that can be used in order to develop a strategy for implementing a smart integrated farming system to develop rural agribusiness businesses (puap) with an eco-friendly agribusiness innovation approach in realizing inclusive and sustainable rural development. Basically, the mathematical formulation of the AHP model is done using a matrix. For example, in an operating subsystem against operating elements, namely operating elements A1, A2, ..., An, the results of pairwise comparisons of these operating elements will form a comparison matrix. Pairwise comparisons start from the highest level of the hierarchy, where a criterion is used as the basis for making comparisons. The pairwise comparison matrix is usually marked with the symbol A and is in the following form (Grošelj et al., 2023):

$$A = [a_{ij}] = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{n1} & a_{n2} & \cdots & a_{nn} \end{bmatrix} = \begin{bmatrix} 1 & a_{12} & \cdots & a_{1n} \\ \dfrac{1}{a_{12}} & 1 & \cdots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ \dfrac{1}{a_{1n}} & \dfrac{1}{a_{2n}} & \cdots & 1 \end{bmatrix} \quad \text{........................} \quad (1)$$

The respective value in matrix A (aij) refers to the extent to which (how much) element xi is preferred over xj with respect to a certain feature (criterion, objective, etc.) which is the higher ranked item (superior item). For each such matrix, the so-called preference vector is determined. Consistency is an important attribute of any comparison matrix. If a matrix is consistent, it means that respondents answered sensibly rather than randomly and consistent results are synonymous with their credibility. With regard to mathematics, a matrix is consistent if:

$$a_{ik} = a_{ij} \cdot a_{jk} \qquad \text{...} \qquad (2)$$

for each i, j, k = 1,..., n.

In the related literature, a series of indices are proposed to measure this measure of deviation. The most frequently applied index in AHP methods is the Consistency Index and its normalized version, the Consistency Ratio. The index was proposed by Saaty in combination with a method involving weight estimation through the right eigenvector (EV) method. Consistency is measured based on the assumption that the ideal consistency of an n-item comparison square matrix (An × n) is maintained when its highest eigenvalue (λmax) is equal to the number of items compared by n, i.e., λmax is equal to the number of items compared:

$$\lambda_{\max} = n \text{ for all } a_{ij} = \frac{w_i}{w_j}. \qquad \text{..} \qquad (3)$$

That is, the more λmax approaches the value of n, the more consistent the matrix is. Saaty also proved that inconsistent matrices have λmax values higher than n (Dadkhah and Zahedi, 1993). Deviation from ideal consistency is measured by the consistency index CI, according to the following equation:

$$CI = \frac{\lambda_{\max} - n}{n - 1} \qquad \text{...} \qquad (4)$$

where λmax - 1 is the deviation of all aij from the estimated value of wj i.e. the deviation from ideal consistency. The simulation results show that the CI expectation value of the randomly generated n+1 dimensional matrix is on average higher than the CI expectation value of the n-dimensional matrix. This implies that CI is stricter for matrices with higher dimensions and should be rescaled. In this way we arrive at the consistency ratio CR, which is the normalized CI value. This is determined by dividing the CI by the so-called Random Index (RI) (Mora, M., Reyes-Delgado, P.Y., Gómez, J.M. et al, 2024):

$$CR = \frac{CI}{RI}. \qquad \text{..} \qquad (5)$$

RI is the arithmetic mean of CI for a large number of randomly generated matrices of various dimensions.

Results and Discussion

Based on the analytical hierarchy process on all criteria for sustainable PUAP development in Magelang City with the expert choice 11 program as shown in Figure 1.
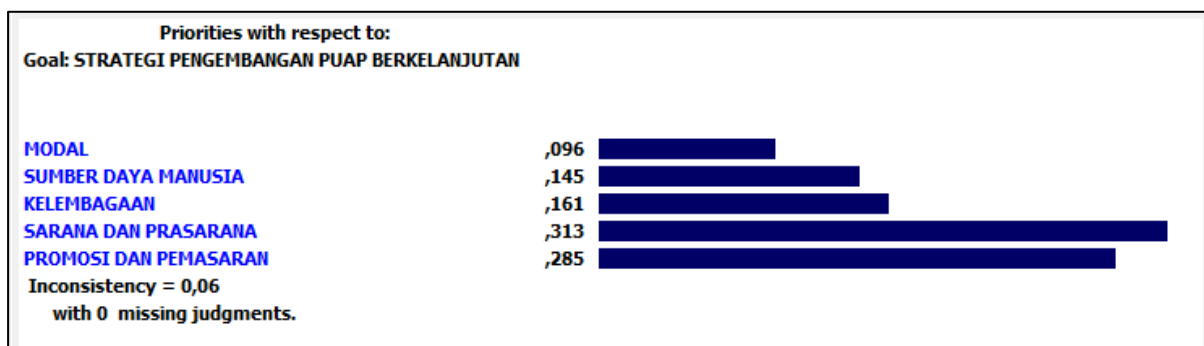

Figure 1. Results of AHP analysis of sustainable PUAP development

The results of the AHP analysis show that in the development of PUAP (Rural Agribusiness Development) sustainability in Magelang District, the most prioritized criterion is infrastructure with a weighted value of 0.313. This indicates the importance of infrastructure and supporting facilities in supporting the sustainability and development of agribusiness businesses in the region. Investment in the development of facilities and infrastructure such as green houses, irrigation systems, roads, and energy supply systems will facilitate accessibility and increase the efficiency of orchid production.

The second priority criterion for PUAP development is promotion and marketing, with a weighted score of 0.285. This shows the importance of effective marketing strategies and promotion of local agricultural products in order to reach a wider market and increase farmers' income. Promotional efforts through various media platforms and the development of an efficient distribution network will be key in improving the competitiveness of orchid products in the market.

The third criterion in PUAP development priorities is institutions, with a weighted value of 0.161. This indicates the need to strengthen the institutions involved in supporting farmers and agribusiness actors in Magelang district. Development of farmer groups, cooperatives and supporting institutions is important to increase farmers' capacity to manage their businesses and improve access to resources and support services.

Meanwhile, the fourth and fifth criteria, human resources and capital, have relatively lower weighted values of 0.145 and 0.096 respectively. Nevertheless, these two aspects remain important in supporting PUAP sustainability. Improving the capacity of farmers' human resources and the availability of sufficient capital will help increase the productivity and competitiveness of agribusiness businesses, especially orchids in the region.

The results also show that the inconsistency ratio obtained (0.06 < 0.1) indicates consistency in the answers given by respondents (keypersons). This indicates that the results of the analysis are reliable and can be considered in designing sustainable PUAP development strategies, especially for orchids in Magelang City.

AHP Analysis on Capital Criteria

Based on the calculation of the analytical hierarchy process on capital criteria with the expert choice 11 program, the results are shown in Figure 2. Capital in this case is capital for the development of orchid cultivation. In this aspect there are three alternatives, namely:

A1: Easy access to capital information

A2: Provision of credit with alternative financing models and at concessional rates

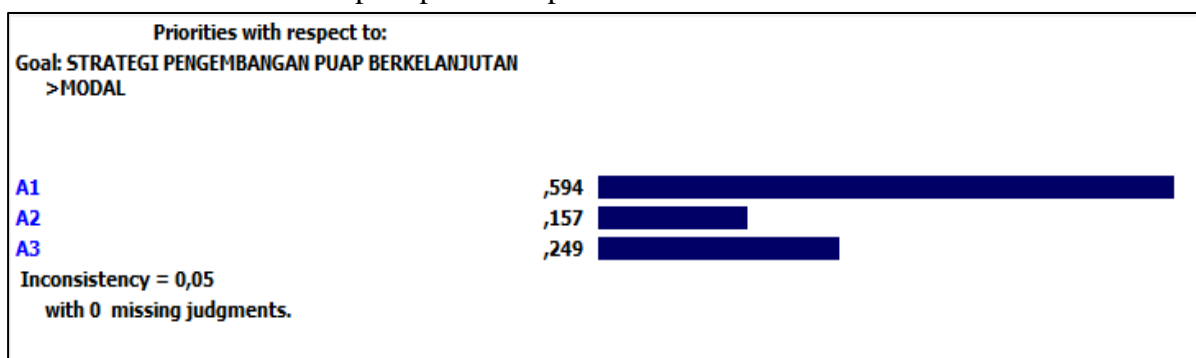A3: Facilitation of capital partnerships

Figure 2. AHP analysis results for capital

Based on the results of the AHP calculation, the most prioritized alternative in the capital criteria is easy access to capital information. This is expressed by a weight value of 0.594. Then, the second alternative in priority is the capital partnership facility with a weight of 0.249. Meanwhile, the last prioritized alternative is the provision of credit with alternative financing models and with soft interest, with a weight of 0.157.

The high weight given to easy access to capital information shows the importance of easy and quick access to capital-related information for orchid businesses. This can help them in obtaining the funds or capital needed to effectively develop orchid cultivation. Furthermore, the second priority is given to capital partnership facilities, which shows the importance of cooperation between various parties in creating better capital opportunities for orchid businesses. Whereas, although important, the provision of credit with alternative financing models and at concessional interest rates received a lower weight, indicating that it is a lower priority in the development of capital for orchid cultivation.

In addition, the analysis results show that the inconsistency ratio obtained is 0.05, which is below the specified consistency limit (0.1). This indicates that the answers given by respondents in this AHP analysis can be considered consistent. Thus, the results of this analysis provide a clear view of the priorities in capital development for orchid cultivation, and show consistency in the assessments made by the respondents.

AHP Analysis on Human Resources Criteria

Based on the calculation of the analytical hierarchy process on human resource development criteria with the expert choice 11 program can be seen in Figure 3. Human resources in this case are aimed at the human resources of farmers and orchid agribusiness actors . In this aspect there are three alternatives:

B1 : Improved managerial skills and management of orchid businesses

B2 : Guidance and development of production of superior orchid commodities location-specific based on land and agro-climatic suitability maps.

B3 : Development of pilot cultivation of superior   orchid species and varieties Commercial.
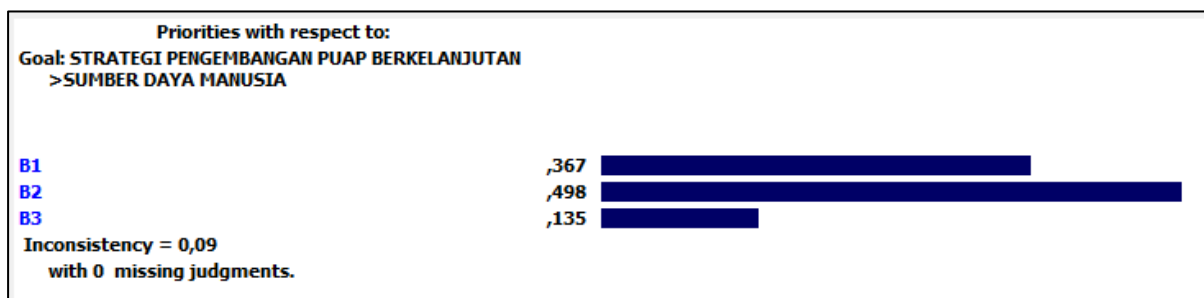

Figure 3. AHP analysis results for human resources

Based on the results of AHP, the most prioritized alternative in human resource criteria is the guidance and development of location-specific production of superior orchid commodities based on land and agro-climatic suitability maps. This is expressed by a weight value of 0.498. The second priority is improving managerial skills and management of orchid

businesses, with a weight of 0.367. The last prioritized alternative is fostering pilot cultivation of orchid types and varieties as a commercial flagship, with a weight of 0.135.

Guidance and development of production of superior orchid commodities based on land and agro-climatic suitability maps is a top priority in human resource development. This shows the importance of taking into account environmental factors and natural conditions in improving the efficiency and productivity of orchid cultivation. By utilizing the right information on land and agro-climatic conditions, farmers can identify optimal locations for orchid cultivation, reduce the risk of crop failure, and improve the quality of production. This coaching also includes the transfer of technology and knowledge on cultivation practices that suit the characteristics of each location, thus enabling farmers to optimize the potential of their land.

Improved managerial skills and management of orchid businesses are important aspects in ensuring the success of orchid farming businesses. Strong managerial skills enable farmers to manage resources effectively, plan production activities well, manage finances wisely, and take appropriate strategic decisions. In addition, efficient business management involves a good understanding of markets, risk analysis, marketing, and supply chain management. With these enhanced capabilities, orchid businesses will be able to face the complex challenges in the horticulture industry and capitalize on opportunities to improve competitiveness and profitability.

The pilot cultivation of commercially superior orchid species and varieties is an effort to develop a diverse and innovative orchid market. Through this pilot, farmers can test various types and varieties of orchids that have high commercial potential, both in terms of flower quality and environmental resistance. The development of superior orchid varieties can increase market attractiveness and provide significant added value for farmers. In addition, pilot coaching also includes technology transfer and practical training on proper cultivation techniques, plant maintenance, and pest and disease management. As such, farmers will be able to produce high-quality orchids consistently, meeting the growing market demand for these ornamental plants.

In addition, the analysis results show that the inconsistency ratio obtained is 0.09, which is below the specified consistency limit (0.1). This indicates that the answers given by respondents in this AHP analysis can be considered consistent, so the results can be relied upon in making decisions related to human resource development in orchid cultivation.

AHP Analysis on Institutional Criteria

Based on the calculation of the analytical hierarchy process on institutional criteria with the expert choice 11 program as in Figure 4. Institutions in this case are aimed at companion institutions, groups and cooperatives of orchid entrepreneurs . In this aspect there are three alternatives:

C1 : Improved capacity and quality of specialized institutions assisting entrepreneurs orchids
C2 : Facilitation of inter-institutional communication forums
C3 : Training on cooperative management and orchid business organization
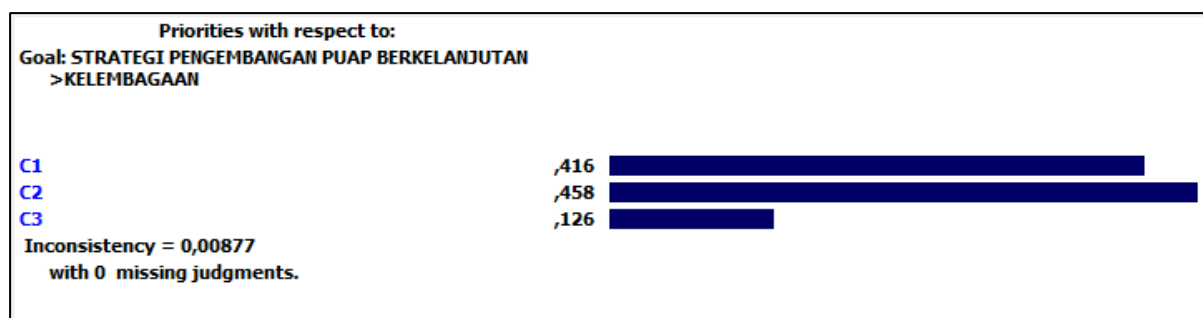
Figure 4. Results of AHP Analysis for Institutionalization

Figure 4 shows that the most prioritized alternative in institutional criteria is the facilitation of inter-institutional communication forums with a weight value of 0.458. The second priority alternative is to increase the capacity and quality of specialized institutions that assist orchid entrepreneurs with a weight value of 0.416. The last priority alternative in institutional criteria with a weight value of 0.126 is training on cooperative management and orchid entrepreneur organizations.

The facilitation of inter-institutional communication forums is a top priority in institutional development related to the orchid industry. This communication forum aims to facilitate information exchange, coordination of activities, and collaboration between various institutions involved in the development of the orchid industry. With an effective communication forum, various parties such as mentoring institutions, farmer groups, cooperatives, local governments, and other institutions can share knowledge, experiences, and resources to improve performance and synergy in supporting the growth of the orchid industry.

Improving the capacity and quality of specialized institutions assisting orchid entrepreneurs is also an important focus in institutional development. Mentoring institutions have a strategic role in providing guidance, training and technical support to orchid entrepreneurs. By improving the capacity and quality of mentoring institutions, such as the provision of qualified experts and the development of mentoring programs that are relevant to the needs of orchid entrepreneurs, it is expected to strengthen the capacity of entrepreneurs to face challenges and take advantage of opportunities in the orchid industry.

Despite being the last priority, management training for orchid cooperatives and business organizations remains an important part of institutional development. The training aims to improve management and leadership skills in the context of orchid cooperatives and entrepreneur organizations. By strengthening their managerial and organizational capacities, cooperatives and orchid entrepreneur organizations can become more efficient and effective in managing their businesses, coordinating their members, and improving access to resources and markets. As a result, orchid entrepreneurs will be more independent and competitive, and able to compete in an increasingly complex and dynamic market.

In addition, the analysis results show that the inconsistency ratio obtained is 0.008 <0.1, which means that the answers given by keypersons are consistent.

AHP Analysis on Facilities and Infrastructure Criteria

Based on the calculation of the analytical hierarchy process on the criteria of facilities and infrastructure can be seen in Figure 5. Facilities and infrastructure are the needs of tools and systems that can help develop orchid cultivation. In this aspect there are three alternatives:

D1   : Provision of sustainable orchid cultivation inputs
D2   : Provision of sustainable production equipment
D3   : Procurement and improvement of transportation, electricity, and
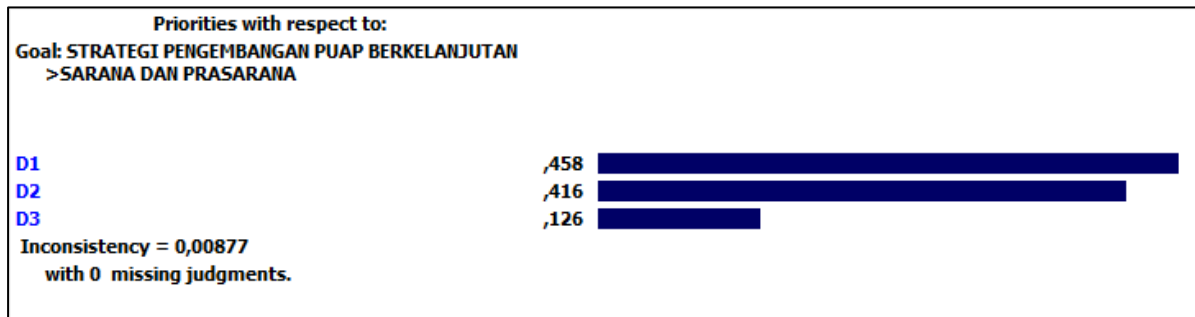   infrastructure communication

Figure 5. AHP analysis results for infrastructure facilities

Based on Figure 5, it can be seen that the most prioritized alternative in the facilities and infrastructure criteria is the provision of sustainable orchid cultivation inputs with a weight value of 0.458. Then the second priority alternative is the provision of sustainable production equipment with a weight value of 0.416. The last priority alternative in the criteria of facilities and infrastructure with a weight value of 0.126 is the procurement and improvement of transportation, electricity and communication facilities and infrastructure. From the results of the calculation of the Analitycal Hierarchy Process (AHP), the inconsistency ratio result is 0.008 <0.1, which means that the answers given by keypersons are consistent.

The main priority under the facilities and infrastructure criteria is the provision of sustainable orchid cultivation inputs. This includes aspects such as seeds, fertilizers, pesticides, and other materials needed in the orchid cultivation process. The provision of quality and sustainable inputs is key in improving the productivity and quality of orchid crops. Thus, the development of appropriate and sustainable input sources will help orchid farmers to achieve economically and environmentally optimal results.

The second prioritized alternative is the provision of sustainable production equipment. Efficient and modern production equipment is essential in increasing productivity and effectiveness in the orchid cultivation process. This includes equipment such as greenhouses, automatic irrigation systems, lighting systems, and other tools that support orchid cultivation activities. With quality and sustainable production equipment, orchid farmers will be able to increase efficiency in resource use and reduce negative impacts on the environment.

Despite being the last priority, the procurement and improvement of transportation, electricity, and communication facilities and infrastructure still play an important role in supporting the development of orchid cultivation. Adequate transportation, electricity, and communication infrastructure will facilitate the distribution of orchid crops, provide access to modern technology, and facilitate communication between orchid farmers, marketers, and consumers. Thus, improving these facilities and infrastructure will improve connectivity and accessibility in the orchid supply chain, which in turn will support the growth and sustainability of the orchid industry as a whole.

AHP Analysis on Promotion and Marketing Criteria

Based on the calculation of the analytical hierarchy process on promotion and marketing criteria as in Figure 6. The promotion and marketing aspect is an effort to develop a wider marketing network for orchid commodities . In this aspect there are three alternatives:

E1 : Development of market-based orchid production centers and regional potentials

E2 : Improved mastery of promotion and marketing technology and information (training, apprenticeship).

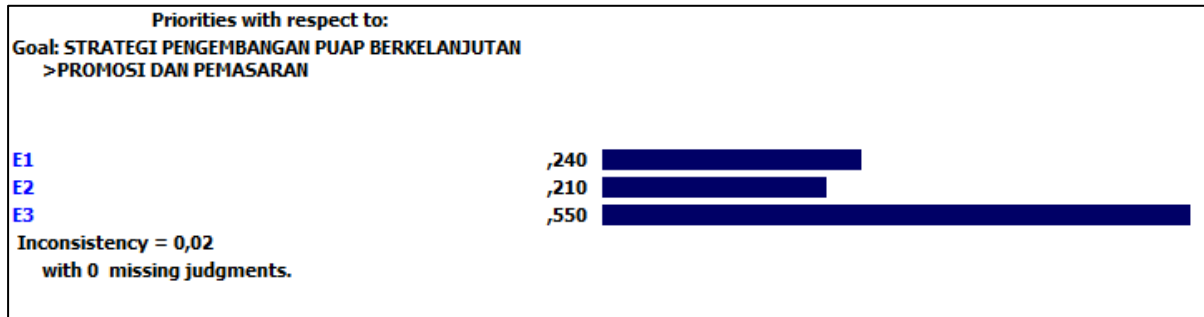E3 : Digital branding and packaging training

Figure 6. Results of AHP analysis for Promotion and Marketing

Based on Figure 6, it is known that the most prioritized alternative in the promotion and marketing criteria is digital-based branding and packaging training with a weight value of 0.550. Then the second priority alternative is the development of market-based orchid production centers and regional potential with a weight value of 0.240. The last prioritized alternative in promotion and marketing criteria with a weight value of 0.210 is Increased mastery of technology and information promotion and marketing (training, internships). The results of the calculation of the Analitycal Hierarchy Process (AHP) obtained the results of the inconsistency ratio of 0.02 <0.1 which means that the answers given by keypersons are consistent.

The highest priority alternative in the promotion and marketing criteria is digital-based branding and packaging training. This shows the importance of modern marketing strategies that prioritize attractive branding and packaging in the digital era. This training will help orchid businesses to understand and implement effective branding and packaging strategies in creating a strong and attractive product image for consumers. Thus, investment in this training is expected to increase the competitiveness of orchid products in an increasingly competitive market.

The second prioritized alternative is the development of market-based orchid production centers and regional potential. This effort includes the development and improvement of infrastructure in orchid production centers that can support promotion and marketing activities. With a strategic production center area that is integrated with the market and utilizes regional potential, it is expected to increase the visibility and accessibility of orchid products for local and global markets.

Despite being the last priority, improving the mastery of promotional and marketing technology and information remains important in developing effective orchid marketing strategies. This includes training and internships for orchid businesses to understand and utilize technology and information in optimizing promotion and marketing strategies. Thus, it

is expected that orchid businesses can improve the efficiency and effectiveness of promotion and marketing of their orchid products.

Conclusion

Infrastructure is a criterion that becomes the first policy priority in the development of sustainable PUAP in Magelang district. One of the prioritized alternatives in infrastructure facilities is the provision of sustainable orchid cultivation inputs. The second priority after infrastructure is promotion and marketing. The promotion and marketing aspect is an effort to develop a wider marketing network for orchid commodities, in this case digital-based branding and packaging training is the most prioritized alternative in the promotion and marketing criteria. The third priority in the sustainable Rural Agribusiness Business Development Program (PUAP) strategy is institutionalization. In the institutional criteria, facilitating communication forums between institutions is an important policy priority. Institutionalization in this case is aimed at assisting institutions, groups and cooperatives of orchid entrepreneurs. The fourth and fifth policy priorities are human resources and capital. Human resources in this case are focused on the human resources of farmers and orchid agribusiness actors. The most important policy priority in the human resource criteria is the guidance and development of location-specific production of superior orchid commodities based on land and agro-climatic suitability maps. As for capital, the most prioritized alternative in capital criteria is easy access to capital information.

Acknowledgments

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