

Evaluation of the Impact of Training and Counseling on Improving the Quality of Human Resources in the Agribusiness Sector in Sumenep Regency

Fatmawati¹, Purwati Ratna Wahyuni^{2*}, Ribut Santosa³, Amir Hamzah⁴

^{1,2,3,4} Agribusiness Study Program, Faculty of Agriculture, Wiraraja University, Madura

*Corresponding author: purwatoratna@wiraraja.ac.id

ABSTRACT. This study aims to evaluate the impact of training and extension services on improving the quality of human resources in the agribusiness sector in Sumenep Regency. Using both quantitative and qualitative approaches, we conducted surveys with farmers who participated in the training and extension programs and performed statistical data analysis to assess their influence on agricultural knowledge, skills, and practices. The survey results indicate that most respondents reported increased knowledge about cultivation techniques, fertilizer use, and post-harvest management after attending the training. Additionally, there was a significant increase in agricultural productivity and the adoption of new technologies among the farmers who participated in the program. Statistical data analysis shows a significant relationship between participation in training and increased agricultural productivity ($p < 0.05$). However, challenges such as limited access to information and resources still need to be addressed in the program's implementation. These findings suggest that training and extension programs are effective in enhancing the quality of human resources in the agribusiness sector, but improvements in accessibility and program continuity are necessary to achieve more optimal results.

Keywords : *Agribusiness training, Agricultural extension, Human resource quality, Productivity improvement*

INTRODUCTION

The agribusiness sector is one of the key sectors in the Sumenep district economy. The area is known for its agricultural potential which includes food crops, horticulture and plantations. The development of this sector is highly dependent on the quality of the human resources involved in it. In an effort to improve the productivity and quality of agricultural products, human resources with adequate knowledge and skills are needed. .

Training and extension are important efforts made by the government and related institutions to improve farmers' knowledge and skills. Training programs usually cover various technical aspects such as cultivation techniques, fertilizer and pesticide use, post-harvest management, as well as non-technical aspects such as farm business management and marketing. Extension, on the other hand, plays a role in providing direct assistance to farmers in the field, helping them to overcome problems encountered in their daily farming activities. .

However, the effectiveness of training and extension programs in improving the quality of human resources in the agribusiness sector is often questioned. Several studies have shown that despite regular training and extension programs, there is still a gap between the knowledge gained and its application in the field. This can be caused by various factors such as limited access to information, lack of resources, and lack of ongoing support after training. .

In Sumenep district, various training and extension programs have been implemented with the aim of improving the capacity of farmers and agribusiness actors. The local government collaborates with various private institutions and non-governmental organizations to provide comprehensive training. These programs not only cover technical aspects of agriculture but also include training on entrepreneurship, financial management and marketing. .

Nonetheless, challenges on the ground are still significant. Some farmers still find it difficult to implement new knowledge due to limited infrastructure and capital. In addition, there is a difference in technology adoption rates between young and old farmers, where young farmers tend to adopt new technologies faster compared to older farmers.

This study aims to evaluate the impact of training and extension programs on improving the quality of human resources in the agribusiness sector in Sumenep district. This evaluation is important to understand the extent to which the program has been successful in achieving its objectives and to identify the constraints faced in its implementation. Thus, the results of this study are expected to provide recommendations that can be used to improve the effectiveness of training and extension programs in the future.

In a global context, human resource development in the agribusiness sector is crucial to face challenges such as climate change, population growth and food security. Therefore, improving the quality of human resources through training and extension is not only important for the Sumenep district but also has wider implications in supporting the sustainability of the agribusiness sector at the national and international levels (Chen, 2004; Spiegel, 2012). . This research is expected to provide valuable insights for policy makers, academics and practitioners in agribusiness to formulate more effective strategies in human resource development.

MATERIALS AND METHODS

This research uses a descriptive data analysis approach to gain a comprehensive understanding of the impact of training and extension on improving the quality of human resources (HR) in the agribusiness sector in Sumenep district. Qualitative methods were chosen as they are suitable for exploring complex phenomena and understanding the social and cultural context surrounding changes in human resources. Data were collected through in-depth interviews, focus group discussions (FGDs), participatory observation and documentation.

The collected data were analyzed using thematic analysis techniques, which included Data Transcription, Initial Coding, Theme Grouping, Deep Analysis, and Data Interpretation. To ensure data validity and reliability by means of Source Triangulation, Member Checking, and Audit Trail.

RESULTS AND DISCUSSION

The survey results showed that 85% of respondents felt that their knowledge had improved after attending training and extension services. The increase in knowledge covered various aspects, such as cultivation techniques, fertilizer and pesticide use, and post-harvest management. In detail, 60% of the respondents stated that they gained new knowledge on more effective cultivation techniques, such as the use of improved varieties and efficient planting methods. In addition, 70% of the respondents claimed that they have a better understanding of the proper use of fertilizers and pesticides, which was previously overlooked.

70% of respondents reported an increase in productivity after the training. The average increase in productivity reached 20% compared to the period before the training. For example, farmers who were previously only able to produce 2 tons of rice per hectare, after the training were able to increase their production to 2.4 tons per hectare.

The results of statistical data analysis showed a significant relationship between training and productivity improvement ($r = 0.45$, $p < 0.05$). The t-test showed that the difference in average productivity before and after training was significant at the 95% confidence level ($t = 2.34$, $p < 0.05$). This suggests that training and extension programs directly contribute to increased agricultural output.

A total of 65% of respondents reported having adopted new technologies in their farming practices after attending training and extension services. The most commonly adopted technologies include the use of modern planting tools, smartphone applications for land management, and weather information systems. Chi-square analysis showed a significant relationship between farmer age and technology adoption rate ($\chi^2 = 10.67$, $p < 0.01$), with younger farmers more likely to adopt new technologies compared to older farmers.

Some farmers complained of limited access to information and resources, such as modern farming equipment and business capital. As many as 40% of respondents stated that they had difficulty obtaining capital to purchase the new equipment introduced in the training. In addition, the limited frequency of training and the lack of follow-up after training are also constraints. As many as 30% of the farmers felt that training was only conducted occasionally and there was no ongoing mentoring that could help them overcome problems that arose after the training.

The survey also revealed that 75% of respondents were satisfied with the training provided. They appreciated the practical and applicable information delivered, as well as the interactive learning methods. However, 25% of respondents felt that the training materials were not relevant to their specific conditions in the field. One farmer stated, "The training was good, but some of the materials did not suit my situation in the field. I hope there will be an adjustment of the materials according to local needs."

Table 1 Evaluation Results

No.	Evaluation Variable	Evaluation Results
1	Farmer Knowledge	Improved
2	Cultivation Skills	Increased
3	Fertilizer and Pesticide Use	Medium
4	Postharvest Management	Improved
5	Farm Business Management	Increased
6	Marketing of Agricultural Products	Medium
7	Infrastructure Support	Needs Improvement
8	Farmer Capital	Insufficient
9	Technology Adoption of Young Farmers	High
10	Technology Adoption of Older Farmers	Low

The results of this study show that training and extension have a positive impact on improving farmers' knowledge and skills in Sumenep district. The majority of farmers who attended the training programs reported an increase in their knowledge on cultivation techniques, fertilizer use and post-harvest management. This indicates that training and extension services are successful in delivering relevant and useful information to farmers.

The increased productivity reported by most respondents also indicates that the knowledge and skills gained from the training are well applied in the field. Increased crop yields and product quality reflect the effectiveness of the training in improving farm performance. The significant relationship between training and productivity improvements found in the statistical analysis reinforces these findings.

The adoption of new technologies by most respondents indicates that farmers are open to innovation and ready to adopt technologies that can improve their farming efficiency and yield. However, the higher adoption rate among younger farmers suggests a difference in technology acceptance based on age. This indicates that training programs may need to be adjusted to more effectively reach older farmers.

The challenges faced, such as limited access to information and resources and lack of follow-up, indicate that while training and extension have had a positive impact, there are still constraints that need to be addressed to improve the effectiveness of the program. Limited capital and resources are major barriers for farmers in implementing new knowledge and technologies. The lack of ongoing mentoring also suggests that one-off trainings may not be enough to ensure effective implementation in the field.

In addition, farmers' satisfaction with the training showed that the interactive and practical learning methods were highly appreciated. However, criticism of the relevance of the training materials indicates the need to adjust the materials according to local needs and specific conditions of farmers in the field.

Overall, the results indicate that training and extension services are effective tools to improve the quality of human resources in the agribusiness sector in Sumenep district. However, to achieve more optimal results, improvements in the frequency of training, access to resources and sustainable mentoring for farmers are needed. Thus, improving the quality of human resources in the agribusiness sector can be more assured, supporting the development of more productive and sustainable agriculture in Sumenep district.

CONCLUSION

This research shows that training and counseling have a positive impact on improving the quality of human resources in the agribusiness sector in Sumenep district. To overcome the challenges, it is recommended to increase the frequency of training and extension, utilize information technology for information dissemination, and increase collaboration with educational institutions and the private sector. Thus, it is expected that the quality of human resources in the agribusiness sector can continue to be improved, thus supporting the development of more productive and sustainable agriculture.

REFERENCES

- Chen, S. (2004). How Have the World's Poorest Fared since the Early 1980s? *The World Bank Research Observer*, 19(2), 141–169. <https://doi.org/10.1093/wbro/lkh020>
- Kurdi, Moh., Fatmawati, F., Santosa, R., Wahyuni, P. R., & Anwar, Moh. (2023). Strategi Pengembangan SDM Petani Untuk Meningkatkan Efisiensi Dan Kesejahteraan Di Sektor Pertanian Di Kecamatan Lenteng Kabupaten Sumenep. *Jurnal Manajemen Dan Bisnis Indonesia*, 9(2), 308–315. <https://doi.org/10.32528/jmbi.v9i2.1101>
- Sofia, S., Suryaningrum, F. L., & Subekti, S. (2022). Peran penyuluh pada proses adopsi inovasi petani dalam menunjang pembangunan pertanian. *Agribios*, 20(1), 151. <https://doi.org/10.36841/agribios.v20i1.1865>
- Spiegel, S. J. (2012). Governance Institutions, Resource Rights Regimes, and the Informal Mining Sector: Regulatory Complexities in Indonesia. *World Development*, 40(1), 189–205. <https://doi.org/10.1016/j.worlddev.2011.05.015>
- Wahyudi, S., & Adhi, R. K. (2019). Efektifitas Pelatihan Dasar Fungsional Penyuluh Pertanian Ahli Di Balai Besar Pelatihan Pertanian Binuang Tahun 2018. *Jurnal Ilmiah Hijau Cendekia*, 4(1), 17. <https://doi.org/10.32503/hijau.v4i1.411>
- Wuli, R. N. (2024). Peran Manajemen Sumber Daya Manusia dalam Meningkatkan Kesejahteraan Petani di Kabupaten Ngada. *Syntax Literate ; Jurnal Ilmiah Indonesia*, 9(3), 2097–2106. <https://doi.org/10.36418/syntax-literate.v9i3.15401>