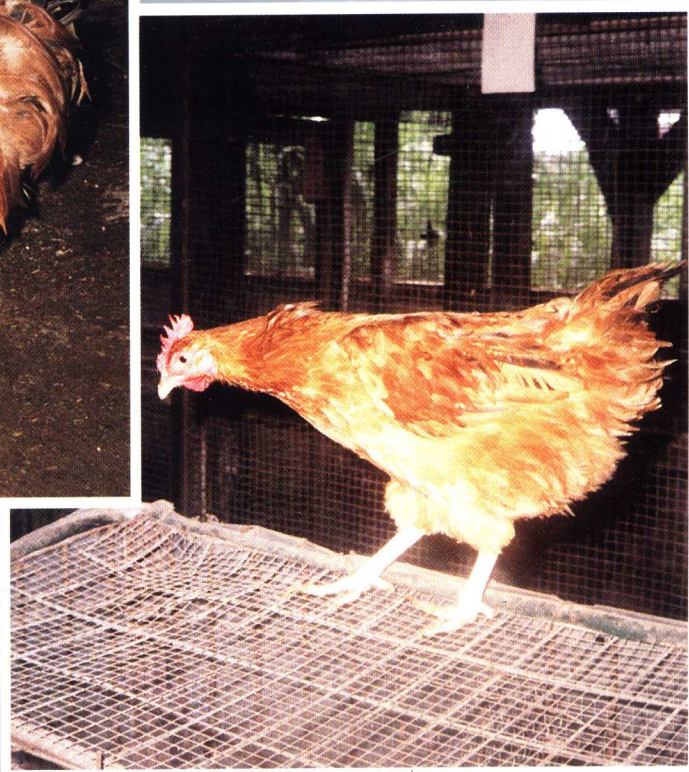


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Gambar sampul:

Ayam nunukan jantan (kiri) dan betina (kanan) dewasa
 asal Kalimantan Timur



Badan Penelitian dan Pengembangan Pertanian
Departemen Pertanian

The Native Chicken of Indonesia

A.G. Nataamijaya

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ABSTRAK

Ayam asli Indonesia yang tersebar di seluruh kepulauan Indonesia ternyata memiliki beberapa rumpun dengan karakteristik morfologis yang berbeda dan khas daerah asalnya. Sejauh ini telah diidentifikasi sebanyak 31 rumpun ayam lokal yaitu, Kampung, Pelung, Sentul, Wareng, Lamba, Ciparage, Banten, Nagrak, Rintit/Walik, Siem, Kedu Hitam, Kedu Putih, Cemani, Sedayu, Olagan, Nusa Penida, Merawang atau Merawas, Sumatra, Balenggek, Melayu, Nunukan, Tolaki, Maleo, Jepun, Ayunai, Tukung, Bangkok, Brugo, Bekisar, Cangehgar/Cukir/Alas, dan Kasintu. Permintaan akan daging ayam lokal/kampung sangat besar sedangkan pembudidayaannya sangat lambat sehingga di khawatirkan akan punah. Beberapa hasil penelitian terdahulu menunjukkan bahwa ayam lokal masih dapat ditingkatkan produktivitasnya dengan tidak melupakan aspek lingkungan.

Kata kunci: Ayam lokal, rumpun, penelitian.

ABSTRACT

The Indonesian native chicken apparently have species physical characteristic which identify them into at least 31 breeds or distinct groups of local chicken namely: Kampung, Pelung, Sentul, Wareng, Lamba, Ciparage, Banten, Nagrak, Rintit/Walik, Siem, Kedu Hitam, Kedu Putih, Cemani, Sedayu, Olagan, Nusa Penida, Merawang atau Merawas, Sumatra, Balenggek, Melayu, Nunukan, Tolaki, Maleo, Jepun, Ayunai, Tukung, Bangkok, Brugo, Bekisar, Cangehgar/Cukir/Alas, and Kasintu. The demand for native chicken meat has been greatly increased yet it's multiplication rate is very low, hence the population will sooner or later, be decreased substantially. Some previous research results indicated that the native chickens productivity can be improved without causing damage to the environmental condition.

Key words: Native chicken, breeds, researchs.

INTRODUCTION

Most of native chicken in Indonesia are raised under extensive traditional system where they are free to scavenge around farmers house during the day and sleep wherever they like to such as trees, hollows and even inside the villagers houses, it's estimated population is 200 millions (CV Fauna Mulia Jaya Raya, 1996). The keepers spend almost no input for raising the birds mainly because of it's ability to feed itself using all kind of sources available on the ground such as kitchen waste, insects, worms, grasses and vegetables. The scavenging native chicken, in fact, could play very important role in natural insects

population control in order to prevent the insects causing big loss to the rice and corn plantation (Nataamijaya, 1996a).

For centuries the birds are kept in this way, it survives, and amazingly it play an important role in the villagers daily life. In most Indonesian villages, the villagers practically can not live, especially during dry season, with out keeping native chickens. During this season most of farmers' land can not be planted by food crops, only grasses and weeds grow on it. The only way to get cash money instantly is to sell the native chicken to the middlemen who bring it to the town and sell it as "Kampung chicken" with high price, much higher than that of commercial (hybrid) chicken. The Kampung chicken meat is more expensive because consumers believe, that it is more delicious and healthier due to its lower fat contents. The Kampung chicken eggs also much more expensive than commercial chicken egges because it can be used as part of traditional herbal medicine called "Jamu" which is very popular in Indonesia.

NATIVE CHICKEN BREEDS

Currently, as much as 32 breeds of Indonesian native chickens had been observed (Nataamijaya, 1996b), the breeds are as follows:

1. Kampung

It is an an ordinary native chicken which can be found in most villages (Kampung) of Indonesian archipelago.

2. Pelung

Origin of Cianjur West Java with biggest and tallest body compared with other breeds, it has also beautiful long crow which make it one of the most expensive birds.

3. Sentul

Origin of Ciamis West Java is well known among the farmers as a productive layer, it is also considered has a relatively better resistance against poultry diseases except Newcastle Disease. It's main plumage color is grey which is it's typical general appearance.

4. **Wareng**
This small sized native chicken is origin of Indramayu West Java, it is very alert and difficult to catch, however it has better egg productivity than Kampung chicken.
5. **Lamba**
In villages of southern Garut West Java we can find this kind of native chicken. It has a slightly bigger body size than Kampung chicken, with long neck, single comb and longer crow compared with Kampung chicken.
6. **Ciparage**
It is a fighting cock type, origin of Karawang West Java, the male has a tall and solid body posture, is now practically extinct.
7. **Banten**
The Banten male chicken is a game type of bird, which is supported by firm and compact posture, with short, small pea comb. It has also a strong neck structure while its plumage is very similar to that of Kampung chicken.
8. **Nagrak**
Is a crossbred of male Pelung and female Kampung which has 87.5% Pelungs blood and 12.5% Kam-pungs blood. It is named Nagrak because it was developed by farmers at Nagrak Sukabumi West Java. It has a much better growth rate than the Kampung and similar to Pelung, Nagrak chicken is raised to be sold as meat type bird.
9. **Rintit/Walik**
This breed has a very distinctive appearance because it's plumage is frizzled. The Rintit can be found any where in Indonesia although in very small numbers.
10. **Siem**
Usually found around Bogor and Jakarta area, has a shiny blue black plumage, it's body size slightly bigger than Kampung chicken. It is well known to have an excellent mothering behavior.
11. **Black Kedu**
This very famous breed is origin of Kedu Temang-gung Central Java, classified into 3 types: egg, meat and fighting/game. It's plumage is almost thoroughly black with big single comb, the hen lays more eggs than Kampung chicken hen.
12. **White Kedu**
It is also origin of Kedu but instead of black plumage, it has white plumage with big single comb on males head. The number of White Kedu is very small and it is impossible to gather a rather, big number of White Kedu, within short time due to it's rarity.
13. **Cemani**
Is Kampung or Kedu chicken which has a thoroughly black color of plumage, comb, wattles, tongue, skin, meat, leg scales and toes. In Javanese society, mainly, Cemani birds are needed to fulfill requirement for certain old traditional ceremonial activities, while some Chinese medicine use the Cemani as part of prescription.
14. **Sedayu**
Farmers in Sedayu Magelang Central Java recognize the Sedayu as the most favorable and profitable breed to be kept, because it has a better size and body weight than Kampung chicken. It is also a good native layer, the reason why it is kept as egg producer at first but after around 2 years production period will be sold as a good meat type native bird.
15. **Olagan**
It's typical characteristics of this Bali native chicken is that it has no feather on the neck while its body form tend to looked wider than the Kampung. The plum-age is very similar to that of Kampung chicken.
16. **Nusa Penida**
This breed comes from small island South of Bali called Nusa Penida, it has a small body size and very alert. The male has thick neck plumage, wide wings and considerably long tail feather, while the female has a nice crest on top of the head and also recognized as good egg layers.
17. **Merawang or Merawas**
It is origin of Bangka island South Sumatra which has reddish brown color plumage (Merawang) or golden brown one (Merawas). The male has a big red single comb and wattles while the female known as a pro-ductive layer.
18. **Sumatra**
Comes from central region of Sumatra, the male has a firm, compact and artistic body appearance with a long beautifully curved tail feather. The female is also well known as a good native egg type.

19. **Balenggek**
Found firstly in Solok West Sumatra, it has three types namely Gadang (big type), Batu (small type) and Ratiah (medium type). Their body plumage mostly combination of red, black and white.
20. **Melayu**
The bird is origin of North Sumatra, the male posture is big and firm with small short red pea comb. The body plumage is not different from that of Kampung chicken.
21. **Nunukan**
The Nunukan is origin of Nunukan and Tarakan Island East Kalimantan, the male has a rather tall and big posture while it's female almost in similar size with the Kampung. Nunukan has a more uniform plumage color if compared with other breeds of native chickens. Male Nunukan has an extremely short tail feather which is the typical characteristic of Nunukan breed.
22. **Tolaki**
It is the game type native breed origin of South Sulawesi, with an upright body posture small head, long neck and back, supporter by a pair of tall but strong legs. It's body plumage color is not much different from the Kampung, yet it is very alert.
23. **Maleo**
This is actually a wild breed or native chicken of Central Sulawesi and Maluku Island, the cock is tall and slender, with a big beak, blue faced and black crest on its head make it looked very attractive. It's plumage basically black and shining reddish brown breast feather while it's tail feather is white.
24. **Jepun**
The size of this breed is smaller than Kampung chicken, the cock has a red single comb while the plumage color is about the same as that of Kampung chicken. One typical characteristic is that it has a very soft fluffy feather structure, looked like the feathers are not grown well.
25. **Ayunai**
The most striking characteristic of Ayunai, origin of Merauke Irian Jaya, is that it has no feather on the neck and crop while it wattles are red and big. It's body appearance tend to be round.
26. **Tukung**
It is possibly one of the rarest type of native chicken can be found in Indonesia, male and female Tukung has no tail feather at all. The body size usually smaller than Kampung chicken.
27. **Bangkok**
Actually most of "Bangkok" chicken kept by the farmers are crossbred of pure male Bangkok with Kampung chicken, used as game bird. It has a tall, wide and firm body with wide and strong wings, short red pea comb. The most common plumage color is black with some red combination on the neck, back, breast and wings for the adult male.
28. **Burgo**
It is a crossbred of male Red Jungle Fowl (*Gallus-gallus bankiva*) with female Kampung chicken. Burgo is very similar to dwarf chicken yet it has a slightly bigger body size, can be found in South Sumatra.
29. **Bekisar**
The most highly appreciated native chicken in Indonesia, it has a very attractive shining body plumage. It's crow is very specific there fore it is known as singing bird. Bekisar is a crossbred of male Green Jungle Fowl (*Gallus varius*) with domestic fowl. The plumage color is very dependent on the parents plumage color.
30. **Cangengah/Cukir/Alas**
These are the local names for Green Jungle Fowl (*Gallus varius*) in Sundanese, Madura and Javanese languages. These wild birds live in southern part of Java, Madura and also in some other Indonesian island. It has much smaller body size than Kampung chicken. The body plumage of the cock basically black combined with shiny green scally looked plumage. It has a big round rainbow colored single comb with relatively long red wattles. The hen's plumage color is pale brown with some small dark spots.
31. **Kasintu**
It scientific name is *Gallus-gallus bankiva* lives mostly in northern part of Java, South Sumatra, Bali and South Sulawesi. The main plumage color of the cock are black, ornamented with red color on it's head, neck, back and waist. The hen usually has reddish brown plumage color with some blackish stripes.

CURRENT STATUS

Kampung chicken meat considered as a delicacy for the middle up to high level Indonesian society, its price therefore almost twice as high as that of commercial chicken meat. Jakarta inhabitants consuming more than 70.000 Kampung chickens daily, brought from Lampung, West Java, Central Java and East Java.

Since 1990's farmers began to raise the birds intensively and feed it with rice bran diluted commercial diet. This way seems to be profitable for years, however the commercial diet price has been increasing very fast due to rapid decrease of rupiah value against the U.S. dollar. It is because some commercial diet ingredients such as soybean meal, fish meal, corn and pollard (wheat bran meal), is imported from abroad which need the U.S. dollar to pay it. In this situation Kampung chicken farmers are forced to adopt the extensive traditional keeping system while most of commercial chicken farmers go into bankruptcy. Hopefully this bad situation will not last too long because Indonesia has sufficient sources of chicken feed stuffs like fertile farm land and sea which has abundant fishes in it.

RESEARCH RESULTS

Kingston (1979) reported that under extensive traditional system chicken mortality was as high as 68% at 6 weeks old, Ronohardjo (1982) found that every year farmers suffered billions of rupiah loss caused by Newcastle Disease (ND). These reports showed that under this system the Kampung chicken are very susceptible to ND and something has to be done to decrease mortality rate. Nataamijaya *et al.* (1986) indicated that under good vaccination program against ND, mortality rate was decreased become 50%; when vaccination combined with artificial brooding system, the mortality became only 25%. The growth rate of native chicks is much slower than that of broiler chicks, at 12 weeks old its body weight were 1089.78 grams (Resnawati *et al.*, 1989) under intensive management system. An observation on the Nagrak chickens showed that it has the best growth rate ever reported among the native chickens (Figure 1), which also has a good market as meat type native chicken (Nataamijaya *et al.*, 1993).

The egg productivity was varied greatly between breeds, however, when it was fed a balanced diet Kampung hens produced 100 to 180 eggs per hen per year (Nataamijaya, 1996; Andi, 1985).

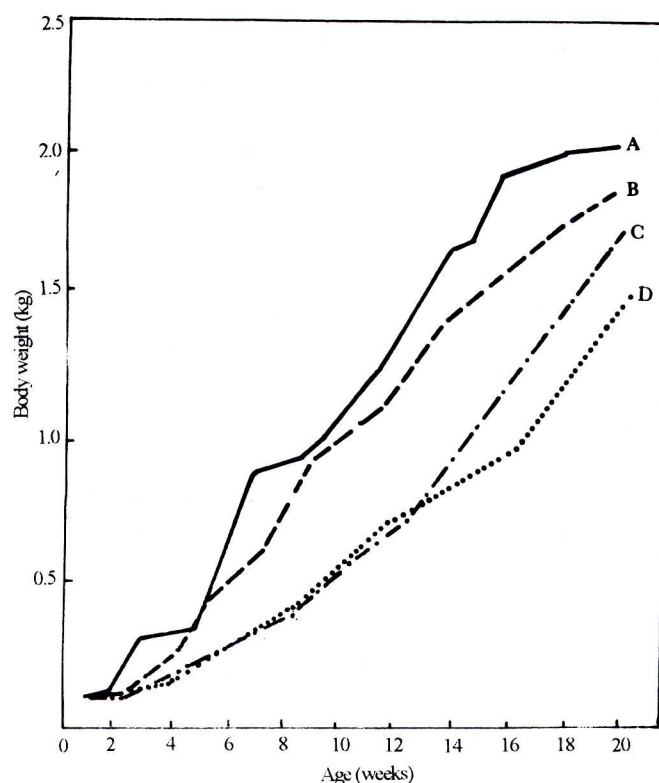


Figure 1. The growth rate of Nagrak chicken raised by the farmers. (A) Compared with previous research results on Pelung (B) by Nataamijaya (1985), on Pelung (C) and Kampung chicken (D) by Creswell and Gunawan (1983).

Source: Nataamijaya *et al.* (1993).

A study on the laying characteristics indicated that based on its gene frequency, Kampung chicken had a good chance to be put under selection program in order to yield more productive hens (Nataamijaya *et al.*, 1996). Cross breeds of native chicken and egg type commercial breed had resulted in excellent performance as reported by CV Fauna Mulia Jaya Raya (1996) of South Sulawesi. It is called Kalosi Pute which laid the first egg at 5.5 months old and laid as much as 180 eggs per year.

Feed cost is the biggest portion of production cost in intensive poultry keeping system, at least 60%, in normal economic condition. The price of conventional feed stuffs and commercial diets are very high, hence, it is impossible for the smallholders to earn a reasonable profit from intensive keeping system. The farmers should be able to find some other kinds of feedstuffs in order to reduce the feed costs. Resnawati *et al.* (1989) concluded that 5% of processed small scarlet seeds, *Adenanthra microsperma*, in

the diet as source of protein could be used. The seeds of kapok, *Eriodendron anfructuosum*, also could be used as much as 5% in the diet (Resnawati *et al.*, 1989).

As source of energy, sago flour of Metroxylon sago as much as 20% in the diet (Table 1) showed no detrimental effect on the growth of Kampung chicks (Nataamijaya *et al.*, 1988). According to I Putu Kompiang *et al.* (1995) the use of cassapro, enriched fermented cassava, as much as 5% in the diet showed no significant negative effect to the broiler chicks growth rate. Darma *et al.* (1995) reported that the protein contents of cassapro was 28.5 to 38.8% dependent on materials and procedures conducted (Table 2). Since the price and availability of poultry diets and feedstuffs still a major problem in Indonesia, more efforts need to be taken in order to build a system that yields in profitable poultry farming especially for the smallholders.

ALTERNATIVES FOR IMPROVEMENT

The increasing demands for the native chicken produces need to be fulfilled by increasing it's productivity which is can be done through management improvement such as improved extensive keeping system, and for a long term through simple selection program. Fully intensive keeping system requires a lot of money which is impossible for most farmer to afford. Besides under intensive system, the birds loose their important role in ecological system as insects population control. If most of native chickens are confined under intensive system, undoubtedly the insects population should increase quickly which in turn will become a major hazards for rice and corn plantation. Intensive system can be run in an area where there is no major rice an corn plantation. Extensive system certainly needs some improvements in order to reduce mortality rate and to increase productivity. -

Table 1. Average daily weight gain of native chicks fed sago flour diet for 12 weeks period (grams).

Age (weeks)	Sago flour contents (%)				
	0	5	10	15	20
1	25.88	23.40	19.72	21.05	25.81
2	42.17	49.44	33/65	30.89	45.45
3	36.57	26.68	56.22	50.89	37.20
4	68.27	83.46	66.93	81.80	74.46
5	86.00	60.34	87.00	86.00	74.46
6	90.66	105.33	122.66	102.00	81.33
7	93.67	70.67	68.67	86.00	116.17
8	92.00	94.66	98.67	102.67	74.33
9	114.33	92.00	94.66	70.60	141.17
10	108.83	97.34	89.34	94.01	95.63
11	83.00	54.33	76.00	126.00	91.87
12	79.00	51.33	73.33	77.33	109.33

Source: Nataamijaya *et al.* (1988).

Table 2. Protein contents (%) of cassapro made under different material, fermentation time and environmental temperatures.

Water contents (%)	Fermentation time (days)					
	4			5		
	Temperatures (°C)			Temperatures (°C)		
	28	33	35	28	33	25
Whole cassava tuber						
50	28.9	26.7	23.0	29.4	30.0	21.9
60	28.2	27.9	30.4	31.9	31.2	32.4
70	31.0	28.2	31.5	33.4	32.8	38.8
Peeled cassava tuber						
50	29.5	29.2	26.1	33.0	30.4	25.8
60	32.5	28.3	27.1	34.1	29.5	24.1
70	32.4	30.0	17.8	32.1	33.3	19.6

Source: Darma *et al.* (1995).

The first things to be done are to conduct a regular continuous vaccination program against Newcastle Disease (ND) and the use of creep feeders where only chicks can take the feeds from it. Also the farmers have to practice a simple way of selection such as keeping only the hens with high egg production, good broadness and mothering behavior. It is important for the hens to have a good mothering behavior so that the chicks can learn from the mother how to get natural feeds such as insects, worms and forages.

Through these simple techniques hopefully the farmers will be able to collect a stock of more productive improved native chickens which can give optimum performances under an improved extensive traditional management system so that the farmers economic welfare will be better while the native chicken population also will be protected from excessive utilization.

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