Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

Implementation of Renewable Energy Based Kemplang Drying House Technology in Talang Pangeran Ulu Village South Sumatra

Pratama Setiawan[1*], Muhammad Jeri[2], Intan Cahyani Aprillianti[3], Jogi Imanuel Gultom[4], Maulia Musyahada[5]
[1*]Departement of Chemistry, Faculty of Mathematics and Natural Sciences, IPB University, Indonesia.
[2]Departement of International Relations, Faculty of Social and Political Sciences,
[3]Departement of Mathematics Education, Faculty of Teacher Training and Education,
[4]Departement of Development Economic, Faculty of Economics,
[5]Departement of Biology, Faculty of Mathematics and Natural Sciences, Universitas Sriwijaya, Indonesia.
*Corresponding Author. Email: prtmasetiawan@apps.ipb.ac.id

Abstract: This community service program aims to introduce renewable energy innovation through the development of a solar-powered kemplang drying house constructed with polycarbonate material in Talang Pangeran Ulu Village, South Sumatra. The initiative was designed to address the limitations of conventional sun drying, which is highly dependent on weather conditions and often results in prolonged drying times and inconsistent product quality. The implementation adopted a training and mentoring approach conducted in two stages. The first stage provided technical guidance on the design, construction, and operation of the solar-powered drying house. The second stage focused on enhancing participants' capacity in digital marketing for product promotion through social media and e-commerce platforms. The activities applied a Participatory Rural Appraisal (PRA) approach, encouraging community involvement through discussions and practical demonstrations. Evaluation instruments included pre-test and post-test questionnaires, observation sheets to assess operational skills, and temperature measurements inside the drying house. The evaluation employed a one-group pre-test–post-test design, and the collected data were analyzed using descriptive quantitative techniques to determine improvements in participants' knowledge and skills. The results indicated that the drying house increased the internal temperature from approximately 32°C to 45–50°C, representing an increase of about 13–18°C. This condition accelerated moisture evaporation and improved drying efficiency. With daily production reaching 8,000–10,000 pieces, the kemplang exhibited more uniform dryness and better hygiene. Additionally, improved product quality and the adoption of digital marketing contributed to higher selling value and increased community income.

Article History:
Received: 13-01-2026
Reviewed: 24-03-2026
Accepted: 11-04-2026
Published: 20-05-2026

Key Words:
Drying House;
Kemplang Crackers;
Polycarbonate;
Renewable Energy;
Technology.

How to Cite: Setiawan, P., Jeri, M., Aprillianti, I. C., Gultom, J. I., & Musyahada, M. (2026). Implementation of Renewable Energy Based Kemplang Drying House Technology in Talang Pangeran Ulu Village South Sumatra. *Jurnal Pengabdian UNDIKMA, 7*(2), 458-468. https://doi.org/10.33394/jpu.v7i2.19293

https://doi.org/10.33394/jpu.v7i2.19293

Introduction

Talang Pangeran Ulu Village is located in West Pemulutan District, Ogan Ilir Regency, South Sumatra. It covers an area of approximately 720 hectares and has a population of 2,614, with approximately 65% of its residents running kemplang cracker businesses. The village's geographical location, located in the lowlands and close to rivers and swamps, has led to the community's habit of processing various types of fish, which has

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

subsequently developed into an economic opportunity by utilizing available local resources. Currently, there are approximately 50 kemplang artisan groups that utilize this business as their primary source of income in Talang Pangeran Ulu Village. Each group typically consists of 10 to 15 people, capable of producing kemplang. Capacity fluctuates, but on average, each group can produce around 5–7 kg of kemplang per day..

Figure 1. Problems in the kemplang drying process

Kemplang is known as a cracker-shaped snack that is also a specialty of southern Sumatra (Larenza et al., 2021). The characteristics of kemplang crackers not only reflect local culinary innovation, but also illustrate the community's adaptation to the availability of ingredients and the needs of the times (Mentari et al., 2025). Kemplang, made from river fish or sea fish, has a fairly simple processing method that only requires sago, fish, salt, and water. The processing involves mixing all the ingredients and the fish that has been pureed into a dough, then shaping it into balls and steaming it first. The steamed kemplang is placed in a 1.5-meter diameter container and dried in the sun before being baked. Baked kemplang attracts high consumer interest because of its unique production process, resulting in a distinctive flavor that distinguishes it from similiar product (Erina et al., 2025). However, kemplang cracker artisans still produce crackers using conventional production methods with simple tools, resulting in an ineffective and inefficient manufacturing process. Artisans dry kemplang in open spaces, especially on the side of the road, which has the potential to reduce the quality of kemplang cracker production. In addition to reducing the quality and hygiene of kemplang crackers, drying them on the side of the road can also disturb other road users. Another problem that occurs is that during the rainy season, kemplang crackers cannot be dried, so they do not expand when baked and become hard (Larenza et al., 2021).

Pontoiyo's Research et al. (2024) discussed the use of greenhouse dryers (GHEs) as an appropriate technology to improve the quality and efficiency of cassava cracker production. Currently, the drying process is still carried out manually using bamboo lamps, which has several disadvantages, such as a relatively long drying time (around 4–5 hours), dependence on weather, and the risk of bacterial contamination due to the drying location being close to a landfill.Through community service, a team from Gorontalo State University introduced and trained people on the use of a rectangular prism-shaped solar-powered ERK dryer. This device has been proven to accelerate the drying process and produce more hygienic and efficient products.However, the application of greenhouse effect drying tools still has obstacles, namely limited general knowledge regarding how to use and maintain the tools and the cost of procuring the tools is an obstacle, so that innovations in other drying methods are needed that are simpler, more economical, and easier for the community to implement.

The new innovation implemented in this community service program is the drying of kemplang houses based on renewable energy using polycarbonate. Polycarbonate is a group of thermoplastic polymers that can be easily shaped using heat. This plastic has many

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

advantages, such as thermal resistance compared to other types of plastic (Telaumbanua & Rahmadianto, 2022). Polycarbonate can withstand temperatures of up to 150°C. Unlike other thermoplastic polymers, polycarbonate can undergo significant plastic deformation without cracking (Hafad et al., 2021). Furthermore, polycarbonate has become a fundamental material among engineering plastics and is considered a vital engineering plastic (Mehrabadi et al., 2025). Therefore, polycarbonate is a good choice for use as a kemplang drying house.

In addition to problems with drying, the marketing process for kemplang does not always run smoothly. Marketing and distribution activities are still carried out conventionally because artisans still use a direct sales system and have not yet utilized social media or online stores as promotional platforms to improve sales quality. The community service activities carried out aim to help improve the skills of kemplang artisan groups in their production process and provide sales improvement strategies through digital marketing. The digital marketing referred to is through social media and e-commerce applications. Through the development of renewable energy utilization in the drying process and the application of appropriate marketing, the community can improve their economy.

Method

The community service activity was carried out in Talang Pangeran Ulu Village, West Pemulutan Subdistrict, Ogan Ilir Regency, South Sumatra. The activity consisted of four stages, namely preparation and survey stage, implementation stage, evaluation stage, and reporting stage.

Preparation and Survey Stage

The first stage of community service is to make preparations and conduct surveys before the activities take place. At this stage, the preparation and survey stage involved identifying and engaging community partners in Talang Pangeran Ulu Village. The partners consisted of approximately 30 individual micro, small, and medium enterprises MSMEs engaged in kemplang production, as well as members of the local youth organization (karang taruna). In addition, Village officials including hamlet heads, were involved in supporting the dissemination of information and encouraging community participation in the program. After that, the community service team can determine what businesses will be improved in Talang Pangeran Ulu Village. This stage included initial coordination needs assessment, and field surveys to understand the existing production processes, challenges, and potential for implementing renewable energy-based drying systems and digital marketing strategy..

Figure 2. Preparation and survey stages

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

Implementation Phase

The implementation phase consists of three stages, namely the socialization stage, the kemplang drying house construction stage, and the kemplang drying house effectiveness testing stage.

a) Training and Mentoring Approach
The socialization stage was conducted using a training and mentoring approach, aimed at improving the knowledge and skills of the community participants. This stage was implemented in two sessions. The first sessions focused on educating participants about the construction and utilization of renewable energy-based kemplang drying houses, including design, materials, and operational processes. The second session focused on enhancing participants' understanding of digital marketing strategies for product promotion through social media and e-commerce platforms. In addition, this stage incorporated elements of Participatory rural appraisal (PRA), where participants were actively involved through discussions and interactive activities. A pretest and posttest were conducted to measure participants' level of understanding before and after training sessions (Chambers, 1994).

b) Kemplang Drying House Construction Phase
The kemplang drying house construction phase began with selecting the location for the drying house, purchasing tools and materials, leveling the ground, building the foundation, erecting support poles, installing polycarbonate, and finishing.

c) Kemplang Drying House Effectiveness Testing Phase
In the kemplang drying house effectiveness testing stage, the implementation team and partner community conducted tests by drying kemplang in the drying house. The drying process began in the morning when the kemplang production process was complete.

Evaluation Stage

The evaluation stage of the educational assistance program was conducted by comparing the conditions of the partner community before and after the socialization through pre-tests and post-tests, with questions provided by the service team before and after the socialization activities. The next stage of evaluation was regarding the effectiveness of the kemplang drying house. This was aimed at observing the effectiveness of the kemplang drying house. The evaluation employed a pre-experimental design with a one-group pre-test post-test design. The data analysis technique used was descriptive quantitative analysis by comparing pre-test and post-test scores to identify the improvement in participants' understanding after the program (Sugiyono, 2023). The success indicators of the program were viewed from cognitive and psychomotor aspects. The cognitive aspect was reflected in the improvement of participants' knowledge regarding renewable energy and the working principles of the kemplang drying house, as indicated by the pre-test and post-test results. Meanwhile, the psychomotor aspect was reflected in participants' skills in operating the kemplang drying house and utilizing digital marketing platforms. The program was considered successful if there was an increase in scores for most participants and an improvement in their practical skills after the implementation of the program.

Result and Discussion

Pre-test and Post-test

Pre-tests and post-tests are very important evaluation tools in community service programs. An increase in knowledge, as demonstrated by higher post-test scores compared to pre-test scores, indicates an improvement in participants' understanding or perception of the

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

intervention provided after the pre-test (Stratton, 2019). By using both types of tests, it is possible to measure the effectiveness of the outreach, identify areas for improvement, and ensure that the outreach benefits both participants and the community.

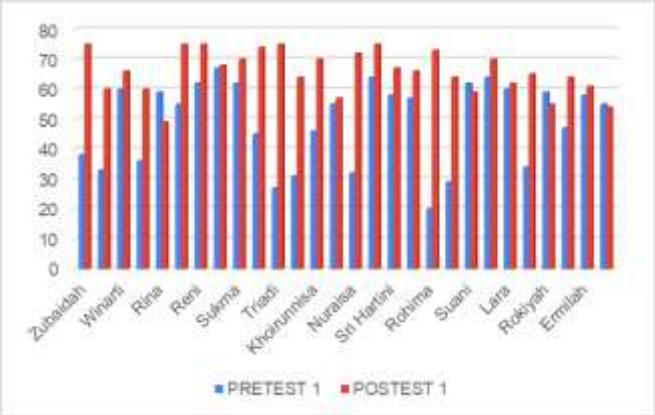

Figure 3. MSME actors' understanding of kemplang drying houses

Figure 3 above presents the results of an evaluation of MSME participants' increased understanding of the working principles and utilization of kemplang drying houses. The data was obtained through pre-tests and post-tests administered before and after the program was implemented. The results show that the understanding of most participants increased significantly after participating in the socialization program. This indicates that the training material presented was effective in improving participants' capacity to manage kemplang drying houses.

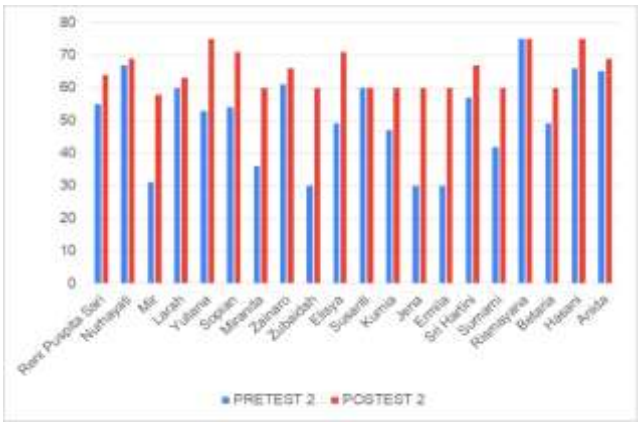

Figure 4. MSME actors' understanding of online marketing

Figure 4 compares the level of understanding of MSME actors regarding online marketing before and after they participated in socialization or obtained related information. In general, Figure 4 shows an increase in understanding after participating in the training program. This can be seen from the increase in scores for most participants in the post-test compared to the pre-test.

Kemplang Drying House

One of the most common problems faced by residents of Talang Pangeran Ulu village is the kemplang drying process carried out by kemplang crafters, which is still done conventionally, requiring a long time and less than ideal drying locations. For example, residents usually use open land exposed to sunlight as a medium to dry their kemplang. This also causes land waste, so residents tend to dry their kemplang on the side of public roads that are commonly used for daily activities. Of course, this does not guarantee the cleanliness of

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

the kemplang produced and disrupts daily activities because the drying area sometimes covers public roads (Sudarsono et al., 2019).

The kemplang drying house is constructed using polycarbonate walls as a heat conductor to improve the efficiency of kemplang drying. The drying house is built right next to the kemplang cracker production area, which is designed with a square wooden frame measuring 4 m × 55 mm. The floor of the house is made of concrete, while the walls and roof are covered with white polycarbonate measuring 2.1 m × 11.8 m with a thickness of 4 mm. The frame of the rack where the kemplang crackers are dried uses small round wood with a length of 4 m. The kemplang cracker rack is arranged in 3 parts: front, right, and left of the entrance with 5 levels. Kemplang craftsmen can typically produce 4,000-5,000 pieces in a single production run and can produce twice a day. This means that they can produce 8,000-10,000 pieces of kemplang per day.

The effectiveness of this drying house is closely related to the application of the greenhouse effect principle. The use of transparent polycarbonate allows solar radiation to enter the drying chamber while retaining heat inside, resulting in a higher internal temperature compared to the surrounding environment. This principle has been widely applied in solar greenhouse dryer technology and is known to significantly enhance internal temperatures through heat absorption and retention. Based on field observations, the average ambient temperature is around 32°C, while the temperature inside the drying house can reach 45–50°C. This temperature difference of approximately 13–18°C indicates a substantial increase in thermal conditions, which accelerates moisture evaporation and shortens the drying time. These findings are consistent with previous studies reporting that polycarbonate-based greenhouse dryers can increase internal air temperature by approximately 10–14°C above ambient conditions (Philip et al, 2022).

Figure 5. Polycarbonate kemplang drying house

In addition, there are other advantages gained from using kemplang drying houses, as presented in the table below.

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

Table 1. Differences between Conventional Drying and Dehydration

Conventional drying	Drying with a drying house
Residents dry their produce in rows, which takes up a lot of space.	There is efficiency in the use of space because the kemplang can be stacked in the drying house so that only a small amount of land is used in the production process.
Kemplang usually takes a long time to dry, and two batches can be produced in one day, with an estimated drying time of 6 hours.	Cutting drying time to 90 minutes in hot conditions and 2 hours in semi-hot conditions. So that in one day it is estimated that four times the production can be produced.
The cleanliness of the product cannot be guaranteed because it is dried in an open space using the usual drying area.	The drying house ensures the cleanliness of the kemplang production because it is covered by polycarbonate that absorbs the sun's heat.
Kemplang tends to be stored inside the house once dry, taking up a lot of space.	In addition to being used for drying, the drying house can also be used as a storage place for kemplang.
There is no guarantee against unwanted risks such as rain or strong winds.	The kemplang drying house protects the product from rain or strong winds that can damage it.

(a) (b)

Figure 6. Drying kemplang before (a) and after (b) using polycarbonate

The drying process using a greenhouse as a drying medium for kemplang crackers works by capturing the sun's heat so that the temperature in the kemplang room is warmer than the general temperature (Sumarto et al., 2021). Kemplang drying houses are made from polycarbonate to help kemplang cracker artisans obtain products with better sanitation in food processing. The use of greenhouses as a drying medium for kemplang crackers also provides an alternative for artisans with limited land and flexibility in the face of unfavorable weather changes. The kemplang drying process using greenhouses produces kemplang that is not much different from manual drying in terms of taste, appearance, and quality.

Education on Packaging, Labeling, Legality, and Online Marketing

Figure 7. packaging of kemplang crackers

Jurnal Pengabdian UNDIKMA:
Jurnal Hasil Pengabdian & Pemberdayaan kepada Masyarakat
https://e-journal.undikma.ac.id/index.php/jpu/index
Email: pengabdian@undikma.ac.id

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

Before starting the marketing stage, product packaging is an important initial step to attract consumers and make it easier for them to recognize a product. According to Apriyanti (2018), one marketing strategy that a company can implement is to create the best and most attractive product packaging. Therefore, during the training, the first thing the community service team did was to provide education and assistance on packaging kemplang crackers. At the initial stage of this training, the community service team provided education on proper packaging procedures, starting with recognizing the types of packaging. The purpose of introducing the types of packaging was so that the partners could use the packaging that suited their needs. After the education, the assistance provided by the community service team was to help the partners in the process of selecting the appropriate packaging, namely using food grade plastic packaging for kemplang crackers.

Figure 8. Product labeling

In addition to packaging, product labeling is also an important point for a company. Labeling serves to give identity to the products produced so that they are different from other products. Labeling training is also included in the packaging training material, so this training is conducted at the same time. Good labeling usually consists of the name of the ingredients, NIB number, ingredient composition, product name, product weight or volume, expiration date, and storage instructions or recommendations. For the labeling process, the assistance provided by the community service team is to help MSMEs in Talang Pangeran Ulu Village design labels and also help them choose materials for the labels. The material commonly used for labels is sticker material. This sticker material is easy to use as it only requires attaching the sticker to the outer packaging of the product.

The Business Identification Number (NIB) is an identification number that must be obtained by business actors as a form of business legality. The NIB serves as an official identity issued by the government and can be used for various purposes, such as business licenses, product certification, and other administrative matters (Agelia et al., 2024). In this training, the community service team also provided guidance on the importance of NIB and assisted partners in the application process. With NIB, products produced by partners, such as kemplang crackers, will be more trusted by consumers and have wider access to both offline and online markets. Furthermore, the community service team assisted MSMEs in filling in the required data, from registration to data verification through the OSS (Online Single Submission) system. Continuing from the assistance in packaging, labeling, and business legality aspects, the next step that became the focus of this program was online marketing. Online marketing is an important strategy in expanding the market reach of MSME products, especially in today's digital era. Marketing activities must be coordinated and directed in a planned manner in order to support the achievement of desired goals. Marketing planning serves as a systematic approach to harmonizing all marketing activities, optimizing strategies and resources used, and ensuring effective and sustainable control over all marketing

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

activities (Iswara et al., 2022). Therefore, the community service team provides education and assistance on how to utilize digital platforms to market products more effectively.

The initial education provided covers an introduction to various online marketing platforms, such as social media (WhatsApp, Instagram, Facebook), marketplaces (Shopee, Tokopedia), and online store websites. The goal is for MSMEs to understand the characteristics of each platform and be able to choose the one that best suits their needs and target market. In addition, the community service team also assists MSMEs in developing effective promotional materials. This includes how to take attractive product photos, write informative and appealing product descriptions, and set competitive prices. The use of high-quality product photos and clear product descriptions is very important in attracting the attention of potential buyers on online platforms.

The results of implementing an online marketing strategy assisted by the community service team showed a significant increase in sales for MSMEs, especially in terms of kemplang crackers. This increase was evident from the expansion of the market that previously could not be reached through conventional marketing methods. By utilizing digital platforms such as WhatsApp, kemplang crackers can now reach wider areas. Before using online marketing strategies, these MSMEs were only able to sell their products locally, with limited market reach. However, after switching to online marketing, kemplang MSMEs began to receive orders from various more distant areas, including major cities and even regions outside the province.

Conclusion

The construction of a kemplang drying house using polycarbonate plastic as the main material works like a greenhouse, allowing sunlight to enter and trapping heat to produce higher temperatures. The construction of a kemplang drying house using polycarbonate is an innovation that solves several problems faced by MSMEs during the drying process. The advantages of drying houses include faster drying times, higher production, more efficient land use, product safety even in the event of unfavorable weather changes, and more hygienic production quality. The construction of kemplang drying houses has received an excellent response from various parties, especially the community of Talang Pangeran Ulu Village, South Sumatra. In addition, the implementation of legal aspects such as obtaining a Business Identification Number (NIB), along with improvements in packaging and digital marketing, has also shown positive results in strengthening business legality and expanding market reach. Overall, the integration of appropriate technology and marketing management has enhanced the competitiveness of the partner MSMEs.

Recommendation

For the future community service ae recommendation to focus on expanding the number of kemplang drying houses so that more kemplang MSMEs can benefit from this innovation. Other more using and research to finding alternatif raw material for minimzing the budget of drying houses per units. Target partner are encouraged to actively adopt and maintain the renewable energy-based drying house technology to improve production efficiency and product quality. Village governments are expected to support the sustainability of the program by facilitating coordination among local MSMEs, disseminating information, and allocating village resource for the replication of drying house facilities. Related government agencies, particularly those responsible for MSME development and trade, are encouraged to provide assistance in business legalization prossesces such as obtaining

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

Business Identificattion Numbers (NIB), entrepreneurship training, also product certification. In addition, marketing efforts should continue to be strengthened though digital media utilization and broader distribution networks. The implementation of renewable energy-based kemplang drying houses is expected to serve as a pilot model for similar kemplang producing communities in other regions.

Acknowledgements

The authors would like to thank the PPK-Ormawa Program (Student Organization Capacity Building Program) under the Ministry of Higher Education, Science, and Technology (Kemdiktisaintek) for their support and funding in the implementation of this community service activity. Gratitude is also extended to the partner community and the Talang Pangeran Ulu Village apparatus for their participation, cooperation, and support, which enabled this activity to be carried out successfully.

References

Agelia, E., Safitri, R. A., Widyastuti, T. A., Mubarok, M. S., & Gunawanm A. (2024). Pendampingan Pembuatan Nomor Induk Berusaha (NIB) Menggunakan Website Online Single Submission (OSS) pada UMKM di Desa Purwosari, Comal, Kabupaten Pemalang. *Welfare: Jurnal Pengabdian Masyarakat*. 2(1), 55-61. https://jurnalfebi.iainkediri.ac.id/index.php/Welfare .

Apriyanti, M. E. (2018). Pentingnya Kemasan terhadap Penjualan Produk Perusahaan. *Sosio E-Kons*, 10(1), 20. https://doi.org/10.30998/sosioekons.v10i1.2223.

Chambers, R. (1994). The Origins and Practice of Participatory Rural Appraisal. *World Development*. 22(7):953-969.

Erina L., Azzahri, R., Pangestu, A., Tobing, A. C. I. L., & Mashanriza, M. A. (2025). Pendampingan Kelompok Usaha Kemplang Panggang dalam Upaya Peningkatan Produktivitas Masyarakat Desa Tebing Utara Kabupaten Ogan Ilir. *KREATIF: Jurnal Pengabdian Masyarakat Nusantara*. 5(4): 467-478. https://doi.org/10.55606/kreatif.v5i4.8772

Hafad, S. A., Hamood, A. F., Alsalihi, H. A., Ibrahim, S. I., Abdullah, A. A. Radhi, A. A., Al-ghezi, M. K., Alogaidi, B. R. (2021). Mechanical properties study of polycarbonate and other thermoplastic polymers. *Journal of Physics: Conference Series*. 1973(012001), 1-12. https://doi.org/10.1088/1742-6596/1973/1/01200.

Iswara, U. S., Setyabudi, T. G., Palupi, D., Wahidahwati, & Suwitho. (2022). Strategi Peningkatan Penjualan Melalui Pemasaran Digital bagi UMKM. Society : *Jurnal Pengabdian Dan Pemberdayaan Masyarakat*, 2(2), 156–164. https://doi.org/10.37802/society.v2i2.205.

Larenza, A., Nugraha, A., & Affandi, M. I. (2021). Analisis Kinerja Produksi Dan Strategi Pemasaran Agroindustri Kerupuk Kemplang Di Kota Bandar Lampung. *Jurnal Ilmu-Ilmu Agribisnis*, 8(2), 279. https://doi.org/10.23960/jiia.v9i2.5100.

Mehrabadi, N. R., Pircheraghi. G., Ghasemkhani. A., Sanati, P. H., Shahidizadeh, A., Kaviani, A., & Ray, S. S. (2025). A review on material extrusion additive manufacturing of polycarbonate-based blends and composites: Process-structure–property relationships. *SPE Polymers*. 6(2): 1-25. https://doi.org/10.1002/pls2.10174.

Mentari, R. D. P., Wihardi, Y., Haliani, D. O., Hasibuan Z. H., Suryati, N. K., & Antoni, R. Analisis Keuntungan dan Efisiensi Produksi Kerupuk Kemplang Ikan pada Skala

Vol. 7, No. 2 (May 2026)
E-ISSN : 2722-5097
Pg : 458-468

Rumah Tangga di Kecamatan Kemuning Sumatera Selatan. *Jurnal Ilmu Sosial, Manajemen, Akuntansi, & Bisnis*. 6(1), 35-43.

Philip, N., Duraipandai, S., & Sreekumar, A. (2022). Techno-economic analysis of greenhouse solar dryer for drying agricultural produce. *Renewable Energy*. 199, 613-627. https://doi.org/10.1016/j.renene.2022.08.148.

Pontoiyo, F., Liputo, B., & Djamalu, Y. (2024). Pemanfaatan Pengering Efek Rumah Kaca dalam Meningkatkan Kualitas Kerupuk Kasubi Lonuo Bukit Arang. *Jurnal Adimas Terapan.* 4(1), 6–10.

Stratton S. J. (2019). Quasi-Experimental Design (Pre-Test and Post-Test Studies) in Prehospital and Disaster Research. *Prehospital and Disaster Medicine*. 34(6), 573-574. doi:10.1017/S1049023X19005053.

Sudarsono., Purwanto, Y., & Suseno, H. P. (2019). Program Kemitraan Masyarakat (PKM) Pembuatan Alat Pengering Ramah Lingkungan Untuk Kelompok Industri. *Jurnal Dharma Bakti-LPPM IST AKPRIND Yogyakarta*, 2(2), 139–147.

Sugiyono. (2023). Metide Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.

Sumarto, S., Desmelati, D., Suparmi, S., Dahlia, D., Sari, N. I., & Sidauruk, S. W. (2021). Penerapan Inovasi Teknologi Rumah Pengering Sinar Matahari Pada Produk Kerupuk Sagu Fungsional Dari Ikan Biang (Ilisha elongata) Di Kube "Dian Lestari" Selat panjang Kabupaten Kepulauan Meranti. *LOGISTA - Jurnal Ilmiah Pengabdian Kepada Masyarakat*, 5(2), 116. https://doi.org/10.25077/logista.5.2.116-122.2021.

Telaumbanua, C. S., & Rahmadianto, F. (2022). Analisa Kualitas Hasil Pembentukan Lembaran Polycarbonate terhadap Pengaruh Variasi Tekanan, Variasi Temperature, dan Variasi Waktu Pemanasan pada Proses Vacum Forming dengan Metode Taguchi. *Prosiding SENIATI*, 6(1), 62–67. https://doi.org/10.36040/seniati.v6i1.4879.