

Optimizing Tobacco Chopping Machines with Information Technology Support for NU Millennial Farmers in Magelang

Angger Bagus Prasetyo^{1*}, Muhammad Maksum Hidayat², Alvin Zuhair³,
Antika Prasetyaningtyas⁴, Fakhri Husain⁵, Kartinasari Ayuhikmatin Sekarjati⁶

^{1,4}Departement of Mechnichal Engineering, Universita Tidar, Magelang, Indonesia

²Departement of Informasi Technology, Universitas Tidar, Magelang, Indonesia

³Departement of Electrical Engineering, Universitas Tidar, Magelang, Indonesia

⁵Departement of Industrial Engineering, Universitas Tidar, Magelang, Indonesia

⁶Departemen of Industrial Technology, Universitas AKPRIND Indonesia,
Yogyakarta, Indonesia

e-mail: anggerbagus@untidar.ac.id^{1*}, muhamadmaksum@untidar.ac.id²,
alvinzuhair@untidar.ac.id³, prasetyaningtyas@untidar.ac.id⁴, husain@untidar.ac.id⁵,
sekar@akprind.ac.id⁶,

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*Correspondence:

anggerbagus@untidar.ac.id

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Abstract

The lack of a regular maintenance schedule system and millennial farmers' lack of knowledge about maintaining tobacco shredding machines are the issues facing Nahdlatul Ulama (NU) in Magelang. This scenario results in less than ideal shredded quality and frequent machine failures. Enhancing farmers' knowledge and proficiency in maintenance, repair, and information technology use for scheduling machine maintenance is the aim of this community service project. The implementation approach consists of training in the use of basic digital programs to record and arrange maintenance schedules, hands-on machine maintenance and repair practice, and teaching through the supply of materials. Thirteen ladies and seventeen males made up the 30 participants in the exercise. With participants' average comprehension rising from 22% prior to the activity to 86% following it, the outcomes discussed shown a notable improvement. It has been demonstrated that machine maintenance results in finer and more consistent shredded tobacco, and the application of information technology facilitates efficient and sustainable scheduling for participants. The community service project was successful in enhancing the quality of the shredded output, maximizing machine performance, and motivating millennial farmers to be more flexible when it comes to using information technology in tobacco farming.

INTRODUCTION

In the plantation sector, tobacco plays a vital role in the Indonesian economy by generating revenue for farmers and the nation. In the global market, tobacco is a strategically important commodity that can be cultivated in different areas, including East Java and East Nusa Tenggara, and it holds great promise for the manufacturing of cigarettes. Tobacco is a seasonal crop, which means it can only be grown once and cannot be sustained for more than a year, according to Hanafi et al. (2019). (Hanafi & Nadliroh, 2019).

Yuliawan et al. (2024) state that tobacco is sold in shreds, with the rest being sold as raw materials for the cigarette business (Yuliawan et al., 2025). Although they are alternate choices, other sales possibilities like Krosok tobacco offer virtually little further value (Sabtono & Judawinata, 2022). In order to boost the additional value that growers create, downstream tobacco processing is essential. Opportunities for farmers to boost their income will be presented by downstream processing (Yola et al., 2023).

In order to facilitate the downstreaming of tobacco commodities, suitable technology must be put in place, such as tobacco shredding machines, to enable post-harvest tobacco management procedures to be completed promptly and yield high-quality, effective, and speedy goods. Increasing MSMEs' output and cutting production costs are largely dependent on the deployment of suitable technologies (Prasetiyo et al., 2024; Pratiwi et al., 2019; Kartinasari Ayuhikmatin; Sekarjati et al., 2025; Kartinasari Ayuhikmatin; Sekarjati & Prasetiyo, 2024; Sutrisna; et al., 2024). In addition to helping farmers, adopting the right technology will directly improve the sustainability and economics of the community (Sianipar et al., 2020). The tobacco leaf chopping method is still regarded as traditional today, as Figure 1 illustrates.



Figure 1. Conventional tobacco shredding process

Using a knife to chop tobacco results in uneven cutting and raises the possibility of worker injuries, according to Lumbantombing et al. (Lumbantobing et al., 2020). Conventional methods of tobacco processing can result in a 30% reduction in product efficiency, delayed reporting, and less-than-ideal evaluation when making decisions (Syahid et al., 2023).

Sugandi et al. (2021) assert that hand cutting will affect the quality of raw materials and their selling price, resulting in higher manufacturing costs and lower selling prices (Sugandi et al., 2021). According to their research, it takes almost 35 days to chop 1.2 tons of tobacco using the traditional method, which would undoubtedly result in higher production costs. The largest issue facing the NU millennial farmer group in Magelang is

tobacco chopping. The ancient chopping procedure is still used today since it is thought to be simple and accessible to both sexes.

They are currently having trouble with technological limitations on tobacco shredding equipment; for instance, workers' cutting of tobacco is inconsistent if a machine component is damaged. According to studies by Al-Fauzi et al. (2023), shredding tobacco with traditional techniques yields 26–29 kg per hour under wet tobacco circumstances, whereas tobacco is cut and dried to avoid damage (Alfauzi et al., 2023). According to Irwansyah et al. (2025), fatigue, a lack of cutter focus, and a significant amount of tobacco cut are variables that lead to reduced uniformity in tobacco cutting. Lack of knowledge about maintenance schedules is another barrier (Irwansyah et al., 2025).

The goal of this community service project is to educate participants on how to maintain tobacco shredding machines and how to use information technology to plan maintenance to reduce issues while the machine is in use. The outcome of this community service program will be an over 85% comprehension of maintenance, machine repair, and technology-based maintenance scheduling among NU millennial farmers in Magelang.

IMPLEMENTATION METHOD

This community service is being carried out in a number of phases, all of which are interconnected. As seen in Figure 2, the community service provider must first locate and survey the site. The community service location is approximately 10 km from the Tidar University campus to Tampir Kulon Village, Candimulyo District, Magelang Regency. The journey by motorcycle takes approximately 15 minutes.



Figure 2. Survey of community service locations.

Examples of partner problems include sharpening the blade and damage to the blade, which results in uneven cutting or a lengthy production process (Prasetyo et al., 2023). Figure 3 shows the stages of community service overall.

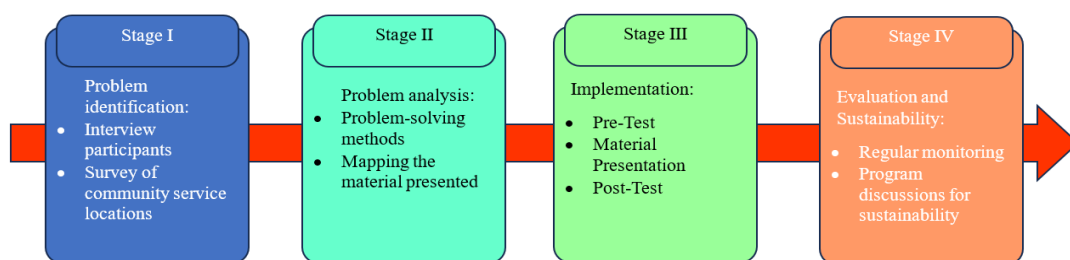


Figure 3. Flowchart of community service activities

Direct observation of the cutting process, maintenance, machine repairs, and creation of machine maintenance schedules is the first step in the identification process. To learn more about partner issues, the servant not only observed but also interviewed a number of millennial farmers in NU Magelang on cutting methods, machine maintenance challenges, and repair scheduling processes (Kartinasari Ayuhikmatin; Sekarjati & Prasetyo, 2021).

In the second phase, the community service will map the instructional materials that will be provided and examine the issues that millennial farmers experience in order to determine how the community service can affect the millennial farmers at NU Magelang. During the third stage, which will be split into two sessions, the community service program will be implemented. The first session will include instructional materials on how to maintain and repair tobacco shredding machines, including when to replace the v-belt, replace the shredding blade, and lubricate the machine parts that usually wear out (Arifin et al., 2023). The second session will provide instructional materials on how to schedule machine maintenance and repairs using information technology. The usage of Google Sheets and Microsoft Excel for scheduling machine maintenance will be covered in this session (Vernanda et al., 2025). At this stage, we use pre-test and post-test techniques to determine the level of understanding of participants before and after the education. According to Prasetyo et al., 2022, pre-test and post-test techniques were chosen because they can objectively measure improvements or the ability to change knowledge after receiving a learning treatment (Prasetyo & Sekarjati, 2022). The assessment of community service projects is the fourth step. This is done to make sure that the participants in the community service program gain something from it (Mawadati et al., 2022; Kartinasari Ayuhikmatin Sekarjati et al., 2022; Sulistyaningsih et al., 2022).

RESULT and DISCUSSION

There were about 30 people who participated in the community service project on Optimizing Tobacco Chopping Machines with Information Technology Support for NU Millennial Farmers in Magelang. Of these, 17 were males and 13 were women, with ages ranging from 21 to 45. Throughout the exercise, the participants enthusiastically paid attention and engaged in discussion on the offered material. The community service participants also presented the machine's operating instructions, which can serve as a guide for maintaining and repairing the machine to reduce the likelihood of damage occurring while it is in use. On September 9 and 10, 2025, a two-day community service project was held at the Tampir Kulon Village Hall in the Candimulyo District of the Magelang Regency. Activities on September 9, 2025 regarding engine maintenance and repair education are shown in Figure 4.

To ensure that participants understood how to replace and repair the blades, v-belts, and pulleys in the event of damage, such as when the blades were not sharp, the v-belt was worn out, or the pulley became loose while operating, participants were asked to try replacing the chopper blades in turns. Participants actively asked questions during the community service activities, including how to maintain and repair the machine and what to do in the event that technical issues arose while it was operating (Candra et al., 2024; Prasetyo et al., 2023; Prasetyo & Sekarjati, 2022).



Figure 4. Education on machine maintenance and repair

The quality of the shredded tobacco is directly impacted by machine maintenance, as demonstrated by the empirical findings. The tobacco slices produced by a well-maintained machine are smoother, more consistent, and devoid of flaws. Prior to maintenance, blunt blades and erratic machine rotation caused many of the shredded tobacco bits to be uneven, excessively wide, or even broken. The shredded tobacco's quality greatly increased following minor tweaks and fixes, better satisfying the requirements of the tobacco processing sector. This demonstrates that proficiency in machine maintenance not only extends the equipment's life but also directly affects the caliber of the final product (Irwansyah et al., 2025). The results of chopping tobacco using the machine are shown in Figure 5.



Figure 5. The result of chopping tobacco using a machine

Participants in the second day of community service heard a presentation about arranging education for equipment maintenance and repairs using information technology. This content explained how information technology can be used to schedule equipment repairs, bookkeeping, and other tasks. The presenter also carried on a conversation about the challenges they encountered and offered solutions. After that, the participants were shown a number of support apps that were easy to use, such as Google Calendar, an

Android-based reminder app, and an Excel template that had been updated for tracking maintenance schedules (Chamidah et al., 2025).



Figure 6. Education of community service participants

In the practical session, participants were invited to create a sample maintenance schedule for a tobacco shredding machine using a prepared digital template. They filled in the components that needed to be checked, the frequency of the checks, and the estimated maintenance time. This practical session provided participants with a concrete understanding of how technology can be applied simply yet effectively to support the machine's operational continuity. Participants' understanding of maintenance, repair, and the use of information technology for tobacco shredding machines improved, as shown in Table 1.

Table 1. Percentage of Participants' Understanding Level per Aspect

Aspects of Understanding	Before (%)	After (%)	Increase (%)
How a Tobacco Shredding Machine Works	47%	87%	40%
Routine Maintenance Techniques (Lubrication, Cleaning, Machine Checks)	37%	90%	53%
Minor Repair Techniques (Blade Replacement, V-Belt Replacement, Pulley Replacement)	20%	77%	57%
Machine Maintenance Scheduling (Manual/Digital)	17%	87%	70%
Fault & Productivity Recording	10%	83%	73%
Utilization of Information Technology (Digital Logs)	0%	90%	90%

Table 1 shows that following the community service program, the participants' level of comprehension considerably rose. At first, the average level of comprehension was still low; for instance, only 47% of respondents comprehended the machine's operating principles, and only 37% were aware of standard maintenance procedures. Just 20% of participants knew how to diagnose or make simple repairs, and just 17% and 10% of participants, respectively, knew how to schedule maintenance and record damage. According to these statistics, most participants lacked the administrative or technical abilities for maintaining tobacco shredding machines before to the program. Analysis of the measurement results before and after education shows that the educational method has a significant influence on respondents' knowledge (Kuntadi et al., 2025). This method

confirms that the educational approach used can substantially increase respondents' level of understanding (Hastuty et al., 2025).

After the community service activities, the percentage of understanding increased dramatically in all aspects. Understanding of machine working principles rose to 87%, routine maintenance techniques increased to 90%, and troubleshooting skills jumped to 77%. The greatest improvements were seen in the managerial aspects, namely maintenance scheduling (from 17% to 87%) and recording damage and productivity (from 10% to 83%). This indicates that the material presented was not only effective in improving technical skills but also succeeded in introducing a more systematic and measurable work culture among farmers.

The utilization of information technology for digital logging is the most noticeable feature. Ninety percent of participants actively used digital logs to support machine maintenance efforts after the program was put into place, but none of the participants used digital systems before the service. This rise (+90%) demonstrates how successfully information technology-based innovations are received by millennial farmers in NU Magelang. In addition to enhancing technical proficiency, this service program creates a new ecosystem that combines information technology and machinery to promote sustainable productivity.

The education provided doesn't stop at basic understanding; it needs to be continued with advanced training, such as machine vibration analysis, optimal knife sharpening, and lubrication management. This aims to provide farmers with deeper technical skills, allowing machines to operate more efficiently and have a longer lifespan. The program's sustainability is directed at developing more integrated digital applications that are easy for millennial farmers to use. While the initial phase used Google Forms and Google Sheets, subsequent developments could include an Android-based application that can record machine failure history, provide maintenance schedule notifications, and provide simple analysis of machine performance. Thus, information technology serves not only as a recording medium but also as a decision support system for farmers.

Data obtained from digital recording can be further processed to calculate machine effectiveness using the Overall Equipment Effectiveness (OEE) method, downtime analysis, and operational cost calculations. The results of this analysis can help farmers develop data-driven maintenance strategies, reduce losses due to sudden breakdowns, and increase the added value of their crops. By integrating these three aspects, the program's sustainability not only strengthens the technical capabilities of machine maintenance but also fosters the habit of utilizing information technology and increases the efficiency of the tobacco processing industry at the farmer level. This makes the program more comprehensive, has a long-term impact, and has the potential to be replicated in other regions with similar commodities.

CONCLUSION

The community service project, "Optimising Tobacco Shredding Machines with Information Technology Support for Millennial NU Farmers in Magelang," effectively improved participants' knowledge of IT-based scheduling and machine upkeep and repair. After taking part in the training, participants who had a low level of knowledge at first shown a notable improvement. The proportion of comprehension significantly rose in every area following the community service project. Troubleshooting skills rose to 77%, routine maintenance techniques to 90%, and machine working principles to 87%. Regular maintenance scheduling is made easier by the use of information technology and an industrial engineering approach, while the application of mechanical engineering concepts has been demonstrated to improve machine performance and improve the quality of

shredded tobacco. Therefore, this initiative promotes millennial farmers to be more adaptive to technological advancements in managing tobacco farming enterprises, in addition to having a direct impact on raising production and yield quality. Three elements will be the focus of this community service program's sustainability: downtime analysis, digital application development, and knife-sharpening techniques.

REFERENCES

- Alfauzi, A. S., Janitra, A. A., & Setyo, A. (2023). Rancang Bangun dan Analisis Mesin Perajang Tembakau Menggunakan Mekanisme Poros Engkol. *Journal of Mechanical Engineering and Applied Technology*, 1(2), 7–12. <https://doi.org/10.32497/jmeat.v1i2.4874>
- Arifin, F., Alaydrus, M. S., & Prasetyo, A. B. (2023). Desain dan Analisis Cassava Chopper Machine. *Angkasa Jurnal Ilmiah Bidang Teknologi*, 15(1), 97–102. <https://doi.org/http://dx.doi.org/10.28989/angkasa.v15i1.1638>
- Candra, A. Y., Prasetyo, A. B., Hartana, D. R., Studi, P., Mesin, T., Babarsari, J., Depok, C., Yogyakarta, S., Pisau, V. M., & Mesin, U. K. (2024). Desain Dan Analisis Varian Sudut Pisau Terhadap Uji Kinerja Mesin Pencacah Rumput. *Journal of Energy, Materials, & Manufacturing Technology (JEMMTEC)*, 3(2), 41–50. <https://doi.org/https://doi.org/10.61844/jemmtec.v3i01.751>
- Chamidah, N., Kurniawan, A., Saifudin, T., Wioldyanisa, E. E., Azizah, K., & Dewanty, S. I. (2025). Training on Use of User-Friendly R-Shiny Program for Determining Nutritional Status of Toddlers at Posyandu in The Working Area of The Sobo Banyuwangi Community Health. *Jurnal Layanan Masyarakat*, 9(3), 406–418. <https://doi.org/10.20473/jlm.v9i3.2025.406-418> Copyright:
- Hanafi, A. D., & Nadliroh, K. (2019). Rancang Bangun Rangka Mesin Perajang Tembakau Dengan Kapasitas 1 Ton / jam. *INOTEK*, 9, 2130–2137. <https://doi.org/https://doi.org/10.29407/afj0q786>
- Hastuty, Y. D., Sitepu, N. B., Balqis, Y. A., & Afdillah, G. P. (2025). Sosialisasi dan Edukasi Pemanfaatan Wedang Jahe pada Ibu Hamil di Deli Serdang Sumatera Utara. *SOCIETY Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 5(2), society203–211. <https://doi.org/https://doi.org/10.37802/society.v5i2.925>
- Irwansyah, Hakim, S., & Kurniawan, D. (2025). Modifikasi Dan Uji Kinerja Mesin Perajang Daun Tembakau Gayo. *Jurnal Agrotek Ummat*, 12(1), 37. <https://doi.org/10.31764/jau.v12i1.28135>
- Kuntadi, Y. A., Satyawati, E., & Asmarawati, S. G. (2025). Sosialisasi Literasi Keuangan Digital Melalui Webinar untuk Meningkatkan Pemahaman Mahasiswa Terhadap Pinjaman Online. *SOCIETY Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 6(1), 125–135. <https://doi.org/https://doi.org/10.37802/society.v6i1.1083>
- Lumbantobing, J. P. S., Jamilah, J., Risyanto, Hermaliani, E. H., & Sulistyowati, D. N. (2020). Sistem Informasi Kelompok Tani Berbasis Android (Si Poktan Berani). *Jurnal Sistem Informasi dan Teknologi*, 1(2), 3–10. <https://doi.org/https://doi.org/10.24176/sitech.v3i2.5610>
- Mawadati, A., Ustyannie, W., Sulistyaningsih, E., Hindarto, A., Sekarjati, K. A., Asih, E. W., Gulo, T. E., Industri, J. T., Industri, F. T., Rekayasa, J., Komputer, S., & Terapan, F. S. (2022). Strategi Pemasaran Produk dengan Whatssapp Business Bagi UMKM. *Jurnal Dharma Bakti-LPPM IST AKPRIND*, 5(2), 203–211. <https://doi.org/https://doi.org/10.34151/dharma.v5i2.4043>
- Prasetyo, A. B., Ayuhikmatin Sekarjati, K., Yawara, E., Pradana Assagaf, I. A., & Rizki Putra, I. (2023). Edukasi dan Pelatihan tentang Pengelolaan Mesin Pengolah Sampah guna Meningkatkan Pemahaman Bagi Kelompok Bank Sampah di Desa Pandes. *Jurnal Jnanadharma*, 1(2), 150–157.

- <https://doi.org/https://doi.org/10.34151/jafst.v1i2.4332>
- Prasetyo, A. B., & Sekarjati, K. A. (2022). Sosialisasi Sistem Pengelolaan Sampah kepada Anggota Bank Sampah Berkah Nyata Desa Pandes. In R. Prastowo (Ed.), *ReTII* (hal. 8–12). Institut Teknologi Nasional Yogyakarta. <https://journal.itny.ac.id/index.php/ReTII/article/view/3453>
- Prasetyo, A. B., Sutrisna, S., Sekarjati, K. A., & A. Assagaf, I. P. (2024). Penerapan mesin pengiris singkong untuk mendukung Kelompok Usaha Bersama (Kube) Jaya Makmur Sinduharjo, Ngaglik, Sleman, Yogyakarta. *KACANEGARA Jurnal Pengabdian pada Masyarakat*, 7(3), 325. <https://doi.org/10.28989/kacanegara.v7i3.2071>
- Pratiwi, I., Permatasari, R., & Homza, O. F. (2019). Pemanfaatan Limbah Kotoran Ternak Sapi dengan Reaktor Biogas di Kabupaten Ogan Ilir. *Ikraith-Abdimas*, 2(3), 1–10. <https://jurnal.sttw.ac.id/index.php/abma/article/view/132>
- Sabtono, O. D. P., & Judawinata, M. G. (2022). Karakteristik Usahatani Tembakau Di Daerah Pinggiran Hutan (Studi Kasus di Dusun Cijaha, Desa Tanjungwangi, Kecamatan Cicalengka, Jawa Barat). *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 8(2), 1104–1122. <https://doi.org/http://dx.doi.org/10.25157/ma.v8i2.7737>
- Sekarjati, Kartinasari Ayuhikmatin, & Prasetyo, A. B. (2021). Sosialisasi Marketing Mix Pada Home Industry Sambal Pecel Dusun Putat 1 Kabupaten Gunung Kidul. *Jurnal Berdaya Mandiri*, 3(1), 571–577. <https://doi.org/https://doi.org/10.31316/jbm.v3i1.1379>
- Sekarjati, Kartinasari Ayuhikmatin, & Prasetyo, A. B. (2024). Pendampingan Penggunaan Mesin Pengaduk Adonan Kue untuk Mengurangi Waktu dan Biaya Produksi Bakpia di Industri Rumahan. *SEWAGATI: Jurnal Pengabdian Masyarakat Indonesia*, 3(4), 09–17. <https://doi.org/https://doi.org/10.56910/sewagati.v3i4.1820>
- Sekarjati, Kartinasari Ayuhikmatin, Rusianto, T., & Prasetyo, A. B. (2025). Pemanfaatan Teknologi Tepat Guna Pengaduk Gula Aren Sebagai Alternatif Untuk Penyelesaian Permasalahan UMKM di Kebonharjo „ *Jnanadharm*, 3(2), 54–62. <https://doi.org/10.34151/jafst.v3i2.5188>
- Sekarjati, Kartinasari Ayuhikmatin, Widuri Asih, E., Inayati Rif ah, M., Sulistyaningsih, E., Emaputra, A., & Prasetyo, A. B. (2022). Pemberdayaan Usaha Mikro Produk Rumput Laut. *Jurnal Sains Teknologi dalam Pemberdayaan Masyarakat*, 3(1), 49–54. <https://doi.org/10.31599/jstpm.v3i1.1166>
- Sianipar, G. D., Gunomo, D., & Ary, M. A. (2020). Modifikasi dengan Penambahan Pengumpan pada Mesin Pencacah Seresah Tebu (Trash Shredder) dengan Variasi Kecepatan Maju Traktor. *Journal of Agricultural and Biosystem Engineering Research*, 1(2), 1–12.
- Sugandi, W. K., Thoriq, A., Yusuf, A., & Firdaus, F. (2021). Rekayasa Mesin Perajang Tembakau Mole. *Jurnal Teknik Pertanian Lampung (Journal of Agricultural Engineering)*, 10(4), 459. <https://doi.org/10.23960/jtep-l.v10i4.459-467>
- Sulistyaningsih, E., Asih, E. W., Mawadati, A., Sekarjati, A., Wibowo, A. H., Ustyannie, W., & Arjianto, B. R. (2022). Strategi Pemasaran Produk UMKM OK OCE ADMA Yogyakarta dengan Memanfaatkan Marketplace di Facebook. *Jurnal Abdi Masyarakat Indonesia (JAMSI)*, 2(5), 1397–1406. <https://doi.org/https://doi.org/10.54082/jamsi.398>
- Sutrisna, Prasetyo, A. B., Muhfidin, R., & Molo, R. C. B. (2024). Mekanisasi Mesin Penghancur Bawang Sebagai Usaha Peningkatan Produktifitas Rambak. *DULANG: Jurnal Pengabdian Kepada Masyarakat*, 6(1), 45–49. <https://doi.org/https://doi.org/10.33504/dulang.v4i02.357>
- Syahid, S., Riyadi, A. H., & Triyono, T. (2023). Rancang Bangun Alat Pencacah Tembakau Otomatis Berbasis Plc Dan Scada. *Jurnal Ilmiah Inovasi*, 23(1), 97–102. <https://doi.org/10.25047/jii.v23i1.3815>

- Vernanda, D., Iqbal, M., & Susilawati, S. (2025). Efektivitas Penerapan Teknologi Informasi Terintegrasi (Mobile dan Website) serta Penggunaan Teknologi Tepat Guna pada Alat Perajang Tembakau. *ADMA : Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 5(2), 539–550. <https://doi.org/10.30812/adma.v5i2.4594>
- Yola, T. M., Yuanita, D. W., & Dewi, C. N. (2023). Peningkatan Agribisnis Tembakau: Seleksi Bibit Unggul Sejak Dini? *Jurnal Social Economic of Agriculture*, 12(1), 68. <https://doi.org/10.26418/j.sea.v12i1.59373>
- Yuliawan, D., Warji, W., & Wanniatie, V. (2025). Peningkatan Pendapatan Petani Tembakau melalui Penerapan Teknologi Mesin Perajang Daun Tembakau di Kecamatan Purbolinggo Kabupaten Lampung Timur. *Jurnal PKM Manajemen Bisnis*, 5(1), 1–8. <https://doi.org/10.37481/pkmb.v5i1.1123>