



Assistance in the Production of Healthy Drink Krokotea Halal and Thayyiban for SMEs in Panakukkang District, Makassar

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Abstract: Krokot (*Portulaca oleraceae*), known as a wild plant by the community, can be turned into a trendy beverage to promote the health benefits of Purslane (*Portulaca oleraceae*). Rizqi and the team have proven that this plant has anti-obesity, anti-rheumatoid arthritis, antioxidant, and immunomodulatory effects. In the city of Makassar, there is currently no product diversification of Krokot into tea, which presents a business opportunity, especially for Small and Medium Enterprises (SMEs) engaged in the beverage trade. Field surveys have identified 2 herbal beverage SMEs in Panakukkang District, but only 1 remains operational. The community engagement activity aims to provide assistance to SMEs in producing a halal-certified healthy drink using Krokot (*Portulaca oleraceae*) as the main ingredient for "The Pure Coffee" SME. The method used in this mentoring program is service learning. The results of this mentoring program show that "The Pure Coffee" SME has become the first seller of Krokotea products in Panakukkang District. The presence of a digital marketplace account has brought changes to the sales system, and the Halal branding has added value to the SME's products.

Introduction

Krokot (*Portulaca oleraceae*) is a wild plant that grows in fields or sandy and clay areas. It can thrive even with limited water and shows excellent adaptability to the environment. However, many people are unaware of its medicinal properties. Krokot is empirically used as a traditional medicine to enhance immunity, lower blood lipid and glucose levels, exhibit bacteriostatic, antineoplastic, and anti-depressant functions, treat

skin diseases, and possess anti-inflammatory properties.¹ The chemical contents of Krokot herb include fatty acids, essential oils, polysaccharides, amino acids, vitamins, minerals, saponins, flavonoids, omega fatty acids, and phenolic acids.² Rizqi and the team reported that Krokot has a hypolipidemic effect in reducing triglyceride levels in rats, and at a dose of 75 mg/kg body weight, it can lower triglyceride levels in rats..³ Another study by Rizqi and the team concluded that the ethanol extract of Krokot herb (*Portulaca oleracea* L.) at a dose of 400 mg/kg body weight has an anti-rheumatoid arthritis effect on male white rats (*Rattus norvegicus*) induced with Complete Freund's Adjuvant (CFA).⁴ In 2020, Rizqi and the team proved the immunomodulatory effect of the ethanol extract of Krokot herb (*Portulaca oleracea* L.) with the parameter of Delayed Type Hypersensitivity.⁵ Their latest study shows that the ethanol extract of Krokot herb has an anti-obesity effect on experimental rats.⁶

Generally, traditional medicines are consumed through infusion. Krokot plant can be utilized to produce herbal tea products due to its rich medicinal properties. This can be a business opportunity, especially for Small and Medium Enterprises (UMKM) involved in the beverage trade. After conducting a survey in the field, two herbal beverage SMEs were identified in Panakukkang District. However, only "The Pure Coffee" SME is currently operational.

"The Pure Coffee" was established in 2021 and is located on Jl. Urip Sumohardjo at the entrance of the Police Asrama Panaikang, Panakukkang Sub-district, Makassar City. The concept of this SME is to offer beverages made from coffee and tea with various flavor variations. During the Covid-19 pandemic, most "The Pure Coffee" customers, particularly the elderly, seek healthier drink options. Krokot tea can be a solution to add a healthy menu variation. Despite that, after observing in the field, some partner

¹ Guang-cai Niu et al., "Progress on Chemical Compositions and Pharmacological Function of *Portulaca oleracea* L.," *Journal of Anhui Agricultural Sciences* (2005): 06.; D. Andayani, E. Suprihartini, and M. Astuti, "Anti-Inflammatory Effects of Purslane (*Portulaca oleracea* L.) Ethanol Extract on Carrageenin Induced Rat Edema," *Journal of Pharmaceutical Science and Clinical Research* (2018), 1:43-49.

² Guang-cai Niu et al., "Progress on Chemical Compositions and Pharmacological Function of *Portulaca oleracea* L.," ; A. Sultana and K. Rahman, "Portulaca oleracea Linn: A Global Panacea With Ethnomedicinal And Pharmacological Potential, Review Article."

³ RN Azizah, B. Son of, and R. Tobis, "Hypolipidemic Activity of Purslane Herb (*Portulaca oleracea* L.) Ethanol Extract in Obese Rats with Triglyceride Parameters," *As-Syifaa* (2018), 10(01): 66-73.; I. Santi, RN Azizah, and Mu'ammara, "Determination of Minimum Dose of Purslane Herb (*Portulaca oleracea* L.) Ethanol Extract to Decrease Triglyceride Levels in Obese Rats," *As-Syifaa* (2018), 10(02): 205-212.

⁴ RN Azizah, I. Asmaliani, and B. Putra, "Antirheumatoid Arthritis Effect of Purslane Herb Extract (*Portulaca oleracea* L.) to Rat (*Rattus norvegicus*) Induced by Complete Freuds Adjuvant," (2019), 11(04): 314-319.

⁵ B. Putra, RN Azizah, and EM Nopriyanti, "Immunomodulatory Effects of Purslane Herb (*Portulaca oleracea* L.) Ethanol Extract on Male White Rats (*Rattus norvegicus*) with Delayed Type Hypersensitivity (DTH) Parameters," *Journal of Pharmacy Galenika: Galenika Journal of Pharmacy (e-Journal)* (2020), 6(1), 20-25. doi:10.22487/j24428744.2020.v6.i1.14106.

⁶ RN Azizah, A. Emelda, I. Asmaliani, I. Ahmad, and M. Fawwaz, "Total Phenolic, Flavonoids, and Carotenoids Content and Anti-Obesity Activity of Purslane Herb (*Portulaca oleracea* L.) Ethanol Extract," *Pharmacogn J.* (2022); 14(1).

problems were identified, including the need for knowledge in making Krokotea healthy drink, limited understanding of digital product marketing, and the partner's desire to obtain a halal certificate from LPPOM MUI.

Based on the aforementioned issues, with this assistance, it is hoped that "The Pure Coffee" can become the first seller of Krokotea products in Panakukkang District.

Method

Metode yang digunakan pada program pendampingan ini adalah menggunakan service learning. Pendekatan service learning dalam pendampingan ini dilakukan untuk mendampingi mitra UMKM dalam menghasilkan menu baru, memiliki akun penjualan berbasis online, serta produk yang memiliki jaminan mutu halal yang dilakukan dalam 3 tahap, yakni tahap persiapan, tahap melayani, dan tahap refleksi.⁷

In the first stage, the mentoring team conducts preparation for the assistance. This preparation is done through initial observation and research related to krokot, SMEs, and herbal beverages. The second stage is the service stage. In this stage, the team provides assistance, starting with the preparation of tools and materials, mentoring in the production of Krokotea, guidance in creating a digital marketplace account, and support in Halal branding. The third stage is the reflection stage. In this stage, the team evaluates the mentoring process that has been conducted.

Result

Herbal beverages are one of the natural plant-based drinks that have health benefits for the body. Herbal beverages are made from various parts of plants such as spices, roots, stems, leaves, bulbs, or fruits. Traditional communities use various plant parts from their surrounding environment to create herbal beverages based on inherited recipes. Nowadays, herbal beverages are made through the extraction of natural plant materials using modern technology, which has increased the market opportunities for these products. Herbal beverages are often referred to as health drinks because the ingredients used have many health benefits. Indonesia is one of the countries rich in plants that are beneficial for health. Various types of plants have been utilized to produce health drinks, and one of them is the Krokot plant (*Portulaca oleraceae*).

⁷ Muh Barid Nizarudin Wajdi et al., "Pendampingan Redesign Pembelajaran Masa Pandemi Covid-19 Bagi Tenaga Pendidik Di Lembaga Pendidikan Berbasis Pesantren Di Jawa Timur," *Engagement: Jurnal Pengabdian Kepada Masyarakat* 4, no. 1 (2020): 266–277; Leora S Waldner, Murray C Widener, and Sue Y McGorry, "E-Service Learning: The Evolution of Service-Learning to Engage a Growing Online Student Population," *Journal of Higher Education Outreach and Engagement* (2012): 123–150; Irene Nusanti, ""Strategi Service Learning Sebuah Kajian Untuk Mengembangkan Kegiatan Pembelajaran," *Jurnal Pendidikan dan Kebudayaan* 20, no. 2 (2014): 251–260, <http://up.openjournaltheme.com/jurnaldikbud/ojs-3.1.2-4/index.php/jpnk/article/view/142>.

Preparation of Mentoring

The mentoring activity began with field observation. The partner is "The Pure Coffee," established in 2021, located on Jl. Urip Sumohardjo at the entrance of the Panaikang Police Barracks in Panakukkang Sub-district, Makassar. The concept of this SME is to offer beverages based on coffee and tea with various flavor variations. "The Pure Coffee" obtained permission from the head of the Panaikang Police Barracks complex to utilize an empty land in one corner of the entrance to set up a café booth. The partner already has several customers residing around the complex. However, based on interviews with the partner, during the Covid-19 pandemic, especially elderly customers tended to seek healthy drinks. However, the business owner lacks sufficient knowledge to produce such beverages. Additionally, the partner desires to improve the product's quality and obtain halal certification from the Indonesian Council of Ulama (LPPOM MUI). The partner is aware that halal certification will enhance the brand and customer trust. However, the partner does not know the registration process for halal certification. Although the halal logo is printed on each cup, it is not official. Based on interviews, "The Pure Coffee" has a monthly revenue of approximately IDR 5,000,000 and aims to increase income. The partner acknowledges the limitations of knowledge in digital product marketing and lacks understanding of business strategies. The customers are mainly from the surrounding community of Panaikang Police Barracks.

After the initial observation, we conducted an activity introduction. We explained to the partner the target to be achieved and scheduled sessions for halal certification education and mentoring, herbal beverage production assistance, and assistance in creating a digital marketplace account. During this meeting, it was agreed that the next agenda would be the halal certification education and mentoring.

Mentoring Services

The next stage involved providing assistance. This mentoring stage began with the purchase of the necessary tools and materials. The raw materials of the Krokot plant were obtained from a Krokot farmer community on Java Island. The raw materials were purchased online through the BigBro Dropshipper store on Shopee.

This activity started with educating the partner on the meaning of halal products, presented by a team from LPPOM MUI Sul-Sel. During this session, the partner gained an understanding of halal products. The owner of "The Pure Coffee" then presented the information obtained during the education session to their employees. After providing the explanation, a pot test was conducted for the partner, and subsequently, the partner was assisted in preparing the Halal Assurance System (SJH) manual. The SJH manual contains everything related to halal implementation in SMEs. Until now, the partner is

still completing the required documents for halal certification.

In the next phase, mentoring was conducted for herbal beverage production. It began with providing material on how to make modern beverages using Krokot as the main ingredient. This herbal tea can be served hot or cold. The meeting was attended by "The Pure Coffee" owner and employees. Afterward, a practical demonstration of herbal tea production was conducted. The Krokot herb (*Portulaca oleraceae*) was weighed at 1.5 grams and then placed in a tea bag. After weighing, the tea bag was sealed using an electric sealer.

The next activity was mentoring for setting up online food ordering accounts. It began with presenting material on "Digital-based marketing strategies for SMEs." During this education, the transformation from traditional to digital marketing was explained. After listening to the education, practical sessions were conducted to create GrabFood and Shopee accounts. The mentoring was carried out through several face-to-face meetings, with additional coordination through a WhatsApp group for regular online communication.

Reflection

The owner and employees of "The Pure Coffee" were highly cooperative throughout the implementation of this community service program. The owner provided both time and facilities, starting from the socialization phase to the evaluation of the activities. The partner was generous in providing refreshments, especially during training and practical sessions. To ensure a comfortable implementation of the program, the partner took the initiative to improve the facilities by adding a canopy at a cost of IDR 5,500,000. Additionally, the partner displayed a promotional banner for Krokot tea. During the program's execution, we encountered some challenges, such as difficulties in obtaining herbal tea raw materials and meeting several administrative requirements that the partner had to fulfill to activate the digital marketplace account. When activating the GrabFood account, we faced some issues, such as the inability to verify the created account. The partner visited the Grab office in Makassar multiple times, but the Grab team could not provide a solution. The process of obtaining halal certification for the partner's café is now in the final stages of the visitation and awaiting the issuance of the halal certificate. The introduction of digital marketplace accounts brought about changes in the sales model.

Discussion

Lastri Wiyani has researched the characterization of an active component in ginger, where ginger is a herbal plant and has been widely applied in society. Another plant, for example, purslane (*Portulaca oleraceae*), can certainly be used as a herbal drink.

Another drink that has been researched is VCO emulsion enriched with orange extract. This drink has also been studied for its antioxidant properties by Lastri Wiyani (2020) and its antidiabetic properties by Rahmawati (2020).⁸ Based on this, producing herbal drinks for the community is very important to support health. Currently, many drinks in plastic packaging are easy to carry everywhere. The community highly favors these drinks, such as tea, coffee, chocolate, and others. Herbal drinks can certainly be packaged to resemble these beverages.

For the Muslim community, consuming halal beverages is very important, as it is related to the teachings of Islam. However, most beverage sellers currently do not have halal certification from MUI (Indonesian Ulema Council). Training and assistance in managing halal products are particularly significant, especially for food and beverage sellers. Indonesia has a large population, with the majority being Muslims. This will certainly shape the mindset of Indonesian society, considering the importance of a halal label for purchasing decisions. Halal is an essential factor that must be considered in the selection of products, such as food and cosmetics. The reality for Muslims is that halal is part of their belief system, morality, and integral to their daily activities. Muslims' positive response to halal products' presence is related to purchasing decisions. Halal products should be recognized as symbols of cleanliness, safety, and high quality for Muslim consumers.⁹

Empowering the community by providing knowledge and understanding while keeping up with the developments of the times, especially in technology related to halal certification for products, can have an impact on the sales of UMKM (Small and Medium Enterprises) products. Considering this situation, some UMKM players have made changes by obtaining halal certification for their products, increasing public trust in purchasing, ultimately influencing sales turnover.¹⁰

Furthermore, during the Covid-19 pandemic, business players must be able to adapt to various changes. One of them is by developing platforms that support access to products from home. "The development of digital platforms is very helpful because most people spend more time at home but can still carry out activities, including transactions, through digital platforms."¹¹ The opportunity for UMKM to sell on digital marketplaces

⁸ Lastri Wiyani, Rahmawati, Andi Aladin, Aminah, and Mustafiah, "Antidiabetic effect of the virgin coconut oil and the virgin coconut oil emulsions. *Systematic Reviews in Pharmacy*" (2020), 11(12): 973-976.; Rahmawati, Lastri Wiyani, Andi Aladin, Bayu Putra, and Muliani, "Antidiabetic effect of the virgin coconut oil and the virgin coconut oil emulsions," *Systematic Reviews in Pharmacy* (2020), 11(11), 243-246.

⁹ SIP Yuwana, "Corononomics: UMKM Revitalization Strategy Using Digital Technology Amid the Covid-19 Pandemic," *Journal of Technopreneurship on Economics and Business Review* (2020), 2(1), 47-59.

¹⁰ A. Farhan, "Implementation of the Lppom Mui Halal Certification for Micro, Small and Medium Enterprises (UMKM) Products (Study of LPPOM MUI Bengkulu Province)," *Manhaj: Journal of Research and Community Service* (2018), Vol. 3 (1).

¹¹ P. Santoso, "UMKM Must Change Their Perspective, New Normal is the Era of the New Paradigm" (2020), Taken back from thoughtrakat.com: <https://www.minded-rakyat.com/Ekonomi/pr-01395635/umkm-musti-ubah-cara-pandang-new-normal-is-era-paradigma-baru>

is believed to increase sales.¹²

Conclusion

The results of this mentoring show that UMKM "The Pure Coffee" has become the first icon selling Krokotea products in Panakukkang Sub-district. The presence of a digital marketplace account has brought changes to the sales system. The Halal branding adds value to UMKM products.

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¹² IP Artaya and T. Purworusmiardi, "Marketplace Effectiveness in Increasing Concentration of Marketing and Product Sales for UMKM in East Java," *Journal of Economics and Business*, Narotama University Surabaya (2021), 1-10.; Arif Rahmana, M. Fauzi, and AM Sutoyo, "Assistance in Digital Marketing Strategy for Food Products in Running a Business in the New Normal Era in Bandung City," *Scientific Journal of Community Service* (2021), Vol. 4 No. 1, Page 49-57.

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