

**ELUCIDATION OF LAYER DUCKS BUSINESS PROSPECTS
IN *KWT* (Farming WOMEN GROUP)
PURBOLINGGO DISTRICTS LAMPUNG TIMUR**

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ABSTRACT

In increase household economy, participation of housewife was very significant to be empowered through institution media that is Group of Farming Woman (*Kelompok Wanita Tani (KWT)*). Government have been support the existence of *KWT* with cattle donation like layer duck cultivation that managed in groups. But, layer duck cultivation in *KWT* Tambah Luhur Village, Purbolinggo didn't optimal. Through community dedication activity, community should be motivated and people thought that housewife played an important role in family welfare, moreover in increase national food security. Based on above, this activity aim to motivate and train *KWT* in optimize role of *KWT* especially in develop layer duck cultivation result of government donation. Method used in community dedication activity pengabdian such as elucidation with materials that supported development of layer duck cultivation about layer duck business prospect, technique of layer duck cultivation (home system), and variation of processing of layer duck flesh. Result and impact of this community dedication activity was motivated of *KWT* to develop layer duck business in groups.

Keywords : Farming, Woman Groups, Household, Economy, Layer, Duck

INTRODUCTION

Based on UU Number 18 in 2012 about food, three condition of food security in household level referred as sufficient that is food availability, accessibility and stability. Food availability didn't only about number of production (*swasembada*) but also distribution and supply system that should be effective and stabil. Indonesia is a country with food self sufficiency (*swasembada*), but still didn't in food security because of very wide area and total number of population. Status of *swasembada* food still limited only about rice commodity as primary food. Nutritional value as one of significant point in food availability that should be fulfilled. Nutritional value didn't only from carbohydrate, but also protein, fat, vitamine, mineral and another micro nutritions. As essential nutritonal source, need of protein should be supplied in enough amount as animal protein and vegetable protein.

National demand for meat as full of animal protein from poultry dominated by broiler chicken, then free range chicken, layer chicken, layer duck, quail, and dove.

Meat of layer duck become alternative in meeting the need for animal protein for each person in household.

Picture 1 show the production of poultry meat as national in 2019.



Layer duck growth or cultivation rate has more advantage than breeding of other poultry such as layer duck with disease resistant body, layer duck meat is more tasty and better, it is more efficient in transform feed become better meat (Akhadiarto. 2002), better energy value content than chicken (Srigandono. 1991) and price of meat or egg of layer duck is better than other kind of poultry.

Farming Woman Group (*Kelompok Wanita Tani* or *KWT*) is a farmer organization that consist of non formal bounded farmers/planters and formed on the basis of common interests, social environment, economy, resources and familiarity to increase and develop business of members. *KWT* as group of housewife or farm wife who help agriculture, fishery, and forestry to increase income and welfare of family. *KWT* is growing based initiative and awareness of people to be active participate in increase, develop and empower nature and human resources.

Farming Woman Group in Tambah Luhur Village start get 10 layer ducks from Local Government of Lampung Timur. This donation aim to stimulate micro business in agriculture by *KWT* as smallest institutional in village level. Besides, layer duck giving aim to motivate housewife being participate for little scale business skill as additional alternative in income of household. On progress, layer ducks are less productive in produce eggs till them failed in increase income for *KWT*.

Population of layer duck less productive because of less knowledge about layer duck cultivation. People only know that cultivation of layer duck did as traditional through let them in farm land. Because of need special time, that caused less maximum of egg production that egg spread in anywhere. Nowadays, layer duck cultivation could be done as more intensive that in cage. Based on Matitaputty and Bansi (2018) caged system caused layer duck harvest time could be done three times in a year. It caused interval between harvest and processing time become shorter and opportunity of layer duck being shepherded in the farm land become short. Through home system, layer duck`s health more secure, layer duck could be controlled with giving drugs and vaccines.

Based on business scale, layer duck breeding could improve community`s economy. Based on Yuwono (2012), business with 500 layer ducks and did through intensive system raised profits for layer duck with R/C ratio as 1,31 score. Based on Subagja (2020), 1000 layer ducks business scale could raised income 7,5 millions rupiah. 100 layer ducks business scale, income raised be Rp 267.459 in each

month. Based on reasons above, community dedication activity in *KWT* Tambah Luhur Village aim to elucidate in agriculture especially about layer duck cultivation business prospect, layer duck cultivation technique with more intensive home system, and layer duck egg become salted egg processing.

METHOD

Community dedication activity did on September 29th 2020 in Tambah Luhur Village, Purbolinggo, Lampung Timur. Target of this activity was farming woman group as built group of Lafood Agricultural Extension (Penyuluh Pertanian Lafood (PPL)) Kecamatan Purbolinggo. Number of *KWT* members came to this activity were 14 people that consist of housewife. Number of layer duck cultivated by *KWT* were 12 layer ducks consist of 2 male layer ducks and 10 female layer ducks. Previous, there were only 3 layer ducks, both of them 2 female and 1 male ducks.

In practice, this activity did directly with health protocols remind in Covid-19 pandemic. Activity of elucidation did through lecture method and discussion. Lecture method used to presented materials that consist of three big themes (a) layer duck cultivation business prospect ; (b) layer duck cultivation technique intensively; (c) processing of salted egg and marketing system. Discussion did to discuss about real problem of *KWT* in home layer duck cultivation and as media for sharing experience and knowledge about layer duck cultivation

RESULT AND DISCUSSION

Business prospect of layer duck as Animal Food Commodity

Poultry as animal consumed by people as animal protein fulfilment. Based on Hastuti and Subekti (2018), high demand for poultry meat caused economic situation being more growing that supported by trading sector such as street vendors. Various street vendors dominated by fried “penyetan” chicken seller. Besides, poultry also cultivated by people as source of family food and income of household.

Demand of poultry meat in national level dominated by broiler chicken, then free range chicken, layer chicken, layer duck. Broiler chicken as highest demand of meat till 1000-3000 tons each year. In the other side, production of layer duck meat is the fourth position with 30-40 ton each year (Table 1).

Table 1. National Production of Poultry Meat in 2015-2019 (ton)

Kind of Poultry	2015	2016	2017	2018	2019
Free range chicken	299.8	285	300.1	287.2	292.3
Laying chicken	102.8	110.3	114.9	141.6	141.5
Broiler chicken	1628.3	1905.5	3175.9	3409.6	3495.1
Layer duck	34.9	41.9	36.4	38.7	39.8
Rabbit	0.6	0.5	0.5	0.5	0.7
Quail	0.9	1.0	1.1	1.3	1.3
Dove	0.3	0.4	0.5	0.6	0.7
Layer duck maniac	5.3	5.6	5.9	6.0	6.8

Source : Statistic of Agriculture and Animal health, 2019

Great disparity caused by people's appetite in chicken . Besides, price of chicken are cheaper than layer duck meat. Preference of people to layer duck cultivation still didn't high considering disadvantage factor in layer duck cultivation is odor pollution. On the contrary, Hastuti and Subekti (2018) said that addition of probiotics in layer duck drinking water could increase FCR and weight as well as decrease layer duck poop smell.

Layer duck cultivation become farmers alternative business to be developed massively. Several factors such as potential market, finance profit, convenience in cultivation way, as well as high demand in market become consideration for layer duck cultivation to be supported by all people especially government. In enter potential market, need to do verified food become processed food. It as additional value besides as fresh food being produced. Through processing product, businessmen also enter marketplace freely because of products are durable. Besides, sales reach is wider because delivered through certain shipping expedition.

Many research did to know how many profit get from business of layer duck cultivation. Research did by Hastuti and Subekti (2018) found that cost cattle layer duck little scale as household business amount Rp 4.560.095 for breeding 100 layer ducks in a period. Income earned amount Rp 5.000.000/period in carcass price Rp 50.000/ekor till income Rp 439.905/period. Price of BEP reached Rp 45.601 and BEP of production number reached on layer duck breeding till 91 ducks.

Activity with eludication through materials about layer duck business prospect accepted positively and full of enthusiasm by *KWT*. By time, cultivated layer duck only produced egg for family consumption. Presentation of materials about layer duck business prospect, motivated *KWT* housewife to be more active to motive other members. *KWT* have expected that layer duck cultivation in groups practice well, till cash flow to *KWT* as sub business activity in groups. It means there would be cash flow in *KWT* to take profit back into group for extend and develop business.

Home system

Technique of intensive model layer duck cultivation need to be observed and presented in community dedication activity. *KWT* in layer duck cultivation still didn't know about proper home system. Most farmers only did business without noticed about home system, feed management and *biosecurity* because of lack of knowledge in cattle management that caused cultivation become didn't productive, even for large value caused loss. *KWT* housewife felt that given by government layer duck didn't give positive *impact* to group especially for household income improvement. Daily feed given much. Because of that, eludication activity as knowledge input for *KWT* to improve layer duck cultivation in *KWT*.

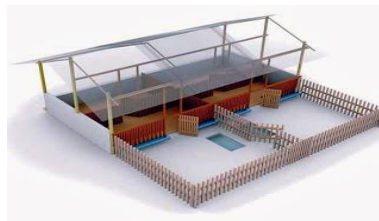
In improve productivity of layer duck, environment is a cage must be noticed well. Cage doesn't only about home either spawn place for layer duck. Because of that reason, optimum setting of cage environment is very helpful in skin and egg yolk of layer duck formation. Factors noticed in home setting are humidity, temperature, precipitation, wind velocity, and sunlight (Rasyaf, 1991).

Based on Mardalena (2002), cage floor become determined factor of humidity and temperature around. Both factors caused change balance of heat in cattle`s body, balance of water, balance of energy and balance of cattle`s behaviour.

Agus (2002) said that there are 3 type of layer duck cage classified based on floor (1) Litter home system, is a solid soil cage, ground level sprinkled with chalk and covered by straw. Lack of Litter system is high humidity in ground level; (2) Slat home system, is a cage floor like stage stood on fish pond. This cage has advantage such as low humidity; (3) Litter and Slat combination system, in this type Litter floor used as spawn for layer duck at night while Slat floor used for layer duck activity at daylight.

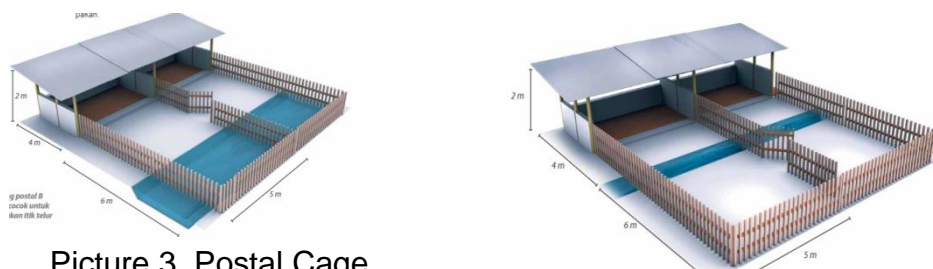
Based on research did by Sari, dkk (2012) there are differentiation of temperature, humidity, and number of egg production between Litter and Slat type unit layer duck Banyubiru. Average amount of egg production in Litter type as 64 eggs, while Slat type as 71 eggs. In the other hand, condition of temperature in Litter cage between 21°C-33°C. Humidity in Litter cage between 33%-85% while humidity in Slat cage between 30%-85%.

There are kinds of cage known as (1) Ranch (REN) Cage; (2) Postal Cage; (3) Stage Cage; and (4) Battery Cage. Ranch cage is a semi intensive cage divided become two functions for layer duck i.e. for rest or spawn place, as playing space or self wet at daylight. Half of cage space given straw for layer duck rest and productive spawn and other half is made pool and canal for layer duck be cleaned or cooling self in daylight.



Picture 2. Ranch Cage

Postal cage has similarity with Ranch cage, but in this type of cage playing or pool larger than Ranch cage. Postal cage proper for layer duck consumption and egg hatch layer duck. Cage used for egg consumption layer duck, pool area is smaller than egg hatch layer duck. it because of function only for wet layer duck`s body. In egg hatch layer duck, pool area for layer duck copulated till produce qualified egg of layer duck (Picture 3).



Picture 3. Postal Cage

Battery cage of boiler chicken could used for layer duck. In this cage, distinctive features of it ias cage made in squares formation placed by a layer duck.

Battery cage made in numbers and arranged as vis to vis in a graded room consist of some row. In battery cage, layer duck didn't give playing area to extend production of egg and disease controll. Because of that, battery cage used to consumption layer duck.



Picture 4. Battery Cage

Battery cage made with bamboo or wire frame that depend on budget. Cost production of battery cage is more expensive than other cage (Picture 4).

Stage cage is kind of cage that located higher than ground. The advantage of it is well air circulation in cage. It because of air rotated as bottom up and top down. Stage cage used to swampland, bumpy ground, or uneven area. Stage cage used to avoid bacterial and virus attack from ground to layer duck. Lack of kind of cage are expensive and caused stress to layer duck because of rotation of place. Besides, in making cage stage need to noticed about mat because leg of layer duck possible to be pinched and hurt layer duck skin membrane (Picture 5).



Picture 5. Stage Cage

Layer duck cultivation in *KWT* Tambah Luhur Village used model ranch home system as technique. Its practice still be really simple because of number only 7-10 layer ducks. The cage is square 5x5 meter size made by 1,5 meter net. There is little wet room but it didn't designed as standart because as sewer from household waste (ex: *comberan*). In this cage, layer duck didn't given privat room for spawn like straw mat that possible layer duck become didn't productive. Besides, layer duck combined with others poultry as chicken that caused behaviour change of layer duck. Based on that reason, materials presentation about semi intensive home system to layer duck delivered well to *KWT*. *KWT* know and understand about the

significance of good home system because it effected spawn produktivity of layer duck.



P... k in KWT

Various Meat of Layer Duck Processing

Various Indonesian menu in every local area as advantage effect for culinary lovers. It become opportunity for culinary seller to get profit. As chicken meat, layer duck meat also being processed to be various spiced menu such as layer duck curry, layer duck stew, layer duck *rica-rica*, layer duck green cilli sauce, crispy fried layer duck, layer duck *geprek* and others. Marketing have been advanced through various marketplace, it as promise profit if used by housewife. Based on cooking skill, processed food could be enjoyed by every people from every place through online marketing system.

Materials about various of the way to process layer duck meat should be presented to enrich knowledge for *KWT* housewife. It because *KWT* housewife has been understood about layer duck egg processing become salted egg as business oportunity of layer duck meat did by many people outside. Penjualan through online media of durable product be an inovation as a material presentation for *KWT* as additional because *KWT* cultivated layer duck and processed egg of layer duck and made layer duck *ungkep*. Layer duck *ungkep* more practice because it half-cooked. Consumers only fried it without prepare seasoning and cooked from the beginning. Proper layer duck for being processed is a basic thing that is 2-3 months young layer duck. Besides, younger layer duck has fewer fat so meat didn't too fishy and tough.

Basically, processing of daging layer duck *ungkep* as canning of layer duck to be durable or marination. Marination did through meat swamp in *marinade* before next processing. *Marinade* as solvent of seasoning for meat swamper increase taste, juiceness and meat tenderly after cooked. Besides, marination also to improve phisical of meat and increase security of food because of antibacterial seasoning marination.



Picture 7. Activity of Community Dedication in *KWT* Tambah Luhur Village

Conclusion

Community dedication did in Farming Woman Group (Kelompok Wanita Tani/*KWT*) Tambah Luhur Village, Purbolinggo, Lampung Timur implemented well. It did through material about elucidation like layer duck cultivation business prospect, technique of layer duck cultivation as home system and various processing of layer duck meat, one of them as layer duck *ungkep*.

As sustainability of activity for other *stakeholders* through creative home industry based on local potency for improve economy of *KWT* members. Besides, program focused on increase of soft skills such as marketing tricks of product and extend market networking.

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