# Utilisation Of Chicken Marination Using Turmeric Powder To Vantura Digital Agensi Employees

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Abstract.

Limited time to process food is one of the challenges for Vantura Digital Agensi employees, especially because their activities with busy working hours, so it is necessary to conduct socialisation activities on the use of chicken meat products that are easy to process and nutritious. One of the training programmes that can be carried out is the use of chicken meat by marinating using turmeric powder. Besides being practical to do, the meat marination technique is able to increase the nutritional content and shelf life of the meat. The method used consists of the preparation stage to identify the background of the problem, planning activities, including licensing, up to the implementation stage. The results of this training activity are in the form of innovative chicken marinated products, some of which are packaged and stored at freezing temperatures, and some chicken marinated products that are directly cooked. The socialisation of the use of chicken meat by mixing turmeric powder as a marination ingredient is expected to increase knowledge and skills regarding practical and nutritious chicken meat processing methods.

Keywords: Socialisation; chicken meat; marination and turmeric.

### I. INTRODUCTION

Chicken meat is one of the food commodities that is quite in demand by the public, affordable market prices and adequate availability make chicken-based food menus a mainstay to meet people's daily protein needs. Chicken meat contains protein, fat, carbohydrates, vitamins, and minerals that are beneficial for supporting health [1]. The nutritional content of chicken meat varies based on the carcass cuts and how it is processed. The color and texture of chicken meat are different from beef and goat meat, with the iron content of chicken meat being 0.7 mg which is lower compared to 2 mg/100 g in beef [2]. The research from [3] states that consumption of red meat of more than 500 g/week, especially processed meat, can increase cholesterol levels. Chicken meat does not contain trans fat, while this type of fat is found in high amounts in livestock meat. The nutritional value of chicken breast contains less than 3 g of fat/100 g, where about half of the fat in chicken meat is monounsaturated fat. Most red meat contains much higher saturated fat, which also varies in total fat content compared to chicken meat. The high nutritional value of chicken meat is very important for the community because it helps maintain health, as well as supports the growth of body tissue. The method used to maintain nutritional value and taste of chicken meat is by marinating. This method is a meat preservation process by applying or soaking the meat in a mixture of spices before further processing. The ingredients used to marinate meat also have the function to extend the shelf life and increase the nutritional content of the meat [4].

One of the marinating ingredients that can be used is turmeric, apart from being a kitchen spice for household needs, turmeric is also a natural ingredient that contains compounds such as curcumin and essential oils. Bioactive compounds in turmeric can work to inhibit microbial activity [5]. Curcumin is a

phenolic compound which is the most abundant bioactive component of herbal plants [6]. The addition of turmeric to a food ingredient can maintain freshness, nutritional value, and increase the shelf life of the meat product. The availability of chicken meat and the processing method with a marinating process that tends to be fast and easy, makes the processed chicken marinated is a menu chosen by workers with limited time. The socialization program for the use of turmeric powder-based chicken marinade for Vantura Digital Agensi employees aims to increase the understanding of chicken meat as a source of animal protein, provide information about the marinating process and its health benefits, also develop interest in consumption related to chicken meat and its processed products.

#### II. METHODS

The socialisation program for Vantura Digital Agensi employees was carried out in Padangsari Village, Banyumanik District, Semarang City. While the activity was carried out in several stages as follows:

### 1. Observation of a community service team

The initial stage was to identify the problems faced by Vantura Digital Agensi employees related to being busy at work so that they pay less attention to the balance of the food menu consumed, so it is necessary to pay attention to the fulfillment of nutritional value in order to be able to work optimally. One way to do this is to process chicken meat by using the marinating technique. Procurement of ingredients is done by preparing chicken breast meat and turmeric as a marinade ingredient. There are also other spices that have been prepared to enhance the taste of chicken meat, but the focus of this socialization is increasing the shelf life and nutritional content by adding turmeric to chicken meat. All employees participated in the Forum Group Discussion as the initial stage of activity planning, including permission from the owner of Vantura Digital Agensi for the implementation of socialization. The mentoring process was carried out through a WhatsApp group created at the preparation stage, so that participants received complete information regarding the preparation and implementation of socialization.

### 2. Implementation of community service activities

The implementation stage is carried out by holding a demonstration of chicken marinating processing. The ingredients prepared consist of chicken, turmeric powder, garlic, salt, lemongrass, bay leaves, and flavoring. The tools used include: stove, frying pan, pot, steamer, knife, cutting board, bowl, strainer, and spatula. All participants who attended this socialization were employees of Vantura Digital Agencsi. During the chicken marinating demo, all participants were involved up to the packaging and storage process of marinated chicken, some of which were stored in the freezer as food stock, while the rest were processed directly. Monitoring and evaluation activities were carried out through questions and answers during the event. Generally, participants already understand the procedure for marinating chicken using turmeric, the packaging process, storing meat in the freezer or chiller, and cooking some of the marinated chicken.

#### III. RESULT AND DISCUSSION

The results of the socialisation that has been carried out on Vantura Digital Agensi employees in Padangsari Village, Semarang City, Central Java, regarding improving meat quality by marinating include demonstrations by practicing marinating, cooking chicken, and discussion activities on the benefits of marinating to increase the durability and nutritional value of meat. The marinating process is presented in Figure 1. The benefits obtained from the marinating process include meat becoming more tender, stronger taste and aroma, and can help extend shelf life and reduce microbes in meat [7]. The ideal marinating time varies depending on the type of meat and marinade ingredients used.



Fig 1. Marinating process for chicken breast meat

In general, juicy and tender the meat requires a longer marinating time. Marinated meat will have better taste, aroma, and texture, as well as being safer and more durable. The dry rub marinade process is carried out by applying dry spices to the meat before cooking. The marinade material used is turmeric powder which is applied directly to the surface of the meat. Dry marinating aims to enhance the taste and aroma of food and help maintain the moisture of the meat during the cooking process [8]. The participants from Vantura Digital Agensi employees, were interested in the processing of marinating chicken because the method was easy to do and the nutritional value of the meat was increases. The documentation of dry rub marinade process is presented in Figure 2.



Fig 2. Dry rub marinade process

The benefits of dry rub marinade process are that turmeric powder is able to penetrates into the meat, this mechanism will provide a richer and more delicious taste, and helps prevent the meat from drying out when cooked, especially when using fast cooking methods such as grilling or frying, the dry marinating process is very easy and does not take long time. Dry marinating can be a healthier option because it does not involve high-calorie ingredients such as oil or sauce. Based on research from [9] stated that dry marinating can increase the shelf life of chicken meat because it does not add water content to the ingredients. Chicken meat that has been marinated and packaged in this socialisation activity is then stored in the freezer. There are various ways to store marinated chicken meat, it can be stored in a chiller with average temperature of  $\pm$  5 ° C, or in a freezer with freezing temperature [10].

The socialisation of chicken meat marinating process has an impact on economic and social aspects. Based on the social impact of organizing activities, the level of ease in processing chicken meat because the marinating process is relatively easy to do, especially for employees who do not have enough time. Marinating is a cooking technique commonly used to improve the quality of food ingredients by soaking them in a spice solution before cooking [11]. When viewed from an economic aspect, marinating the chicken meat can increase the added value of meat, reduce waste, and increase production efficiency. From the consumer side, marinating can increase satisfaction and the eating experience with a richer taste and a more tender texture of the chicken meat. Marinating can be used to develop new meat products with unique flavors and textures, thereby expanding consumer choices.

#### IV. CONCLUSION

The socialisation that has been carried out regarding the use turmeric powder as a marinade compound of chicken meat is intended for Vantura Digital Agensi employees to gain experience in processing chicken meat that is fast and easy to applied. In addition, the process of marinating and storing chicken meat at various temperatures is also inform participants about increasing the nutritional value of meat and the use of products that are tender and safe for consumption.

## **REFERENCES**

- [1] Febrianta, H., Yunianto, V. D., Nurwantoro, N., & Bintoro, V. P. (2022). Dietary addition of microencapsulated turmeric in an amorphous matrix of maltodextrin on quality characteristics of broiler chicken. *Journal of Advanced Veterinary and Animal Research*, 9(2), 221-229.
- [2] Jinap, S., Iqbal, S. Z., & Selvam, R. M. P. (2015). Effect of selected local spices marinades on the reduction ofheterocyclic amines in grilled beef (satay). *Lebensmittel-Wissenschaft & Technologie*, 63(2), 919–926.
- [3] Bingham, S. 2006. The fibre folate debate in colo-rectal cancer. *Proceedings of the Nutrition Society*, 65(1), 19–23.
- [4] Gamage, H. G. C. L., Mutucumarana, R. K., & Andrew, M. S. (2017). The Effect of marination method and holding time on physicochemical and sensory properties of broiler meat. *Journal of Agricultural Sciences*, 12(3), 172–184.
- [5] Cho, W. H., & Choi, J. S. (2021). Sensory quality evaluation of superheated steam-treated chicken leg and breast meats with a combination of marination and hot smoking. **Foods**, 10(8).
- [6] Praditya, A., Elizabeth Mustamu, N., Ainy Dalimunthe, B., & Lestari, W. (2024). Application of liquid organic fertilizer from moringa leaves (moringa oleifera) on sweet plants (brassica juncea l). *International Journal Of Community Service*, 4(3), 249–252.
- [7] Prayitno, A. H., Asrianto, N., Utomo, B., Respati, A. N., Ningsih, N., Rahmasari, R., Muhamad, N., Meswari, R., Irawan, A., Putra, Y. D. K., Agustin, M. N., & Ramadhanti, F. R. S. I. (2023). Aplikasi bahan marinasi terhadap kualitas daging unggas. *Conference of Applied Animal Science Proceeding Series*, 4, 29–46.
- [8] Latoch, A., Czarniecka, S,E., & Moczkowska, M. (2023). Marinades based on natural ingredients as a way to improve the quality and shelf life of meat: a review. **Foods**, 12, 3638.
- [9] Rahman, S. M. E., Islam, S., Kong, D., Xi, Q., Du, Q., Yang, Y., Wang, J., Oh, D., & Han, R. (2023). Marination ingredients on meat quality and safety: a review. *Food Quality and Safety*, 7, 10.
- [10] Ismail, M. A., Ibrahim, M. A., & Ismail-Fitry, M. R. (2019). Application of ziziphus jujube (red date), camellia sinensis (black tea) and aleurites moluccana (candle nut) marinades as beef meat tenderizer. *International Journal of Engineering & Technology*, 7(14), 307–311.
- [11] Pratama, R., Riyanti, R., & Husni, A. (2018). Efektivitas bawang putih dengan metode marinasi terhadap kualitas fisik daging broiler. *Jurnal Riset Dan Inovasi Peternakan*, 2(1), 20-25.