

Wood Waste Crushing Machine Training at BUMDes Banjarwaru Sejahtera

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ABSTRACT

Background. BUMDes Banjarwaru Sejahtera is a business owned and managed by the people of Banjarwaru Village, Cilacap Regency. Some of the businesses that have been managed by BUMDes Banjarwaru Sejahtera include renting molen machines and making handicrafts such as broom handles and woven bamboo household crafts which produce an abundance of wood waste left over from the production process. So far, this wood waste has been sold to tofu craftsmen as fuel for the tofu production process.

Purpose. People can use wood waste as added value by processing wood waste into handicrafts that have high economic value so that they can improve the welfare of the people of Banjarwaru village. Through this community service activity, training will be held on the use of wood waste chopping machines so that processed wood waste can be made into handicrafts such as particle boards or other handicrafts.

Method. The method used is a lecture method where the community service team who are lecturers at the Cilacap State Polytechnic provide training on the use of wood waste chopping machines to members of BUMDes Banjarwaru Sejahtera and several wood craftsmen in Banjarwaru village.

Results. The results of this community service activity have had a positive impact on business development at BUMDes Banjarwaru Sejahtera.

Conclusion. Through this community service activity, it can be concluded that this activity has had a positive impact on the business development of BUMDes Banjarwaru Sejahtera. Apart from this, training in the use of wood waste chopping machines can also increase the competence of wood craftsmen in Banjarwaru village so they can produce more varied crafts made from wood waste.

KEYWORDS

Community Service, BUMDes, Training, Shredding Machines, Wood Waste

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INTRODUCTION

BUMDes is an abbreviation for Village-Owned Enterprise which is a business owned and managed by the village community or village government (Salman et al., 2022). BUMDes has the main objective of improving the welfare of the people of a village through the development of various economic businesses at the village level (Nugrahaningsih et al., 2021). BUMDes usually operate in agriculture, livestock, fisheries, creative industries, tourism, and others (Wibisono and Panuntun 2020). With the existence of BUMDes, it is hoped that it can become a driving force for the local economy and have an impact on increasing village income and welfare (Aji et al., 2022).

Banjarwaru Village is a village in Nusawungu sub-district, Cilacap district which has 3 Neighborhood Units and 11 Neighborhood Units (Cilacap, 2022). Banjarwaru Village has a BUMDes called BUMDes Banjarwaru Sejahtera with two main businesses, namely molen machine rental and internet wifi services. This business has been running since the BUMDes were founded. Most of the residents in Banjarwaru village have woodworking businesses such as broom-handle craftsmanship businesses, bamboo handicraft businesses, bag craftsmanship businesses, and so on. From the business of making broom handles, quite a lot of production waste is produced. So far, wood waste has been sold to tofu craftsmen from communities outside Banjarwaru village to be used as fuel for making tofu. The wood that is often used is mahogany which has a texture that is not too hard but is durable enough to be used as a broom handle (Fachrurrozie et al., 2021).

Figure 1. Banjarwaru Sejahtera BUMDes Partner Business



Wood waste can be utilized through a recycling process, namely by making wood waste according to certain sizes so that it can be shaped into several handicrafts such as particle boards which have high economic value (Lukman et al., 2022). However, the people of Banjarwaru village do not think about this and prefer to sell wood waste at low prices to tofu craftsmen. Processing wood waste can be used as added value and become one of the businesses at BUMDes Banjarwaru Sejahtera to increase the income and welfare of the people of Banjarwaru village. So through this community service activity, the community service team who are lecturers at the Cilacap State Polytechnic will provide training on the use of wood waste chopping machines so that wood waste of a certain size can be made into handicrafts such as particle board or others so that it can increase the value of wood waste to handicrafts with economic value (Manurung et al., 2023). This service activity focuses on training in the use of wood waste chopping machines to reduce wood waste of a certain size which can be processed into handicrafts of economic value.

Several community service activities that have been carried out previously include those carried out by (Mashudi et al., 2022), (Suharyatun, 2020), (Fathoni et al., 2022), (Meidayanti et al., 2023) and (Putra et al., 2022). The difference between community service activities carried out by the Cilacap State Polytechnic community service team and service activities that have been carried out previously is training in the use of wood waste chopping machines for service partners, namely BUMDes Banjarwaru Sejahtera, to increase business, income, and welfare for the people of Banjarwaru (Nainggolan et al., 2022). It is hoped that training on the use of wood waste chopping machines can become a business that can improve the economy and welfare of the community in Banjarwaru village (Jumawan & Yusuf Ali, 2020). Through community service activities, the community service team provides outreach on the use of wood waste chopping machines to wood craftsmen so they can utilize waste to make crafts that have high economic value (Sudiryanto & Suharto, 2020).

RESEARCH METHODOLOGY

Implementation of community service activities will start from July 2023 to December 2023. Training activities will be held on November 28 2023 at the Banjarwaru Village Hall located at Jln. Kubang, Banjarwaru, Nusawungu District, Cilacap Regency, 53281 which starts at 09.00 WIB until 13.00 WIB. There were 35 activity participants consisting of wood craftsmen and bamboo craftsmen in Banjarwaru village. The training activity was also attended by Banjarwaru village government officials and the activity ended with the signing of the minutes of handover of the wood waste chopping machine to the Director of BUMDes Banjarwaru Sejahtera from the Head of the Community Service Team for the Cilacap State Polytechnic.

Figure 2. Business Plan for Community Service Activities

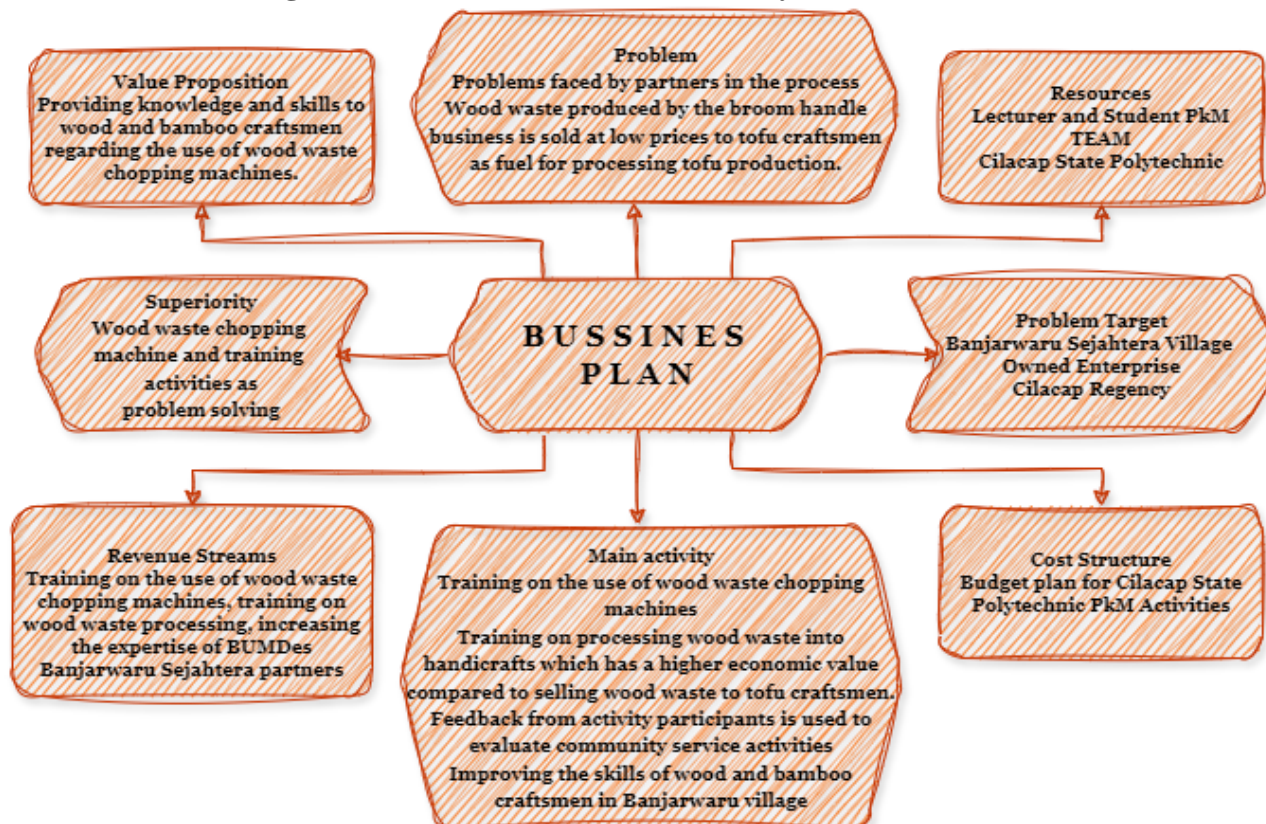


Figure 2 explains the business plan for community service activities. The business plan contains the problems faced by partners, namely that the businesses owned by BUMDes Banjarwaru Sejahtera are still limited to only two businesses that are still running. The resources for

community service activities are the community service team consisting of 8 lecturers from four different study programs, namely the mechanical engineering study program, cyber security engineering study program, multimedia engineering study program, and Sharia institution financial accounting study program assisted by students from the mechanical engineering study program, multimedia engineering study program, and cyber security engineering study program. The problem-solving target aimed at community service activities is the community service partners of BUMDes Banjarwaru Sejahtera. The main activity carried out is training in the use of wood waste chopping machines which can process wood waste into handicrafts which have higher economic value compared to selling wood waste to tofu craftsmen (Indra & Fajrul, 2021) (Wanti et al., 2023). Funding used for community service activities comes from DIPA funds from the Negei Cilacap Polytechnic for Fiscal Year 2023. The benefits of this community service activity are increasing the competence of wood and bamboo craftsmen in Banjarwaru village, increasing the diversity of business fields in BUMDes Banjarwaru Sejahtera, and increasing the welfare of the people of Banjarwaru village (Wanti et al., 2022). Later, after training on how to use it, the wood waste chopping machine will be handed over to the Director of BUMDes Banjarwaru Sejahtera as an asset of BUMDes Banjarwaru Sejahtera.

RESULT AND DISCUSSION

Community service activities began with survey activities for partners by the community service team by visiting partner locations, namely in Banjarwaru Village, Nusawungu District, Cilacap Regency, Central Java Province. This activity aims to explore the problems faced by partners, namely BUMDes Banjarwaru Sejahtera so that solutions can be found for the problems faced. From the survey results, a problem was found, namely the large amount of waste from the production of broom handles which was sold to tofu craftsmen at very cheap prices. The next activity is coordinating with the community service team. This coordination activity is carried out online and offline to determine solutions to problems faced by partners in the community service team. The solution to the problems faced is to utilize waste from broom handle production into a craft that has a higher economic value than if the waste was sold to tofu craftsmen. So from this solution, a machine was created that was used to chop wood waste until it got a certain size so that the wood waste could be made into particle board as a handicraft that could be sold and had high economic value.

Figure 3. Design of Wood Waste Shredding Machine, Welding Process of Wood Waste Shredding Machine and Trial Use of Wood Waste Shredding Machine



(a)



(b)



(c)

After the wood waste chopping machine has been tested to find out the results of the wood waste process to a size that can be formed into particle board or other handicrafts that have economic value. During the testing phase, the machine was reset twice to ensure that the size of the chopping results was by the specified size. After the chopping machine trial phase is complete, the next stage is to carry out training on the use of the chopping machine to community service activity partners, namely BUMDes Banjarwaru Sejahtera. Training activities on the use of wood waste chopping machines were carried out on November 28 2023 by the Cilacap State Polytechnic community service team for partners, namely BUMDes Banjarwaru Sejahtera. From the training activity on the use of wood waste chopping machines which was attended by 35 participants from wood craftsmen and bamboo craftsmen in Banjarwaru village, there were several inputs submitted by activity participants, including the need to group wood waste, namely large wood waste which makes the chopping process difficult and The maximum capacity of the wood waste chopping machine which needs to be considered when using the machine. The training activity ended with the signing of the minutes of handover of the wood waste chopping machine from the Cilacap State Polytechnic community service team to the Director of BUMDes Banjarwaru Sejahtera which was witnessed by the head of Banjarwaru Village and all Banjarwaru village government officials. The image below is documentation of training activities on the use of wood waste chopping machines and the handover of wood waste chopping machines.

Figure 4. Training on the Use of Wood Waste Shredding Machines and Signing of Minutes of Handover of Wood Waste Shredding Machines



(a)



(b)

CONCLUSION

Through this community service activity, it can be concluded that this activity has had a positive impact on the business development of BUMDes Banjarwaru Sejahtera. Apart from this, training in the use of wood waste chopping machines can also increase the competence of

wood craftsmen in Banjarwaru village so they can produce more varied crafts made from wood waste. It is hoped that in the future this business can be continued by the younger generation or youth organizations in Banjarwaru village to increase people's income so that the welfare of Banjarwaru village will automatically increase.

AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project Administration; Validation; Writing - Review and Editing.

Author 2: Conceptualization; Data Curation; Investigation; Methodology; Writing - Original Draft.

Author 3: Data Curation; Investigation; Formal Analysis; Validation.

Author 4: Formal Analysis; Methodology; Writing - Original Draft.

Author 5: Methodology; Writing - Original Draft.

Author 6: Supervision; Resources; Visualization.

Author 7: Investigation; Methodology; Writing - Original Draft

Author 8: Resources; Visualization.

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