

Processing of Salted Duck Eggs with Various Flavors in Mompang Village, Padang Sidempuan

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Abstract. The community service was conducted in Mompang Village, Padangsidimpuan District, Angkola Julu. This activity aims to increase public knowledge and produce innovations in the processing of poultry production. Eggs are one of the livestock products that are easily damaged in storage and have a fishy taste, especially duck eggs. The utilization of natural salt and spices can produce salted eggs with a variety of aromas such as soto flavor, rendang and spicy so as to reduce fishy smell and increase egg retention. This activity was attended by 22 participants. The method used was the socialization and demonstration of making various salted roasted eggs. Based on the results of organoleptic testing, making various salted eggs is quite good to reduce the fishy flavor contained in duck eggs so that it can increase the amount of consumption, with this activity can increase public knowledge about processing livestock products.

Keywords: Flavors, Preservation, Duck Eggs

Abstrak. Kegiatan pengabdian masyarakat ini dilakukan di Desa Mompang, Kabupaten Padangsidimpuan, Angkola Julu. Kegiatan ini bertujuan untuk menambah pengetahuan masyarakat dan menghasilkan inovasi dalam pengolahan produksi unggas. Telur adalah salah satu produk ternak yang mudah rusak dalam penyimpanan dan memiliki rasa amis, terutama telur bebek. Garam dan rempah-rempah alami yang digunakan dapat menghasilkan telur asin dengan berbagai aroma seperti rasa soto, rendang dan pedas sehingga dapat mengurangi bau amis dan meningkatkan retensi telur. Kegiatan ini dihadiri oleh 22 peserta. Metode yang digunakan adalah sosialisasi dan demonstrasi pembuatan berbagai telur panggang asin. Berdasarkan hasil pengujian organoleptik, pembuatan berbagai telur asin cukup baik untuk mengurangi rasa amis yang terkandung dalam telur bebek sehingga dapat meningkatkan jumlah konsumsi, dengan kegiatan ini dapat menambah pengetahuan masyarakat tentang pengolahan produk ternak.

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Kata Kunci: Flavor, Pengawetan, Telur Bebek

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1. Introduction

Mompang Village is one of the villages in the agricultural extension work area of Padangsidempuan District Angkola Julu which is located at an altitude of 300-400 mdpl with an area of 496 Ha. This area is divided into 75 hectares of rice fields, 2 hectares of dry fields, 40 hectares of smallholder plantations, 4 hectares of pasture fields, 141 hectares of fields, 40 hectares of plantations, 12 hectares of ponds, 35 hectares of forest [1]. Based on the situation analysis, the topographic situation of Mompang village is very supportive for duck maintenance. This region has several farmer groups, one of which is the Murni Farmer Group which has the potential of duck farming with a total were 468 ducks. But the problem is the low innovation and knowledge of farmers about duck eggs management and processing. The duck eggs produced are only sold to the market. Increasing the value added of eggs can be done through processing eggs into salted eggs with various flavors.

Duck eggs have lower water content while the protein and fat content is higher, compared to other poultry eggs. This causes the duck eggs to be very easily damaged [2]. Duck eggs weigh 60-90 g, with a percentage of egg white 45-58%, egg yolks 28-35% and eggshells 11-13% [3,4]. Duck eggs contain a total protein of 12.81%, total fat 13.77%, carbohydrates 1.45%, energy 185 Kcal, cholesterol 884 mg [5]. The advantages of duck eggs compared to other poultry eggs because they are rich in minerals, vitamin B6, pantothenic acid, thiamine, vitamin A, vitamin E, niacin and vitamin B12. Egg quality will be reduced during storage [6].

Preservation with salting methods can increase the shelf life of duck eggs. The principle of making salted eggs is the ionization process of NaCl salt which then diffuses into the egg through the shell pores [7]. The vitelin membrane acts to push water out of the yolk and prevent water from entering, pushing NaCl into the egg and preventing NaCl from escaping from the egg [8]. The salting process aims to eliminate fishy on the egg so that it can increase egg consumption. This process will also increase the shelf life and value of eggs. Besides the original taste, salted eggs can also be processed with various flavors, such as: soto flavor, rendang and spicy. The cooking process by baking is innovation to improve egg flavor and maintain egg quality during storage. Roasting salted eggs at 90°C can maintain a protein content of 25% and can be stored for 25 days [9].

The objective of this community service was to optimize the potential of duck eggs in the village of Mompang, by transferring the knowledge about producing innovative products of duck eggs through the making roasted salted eggs with various flavors.

2. Method

This activity was held on July 2018 which was attended by 22 participants with two stages including socialization about making salted eggs and demonstrations of making various salted eggs. The implementation of activities were as follows :

1. In the first stage, the team leader of community service group gave a presentation about salted eggs.
2. In the second stage, a demonstration and practice of making salted eggs was carried out. Participants were divided into four groups consisting of 5-6 participants. Each group makes one type of salted eggs flavor, i.e. Group 1 makes original salted eggs; Group 2 makes salted soto flavored salted eggs; Group 3 makes rending flavored salted eggs and Group 4 makes spicy flavored salted eggs. The salting eggs was made by using dry method (wrapped in salt mixture mixed with other components such as rubbing ash, brick powder or clay) [10].
3. The final stage was discussion session with devotees.
4. After 10 days each group brought the roasting of salted eggs that had been made, and then cleaned and roasted. The process of making salted egg with various flavor was shown in Figure 1.

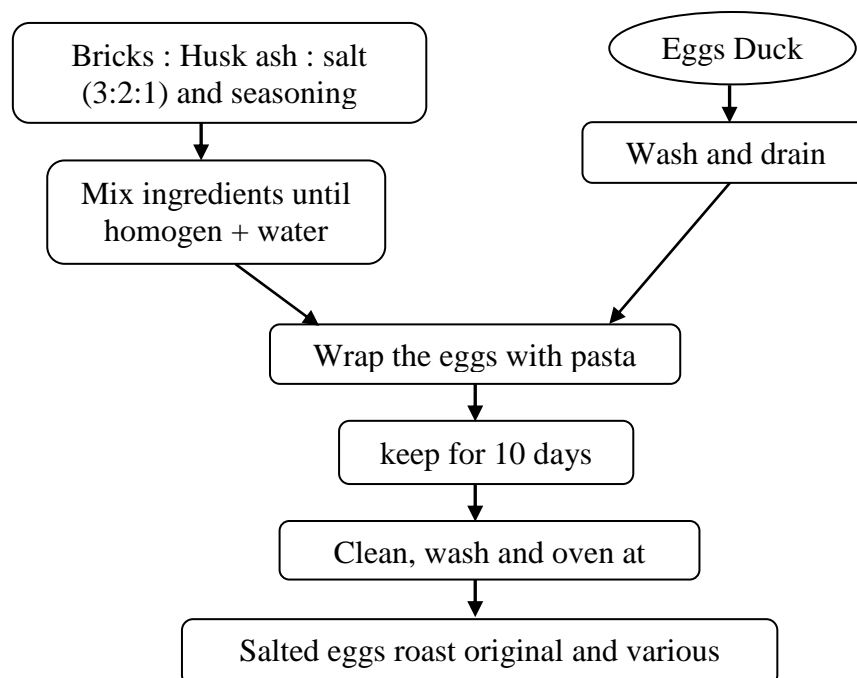


Diagram 1. Procedure for making various salted roasted eggs

3. Result and Discussion

The salted eggs with various flavor produced by each group of participants were tested for their organoleptic properties by description test (Table 1). The original salted egg had a white shell and reddish yolk color, whereas salted eggs with various flavors had a brownish shell and reddish egg yolks color. This is in line with the research conduct by Listyorini [11]. Salted eggs resulting from soaking red brick powder produce white color of egg whites and reddish egg yolk.

Table 1. The organoleptic characteristics of various flavored salted eggs

Criteria	Flavour of Egg Salted			
	Original	Soto	Rendang	Spicy
Color of egg shells and egg yolks	White and reddish	White and reddish	Brownish white and reddish	Brownish white and reddish
Taste	Salty	Salty and Soto flavour	Salty and Rendang	Salty and spicy flavor
Aroma	a little fishy	Soto flavour	Rendang flavour	Spicy flavour

Original salted eggs have a slightly fishy aroma, while salted eggs with various flavors have aromas according to the flavor added. The fishy smell in the original salted eggs is the nature of duck eggs. Salted eggs, both original and flavored, have a salty taste caused by the salt content in the egg soaking process. According to Hary [12], salt serves as a source of salty taste and as a preservative because it can reduce oxygen solubility, inhibit the action of the proteolytic enzyme and absorb water in eggs.

The texture of original and flavored salted eggs were bit chewy on their egg whites and slightly mashed on their yolk. The mashed taste can be formed due to the presence of NaCl salts attached to lipoprotein in the form of low density lipoprotein (LDL) in egg yolk [13,14]. According to Prihantari [15], soaking duration of the egg affects the yellowing of the egg yolk, because the acidity of the yolk is affected by salt.

4. Conclusion

Salted egg making is very good to eliminate the fishy aroma contained in duck eggs so that it can increase the amount of duck egg consumption. With the salting method in duck eggs, it increases people's knowledge about processing livestock products.

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