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Women's Empowerment Through Training in Making Melinjo Leaf Chips with Low Purine and Oil in Bulakan, Cikedung Village, Mancak District, Serang Regency

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Abstract: Posyandu Aster, Cikedung Village, Mancak District has potential that can be developed, namely Bulakan melinjo leaf chips (Damelkan). These chips have the weakness of being bitter due to the high purine content in melinjo leaves and the high oil content in the chips. Therefore, purine and oil reduction training was carried out using a spinner. The method used was workshops and training with the object of Aster posyandu members. The results of the training are that Aster posyandu members can apply it well and it is hoped that it can be used to produce good Damelkan chips, so that it can increase sales and the economy of Aster posyandu members. The conclusion of this activity was that Posyandu Aster was very helpful in developing the Damelkan chips produced.

Keywords: Melinjo Leaf Chips; Purine Reduction; Oil Reduction; Women's Empowerment.

Abstrak: Posyandu Aster Desa Cikedung, Kecamatan Mancak memiliki potensi yang bisa dikembangkan yaitu keripik daun melinjo Bulakan (Damelkan). Keripik ini memiliki kelemahan yaitu pahit akibat tingginya purin pada daun melinjo dan tingginya minyak yang terkandung pada keripik. Oleh karena itu dilakukan pelatihan reduksi purin dan minyak dengan menggunakan *spinner*. Metode yang dilakukan yaitu *workshop* dan pelatihan dengan objek anggota posyandu Aster. Hasil pelatihan yaitu anggota posyandu Aster dapat menerapakannya dengan baik untuk produksi keripik Damelkan, sehingga dapat meningkatkan penjualan dan perekonomian anggota posyandu Aster. Kesimpulan kegiatan ini Posyandu Aster sangat terbantu dalam mengembangkan keripik damelkan yang dihasilkan.

Kata Kunci: Keripik Daun Melinjo; Reduksi Purin; Reduksi Minyak; Pemberdayaan Perempuan.

A. Introduction

Indonesian people have a habit of snacking between main meals, whether while

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working, watching TV, or hanging out with friends and family. One of the snacks that is often consumed by Indonesian people is chips. Chips are a snack in the form of thin slices that are popular among the public because it is crunchy, tasty and is available in various flavors such as salty, spicy and sweet (Hidayati *et al*., 2022). There are many types of chips circulating in Indonesia, such as fruit, vegetable, leaves, meat and offal chips. One type of food that can be made into chips is melinjo leaves.

Melinjo is a plant in the *Gnetaceae* family that comes from tropical areas. People generally consume the young leaves as a vegetable for daily food and the seeds as an ingredient for processing melinjo chips. Melinjo leaves contain active compounds such as alkaloids, saponins, steroids and tannins (Tarigan *et. al,* 2019). Banten is the fifth largest melinjo producing area after Central Java, West Java, East Java and the Special Region of Yogyakarta, this is supported by horticultural production data, with production of 22,963 tons per year (Purnama *et al.,* 2023).

One of the melinjo producers is Bulakan, Cikedung Village, Mancak District, Serang Regency. This village has an area of ± 1110 Ha. The population of Cikedung village in 2015 was 1,535 people, consisting of 792 mens and 743 womens. The dominant livelihoods in Cikedung village are farming and labor (Yuslistyari *et al.,* 2024). These demographics show that the number of women in Cikedung Village is quite large so that the potential for female workers, especially housewives, who can carry out entrepreneurial activities by exploiting the potential of melinjo leaves is quite potential.

Members of the Bulakan Village Posyandu already have a melinjo chips business named Keripik Damelkan (*Daun Melinjo Bulakan*) but face various obstacles in increasing income from this sector. The main problem faced is that currently, the melinjo leaf chips produced are still bitter and if consumed frequently can increase the potential for gout/hyperuricemia. This can happen because melinjo leaves contain quite high levels of purine compounds (366 mg/100 grams) which can trigger hyperuricemia (Barangmanise *et al.,* 2018). Apart from that, this group still has minimal understanding of hygienic and quality melinjo leaf processing techniques because the processing and packaging techniques are very simple. Damelkan chips products still contain a lot of oil, if there is a lot of oil in the chips it can also be detrimental to health, including coronary heart disease and aesthetically it is not good

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so it is less attractive to consumers, besides that it will also be more easily oxidized so the chips will go rancid (Hutasoit *et al*., 2024).

Community service that has been carried out previously was the process of improving the marketing of Damelkan chips, the activities carried out were training on the use of social media for marketing, training on creating online shops in e-commerce, and training on creating affiliates (Yuslistyari *et al*., 2023). However, product improvement training has not been implemented. Product improvements must be implemented so that they can be accepted by consumers. Therefore, training activities to reduce purines and oils in Damelkan chips were carried out.

B. Method

This activity is carried out in three stages. These stages are the preparation stage, implementation stage, and evaluation and mentoring. The flow of stages can be explained in Figure 1.

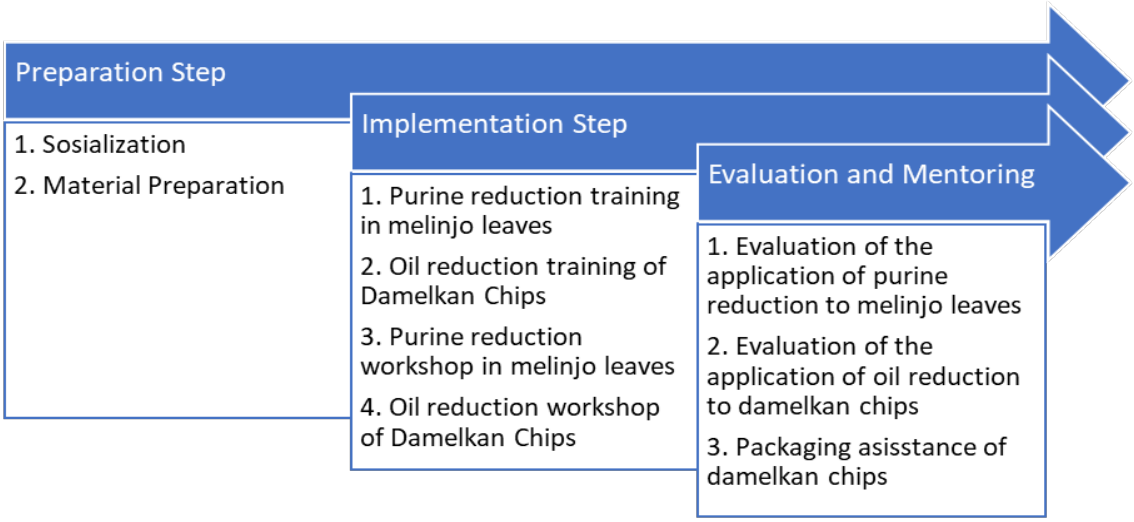

Figure 1. Flow of Community Service Implementation

The first stage is preparation, at this stage coordination and outreach is carried out with the chairman and members of Posyandu Aster in Bulakan, Cikedung Village, Mancak District, Serang Regency. Coordination and outreach are carried out with the aim of being in line with the objectives and output of this service activity. The

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preparation of the material was carried out after coordinating with the head of Posyandu Aster, after investigating the existing problem, namely that the damelkan chips produced were still bitter and contained a lot of oil, therefore materials and training would be prepared for the reduction of bitter or purine compounds in melinjo leaves and the reduction of oil in the chips. After the workshop was carried out, it continued with an evaluation of the implementation for Aster Posyandu members.

Purine reduction is carried out by soaking melinjo leaves in water for 120 minutes and drying them in the sun (Lioe *et al.,* 2019). The second processing technique is that fried melinjo leaf chips are drained using a spinner so that the oil can be reduced by up to 60% so that the chips do not easily go rancid because they are oxidized due to the large amount of oil (Hutasoit *et al.,* 2024). This activity was taught to all Aster posyandu members, carried out direct practice, and the results were seen directly by the presenters.

C. Result and Discussion

Bulakan Village has topography in the form of a plateau with a height of 300-400 meters above sea level, has tourism potential in the form of Cariang Hill with natural views of Rawa Dano. The area of Cikedung village reaches ± 1110 Ha, consisting of residential land, agricultural/plantation land, fields, forests, swamps, offices, schools and roads. Demographically, the north borders Ciwarna village, the south borders Kalumpang village, the west borders Cikolelet village, and the east borders Gunung Sari village (Yuslistyari *et al.,* 2024).

Accessibility to Bulakan, Cikedung Village is 11 km from the center of Mancak District with a travel time of 11 minutes, 36 km from the government center of Serang Regency with a travel time of 1 hour 30 minutes, and 22 km from the government center of Cilegon City with a travel time of 1 hour. The access road to Cikedung Village from the center of Mancak District is two kilometers damaged and rocky, uphill and

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downhill, the right side is a ravine and the right side is forestry forest (Yuslistyari *et al.,* 2024). The satellite image of Cikedung Village can be seen in Figure 2.

Figure 2. Satellite image of Cikedung Village
Source: (*Google Maps*, 2025)

Potency of this village are coffee, coconut, chocolate, petai, jengkol, durian, melinjo and others. Melinjo trees are very easy to find around people's homes as well as in plantations. The melinjo plant is widely used by the community for its seeds and leaves. Based on interviews with local people, melinjo trees are the right choice to be used as raw material for local entrepreneurship on a home scale. So far, the melinjo tree has only been used for its seeds as raw material for *emping*. Another untapped potential is melinjo leaves. Melinjo leaf chips were chosen as the Aster Posyandu business in Cikedung Village because no one has exploited the potential of these leaves and they can be used as a typical souvenir from Cikedung Village for those who visit Rawa Danau.

1. Preparation Stage

At the preparation stage, the socialization process and material preparation are carried out. Socialization was carried out to village officials and members of Posyandu Aster. After conducting interviews, the problem was found, namely that the melinjo leaf chips produced were still bitter and still contained a lot of oil. The bitter taste of melinjo leaf chips is because melinjo leaves contain 366 mg/100 grams of purine compounds

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(Lioe *et al*., 2019) which can cause hyperuricemia or gout. From the results of this interview, material was then created regarding how to reduce purines in melinjo leaves and reduce oil in chips using an oil drainer/spinner. Socialization among village officials can be seen in Figure 3.

Figure 3. Socialization of Community Service Activities to Cikedung Village Officials

2. Purine Reduction Workshop in Making Melinjo Leaf Chips

This activity began by conducting a pre-test to determine participants' understanding regarding melinjo leaf chips which can be reduced in bitterness, namely by reducing the purines. Participants in this activity consisted of 35 members of Posyandu Aster. After that, it was continued with the presentation of the material by the speaker, a question and answer session, practice in making low-purine melinjo leaf chips, and a post-test after the activity to see how the participants understood after the explanation by the speaker.

The pre-test results obtained were only 2.85% or only one participant knew that the bitter taste of melinjo leaf chips could be reduced. During the explanation and question and answer session conducted by the speaker, the participants seemed very enthusiastic. In the final stage, a post test was carried out and the results showed that 91.4% or 32 participants understood how to make low-purine melinjo leaf chips. Images of socialization and training on making low-purine melinjo leaf chips can be seen in Figure 4-6.

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Figure 4. Training in Making Low Purine Melinjo Leaf Chips

Figure 5. Workshop on Making Low Purine Melinjo Leaf Chips

Figure 6. Making Low Purine Melinjo Leaf Chips by Posyandu Aster Members

The process of making low purine melinjo leaf chips starts from sorting the young melinjo leaves to separate the defects. The young melinjo leaves used are characterized by their light green color and soft leaves. Young melinjo leaves are used because their purines are still lower than old melinjo leaves. After sorting, it is continued with purine removal, namely by soaking in water at room temperature for 120 hours (Lioe *et al.,* 2019). This is done because purines are polar compounds that dissolve in water, so purines can dissolve in water (Sunnah *et al.,* 2021).

After soaking, the melinjo leaves are added to the liquid mixture. The liquid mixture consists of rice flour, water in a ratio of 1:2, seasonings consisting of salt, onion

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powder, garlic powder, and coriander to taste. After dipping in the wet mixture, it is followed by coating with dry mixture in the form of all-purpose seasoned flour. Melinjo leaves that have been coated in flour are then fried until brownish yellow. The flow diagram of the process for making low-purine melinjo leaf chips can be seen in Figure 6.

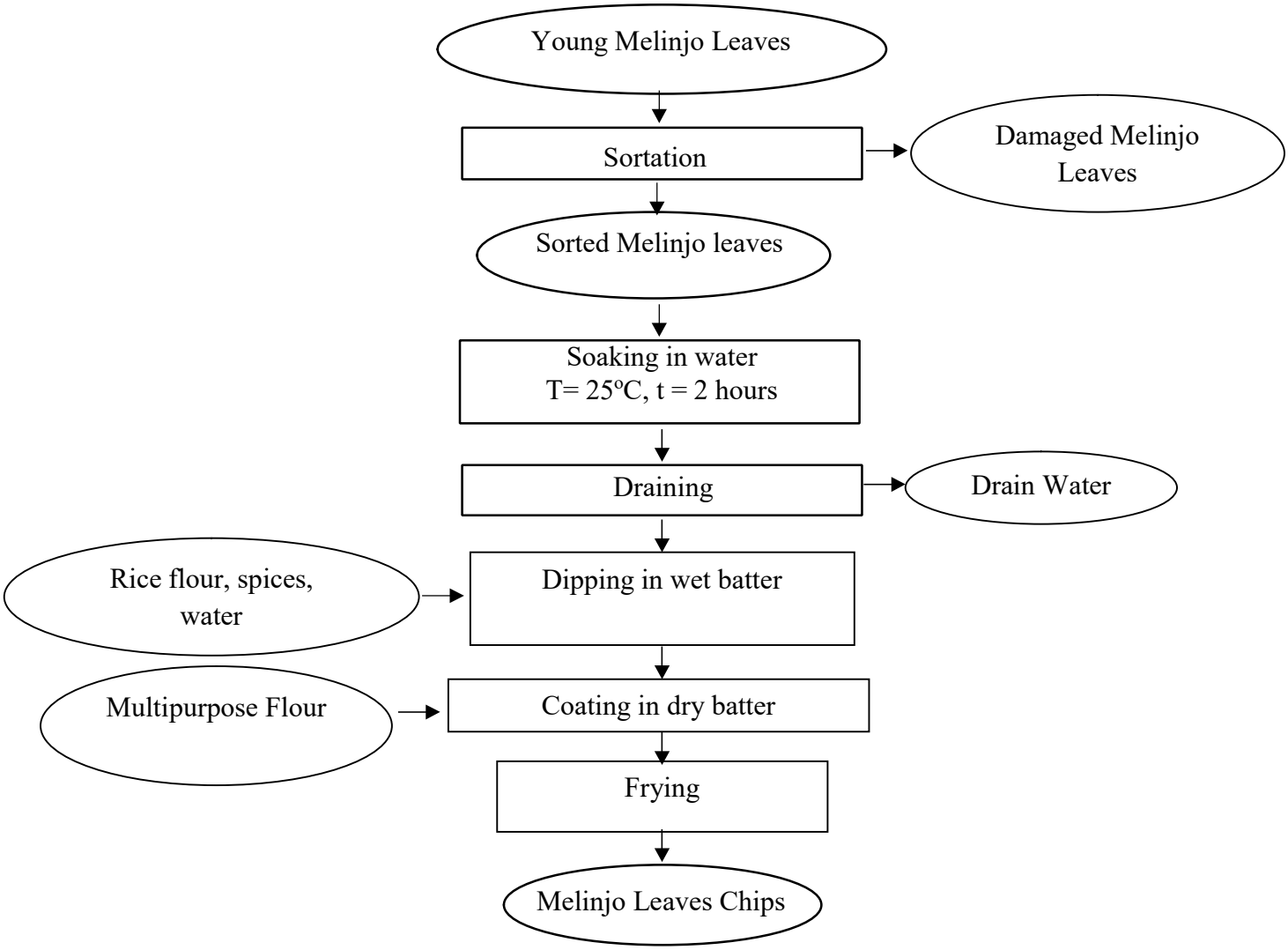

Figure 6. Flow diagram for making low-purine melinjo leaf chips

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3. Purine Reduction Workshop in Making Melinjo Leaf Chips

This activity began by conducting a pretest to determine participants' understanding of melinjo leaf chips whose oil can be reduced. Participants in this activity consisted of 35 members of Posyandu Aster. After that, it continued with the presentation of the material by the speaker, a question and answer session, practice using the spinner and a post-test after the activity to see how the participants understood after the explanation by the speaker.

The pre-test results obtained were that only 29% or 10 participants knew that the oil in melinjo leaf chips could be reduced. The process of reducing oil in melinjo leaf chips is using a spinner. A spinner is a tool used to reduce oil by rotating it so that the oil contained in the chips can be released from the material matrix (Radistya et al., 2023). During the explanation and question and answer session conducted by the speaker, the participants seemed very enthusiastic. In the final stage, a post test was carried out and the results showed that 100% or 35 participants knew how to make low-oil melinjo leaf chips. Pictures of socialization and training for making low-oil melinjo leaf chips can be seen in Figure 7-9.

4. Purine Reduction Workshop in Making Melinjo Leaf Chips

This activity began by conducting a pretest to determine participants' understanding of melinjo leaf chips whose oil can be reduced. Participants in this activity consisted of 35 members of Posyandu Aster. After that, it continued with the presentation of the material by the speaker, a question and answer session, practice using the spinner and a post-test after the activity to see how the participants understood after the explanation by the speaker.

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Figure 7. Spinner Using Training

Figure 8. Posyandu Aster Members Try Using a Spinner

The way to use a spinner to reduce the oil in melinjo leaf chips is to put the chips into the spinner tube completely and then cover it with a lid. Once closed, turn on the power button and set the rotation speed and rotation time. The rotation speed is around 500 rpm and the time is around 3 minutes (Yudha *et al*., 2022).

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Figure 9. Melinjo Bulakan (Damelkan) Leaf Chips

D. Conclusion

Melinjo leaf chips Bulakan are an innovation from Posyandu Aster, Cikedung Village, Mancak District which can be used as a regional souvenir. The drawback of these chips is that they are still bitter due to the high purines in melinjo leaves and the large amount of oil. The result of this community service is training in purine reduction and oil reduction in chips with a spinner, so that damelkan chips are obtained that are not bitter and low in oil. With this training, it is hoped that Posyandu Aster can market damelkan chips more widely with good quality.

E. References

Barangmanise, S., Karundeng, Y., & Latif, Y. (2018, October). Kebiasaan Makan Makanan Tinggi Purin Pada Penderita Gout Arthritis Rawat Jalan Di Puskesmas Tuminting. In *PROSIDING Seminar Nasional Tahun 2018 ISBN: 2549-0931* (Vol. 1, No. 3, pp. 528-541).

Hidayati, S. A., Wahyulina, S., Suryani, E., & Juliana, N. (2024). Entrepreneurship Dengan Peningkatan Nilai Ekonomi Daun Bebele Menjadi Keripik Di Desa Tetebatu Selatan Kabupaten Lombok Timur. *Jurnal Abdimas Sangkabira*, *5*(1), 17-26.

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Jurnal Pengabdian Masyarakat
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Hutasoit, A. M., Hermanto, T., & Sinurat, R. F. (2024). Perancangan Mesin Peniris Minyak Bawang Goreng Otomatis. *IRA Jurnal Teknik Mesin Dan Aplikasinya (IRAJTMA)*, *3*(1), 38-46.

Lioe, H. N., Syah, D., & Defriana, A. (2019). Reduksi Purin pada Emping Melinjo Melalui Pre-treatment Perendaman Emping Mentah. *Jurnal Mutu Pangan: Indonesian Journal of Food Quality*, *6*(2), 91-98.

Purnama, A., Rahayu, F. F., & Wahyuni, P. (2023). Pola Persebaran Tanaman Melinjo (Gnetum gnemon) di Provinsi Banten. *Bioma: Jurnal Biologi Makassar*, *8*(2), 51-65.

Radistya, D., Santoso, A. B., Adinda, E. O. T., Batara, D. M. Y., & Billah, M. T. (2023). Implementasi Teknologi Tepat Guna Spinner Peniris Minyak Sebagai Upaya Mengurangi Resiko Kesehatan di Desa Karangan Kabupaten Jombang. *Jurnal Nusantara Berbakti*, *1*(3), 10-17.

Sunnah, I., Erwiyani, A. R., Aprilliani, M. S., Maryanti, M., & Pramana, G. A. (2021). Aktivitas Antihiperurisemia dan Evaluasi Sifat Fisik Sediaan Sirup Ekstrak Labu Kuning (Cucurbita maxima). *Indonesian Journal of Pharmacy and Natural Product*, *4*(1).

Tarigan, I. L., Muadifah, A., Amini, H. W., & Astutik, T. K. (2019). Studi aktivitas ekstrak etanol dan sediaan gel daun melinjo (Gnetum gnemon L) sebagai antibakteri terhadap Staphylococcus Aureus. *Chempublish Journal*, *4*(2), 89-100.

Yudha, V., Hayati, N., & Hariyanto, S. D. (2022). Peningkatan kualitas keripik jamur tiram produksi kelompok tani Pesona Jamur dengan mesin spinner. *Agrokreatif: Jurnal Ilmiah Pengabdian kepada Masyarakat*, *8*(1), 129-136.

Yuslistyari, E. I., Umam, C., & Santi, E. T. (2023). Pendampingan Kewirausahaan Skala Rumahan Berbahan Baku Daun Melinjo di Desa Cikedung Mancak Serang. *Journal Pemberdayaan Masyarakat Indonesia*, *5*(2), 117-122.

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for the 2025 fiscal year with the title "**Pemberdayaan Perempuan melalui Keripik Damelkan: Inovasi Daun Melinjo untuk Meningkatkan Ekonomi Kampung Bulakan, Desa Cikedung, Kecamatan Mancak, Kabupaten Serang"**