



The Local Chicken Breeders Levels Knowledge of the Implementation of Newcastle Disease Vaccination in Ulu Mowewe, Indonesia

AUTHORS INFO

Paisal Sandek

Universitas Sembilanbelas November, Kolaka
paisalsandek@gmail.com

Sainuddin

Universitas Sembilanbelas November Kolaka
sainuddinudin@gmail.com
+6285242575989

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Abstract

This research aims to determine the level of knowledge in domestic poultry vaccination Newcastle Disease (ND) in the village of Ulu Mowewe, Mowewe District of Kolaka Regency, Indonesia. There are two variables includes namely the primary variable and the supporting variable. The identity of respondents consisted of the respondents' age, education level, some innocent families, land area, and experience in breeding are the supporting variables. The primary variable is the knowledge level in implementing ND vaccination. Doing tabulation data Qualitatively and percentage. Based on the results, known that the breeder chicken in the village of Ulu Mowewe included in the category as experienced breeding regarding experience working farm free-range chicken. In another hand, the breeders chicken in the town is skilled yet in vaccinating Newcastle Disease. From 20 respondents, there is only one skilled person who has ability to vaccinate the ND. Therefore, it is essential to train the breeders at the village.

Keyword: local chicken, vaccination, level of knowledge, Newcastle disease vaccination.

A. Introduction

The government's efforts to increase agricultural production, particularly the livestock sub-sector, continue to be encouraged, in line with rising population growth, as well as increasing community needs. It is necessary and closely related to the need for animal protein, creating new jobs and income and living standards of farmers.

Local chicken is one type of poultry that has popularized and spread throughout the archipelago. For the people of Indonesia, chicken is not a foreign matter. The term "Local Chicken" was originally the opposite of the term "broiler chicken," and this term refers to chickens found roaming freely around the housing. Nevertheless, since the development,

refining, and breeding program of some superior local chickens, is now known to some of the best local chicken. To distinguish it is known as local chicken for chicken that has been selected and maintained by improving the technique of cultivation (not just scrambled and left to feed themselves). Local chicken farms have a significant role in supporting the economy of rural communities because it has high adaptability to the environment and maintenance is relatively more comfortable (Rasyaf, 1989 and Anonymous, 1998).

The cultivation of local domestic chicken is very appropriate for the effort to nutrition improvement and increase in family income because the results are sustainable. The increased population and production need to go through intensive maintenance which focuses in operation on the implementation of vaccination Newcastle Disease (ND) in local chicken. Newcastle Disease (ND) is a disease of fatal poultry (deadly). The cause is an NDV virus attack, a single beam RNA virus with negative sequence antisense. Chicken attacks are the best known, with clinical symptoms such as getting a runny nose (runny and stuffy nose), snoring, wings going limp (droop), dragging feet, until the head drops or folds. In young poultry, this attack may soon end in death, whereas in adult poultry, death usually occurs two to three days after the first symptoms are seen (Anonymous, 1998).

The village of Ulu Mowewe is one of the towns in Mowewe sub-district, Kolaka Regency is one potential enough area for the development of local chicken. Based on the results of field observations, known that the population of local chicken in the village is as many as 325 heads with the number of household heads that keep the local chicken as much as 20 families. Based on the above, the authors researched the level of knowledge of *local* chicken farmers in the implementation of ND vaccination.

B. Methodology

1. Types and Techniques of Data Collection

The data collected in this study consists of two types of data, namely:

- a. Primary data, i.e., data obtained from field studies and direct interviews with local chicken breeders accompanied by a questionnaire.
- b. Secondary data, i.e., data obtained from relevant agencies and literature that support this research.

Data collection is from through observation and interview method. Observation method needs to do by observing the process of local chicken farm cattle in every population/breeders, while the interview is by providing questions to the population/breeders, accompanied by filling questionnaires.

2. Population and Sample Determination

Population in this research is all breeder of local chicken in the village of Ulu Mowewe, Mowewe district Kolaka Regency. They consisted of 20 householders (breeder). In this research, the sampling technique used is saturated sampling technique, that is sampling technique when all population is used as a sample and also known as the census.

3. Variable Observed

Variables to be studied in this research consist of:

- a. Supporting variable is the identity of respondent consist of age, education level, number of family dependent, land area, and farming experience.
- b. The primary variable is the level of knowledge in implementing Newcastle Disease vaccination (ND).

4. Data Analysis Method

Data obtained from the results of this study will be tabulated then calculated on a percentage and analyzed qualitatively.

C. Result and Discussion

1. Resident Identity

Respondents' identity describes the condition of respondents who are considered to have an effect on the farmers in managing the livestock business activities they lead.

The respondent's identity is as follows:

- a) Age
- b) Education level
- c) Number of family dependents

- d) Breeding experience
- e) Extent of farmland
- f) Number of local chickens

a. Age

Age can affect one's activity both at work and in thinking. In general, healthy breeders and young people can think in managing their farming activities compared with old farmers. Soehardjo & Patong (1984) categorized the age range of labor based on productive and non-productive groups with the age range of 0-14 years including non-productive age, the age range of 15-54 years including fertile age and five years old categorized as less productive age.

From the result of research, found that age of the breeder (respondent) in the village of Ulu Mowewe from 20 respondents studied, the lowest is 25 years, and the highest is 59 years. Based on these data, then classified according to the division of productive age groups and less productive (Table 1).

Table 1. Distribution of productivity and less productive age group of local chicken in the village of Ulu Mowewe

Age Group (Year)	Frequency (Man)	Percentage (%)
25-54 (Productive)	18	90
>55 (Less Productive)	2	10
Total	20	100

Source: Data Processed, 2013

The Table 1 shows that out of 20 respondents, most (90%) are in the productive age group of 25-54 years. The rest (10%) of respondents are in the age group less productive that is 69-75 years. Based on the age, it can be mean that the respondents in the village have the physical ability in managing their local chicken business activities in their productive period.

b. Level of education

The people education level can affect a person's mindset and speed up the process of receiving information. Relatively high education and accompanied by robust physical capabilities lead to more skilled and dynamic farmers in managing their farming activities. As table 2 below:

Table 2. The formal education level of respondents in the village of Ulu Mowewe

No.	Education Level	Amount (Person)	Percentage(%)
1.	SD/Equivalent	9	45
2.	SMP/Equivalent	6	30
3.	SMA/Equivalent	5	25
	Total	20	100

Source: Data Processed, 2013

The Table 2 shows that the level of formal education of poultry farmers in the village of Ulu Mowewe is still low, because of 20 respondents, only 5 are high school graduates, and 6 are junior high school graduates, while the majority are nine elementary school graduates. It means chicken breeders in the village have to give an additional skill, especially livestock business skill through non-formal education, or by counseling.

c. Number of Family Counts

Thohir (1983), that the number of dependents of families of 1-3 people is called the dependents of small families, 4-6 are called middle family dependents, and more than six people are called significant family dependents. The family dependents referred to in this study are all people who live inside or outside the home and become dependents of the head of the family.

Based on the results of the study obtained data that the dependents of local chicken breeder family in the village of Ulu Mowewe ranged from 2-7 souls (Table 3).

Table 3. Number of Respondents family dependents

No.	Family numbers (head)	Amount (Person)	Percentage (%)
1.	2-3	4	20
2.	4-6	13	65
3.	7	3	12
Total		20	100

Source: Data Processed, 2013

The Table 3 shows that the highest percentage of 60% of respondents has 4-6 family dependents. Based on the classification of the number of family dependents, it can be mean that the respondent has a dependent family. Based on the research results obtained data that the responsibility of respondent's family of farmers averages in the range of productive age. Thus, in the case of the fulfillment of labor needs in the local chicken livestock business, respondents have the asset of labor so that it can streamline the use of work because no longer need to use work from the outside who must spend.

d. Livestock area

The land is one natural factor that can have an essential position in agriculture and very determine the income of farmers from the results of his business. The size of the land will affect the farmers in making decisions related to farming activities that will do. According to Hernanto (1991), the area of agricultural land in Indonesia is divided into three groups based on the field of property, which is a narrow farming area (≤ 0.5 Ha.), Medium area (0.6-2 ha) and vast farmland (≥ 2 Ha.).

The area of land referred to in this study is the area of property owned by farmers and used for local chicken farming business. The results of the research show that the space of a local chicken farm owned by the farmers in Ulu Mowewe village ranges from .05 – 1 Ha. Table 4 shows as below.

Table 4. Area of Livestock farm local chicken respondent in Ulu Mowewe village

No.	Land Area (ha)	Frequency (Person)	Percentage (%)
1.	≤ 0.5	18	90
2.	0.6-2	2	10
Total		20	100

Sources: Data Processed, 2013

Table 4 shows that 18 people (90%) have a small land area and have 2 (10%) of common land. It indicates that in the village of Ulu Mowewe there are no breeders who have extensive farmland.

e. Breeding experience

Farmers in running their livestock business always work based on what has been gained from experience. Experience for farmers is a process of the incidence experienced by farmers in livestock, so it can be influential in making decisions about various alternatives that exist.

The breeding experience becomes determination, and it was from the length of an active breeder carrying out livestock activities. A breeder who has recently run his livestock business activities is more likely to imitate or seek guidance from farmers who are considered most skilled and experienced in conducting the same livestock raising activities with his farm. Soehardjo & Patong (1984), stated that the experience of farming is becoming into three groups, namely a) 1-5 years of experience categorized sufficient expertise, b) experiences 6-10 years categorized old, and c) experience ten years and above classified more experienced. It was the same as statement of Syamsuddin (1988).

Based on the results obtained data on the experience of breeding local chicken breeders in the village of Ulu Mowewe is very diverse, where the experience of the lowest one year and experience the highest 30 years. Table 5 shows as below.

Table 5. Livestock farming experience local chicken respondents in the village of Ulu Mowewe

No.	Experience (Year)	Frequency (Person)	Percentage (%)
1.	1-5	4	20
2.	6-10	11	55
3.	>10	5	25
Jumlah		20	100

Source: Data Processed, 2013

The Table 5 shows that most 55 percent of farmers have breeding experience in the range of 6-10 years, 25 percent over ten years and 20 percent experienced 1-5 years, so it is mean that local chicken breeders in the village of Ulu Mowewe can include in the category as experienced.

f. Number of Local Chickens

The number of chickens owned by farmers is a significant factor in a livestock business. The amount in question is all the number of chickens owned by the respondent, can affect the level of income earned. Farmers who have local chicken livestock in large quantities will get more production than the few.

The results showed that the amount of ownership of local chicken of 20 respondents ranged between 10- 30 individuals with a total of 325 heads and - average number of 16 cattle/farmer. The chicken is critical to increasing marginality of a farmer (Sudrajat, 1998; Rasyaf, 1989; Badarsyah & Zamrowi, 1992; and Djanah, 1985).

2. Level of Skills in Vaccinating Newcastle Disease

The skill in the ND vaccination is an important thing that must be owned by farmers in raising local chicken. Based on the results obtained data on the skill level of local chicken farmers in the village of Ulu Mowewe, in vaccinating ND as Table 6 below.

Table 6. The Respondents' skills level in conducting vaccination Newcastle decided in the village of Ulu Mowewe

No.	Skill	Frequency (Person)	Percentage (%)
1.	Skilled	1	5
2.	Less Skilled	4	20
3.	Unskilled	15	75
Total		20	100

Source: Data Processed, 2013

Table 6 shows that most 75 percent of farmers are not skilled in vaccinating Newcastle Disease, less experienced 20 percent, and only 5 percent of competent or 1 person. So, it is mean that local chicken in the village of Ulu Mowewe is not skilled in doing vaccination Newcastle Disease. So that, it is desperately needed training to local chicken farmers in the community of Ulu Mowewe Newcastle Disease vaccination of the parties responsible for the development of the skills of the farmers. It was the same statement of Nugroho (1981) that vaccinating is one of the ways to prevent Newcastle disease.

D. Conclusion

The result of research concludes that the level of farmers knowledge of local chicken in the implementation of vaccination Newcastle Disease in the village of Ulu Mowewe District of Mowewe Kolaka Regency. It gives data that the breeder, the domestic chicken in the village of Ulu Mowewe. It also includes experienced livestock regarding experience trying to farm local chicken, but in the case of Newcastle Disease vaccine, local breeder chicken in the village of Ulu Mowewe not yet skilled in Newcastle Disease vaccine, because of the 20 respondents, only one qualified person vaccinated Newcastle Disease.

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