Differences of Body Characteristics of Kedu Chicken that reared On "Makukuhan Self" Livestock Farmer Group in Waterford

Evri Kalis Untari[1], Ismoyowati[2 *], Sukardi[2]
[1] Faculty of Animal Unsoed Purwokerto
[2] Faculty of Animal Unsoed Purwokerto
[*] moy.moyowati@gmail.com
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ABSTRACT
The aims of this research was to compare the diversity of body characteristics in various kinds of Kedu chicken. Objects of this research were Kedu Chicken roomates were kept by the "Makukuhan Self" Livestock Farmers Group numbered 30 people. The samples were divided into three periods, they were Kedu Chicken, starter period (age of 1 month), grower period (age of 4 months) and production period (> 6 months). This research used a survey method and the samples were taken by a mean of purposive sampling from selected the "Makukuhan Self" Livestock Farmers Group. Data were Analyzed using analysis of variance with differentiating factor was the strain of chicken, with unequal replications (farmers). There were five strains of Kedu chickens: Cemani, Black Kedu, Red Kedu, and Spotted White Kedu Kedu. The results Showed that there were very significant differences (P <0.01) in of the quantitative and qualitative characteristics in various kinds of female Kedu chicken of the age 1 month, 4 months and 6 months based on body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, color comb and comb shape. The Conclusions were there were quantitative and qualitative characteristic differences among various kinds of females Kedu chicken of the age of 1 month, 4 months and> 6 months on the basis of body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb comb colors and shapes. Key words: Kedu chicken, quantitative characteristics, qualitative characteristics 01) of the quantitative and qualitative characteristics in various kinds of female Kedu chicken of the age 1 month, 4 months and 6 months based on body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb color and comb shape. The Conclusions were there were quantitative and qualitative characteristic differences among various kinds of females Kedu chicken of the age of 1 month, 4 months and> 6 months on the basis of body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb comb colors and shapes. Key words: Kedu chicken, quantitative characteristics, qualitative characteristics 01) of the quantitative and qualitative characteristics in various kinds of female Kedu chicken of the age 1 month, 4 months and 6 months based on body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb color and comb shape. The Conclusions were there were quantitative and qualitative characteristic differences among various kinds of females Kedu chicken of the age of 1 month, 4 months and> 6 months on the basis of body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb comb colors and shapes. Key words: Kedu chicken, quantitative characteristics, qualitative characteristics comb comb color and shape. The Conclusions were there were quantitative and qualitative characteristic differences among various kinds of females Kedu chicken of the age of 1 month, 4 months and> 6 months on the basis of body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb comb colors and shapes. Key words: Kedu chicken, quantitative characteristics, qualitative characteristics comb comb color and shape. The Conclusions were there were quantitative and qualitative characteristic differences among various kinds of females Kedu chicken of the age of 1 month, 4 months and> 6 months on the basis of body weight, chest width, chest circumference, shank length, feather color, skin color, shank color, comb comb colors and shapes. Key words: Kedu chicken, quantitative characteristics, qualitative characteristics

INTRODUCTION

Local chicken Indonesia Indonesia is a native chickens were domesticated and developed to form a clump. Indonesia has some clumps of local chickens that have specific characteristics and preserved as a regional germplasm. Nataamijaya (2000) states there are 31 local chicken clump Indonesia which have characteristics such as: chicken Pelung, Kedu, Nunukan chicken, chicken Sedayu, Sentul chicken, chicken crow and others. One local chicken, which has a high potential to be developed is Kedu. Kedu chicken population scattered in Temanggung regency, Central Java, in 1997 as many as 3000 birds (Mugiyono, 1997). Kedu are still prevalent today is Kedu Black, White Kedu, Kedu Red and kedu Lurik and also reported that the Kedu Cemani have specific characteristics marked with the whole fur color black, and even the whole body from the skin, flesh, bones, beak, cloaca, comb, face and legs are black (Muryanto et al., 1993). Development of local chickens is influenced by various factors one of which is the diversity of phenotypic characteristics. The nature of the phenotype is the external appearance or other characteristics of an individual that can be observed and measured (Warwick et al., 1990).

Livestock phenotype could be observed based on the nature of quantitative and qualitative nature. Quantitative trait phenotypes are properties that appear and can be measured in a certain size, includes morphometric, productivity and resistance to disease or parasites. Phenotype that is the nature of the qualitative nature which looked but can not be measured, including coat color, color leather, shank color, color comb and comb shape. Kedu diverse phenotypic characteristics that can affect production performance. Based on this assessment of the diversity of the body do a variety of Kedu maintained Livestock Farmers Group "Makukuhan Self" in the district of Temanggung.

RESEARCH METHODS

The method used is survey with qualitative and quantitative characteristics of the observations made at the Group of Livestock Farmers' Makukuhan Self "in the village of Kedu, District Kedu, Temanggung regency, Central Java. Goal of this research is maintained by the Kedu Chicken Livestock Farmers Group "Makukuhan Self" numbered 30 people. Samples can be divided into three periods: the early period of chicken Kedu females (aged 1 month), growth (4 months old) and production (> 6 months). The number of samples was observed Kedu Chicken 50% of the population owned by group members. The study was conducted from November 2 to 14 December 2011.

The parameters observed quantitative and qualitative characteristics, namely: (1) Body weight is a measure of weight through weighing cattle using digital scales with sensitivity 0,1g; (2) Chest width is measured body size of the tip of the coracoid bone right towards the sternum and ends at the tip of the coracoid bones left; (3) chest circumference is measured from the first circular backbone down to the sternum and spine meet again in the first; (4) Long

a shank bone lengths metatarsus; (5) coat color is a qualitative trait whose expression is controlled by a gene that can be used as an identifier of the nation's chicken; (6) The color of the skin is the skin tissue that is affected by certain pigments; (7) The color of the shank is the appearance of the presence of some specific pigment in the epidermis and dermis, the yellow color of the shank due to the fat or lipokrom pigment in the epidermis; (8) The color of the comb is staining the blood vessels in the epidermis; (9) The shape of the comb is red meat that grows on his head resembles a chicken and flowers. characteristics Qualitative various kinds of Kedu observed visually and do the scoring. Scoring can be seen in Table 1.

The data obtained are tabulated and analyzed using analysis of variance with the distinguishing factor is the type or strain of chicken kedu yaitu5 kinds of Kedu (Cemani, Kedu Black, Kedu Red, White and Kedu Kedu Striated). Chickens are owned by each farm used as replicates (un equal replaceament). A further test to determine differences between various chicken kedu using honestly significant difference test (HSD).

Table 1. Scoring the qualitative characteristics of a wide variety of Kedu female

Qualitative characteristics (color)			**scoring**		
Fur					
Head	Black = 3	Striated = 2.5	Red = 2	White = 1.5	Yellow = 1
Neck	Black = 3	Striated = 2.5	Red = 2	White = 1.5	Yellow = 1
Left wing	Black = 3	Striated = 2.5	Red = 2	White = 1.5	Yellow = 1
Right wing	Black = 3	Striated = 2.5	Red = 2	White = 1.5	Yellow = 1
Body	Black = 3	Striated = 2.5	Red = 2	White = 1.5	Yellow = 1
Tail	Black = 3	Striated = 2.5	Red = 2	White = 1.5	Yellow = 1
Skin	Black = 3	Black Yellowish = 2.5	Yellow = 2	White = 1.5	White = 1.5
Shank	Black = 3	Black Yellowish = 2	Yellow = 1	Yellow = 1	Yellow = 1
Comb	Black = 3	Black Reddish = 2.5	Red = 2	Yellow = 1	Yellow = 1
shape Jengger	Single = 3	Single = 3	Single = 3	Peacomb = 2	Rose = 1
Total	**30**	**25**	**20**	**14.5**	**10.5**

Table 2. Mean body weight Kedu assorted females aged 1 month, 4 months and 6 months (g)

Kedu Chicken Type	Age (months)		
	1	4	> 6
	----------	g ----------	
Kedu Cemani	351.34 ± 65.76^{a}	883.33 ± 275.00^{bc}	1544.00 ± 294.80 ^{bcd}
Kedu Black	353.50 ± 16.12^{a}	730.00 ± 42.40^{a}	1237.50 ± 47.87^{a}
Red kedu	257.33 ± 69.80^{b}	880.00 ± 28.28^{b}	1490.00 ± 167.33^{bc}
White Kedu	174.37 ± 18.34^{a}	990.00 ± 14.14^{a}	1450.00 ± 180.28^{b}
Kedu Lurik	307.20 ± 96.81^{c}	1033.00 ± 83.27^{e}	1612.50 ± 201.56^{d}
Mean total	288.75 ± 75.04	903.33 ± 117.69	1466.80 ± 141.94

Description: Values with different superscripts in the same column indicate significant differences at test level P <0.05.

Body weight Kedu assorted females in the same age showed a difference. This is because the effect of additive gene that is a different coat color on a wide variety of Kedu. Effect of E gene cause black coat color, gen e^+ causing striated plumage, gen I / W^+causing white coat color. Body weight a wide range of Kedu at different ages show the difference. This was due to non-genetic factors that manejemen feed, cages and health. Cemani period starter chicken feed that is BR 511 with a protein content of 22% and energy 3050 kcal / kg administration of 40 g / head / day. Feed grower period and the period of production such as corn, rice bran and concentrate ratio of 2: 7: 1, 14.82% protein, energy 2720 kcal / kg, giving 80 g / head / day for a period of growers and 100 g / head / day for the period production. Kedu chicken feed starter period, namely BR 511 and bran, a ratio of 1: 1, 18% protein, energy 2775 kcal / kg, giving 30 g / head / day. Feed grower period and production is parched rice bran and the ratio of 1: 1, 12.95% protein, energy 2749 kcal / kg, giving the grower period 80 g / head / day and production period of 100 g / head / day. Ration calculation is attached in Appendix 16. The nutrient content of the feed does not comply with the nutrient needs of chicken. Zainudin (2006) the nutritional needs of chicken in starter period (0-8 weeks) requires a 18-19% protein, energy 2900 kcal / kg, grower period (8-12 weeks) requires a 16-17% protein, energy 2900 kcal / kg and the production period (18-70 weeks) requires a 15% protein and energy 2750 kcal / kg. Cemani chicken coop and grower period (8-12 weeks) requires a 16-17% protein, energy 2900 kcal / kg and the production period (18-70 weeks) requires a 15% protein and energy 2750 kcal / kg. Cemani chicken coop and incorporating artificial heating.

Kedu chicken starter form stable period,

Cemani chicken coop grower period is batteray cage size 120x60 cm^2 for 2-3 tails, form stable production period swath confined to umbaran 6x4 m^2contains 1 males and 5 females. Kedu chicken coop grower period and production is confined to umbaran. Manejemen Cemani chicken health, namely provision of vitamins, medicines and vaccinations ND, not done Kedu ND vaccination and drug delivery. The occurrence of inbreeding in chickens Cemani thereby lowering Cemani genetic quality chicken, but with a good maintenance manejemen Cemani then chicken can produce well. Schaible (1976) states the species, sex, age and food affect the growth rate.

The rate of growth has different phases depending on the age and type of organ. At the age before puberty, the growth rate is in a stage that is being accelerated after the age of puberty to adulthood are in a slow phase (Anggorodi, 1994). Relatively rapid growth rate occurs at the age of 1-6 weeks (Wahju, 1992) because in this period the chicken is in the active growth phase (Scott et al., 1982). At the age of 6-8

Sunday already happen reduction rate growth, but the body weight gain persisted due to the increase in body fat. Growth, body weight and body measurements (growth) according to age. When the age increases, to a certain extent body measurements also increased (Siregar et al., 1995). The more mature cattle increasing body weight (Soeparno, 1998).

Chest width Kedu

Results width measurement chest wide variety of Kedu female can be seen in Table 3. The mean chest width wide variety of Kedu females aged 1 month, 4 months and> 6 months have a value that varies with the percentage of variation in a sequence that is 24.53%, 6.94% and 6.63%. This shows the wide bervariasiya Kedu chicken breast assorted females. Variations in phenotype can be influenced by a large number of gene pairs react additive, dominant and epistasis and environment. Variation in quantitative traits describe a normal distribution, which is between the minimum and maximum values (Falconer, 1983: Warwick et al., 1990). Appearance of body size on the chicken in addition affected by the genetic trait is also influenced by the environment (Lasly, 1978).

Results of analysis of variance various kinds of Kedu females age 1 month, 4 months old, and age> 6 months showed the type of Kedu highly significant (P <0,01) to the width of the chest. The test results further with Significant Difference Honest to Kedu females aged 1 month, 4 months and 6 months showed that there were differences in the width of the chest between various Kedu female, but there was no difference in the width of the chest to the age of 4 months between Kedu Black with Cemani and Kedu as well as on Cemani red with red Kedu. In Kedu females aged> 6 no chest width difference between Cemani with Kedu Kedu Black and Red as well as on Kedu Kedu Black with Red and White and Kedu Kedu Kedu Red with White.

RESULTS AND DISCUSSION Quantitative Characteristics

1. Body weight Kedu

Weight weighing results Kedu assorted females can be seen in Table 2. Analysis of variance on a wide variety of Kedu females age 1 month, 4 months old, and age> 6 months showed the type of Kedu highly significant (P <0,01) to of body weight.

The test results further with Significant Difference Honest to Kedu females aged 1 month, 4 months and 6 months showed that there were differences in body weight between various Kedu female, but there was no difference in body weight for age 1 month between Cemani with Kedu Black and Kedu age of 4 months between the Red and Cemani. In Kedu females aged> 6 months there was no difference in body weight between Kedu Kedu White with Red and Cemani, also on the Red Kedu with Cemani and Cemani with Kedu Lurik.

Kusuma (2002), states that the width of the chicken breast and chicken Merawang both male and female have a real relationship with body weight. In this study the type of Kedu very significant effect on the width of the chest. According Hardjosubroto (1994), the size of the body that are often used one of which is the circumference of the chest which is an indicator of body weight.

2. Bust Kedu

Chest circumference measurement results for a wide variety of Kedu female can be seen in Table 4. Results of analysis of variance various kinds of Kedu females aged 1 month indicates the type of Kedu highly significant (P <0.01), whereas the age of 4 months and 6 months showed real effect (P <0.05) on chest circumference.

Table 3. Mean chest width wide variety of Kedu female umur1 months, 4 months and 6 months (cm).

Kedu Chicken Type	Age (months)		
	1	4	> 6
	----------	cm ----------	
Kedu Cemani	10.60 ± 2.43^{c}	14.44 ± 1.89^{ab}	18.67 ± 2.16^{a}
Kedu Black	12.50 ± 0.71^{d}	14.25 ± 0.35^{a}	18.88 ± 0.63^{ab}
Red kedu	8.50 ± 0.50^{e}	14.50 ± 0.71$^{a\ B\ C}$	19.20 ± 1.79$^{a\ B\ C}$
White Kedu	6.20 ± 0.35^{a}	15.75 ± 1.77^{d}	19.50 ± 0.87^{bcd}
Kedu Lurik	9.60 ± 2.08^{b}	16.67 ± 1.53^{e}	21.88 ± 0.85^{e}
Mean Total	9.50 ± 2.33	15.12 ± 1.05	19.62 ± 1.30

Description: Values with different superscripts in the same column indicate significant differences at the level of test P <0.05

Table 4. Mean bust wide variety of Kedu females aged 1 month, 4 months and 6 months (cm).

type Chicken Kedu	Age (months)		
	1	4	> 6
	----------	cm ----------	
Kedu Cemani	13.50 ± 2.55^{c}	16.56 ± 3.70^{a}	24.10 ± 3.28$^{a\ B\ C}$
Kedu Black	15.50 ± 0.71^{e}	18.50 ± 0.71^{b}	24.75 ± 1.50$^{a\ B\ C\ D}$
Red kedu	11.33 ± 0.58^{CD}	19.25 ± 1.06^{bc}	23.90 ± 2.36^{a}
White Kedu	8.75 ± 1.06^{a}	21.50 ± 3.54^{d}	24.00 ± 1.73^{ab}
Kedu Lurik	13.17 ± 1.61^{b}	21.17 ± 1.04^{d}	26.88 ± 2.32^{e}
Mean Total	12.45 ± 2.54	19.39 ± 2.03	24.73 ± 1.25

Description: Values with different superscripts in the same column indicate significant differences at test level P <0.05.

Honestly Significant Difference test results for Kedu females aged 1 month, 4 months and 6 months showed that there are differences between various chest circumference of Kedu females. At the age of 1 month Kedu black has the most high chest circumference compared with chicken kedu kind alainnya. At the age of 4 months of Kedu white and striated chest circumference have a higher compared to other Kedu chicken, while the lifespan

> 6 months Kedu highest striated chest circumference. Results of previous studies reported that adult cemani chicken breast circumference is 27 cm, this is according to the study where the average chicken breast circumference Cemani age> 6 months is 24.10 ± 3.28 cm (Iskandar, 2005). Range chicken breast circumference age of 4 weeks, 8 weeks and 12 weeks in a row by 13 cm, 17 cm and 23 cm (Iskandar, 2009). Mean total circumference adult chicken breast Cemani 40.23 ± 2.40 cm with a range of chest circumference of 37 cm to 47 cm, adult black Kedu 37.20 ± 2.91 cm chest circumference range of 33 cm to 42 cm, chicken adult white Kedu 37.14 ± 2.29 cm with a range of chest circumference of 34 cm to 43 cm (Sulandari et al., 2006).

3. Long Shank Kedu

The mean length of the shank measurement results on a wide range of Kedu can be seen in Table 5. The results of variance analysis Kedu assorted females age 1 month, 4 months old showed the type of Kedu highly significant (P <0.01), while the age of 6 months indicates the type of Kedu significant (P <0.05) to the length of the shank. The test results further with Significant Difference Honest to Kedu females aged 1 month, 4 months and 6 months showed that there were differences in the length of the shank between various Kedu females, but there was no difference in the length of the shank to the age of 4 months between Kedu White with Cemani and Kedu striated and in Cemani with striated Kedu.

Factors affecting the length of the shank including age and gender. In the age before puberty, the growth rate is in a stage that is being accelerated after the age of puberty to adulthood are in a slow phase (Anggorodi, 1994). Sugeng (1992) states that the framework and bones grow faster in a very short time after the animal was born who later growth rate decreases. According Jull (1978), the male bones grow faster than females, and according to the age of 4-12 weeks of bone growth speeds rise and drop at the age of 12-20 weeks.

4. Qualitative characteristics (color) Various chicken Kedu

Mean scoring qualitative characteristics of a wide variety of Kedu females by age which is equal to either 1 month, 4 months, or 6 months showed a difference. The differences are due to factors that coat color additive gene. Effect of E gene cause black coat color, gen e^+ causing striated plumage, gen I / W^+causing white coat color. Different coat color on a wide range of Kedu for the same age causes the difference in scoring. The higher the value of scoring then the darker color or black fur. Mean scoring qualitative characteristics of a wide variety of Kedu females for different ages show the difference was not too great. This is due, not to the influence of additives that coat color genes and influenced by environmental factors. Fur color on a wide range of Kedu for different ages do not change too much.

Results of analysis of variance scoring qualitative characteristics of a wide variety of Kedu females age 1 month, 4 months old, and age> 6 months showed the type of Kedu highly significant (P <0.01). The test results further by Honestly Significant Difference for a wide range of Kedu females aged 1 month, 4 months and 6 months shows that there are differences between various qualitative characteristics of Kedu females.

Based on these results, the average total scoring qualitative characteristics Cemani female chickens at 30 ± 0.00 with fur color characteristics (head, neck, left wing, right wing, body and tail), color, color shank, cockscomb color colored black and form a single comb. Chicken Cemani have jet black appearance, including beaks, nails, feet, tongue, hands down (ceiling), even

meat and bone black. Cemani chicken adult figure tall and large (Grace, 2003). Mean total scoring Kedu Black female 28.67 ± 0.80 with fur color characteristics (head, neck, left wing, right wing, body and tail) in black, the color black, the color of black shank, there is also the color black comb dark red, single comb shape. These results are consistent opinion (Nataamijaya 2008) in which observations show that the Kedu Black coat color is predominantly black shimmering, both male and female, with a red comb and wattles, while the legs and beak scales dark blackish. Mean Red Kedu total females scoring 26.10 ± 0.48 with fur color characteristics (head, neck, left wing, right wing, body and tail) in black, the color white, black shank yellowish color, the color red cockscomb there is also a dark red, single comb shape. Mean total scoring Kedu White female 15.99 ± 2.04 with fur color characteristics (head, neck, left wing, right wing, body and tail) white, white skin color, the color yellow shank there are also black in color, color red cockscomb, single comb shape. Suprijatna (2005) states that the White Kedu chicken feathers have white or yellowish.

Table 5. The mean length of the shank a wide range of Kedu females aged 1 month, 4 months and 6 months (cm)

type Chicken Kedu	Age (months)		
	1	4	6
	---------- cm ----------		
Kedu Cemani	4.10 ± 0.55^{e}	6.28 ± 0.62^{bc}	6.80 ± 0.61$^{a\ B\ C}$
Kedu Black	3.25 ± 0.35^{b}	6.75 ± 0.35^{e}	6.75 ± 0.50^{ab}
Red kedu	3.17 ± 0.29^{a}	5.25 ± 0.35^{a}	6.60 ± 0.82^{a}
White Kedu	3.75 ± 0.35^{a}	6.25 ± 0.35^{b}	7.17 ± 0.29^{a}
Kedu Lurik	3.50 ± 0.50^{c}	6.33 ± 0.29^{bcd}	7.13 ± 0.25^{d}
Mean Total	3.55 ± 0.38	6.17 ± 0.55	6.89 ± 0.25

Description: Values with different superscripts in the same column showed significant differences at test level P <0.05.

Table 6. Observations qualitative characteristics of a wide variety of Kedu females.

characteristics Qualitative	type Chicken				
	Cemani	Kedu Black	Kedu Red	Kedu White	Kedu striated
marking					
Head	Black	Black	Black	White	striated
Neck	Black	Black	Black	White	striated
Left wing	Black	Black	Black	White	striated
Right wing	Black	Black	Black	White	striated
Body	Black	Black	Black	White	striated
Tail	Black	Black	Black	White	striated
Skin color	Black	Black	White	White	White
color Shank	Black	Black	black Yellowish	Yellow	Yellow
color Jengger	Black	Black redness	Red Black / red	Red	Red
shape Jengger	Single	Single	Single	Single	Single

Sources: Primary data observations of the qualitative characteristics of Kedu (2011)

Table 7. Mean scoring qualitative characteristics of a wide variety of Kedu females aged 1 month, 4 months and 6 months.

Kedu Chicken Type	Age (months)			
	1	4	> 6	Mean Total
Kedu Cemani	30.00 ± 0.00^{a}	30.00 ± 0.00^{a}	30.00 ± 0.00^{a}	30.00 ± 0.00
Kedu Black	27.75 ± 1.06^{b}	29.00 ± 0.71^{b}	29.25 ± 0.50^{b}	28.67 ± 0.80
Red kedu	26.50 ± 0.50^{c}	25.75 ± 0.35^{c}	25.90 ± 0.42^{c}	26.10 ± 0.48
White Kedu	13.65 ± 0.49^{d}	17.00 ± 0.71^{d}	17.33 ± 0.29^{d}	15.99 ± 2.04
Kedu Lurik	21.83 ± 0.29^{e}	22.33 ± 0.29^{e}	23.25 ± 1.50^{e}	22.47 ± 0.72

Description: Values with different superscripts in the same column indicate significant differences at test level P <0.05.

Mean total Kedu female Lurik 22.47 ± 0.72 with fur color characteristics (head, neck, left wing, right wing, body and tail) striated, white skin color, shank color yellow, the color red cockscomb, single comb shape , This is in accordance with the opinion Sulandari (2006) that Kedu Lurik have specific characteristics that striated plumage red-gold-striped, shank and yellow beak and red comb. The average value obtained in this study indicate that there selection and cross-breeding between Kedu Kedu the one with the other.

Fur color varies also due to the color of the feathers is governed by one or several pairs of genes or alleles series (Warwick et al., 1990). According to Kimball (1954) and Smyth (1990), the black color is caused by E allele at the locus of E and is dominant to another allele. Further described by Crawford (1990) that influenced their black color pigment melanin. The white color is caused by genes White (I) with the characteristics of all parts white (Kimball, 1954) and (Smyth, 1990). Yellow or white coat color due to lack of melanin content in the skin tissue (Somes, 1988). On the chicken has a wild-type coat color (e^{+}) (Mansjoer, 1985). Wild-type coat color (e^{+}), According to Smyth (1990) and Kimball (1954) due to the influence of the allele e^{+}, Wild-type with the symbol e^{+} expressed in the appearance of hair for females with a body consisting of a mixture of brown and black, light brown chest.

Skin color in a wide variety of Kedu females have varied values that show the variation of color, black and white. The black color of the skin caused by the dye melanin in the blood vessels and their genetic influences (Hutt, 1949). The emergence of the white color is caused by the influence of W^{+}located on autosomes (Hutt, 1949). Jull (1951) states the white color on the skin of the abdomen is also caused by the absence of dyes xanthophylls in the dermis and epidermis.

Shank yellow color is caused by melanin pigments are not in the epidermis and dermis. Shank is black because the melanin pigment in epidermisnya. Shank shiny blue and dark blue on a white chicken due to the pigment melanin in dermisnya, without pigment lipochrom in epidermisnya. Shank is green due to the pigment lipochrom in epidermisnya and pigment melanin in dermisnya (Purwanto, 1995).

Cockscomb color on a wide variety of chicken

Kedu females in this study varied from

black, burgundy up to

Red. Johari (2009) states that

Kedu chicken cockscomb Abu-color black has

gray, black and red. According Franson (1992),

warnahitamdanmerahdisebabkanoleh

blood vessels in the epidermis.

Comb shape in a wide variety of chicken

Kedu females have the same form that is

singular. Single comb shape that is

berdiritegakpipihdanterbagi-bagiseperti

saw. Hutt (1949) explains that shape

single comb caused by genetic influences rr

dansebagianbesarayampiaraan

now

memilikibentukjenggertunggal, As can

owned the red jungle fowl, gray partridge

and partridge ceylon. According to Hutt (1949)

nature

Dominant genes are not fully carried by two genes R

(Rose) and P (pealercis) both genes will emerge

ekspresinyajikagenlainnyadalam

circumstances

recessive homozygous, misalnyaRRppakan

berfenotipejenggerbentukrosedanrrPP

expression pea comb shape. Punnett (1923)

menjelaskansifatjenggerwalnutmerupakan

expression derived from the interaction of two genes R

and P were equally dominant in a state,

keduageninisepertisaling

complete

form a new expression in addition to expression

dibawanyayaituwalnut, genotipesifatwalnut

mempunyaiempatkemungkinanyaituRRPP,

RrPP, RRPp and RrPp.

CONCLUSION

Kedu chicken strains have characteristics

quantitatively and qualitatively different in every

maintenance. At period the age of 1 month

kedu black chicken has weight and width

kedu another chicken strains. At the age of 4 months

and more than 6 months have a striated kedu chicken

body weight and chest width are higher

compared to other kedu chicken. Chicken

kedu cemani has qualitative characteristics

with the highest score.

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