

Teenagers' Perception of Banjarnegara Local Food Development For Improving Sustainable Food Security

Lukmanul Hakim¹, Rifa Nurhayati²

¹Department of Agroindustry, Banjarnegara Polytechnic, Banjarnegara, Indonesia

²Research center for food technology and processing. National Research and Innovation Agency,
Yogyakarta, Indonesia

Author¹ email address: rencang.hakim@gmail.com

Abstract

Local food is a crucial foundation in ensuring sustainable food security. However, the production of local food for teenagers, whose preferences are highly influenced by increasingly globalized socio-cultural changes and interactions, has its own issues. The goal of this study was to investigate the perceptions of teenagers in Banjarnegara on the opportunities for developing local food in Banjarnegara. This research was conducted utilizing a quantitative survey method. Data collection was carried out randomly on 370 respondents aged 17–22 years. The respondents were high school students in Banjarnegara. The results of the study suggest that the majority of the information on local food was gained by respondents via social media. Tubers, fruits, and vegetables are groups of local foods that are considered to have the potential for further development. It is known that snacks are a kind of highly processed local food that are considered to have the ability to be more liked and accepted by consumers.

Keywords: Banjarnegara, food security, local food, teenagers.

A. Introduction

The Food and Agriculture Organisation of the United Nations (FAO) projects that food demand in developing nations will increase by 60% by 2030 and could potentially reach 200% by 2050. The fact that food consumption is expected to rise faster than supply makes this projection even more worrisome (Rozi et al., 2023). One of the measures presently being taken to anticipate this condition is to optimise the potential of local food sources. Local food products are unique due to their association with cultural history and the environment. It has excellent potential for development because of its ease of access, acceptance by the local population, and relatively affordable price (Banerjee & Quinn, 2025; Hakim et al., 2021; Widowati & Nurfitriani, 2023). Initially, local food development focused solely on crops that serve as sources of carbohydrates.

With the emergence of needs and opportunities, various local commodities have been developed and directed to enhance regional food security through strategic government programs (Bapanas, 2025).

Personal preferences, community, geography, socio-economics, and demographics are some factors that influence changes in the food-eating habits of teenagers in Indonesia. These changes in consumption patterns have shifted from a traditional culture-based diet rich in grains, vegetables, fruits, and local foods to a Western diet high in sugar, saturated fats, and simple carbohydrates (Fibri & Frøst, 2019). This condition is known to increase the risk of metabolic disorders, which will undoubtedly have an impact on the growth and health of teenagers (Briawan et al., 2022). The consumption pattern of Western food, which is very low in local ingredients, also has the potential to increase dependence on imported food products and further reduce the use of local food ingredients in the daily intake of teenagers. To alleviate this problem, the introduction and implementation of locally sourced food among teenagers is regarded as necessary to be done promptly. The teenage demographic in Banjarnegara Regency is approximately 22% of the population (BPS Kab. Banjarnegara, 2024). The proportion of this significant number of teenagers will undoubtedly impact many things, including local food development strategies in supporting sustainable food availability and food security.

B. Literature Review and Hypothesis Development

Local foods genuinely hold a distinct position in consumer preferences. There is a tendency that the more traditional a culinary product is, the more distinctive and popular it gets. The development of local foods, particularly those used as ingredients in traditional dishes, should be done gradually while preserving the unique characteristics of the items to preserve originality and market acceptance (Fibri & Frøst, 2019). Maximising the availability and utilisation of local food will improve food security. To achieve this, all stakeholders must collaborate, including having a good understanding of consumer preferences regarding the local food delivered (Mkhize et al., 2023). Increasing the variety of local food is one approach to make use of it. Diversification can be achieved by diversifying the production and consumption of many types of local foodstuffs to decrease dependence on a single commodity. Additionally, local agricultural goods can be processed to enhance their added value in terms of form, time, and location utility (Widowati, 2023).

Physical, psychological, and psychosocial changes and developments in teenagers will affect their physical, emotional, and psychological characteristics. These conditions will also impact teenagers' consumption preferences. The most commonly reported condition among teenagers is excessive consumption of foods rich in carbohydrates and fats and low consumption of foods rich in vitamins and fibre (Prasetyaningrum et al., 2024). Diets centred around rice and noodles are new habits, especially among teenagers. Local food ingredients are generally only consumed during certain ceremonial community events that the committee has prepared, and people do not cook or process local food ingredients themselves (Heryadi et al., 2024). This trend is also in line with local food research, which, since 2022, has increasingly emphasised themes connected to food security and food substitution to overcome health problems such as malnutrition and hypertension (Sadeli et al., 2024). Research evaluating variations in traditional food and fast food consumption habits among teenagers in Indonesia in 2022 shows that over the past 20 years, there have been changes in teenagers' food consumption patterns, some of which have progressed in a disadvantageous direction. Fast food tends to be liked and consumed more than traditional foods, especially in Java-Bali and urban areas (Briawan et al., 2022).

There has been no research on teenagers' acceptance and perception of local food development in Banjarnegara. Previous research on local food in Banjarnegara mainly focused on attempts to integrate local food into specific food products. Then it evaluated both the qualities and consumer acceptance of these products (Andriani et al., 2024; Hakim et al., 2025; Nasifah & Sukendra, 2021; Sarno et al., 2022). Previously conducted studies will form the basis for classifying factors affecting local food development in Banjarnegara Regency that need to be explored further from the perspective of teenagers. These study findings strategically guide Banjarnegara local food development initiatives. This study investigates how Banjarnegara Regency teens see local food products, particularly their thoughts on programs supporting local food growth. This study will yield data on how well-informed teenagers are about local food in their community, how they perceive the diversification of local food use, and what factors need to be taken into account to ensure that teenagers as well receive innovations in processed foods derived from local foods as possible.

C. Research Method

The study was developed as a quantitative survey. Data collection was undertaken using purposive random sampling on 370 individuals aged 17–22 years. The respondents were students enrolled in Banjarnegara schools. Respondents were requested to complete a questionnaire via a Google Form link, and the data received were then processed and presented descriptively. The study was conducted throughout the period of March-April 2025.

D. Discussion

Based on the data in Fig. 1, about 82% of respondents obtained information about local food development from social media, 8% from paper-based and electronic media, 7% from word-of-mouth information, and 3% from offline interaction. The respondents who belong to the Alpha Generation are the generation that grew up in the digital era and are the focus of attention in various aspects, including marketing, education, and the economy. They are very close and familiar with social media. The literacy needs they access are mostly shared on social media (Rusmiatiningsih & Rizkyantha, 2022)

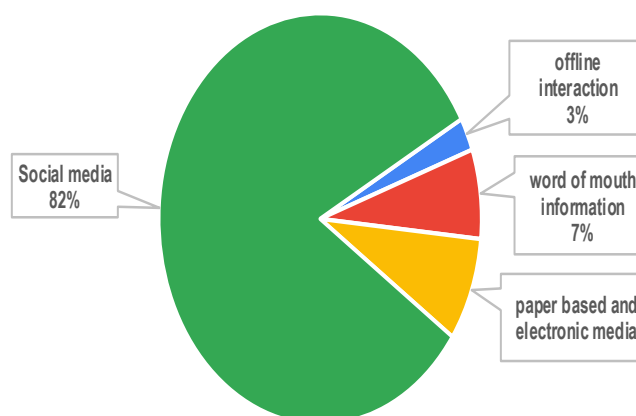


Fig 1. The source information of respondents about local food products and development

Based on Fig. 2, Banjarnegara's local foods with potential for development are tubers (52%), fruits and vegetables (39%), legumes (5%), and cereals (4%). Further data presented in Fig. 3 indicate that the tuber types in the Banjarnegara district with potential for development are potatoes (35%), sweet potatoes (27%), cassava (27%), and busil (11%). Banjarnegara Regency

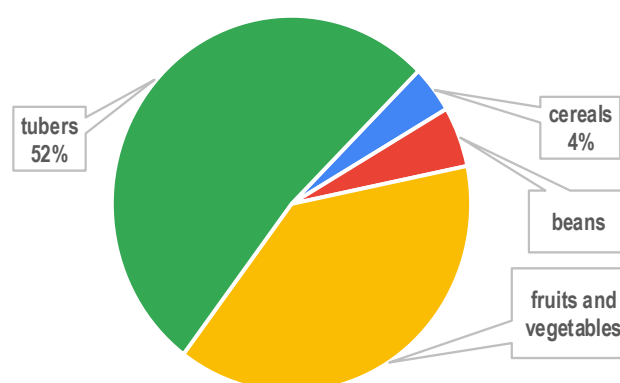


Fig 2. Potential local food in Banjarnegara

is known as a producer of potatoes and cassava. Based on data from the Indonesian Central Statistics Bureau in 2019, Banjarnegara was the biggest potato production district of 124,484 tons with a harvest area of over 3,500 ha.

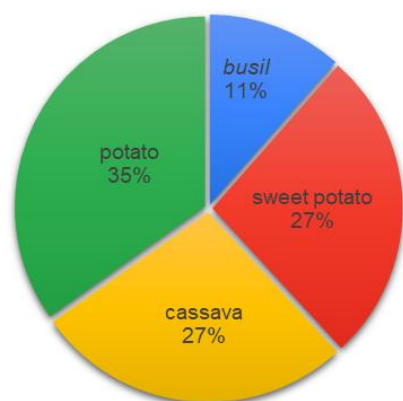


Fig 3. Local tubers in Banjarnegara with potential for development

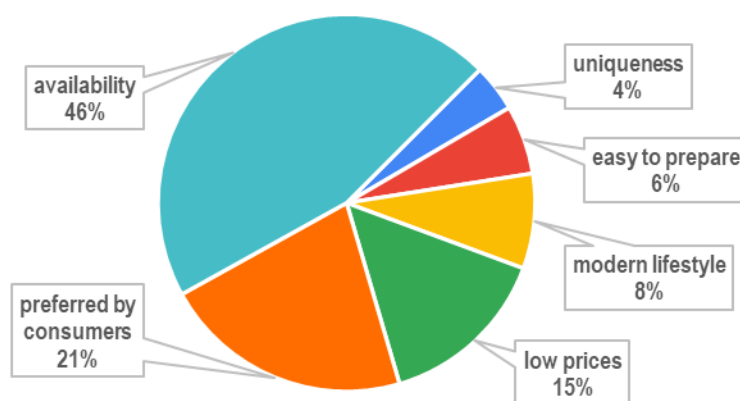


Fig 4. Factors influencing the development of local food in Banjarnegara

Based on Fig. 4, the main factors affecting the growth of local food in Banjarnegara are its availability and consumer preferences. The more widespread and readily available a product is, the more consumers are inclined to perceive it as having potential for further advancement. This evaluation is inherently subjective and contingent on individual consumers' preferences. Nonetheless, it aligns with data indicating customer interest.

The development of local food into diversified food products plays a crucial role in enhancing food security, preserving cultural heritage, and boosting the local economy. Fig. 5 showed that 37% of respondents suggested processing local food into traditional snack products, 23% into modern street food products, 22% into frozen food, 16% into alternative staple food products, and 2% into beverage products. By transforming traditional ingredients into a variety of modern and innovative food items—such as snacks, beverages, ready-to-eat meals, or health products—communities can

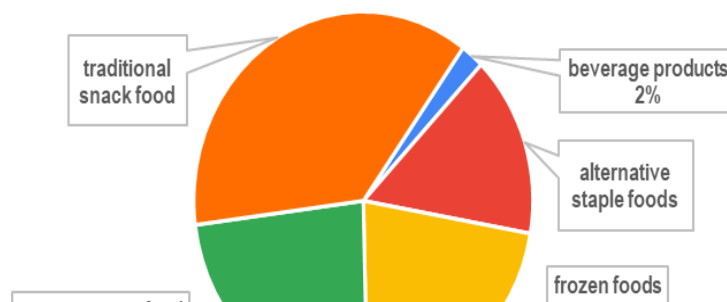


Fig 5. The development of food diversification based on local food

increase the value and marketability of their local resources. This process not only meets changing consumer demands and lifestyle trends but also promotes sustainable agriculture by encouraging the continued cultivation of native crops. Furthermore, food diversification helps reduce dependency on imported goods and supports small-scale producers and entrepreneurs in creating unique, locally rooted products that can compete in broader markets (Susanawati et al., 2022).

E. Conclusion

The majority of the information on local food was gained by respondents via social media. Tubers, fruits, and vegetables are groups of local foods that are considered to have the potential for further development. It is known that snacks are a kind of highly processed local food that are considered to have the ability to be more liked and accepted by consumers.

Bibliography

- Andriani, W., Gunawan, G., Suswono, S., Nurkholis, Cahya, R. D., Kurniawan, & Sugiarto, T. A. (2024). Pemanfaatan kulit salak sebagai teh herbal dan pemberdayaan digital melalui pelatihan aplikasi penjualan online di Purbalingga. *DIMAS: Jurnal Pengabdian Masyarakat*, 2(5), 308–319. <https://doi.org/10.57101/dimasjurnal>
- Banerjee, R., & Quinn, B. (2025). Local food consumption and a sense of rural: The role of “rural connections.” *Journal of Rural Studies*, 119(July). <https://doi.org/10.1016/j.jrurstud.2025.103790>
- Bapanas. (2025). *Rencana Aksi Badan Pangan Nasional Tahun 2025*. Badan Pangan Nasional.
- BPS Kab. Banjarnegara. (2024). *Kabupaten Banjarnegara dalam Angka 2024* (W. S. Kusmastuti & R. Basuki (eds.)). Badan Pusat Statistik Kabupaten Banjarnegara.
- Briawan, D., Khomsan, E., A., Z., N., & PA, P. (2022). Edukasi gizi remaja saat terjadi pergeseran konsumsi makanan tradisional dan fast food di indonesia. *POLICYBRIEF: Pertanian, Kelautan, Dan Biosains Tropika*, 4(2).
- Fibri, D. L. N., & Frøst, M. B. (2019). Consumer perception of original and modernised traditional foods of Indonesia. *Appetite*, 133(July 2017), 61–69. <https://doi.org/10.1016/j.appet.2018.10.026>
- Hakim, L., Marseno Djagal Wiseso, & Triwitono Priyanto. (2025). Evaluation of consumer acceptance of cookies added with modified microwave busil (*Xanthosoma sagittifolium* L.) starch. *PROCEEDING AL GHAZALI International Conference*, 2, 417–424. <https://doi.org/10.52802/aicp.v1i1.1291>
- Hakim, L., Triwitono, P., Supriyanto, & Marseno, D. W. (2021). Physicochemical characterization of Cocoyam (*Xanthosoma sagittifolium*) starch from Banjarnegara highland as a local source of carbohydrate. *IOP Conference Series: Earth and Environmental Science*, 653(1). <https://doi.org/10.1088/1755-1315/653/1/012049>
- Heryadi, D. Y., Rofatin, B., Tedjaningsih, T., & Nurcahya, I. (2024). Implementasi diversifikasi konsumsi pangan lokal dan faktor-faktor yang mempengaruhinya dalam menu keluarga untuk menunjang ketahanan pangan. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 10(1), 843. <https://doi.org/10.25157/ma.v10i1.12612>
- Mkhize, X., Mthembu, B. E., & Napier, C. (2023). Transforming a local food system to address food and nutrition insecurity in an urban informal settlement area: A study in Umlazi Township in Durban, South Africa. *Journal of Agriculture and Food Research*, 12(March).

<https://doi.org/10.1016/j.jafr.2023.100565>

- Nasifah, S. L., & Sukendra, D. M. (2021). Analisis zat gizi dan daya terima produk cookies salak pondoh sebagai upaya pengembangan bahan pangan lokal Banjarnegara. *Indonesian Journal of Public Health and Nutrition*, 1(3), 388–395.
- Prasetyaningrum, Y. I., Kadaryati, S., Wulan, Y. K., & Wardani, D. F. (2024). Keragaman pangan dan status gizi pada remaja usia 12-15 tahun: Studi cross sectional. *Jurnal Gizi*, 13(2), 82–93.
- Rozi, F., Santoso, A. B., Mahendri, I. G. A. P., Hutapea, R. T. P., Wamaer, D., Siagian, V., Elisabeth, D. A. A., Sugiono, S., Handoko, H., Subagio, H., & Syam, A. (2023). Indonesian market demand patterns for food commodity sources of carbohydrates in facing the global food crisis. *Heliyon*, 9(6). <https://doi.org/10.1016/j.heliyon.2023.e16809>
- Rusmiatiningsih, R., & Rizkyantha, O. (2022). Analisis karakteristik literasi generasi alpha dan implikasinya terhadap layanan perpustakaan. *Tik Ilmeu: Jurnal Ilmu Perpustakaan Dan Informasi*, 6(2), 295. <https://doi.org/10.29240/tik.v6i2.5134>
- Sadeli, A. H., Qanti, S. R., Syamsiyah, N., Sosial, D., Pertanian, E., Pertanian, F., & Padjadjaran, U. (2024). Tinjauan literatur pangan lokal di Indonesia. *Mimbar Agribisnis: Jurnal Pemikiran Masyarakat Ilmiah Berwawasan Agribisnis*, 10(2), 2020–2027.
- Sarno, Eko Apriliyanto, & Dwi Ari Cahyani. (2022). Penerapan teknologi pengolahan singkong menjadi tepung mocaf sebagai upaya mendukung Desa Mandiri Mocaf Desa Pesangkalan Kabupaten Banjarnegara. *JURPIKAT (Jurnal Pengabdian Kepada Masyarakat)*, 3(3), 584–595. <https://doi.org/10.37339/jurpikat.v3i3.1071>
- Susanawati, Wijaya, O., & Barik Rizqi, M. (2022). Local food development strategy in hilly areas of Gunungkidul Indonesia. *IOP Conference Series: Earth and Environmental Science*, 1016(1). <https://doi.org/10.1088/1755-1315/1016/1/012026>
- Widowati, S. (2023). Prospek Pemanfaatan Pangan Lokal dalam Rangka Meningkatkan Ketahanan Pangan. In *Diversifikasi Pangan Lokal untuk Ketahanan Pangan: Perspektif Ekonomi, Sosial, dan Budaya* (pp. 1–13). Penerbit BRIN. <https://doi.org/10.55981/brin.918.c789>
- Widowati, S., & Nurfitriani, R. A. (Eds.). (2023). *Diversifikasi Pangan Lokal untuk Ketahanan Pangan - Perspektif Ekonomi, Sosial, dan Budaya* (Edisi Pert). Penerbit BRIN.