The Role of Women in Raising Local Chicken on a Household Scale in Minahasa Regency, North Sulawesi: Review

Hasrianti Silondae^{1,2}, M.A.U. Muzayyanah^{1,*}, Endang Sulastri¹, and Budi Guntoro¹

Abstract. Local chicken is a source of animal protein that is needed by families in Indonesia. In the countryside, local chickens are very close to women's lives. This paper aims to determine the form of women's contribution to local chicken farms so that they can support the development of local chickens in Minahasa Regency as a local chicken producing district in North Sulawesi. As housewives, they do household chores such as cooking, cleaning the house, taking care of their husbands and children, and other household chores. Therefore, this paper examines the information obtained from various previous research literatures in the last ten years (2012-2021). Regarding the contribution of women in local chicken agribusiness that can increase family income and increase their role as housewives in Minahasa Regency, North Sulawesi. The contribution of women in local chicken farming in Minahasa district needs to be increased through counseling and training, and government programs and support are needed to empower women to be involved in local chicken production and marketing. This contribution strengthens the position of women in making decisions to prepare animal protein foods in the household. Family welfare can be realized by the role of women in chicken agribusiness.

1 Introduction

Agricultural development in Indonesia, especially effort going to endurance food no miss from role female. Women play a big role important in realizing endurance in food, fulfillment in nutrition, and a healthy family. female status in the family is usually only looked at as colleagues and status lower than men. Continuous development of the times develops open opportunities big for women for work, including the work in the sector economy that can maximize income house ladders such as in offices, factories, and marketing. Division task work already starts shift at the first woman as administrator home and boy as seeker livelihood [1]. This condition following gender analysis in the Moser and Harvard Models, namely activity productive or activity economy is activities carried out

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¹ Department of Livestock Social Economics, Faculty of Animal Science, Gadjah Mada University, Yogyakarta 55281, Indonesia

² National Research and Innovation Agency (BRIN), Jl. M.H. Thamrin No.8. Jakarta Pusat 10340, Indonesia.

^{*} Corresponding author: m anggriani um@ugm.ac.id

member Public in skeleton look for income that can make money direct or items that can be rated with money [2]. Puspitawati [3] report that Women's contribution to family income is 51%. Thus, women play a major role in increasing family income. However, increasing the capacity of women's human resources as policy makers in counseling and demonstration activities is rarely involved, so that knowledge and skills do not develop. This condition will hamper efforts to increase production which in turn will encourage farmers' profits, as well as hinder efforts to meet targets, including in the context of meeting national meat needs.

The impact of the National Disaster in the form of the Covid-19 pandemic that is still ongoing can be felt until now affecting the national development order [4], it is necessary to increase efforts to improve the agricultural sector, including the livestock sub-sector which has a major role in providing animal protein food. The government must be able to make policies in increasing efforts to improve the agricultural sector, both in meeting the food needs of the community and supporting the economic needs of people working in the agricultural sector [5]. The role of women in supporting an economic family of course is very necessary during the pandemic. Amount disconnection right work [6] make woman must share time Among look after house stairs and help the husband in add income family. In general reason, women work is to help an economic family, state a growing economy no uncertain, prices need growing tree increase, income inclined family no increase will result in disruption stability economy family [7].

Local chickens are very close to life women in the countryside. In general preference for the utilization of chicken local lies in the benefit product meat that can for sale return besides consumption family in days big religion or moment day big other. In addition, system maintenance and needs relative feed easy [8] will help the women in the village more productive for managing effort cattle chicken local as effort part-time family. As a result [9], the study confirmed that the population of free-range or free-range chickens in Minahasa Regency continues to increase. Though there is no definite data on the size of the population. The development of local chicken as a complementary food product in the provision of poultry meat today has good prospects. one indication that the demand for local chicken products tends to increase from year to year shows that: (1) the public's preference for local chicken products is still high because of the distinctive taste of the meat; (2) there is potential in the shift of certain consumer shares from fatty meat products to products that are more organic meat and (3) there is only local chicken market [10].

2 Methodology

Writing a paper uses method study references or literature review. The collection of information is conducted through journals, articles scientific, as well as proceedings seminar results. Information obtained is used as a base in composing background, goal writing, discussing, and withdrawal conclusion. Data obtained is then described and customized with phenomena that occur moment this.

3 Result and discussion

3.1 Contribution from Women in The Local Chicken Farming Business in Minahasa Regency

Women, especially housewives, have a very big role in deciding to choose food ingredients, process food in a healthy manner and determine household needs that are environmentally friendly, including being involved in agricultural or livestock activities. The contribution of

women in Indonesia is known to appear in various sectors of life. So that women have a special role involvement in all fields including animal husbandry. Activities in the agricultural sector always involve women, especially those of family farmers. These efforts are solely to increase family economic security and efficient use of local resources as well as to improve the gender status of women in sectoral activities. The involvement of women in livestock business is an effort to increase the value of the input power that is contributed to the decision-making and production process. It is explained that the additional income of a woman in the household economy is very important in supporting the economy of family [11] in line with opinion [12] highlighting the role of women, Minahasa in problem environment life and resources power nature is so great normal magnitude. Dual role woman Responsible Minahasa answer fully to husband and children, as well as them involved good by direct nor no direct follow in making waterways, manufacture bridges, printing new rice fields, and so on. They open land new past the "mapalus" cooperation tradition and planted plants productive [12]. Role of women Minahasa in activity productive effort chicken local recorded on research [13] with method Participatory Rural Appraisal (PRA), know that materials and leaflet materials used to get a good response so that group farmer Pinabetengan played by women could increase knowledge method arrange rations and raising chicken free so that could increase economy family.

Based on the study is known that the role group of farmer women in Minahasa already looks give influence in help enhancement economy and welfare of family through effort to raising native chicken. The role woman in the field of farming is in the cultivation of poultry that is produced until marketing [14]. Women in the countryside or urban areas need to be involved in every meeting, training or counseling agriculture because the activities that have been walked before, people woman not once involved even though in reality executor from activity cultivation in the cage most is people female. In the field development he also participates in government programs in the village. Women who work in the city are usually more dependent intellectually, while in the countryside women depend on energy, experience, and enthusiasm devoted to the house the stairs. Any opinion by generally applicable that work is an obligation, if no work so children will eat what? The expression this always becomes answer when women in the countryside asked: why he must work along day? Women in the household farm with the economy are weak they not only play a role as mothers or wives but also play a role as seekers livelihood. On the island small occur shift in gender roles that occur in households that don't only play a role Fulfill the needs household through a variety of activity economy, generally, people girls on the island small many to do activity economy commodity plant food especially plant plantations, livestock, and fisheries [15]. According to Rintjap [16], the role of extension workers is also has a role important in the development of husbandry and adoption of process improvement technology determined by the appropriate extension model with needs farmer that is accuracy materials, methods, and media used. Tohir [17] state that resource woman is one great potential in donating power work on activities production in farming cattle. Sumodiningrat [17] explains that limitations in opportunity work and lack of level experience in women show the importance of empowering people women to be able to produce qualified and empowered human resources competitive high. Empowerment becomes an important strategy for enhancing the role of the woman who has the potential and opportunity to develop more life good. Empowerment of women as caatle farmer in the countryside could be performed in various field efforts main is field agriculture and animal husbandry like effort cultivation local chicken.

In this study, [18] describes some performance KUB chicken's various system maintenances in Table 1.

Description	System Maintenance		
	Extensive	Semi-Intensive	Intensive
Production eggs (eggs /brood /year)	47	59	146
Frequency lay eggs (times/year)	3	6	7
Hatchability eggs (%)	74	79	84
Weight egg (g/grain)	38-48	39-48	39-48
Consumption feed (g/ head/day)	<60	60-80	80-100
Conversion feed	>10	8-10	4.9-6.4
DOC mortality – 6 weeks (%)	50-60	34-42	<27
Dead age productive reject (%)	>15	15	<6

Table 1. Performance of KUB Chickens in Various System Maintenance.

Source: [18]

Recommendation [18], for maintenance type KUB chicken in the yard, adapted to the yard category medium (\geq 120 m²) which can side by side with plant vegetables, plants fruits, plants tubers, plants medicine and fish rearing. A total of 28 tails parent and 4 tails stud or with ratio male: female (1:7) suit experience farmer get fertility by > 90%. As for the area, the cage measure 24 m (2x12m), 2 m high, and divided into 4 drums (2 x 3 m each), each getting 7 tails parent chicken and one stud. The drum floor uses litter with a mixture of sand, lime, and husk of 10 cm thickness. Giving ration can arrange by breeders, such as experience farmers with 5 parts mix bran, 2 parts corn, and 1 part concentrate.

3.2 The Contribution Strengthens the Position of Women in Making Decisions to Prepare Animal Food Sources in The Household

According to [19] role of women as factor determinants in the process of taking decisions is relatively seldom researched. The decision to sell cattle or business input as well as the decision to take advantage of the money selling cattle or the product is frequent nonphysical activities debated as less activity important. Whereas procedure of buys and sells and determine the use of proceeds sale cattle or product farm always through a process of taking a decision where a wife or family member other women can share role by significant. In cases of this, role and contribution thinking a wife in determine to sell, buy, or determine price sell generally (considered) low compared with donation thinking husband. However, no one could be denied that the role of a wife in managing earnings and selling products on farms is the strongest than the role of the husband. Joint decisions often reflect women's bargaining position, often influenced by social norms regarding the gender division of labor related to household roles and income. Gender-responsive policies and programs in rural areas are suggested to focus on empowering women, and to integrate gender relations with nutritious and quality food [20]. The results of research [21] on cattle show that the level of empowerment of female beef cattle breeders is good, but they still need to increase other sources of income, especially in processing livestock products into high-quality processed products such as shredded, rendang and others, processing manure into compost or biogas.

Women in Minahasa Regency are known to have enough share big in fulfill needs house ladder including needs food. Generally, women, active farmers in utilize yard help husbands in farming (rice fields and gardening) and are involved directly in almost whole stages of activity effort farmer. Study [22] reveal results from observation and identification on land yard besides plants and fish, people woman also maintain cattle domesticated, local chicken, pigs, ducks, ducks that are managed in accordance needs and abilities house stairs. Sale results the yard can go through trader vegetables around or direct for sale to market.optimization land yard beside could sufficient needs food micro and nutrition family

too could save expenditure finance in the field of food, which at any time no need to market again if need commodity certain for consumed by family. Contribution women in effort cattle on the plains Minahasa height indeed already start show favorable outcome, however, in reality still many people in North Sulawesi especially society categorized as poor [21]. According to Saliem et al (2002) in [23], that to reach endurance food required the availability of food in sufficient quantity and quality. Availability distributed with price affordable and safe for consumption for every inhabitant for support activity daily along time. Coastal people are an income society low result in trend consume product farms are also low. According to Soedjana (1996) in [23], big income family very determine big consumption products cattle. Various how to do by the government, private sector, and college tall for increased consumption food origin product cattle. For example, development of farms through enhancement ownership accompanying cattle with promotion main enhancement consumption household. Next, development farm the impact on enhancement income household so that purchasing power increase. However, the problem that arises is can the program arrives? on people who are far from urban areas [23]

This statement should be a motivation for women in coastal areas in providing nutritious food from animal protein sources by looking at the potential of the local environment. In addition to fishery food sources, domestic chicken farming should also be considered. Local chicken is a very valuable asset in the formation of proven superior chicken seeds [24]. Besides that, local chicken known as livestock that have high vitality can live in various regions with different conditions and extreme climates, as well as have the ability to live in conditions fed with low nutrition. Local chicken could be found all over Indonesia, particularly maintained in the area rural [25].

3.3 That There is Family Welfare with The Role of Women in Local Chicken Agribusiness

Farms have huge potential for becoming a source of growing economy in sector agriculture one strength local in the field farm is chicken free. Farm development based on local is very relevant with development groups farm in the countryside [26]. Sub-sector farms can also develop through the concept of the agropolitan area, in particular commodity native chicken that is activity make use of available resources for getting results and profits. Success farmers maintain cattle as something method for saving money as well as something satisfying job breeder. As input so power work is important factor in effort native chicken [27].

From the resulting study [27] that effort economy chicken locally carried out in the District Kawangkoan, Minahasa is using power work in family and extra power work outside moment required start from activity give to eat, clean cage, guard livestock, incubate eggs and activities other related with cattle. Research [28] reports that the suitability of information about the use of yards and food processing sourced from the yard will increase the ability of women to seek sustainable food, increase the contribution of the yard to income. Thus, it will increase the ability of female respondents to seek continuity of food in their yards, increase their yard fees for food, and increase their yard contributions to income. An activity study [29] reported that the enthusiasm of church women in the sluggish village of Tombariri District, for getting knowledge and skills effort cultivation cattle chicken village enough high. Although at first outlook group PKK still very not enough about method cultivation chicken village but enthusiasm group very good for study cultivation cattle chicken village, so could change pattern think in raising chicken village not only just for Fulfill needs protein family but could increase life economy group moms' church. The more encouraging result from the research is that the church group mothers initially raised chickens traditionally, eventually wanting to build a cage, make their own formula feed using existing local ingredients, the number of livestock ownership increased, and the mortality rate of livestock decreased.

4 Conclusion

Women as takers decisions in provision food house stairs are very possible for maintain chicken local as source nutrition tall and healthy in the family. Besides being able to help members' families for work by productive, chicken local could become a source of savings and income family. Contribution to women in effort local chicken already seen produce from aspect utilization yard as source provider food easiest and affordable. Further research on the contribution of women still needs to be done in relation to the development of native chicken businesses as a family business in the lowlands or highlands in North Sulawesi Province in relation to fulfilling family food and helping to increase family income. Thus, the continuity of local chickens as the germplasm of the archipelago will continue to be maintained and become a leading commodity complete with other livestock as a provider of animal food for people in Indonesia.

References

- 1. F. Noviana and D. M. Hutajulu, **2**, 1 (2021).
- 2. D. Fujiati, Muwazah 6, 32 (2014).
- 3. W. Sudarta, Sos. Ekon. Pertan. 3, 1 (2012).
- 4. M. P. Republik Indonesia, Salinan Keputusan Menteri 1 (2021).
- 5. C. A. Maskur, J. Agriovet 3, 63 (2020).
- 6. A. A. H. Silondae, M Lintang, in *IOP Conf. Ser. Earth Environ. Sci.* (2021).
- 7. E. S. Alfan Biroli, in *Pros. Semin. Nas. Penanggulangan Kemiskin.* (2021).
- 8. A. A. Kartika, K. A. Widayati, Burhanuddin, M. Ulfah, and A. Farajallah, J. Ilmu Pertan. Indones. **21**, 180 (2016).
- J. K. J. Kalangi, J. Lainawa, and C. A. Rahasia, Int. Res. J. Adv. Eng. Sci. 6, 117 (2021).
- 10. E. Suprijatna, Strategi Pengembangan Peternakan Ayam Lokal (2010).
- 11. A. Mursidin, Suarda, 6, 57 (2020).
- 12. M. J. Wowor, in Present. Ilm. Semin. HUMONIORA (2013), pp. 73-76.
- 13. J. T. Laihad, S. Turangan, R. M. Tinangon, J. R. Leke, C. Sarajar, and W. Pontoh, JPAI 1, 26 (2019).
- 14. S. N. Jarmani, Pros. Semin. Nas. Teknol. ... 619 (2014).
- 15. P. Dan, U. Domba, D. I. Desa, F. In, P. Village, D. Of, and N. Kisar, 7, 265 (2019).
- 16. J. T. Viane Mangundap, A. K. Rintjap, A. A. Sajow, 41, 512 (2020).
- 17. S. H. Purnomo, E. T. Rahayu, and I. N. Tanti, 14, 1 (2016).
- 18. M. Achmad, 1 (2011).
- 19. K. Suradisastra and A. M. Lubis, J. War. 10, 13 (2000).
- G. Bonis-Profumo, D. do Rosario Pereira, J. Brimblecombe, and N. Stacey, J. Rural Stud. 89, 222 (2022).
- 21. S. Yuniati, H. Riniwati, and Wike, Russ. J. Agric. Socio-Economic Sci. 90, 293 (2019).
- 22. H. T. Conny Naomi Manoppo, in (2019), pp. 185-200.

- 23. I. D. R. L. Femi H. Elly, Merry A.V. Manese, Nansi M. Santa, in *Hasil-Hasil Penelit*. *Sebagai Aktual. Pelaks. Tri Dharma Perguru. Tinggi* (Unmas Press, 2014), pp. 123–129.
- 24. A. G. Nataamijaya, J. Penelit. Dan Pengemb. Pertan. 29, 131 (2017).
- 25. W. P. S. Suprayogi, E. Wida, and S. Dwi, Inoteks 22, 18 (2018).
- 26. Y. L. R. Lombogia, Stanly O.B., Lumenta, Ingriet D.R., Tulung, in *Pros. Semin. Nas. Pengemb. Unggas Lokal Di Indones.* (2017), pp. 122–124.
- 27. J. C. LOING and A. Makalew, J. LPPM Bid. Sains Dan ... 3, 51 (2016).
- 28. Conny N Manoppo dan Yenny Oktavia, 2, 105 (2020).
- 29. S. S. Lucia Johana Lambey, in (2019), pp. 82–84.