

BIBLIOGRAPHY

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ABSTRACT

Local egg production have started in Benguet. Poultry raisers from Naguey, Atok, Benguet are supplying egg demand for household consumers in some parts of Benguet. This study was conducted to document the production practices, marketing practices, problems encountered and other production and marketing logistics and issues of the different poultry raisers in Naguey, Atok, Benguet.

Cages were acquired through the Benguet State University poultry production extension project. At the time of the study, acquisition of feed supply and other stocks and materials used in poultry production had been done through collaboration with the Benguet State University. However, as of December 2012, due to reorganization of the university, poultry raisers got their feed supply from B-MEG through a poultry supply store in La Trinidad, Benguet.

The poultry raisers collected eggs twice a day, stored, then delivered to the market on a scheduled day. The eggs were put in trays and crates for delivery.



The poultry raisers experienced pest and disease problem in production. In marketing, the raisers problems were farm to market road and low demand for eggs during the months of March to May.

Poultry raisers in Naguey, Atok, Benguet should continuously be provided with technical and other logistics in poultry production. Poultry raisers are encouraged to increase supply to meet the demand of consumers in Benguet and Baguio City.



INTRODUCTION

Rationale

Commercial egg production is dominated by the lowland areas such as Tarlac, Nueva Ecija, Pampanga and Ilocos region. Egg supply for highland (CAR) region is coming from these areas. Until BSU had started producing eggs in their poultry project. It was also through BSU poultry project that technology on egg production was disseminated to other areas of Benguet in order to supply demands of eggs in Cordillera, Naguey was one recipient of the BSU poultry project.

However, until now production is not yet sufficient to meet the demand of the increasing population especially in La Trinidad, Benguet. Demand for highland egg is tremendously increasing because of the increasing population of homelands and fast food chains like McDonalds. The egg produced in the highland produces orange yolk egg which is most preferred by consumers in La Trinidad and McDonalds situated in La Trinidad.

Naguey is known for its orange yolk egg products. Local production of eggs has started and they start distributing not only in Atok but also in some parts of La Trinidad.

Chicken egg production in the Philippines is a minor industry compared to the broiler production sector that takes center stage in the Philippine chicken trade. But the chicken layer sector had the most growth between 2001 and 2002 because of the increase of chicken layers in the country. In 2002, chicken egg contributed 3% of the total value in the Philippines (Molecio, 2011).



In this situation, it is therefore necessary to assess and document the production capacity of poultry farms in Benguet, production and marketing practices, problems and other logistics and issues.

Importance of the Study

This research aimed to document the production and marketing practices including other logistics and issue related to the project. The result could be a basis for other individuals who have interests to go to a similar enterprise and for other researchers who may be interested to conduct the same field of interest.

Statement of the Problem

1. What are the production and marketing practices employed by the egg producers in Naguey, Atok, Benguet?
2. What are the problems encountered in the production and marketing of eggs in Naguey, Atok, Benguet?
3. What are other production and marketing logistics and issues?

Objectives of the Study

1. To determine the production and marketing practices employed by the egg producers in Naguey, Atok, Benguet.
2. To determine the problems encountered in the production and marketing of eggs in Naguey, Atok, Benguet.
3. To identify other production and marketing logistics and issues.

Scope and Delimitation of the Study

The study documented the production and marketing practices of the different poultry raisers in Naguey, Atok, Benguet.



REVIEW OF LITERATURE

Historical Aspect of Poultry Production

Chickens were being raised by the Chinese about 1400 B.C. Poultry were domesticated in India by 1000 B.C. and chickens were also known in ancient Egypt. Although poultry and eggs were used for food in the early history, poultry raising has only recently become a major commercial enterprise. In the past, most poultry was raised on an individual family basis (Gillespie, 1981).

The modern poultry and egg industry is faced with the challenge of efficient production of large volumes of safe poultry and eggs without creating nuisance problems such as odors, flies, or pollution of air and water. The industry must also address welfare concerns with regards to bird care and housing. Poultry and egg production have tremendous potential to produce large quantities of high protein food. With modern technology, poultry can be successfully grown in any location or climate in the world. Successful poultry producers are those individuals who follow known principles of good husbandry and practice these continuously (Pond, 2000).

Raising poultry has a number of advantages, among which are high feed efficiency, fast return on investment, spreading income throughout the year, high return compared to feed cost, low land requirements, adaptability to both small part-time enterprises and large commercial enterprises, and the operation can be highly mechanized with high output per hour of labor. However, there are some problems involved in raising poultry among which are serious problems of disease and parasites, need for high level of management ability, especially large commercial flocks (Gillespie, 2002).



Management of Pullets

Ready to lay pullets should be shifted from grower to layer sheds around 16 to 18 weeks to allow 1 to 2 weeks adaptation period before laying starts. During pullet rearing it is quite possible that in spite of providing highly suitable management facilities, some pullets may lack in size development of body. In real sense, genetics itself allows one to two percent culling such underdeveloped pullets should be segregated while transferring them to layer sheds and be housed in separate compartments of cages or sections of house in case of deep-litter, to allow them to avail extra nutrition to achieve normal standard of growth (Jadhav, 2007).

The general management practices of pullets are the following: a) under two-stage rearing system, 5 to 8 weeks of old chicks are transferred from the brooder to the rearing house until point of lay (18 weeks of age). This is not necessary under single stage rearing, b) use the correct feed for the age and growth progress of the bird, c) check the feed, water and lights daily. Fresh and clean drinking water should always be available, d) vaccinate on schedule based in a sound vaccination program, e) keep a flock history / record including feed programs, light programs, vaccination programs and birds weight that can be transferred to the layer house with the pullets, f) measure growth process and use the correct formulation to attain the necessary growth and target body weight at point of lay g) follow a lighting program recommended for the strain of bird h) provide recommended floor, feeder, and water space requirements; and i) prevent feather pecking and cannibalism (Molecio, 2011).



Lighting for Layers

Light should be of even intensity throughout the building, and lighting points should be no more than 15 feet (2.8m) apart. Continuous light reduces age at maturity but increasing day length is a greater stimulus to egg production than absolute day length. The ration of light for layers should be increased from six hours at 20 weeks old by 18 minutes each week for the following year (Yadav, 2010).

In shaded areas, natural daylight must be supplemented with artificial lighting in order to obtain desirable lighting patterns which are necessary to adequately control sexual maturity. A constant or decreasing lighting pattern which rearing is essential to prevent too early sexual maturity. An increasing of constant light pattern is necessary after 22.24 weeks of age (Molecio, 2011).

Housing for Layers

Under skilled management, the battery system of housing was proven to be the most advantageous with regards to egg production, efficiency of food conversion and mortality. The hens, either singly or in pairs, are confined to a cage. The usual floor space allowed is 15 x 18 inches (38x46cm) for singles and 18 x 18 inches (46x46cm) for doubles. The height should be 17 inches (43.2cm). The floor is made of stout galvanized wire, slopes 4 inches (10.2cm) from behind to an egg cradle extending some six inches (15.2cm) in front of the cage, into which the eggs roll as they are laid. Underneath is a tray for droppings. Both food and water receptacles are outside the cage. The whole structure should be made of metal so that no parasites will be harboured and so that thorough disinfection can be carried out as often as required (Yadav, 2010).



Purposes of Layer House

a) To protect birds from inclement weather like excessive heat or cold. b) To protect birds from direct sun rays and rain. c) To minimize effect of dampness, especially in rainy season. d) To provide safety from their predators like dogs, cats, wild animals like birds, snakes and rodents(rats) etc. e) To apply scientific management practices easily for improving productive performance and to provide suitable atmosphere for expression of full genetic potential (Jadhav, 2007).

Layer Nutrient Requirements

Flock replacement chicks fed 20% crude protein all-mash starter diet for the first 6 weeks, followed by 15 to 16 percent protein grower feed to 12 weeks, and 12 to 13 percent protein developer feed until sexual maturity (age at first egg laying, approximately 18 to 20 weeks). Feeds may be restricted during the developing period to delay onset of sexual maturity. This is desirable to reduce the number of small eggs produced when the birds begin laying. Layers have a high calcium in the diet and often by providing crushed oyster shell (calcium carbonate). Layers are often “phase-fed” with an adjustment after approximately 40 weeks of age to increase the calcium level to maintain egg shell quality (Cheeke, 1991).

Vaccination of Layers

The build-up of immunity to disease starts in the egg and continues in the brooding period. A well planned and executed vaccination program is essential. Vaccinate only against those diseases prevailing in the areas where the flock is expected to live (Molecio, 2011).



Temperature and Ventilation for Layers

Heat stress is one of the major risk factors that one must consider in layer farm management. The ideal temperature for laying hen is between 18 degrees to 29 degrees Celsius (Table 1). Air movement around birds at floor level has a beneficial cooling effect. In shade houses, take full advantage of natural breezes using paddles or circulating fans in periods of still weather and particularly during the heat of the day. Controlled environment house, use inlets with movable louvers which can direct moving air direct on to the birds at floor level. There are five main objectives for ventilation: a) to provide fresh air, b) to remove stale air, c) to control temperature, d) to control humidity and e) to remove dust. Each of these five objectives must be fulfilled if the flock perform its best ability in feed conversion, livability, growth and egg production. According to Kekeocha (1985) as cited by Molecio (2011), the optimal laying temperature is between 11 degrees Celsius to 26 degrees Celsius. A humidity level above 75 percent will cause a reduction in egg laying. Table 1 indicates the effects of temperature on egg production (Molecio, 2011).

When the temperature rises above 28 degrees Celsius, the production and quality of eggs decreases. Seasonal temperature increases can reduces egg production by about 10 percent.



Table 1. Temperature and its effects on egg production

TEMPERATURE (°C)	EFFECTS
11-26	Good production.
26-28	Some reduction feed intake.
28-32	Feed consumption reduced, water intake increased, reduced size of egg and thin shell.
32-35	Slight panting.
35-40	Heat prostration sets in, measures to cool the house must be taken.
40 and above	Mortality due to heat stress.

Egg Collection and Grading

Poultry raisers collect eggs at least twice a day or as frequent as possible. Collected eggs are placed in clean trays or egg baskets and dirty eggs are first cleaned before they are packed. Soft shell and cracked eggs are separated. Grading is one of the important steps in marketing eggs. In this process, eggs go through identification and separation. Grading allows you to set different prices for different sizes and quality level of eggs. High quality eggs may be priced higher, while eggs with small blood spots maybe sold to consumers such as bakeries. Factors considered in grading eggs are appearance, internal quality, size, color, and the soundness of the shell. Eggs are also classified by size. The standard classifications of the commercial chicken eggs by weights are: Jumbo = 70g and above, Extra large = 65-70g, Large = 56-65g, Medium = 49-56g, Small = 42-49g, and Pewee = 35 or 40g (Molecio, 2011).



Marketing for Eggs

There are two ways to market table eggs; using direct marketing or marketing through middlemen or intermediaries. Marketing through middlemen is more common method and the more preferred because it gives the farmers the opportunity to concentrate on farm and production as compared to spending time on marketing and selling. The most crucial part of marketing is meeting the demands and requirements of customers, and these usually rely on production, handling, storage, and transport of goods. The four ways to conduct direct marketing are: sale from the farm, door-to-door sales, producers' markets, and sales to local retail stores (Molecio, 2011).

Egg Production Standards

Dagoon (1990), said for profitable egg production, the birds must lay more eggs in order to pay for the cost of feed and all of the other costs involved in producing eggs. For most part of the country, the native laying flock should lay an average of at least 150 eggs per bird per year to give a reasonable labor income or profit. Neither the best kind of diet nor the most scientific management will enable pullets to lay well if they are not bred for egg production. A pullet to lay well should also possess the following outstanding characteristics: a) early sexual maturity-white leghorns should commence to lay at about 150 days of age and the general purpose varieties at about 170 days of age, b) pullets of all varieties should lay at an average of about 50 percent production or about 15 eggs per month or better, c) pullets should continue to lay for a period of approximately ten months from the time they start to lay (Molecio, 2011).



Watering Equipment

The importance of water is evident by the fact that laying hens drink 2 to 3 lbs of water for each pound of feed that they consume, and the recommendation that laying hens not be required to walk more than 15 feet to get a drink. Watering devices should keep the water clean, be easily cleaned, prevent spillage of water around the vessels or containers, and keep the water cool in warm weather. To keep water clean, the containers should be high enough that litter will not be scratched into it, and so that the birds cannot contaminate it with droppings. Automatic watering devices are commonly used on commercial layer, broiler, and turkey operations. For large flocks, shallow V-shaped troughs running the entire length of the house are satisfactory. For cages, drip type or small-cup waterers minimize cleaning and spillage (Ensminger, 1980).

Floor, Feed and Water Space

Floor space of 1800 to 2200 cm² per bird on deep-litter and 337 to 375 cm² per bird in cages is recommended for layers. Breeders are provided with little higher space of 2300 to 2700 cm² depending on size of birds. About 12 to 15 cm linear feeder space and 2.5 cm water space per bird is adequate during laying. On deep-litter system one laying nest for every 4 to 5 hens with perch at entrance is provided for comfortable laying and clean egg production and feed efficiency: increased diseases incidence and mortality and sometime cannibalism also (Molecio, 2011).



METHODOLOGY

Locale and Time of the Study

The study was conducted at Naguey, Atok, Benguet where the poultry farms are located. Gathering of information was done from October 2012 to December 2012.

Respondents of the Study

Complete enumeration was done and there were 10 respondents.

Data Gathering Procedure

A personal interview with the farmers was done with the aid of an interview guide and secondary information from farm records was gathered.

Data Gathered

The data gathered includes the following: production practices and marketing practices of poultry raisers, problems encountered by poultry raisers in their production and marketing of eggs and other production and marketing logistics and issues.

Data Analysis

The data was tabulated and analyzed by using frequency analysis and descriptive analysis.



RESULTS AND DISCUSSION

Profile of Respondents

Gender. Table 2 shows the profile of the respondents in terms of gender and educational attainment of the respondents. Majority (60%) of the poultry raisers are female and 40% are male.

Educational attainment. Half (50%) of the poultry raisers reached high school, some (30%) reached and finished elementary while the remaining 20% were college undergraduate.

Table 2. Profile of the respondents

PROFILE	FREQUENCY	PERCENTAGE
Gender		
Female	6	60
Male	4	40
TOTAL	10	100
Educational attainment		
Elementary	3	30
High School	5	50
College	2	20
TOTAL	10	100



Year of Start of Layer Production

Table 3 shows that the poultry raisers did not start at the same year. Poultry raising in the study area started in 2004 and every year until 2012, there is an additional increase in the number of raisers. In 2005, there was an additional of two (20%) and the same increase in 2006. There was only one raiser who just started its production last year (2012). At present, total poultry raisers were 10 since 2004.

Table 3. Year of start of layer production

YEAR	FREQUENCY	PERCENTAGE
2004	1	10
2005	2	20
2006	2	20
2007	1	10
2008	1	10
2010	1	10
2011	1	10
2012	1	10
TOTAL	10	100



Seminars and Trainings

All of the poultry raisers in Naguey, Atok, Benguet acquired their poultry production skills from seminars and trainings on poultry production from the Benguet State University through Mr. Diego Dumapis. Mr. Dumapis was in charge of the poultry project of the Benguet State University and was providing technical assistance to these poultry raisers.

Production Practices

Housing facilities. All of the poultry raisers in Naguey, Atok, Benguet used the stair stepped cages made up of steel as shown in figure 1. The stair stepped cages are common and the most popular type of cage being used here in the Philippines. The poultry houses were made of galvanized iron. Some use bamboo as the wall of the poultry house as shown in figure 2. Most of the poultry houses are located near the houses of the farmers. Most of the poultry houses are closed but some are open sided as shown in figure 3. The posts are made up of concrete cement and underneath the poultry house is where chicken dung is collected as shown in figure 4.





Figure 1. Stair stepped cages used by the poultry raisers in Naguey



Figure 2. Closed type poultry house with bamboo walls at Naguey



Figure 3. Open sided poultry house at Naguey



Figure 4. Chicken dung dryers made of sticks

Floor space. The floor space per bird that was used by the poultry raisers was different because each raiser has its own desired floor space for their layers. Two or 20% poultry raisers use 12'' x 18'' floor space per bird, another two or 20% poultry raisers use 14'' x 18'' floor space per bird and another two or 20% poultry raisers use 24'' x 14'' floor space per bird. One or 10% poultry raiser use 1.5 feet x 2 feet floor space per bird, another one or 10% poultry raiser use 14'' x 12'' floor space per bird, one or 10% poultry raiser use 18'' x 16'' floor space per bird and one or 10% poultry raiser use 14'' x 13'' floor space per bird.

Table 4. Housing facilities and population per cage

FLOOR SPACE	NO. OF BIRD/CAGE	FREQUENCY	PERCENTAGE
18'' x 24''	4	1	10
12'' x 18''	4	2	20
14'' x 18''	4	2	20
18'' x 16''	4	1	10
24'' x 14''	4	2	20
14'' x 13''	4	1	10
14'' x 12''	3	1	10
TOTAL		10	100



Capacity of the Layer Cages

Table 4 shows that most (90%) of the poultry raisers in Naguey follow the required capacity of layer cages which is 4 bird per cage and one or 10% poultry raiser use 3 birds per cage.

Light Management

Light is one major factor in the poultry production. Based on the recommended requirement of light, continuous light reduces age at maturity but increasing day length is a greater stimulus to egg production than absolute day length. All of the poultry raisers in Naguey, Atok, Benguet do not provide lighting until the pullets reached the age of 21 weeks. At 21 weeks, the pullets are then provided with 30 minutes light starting from 5:30 to 6 in the morning. 30 minutes light is methodically provided until they reach the optimum light exposure of 16 hours. All of the poultry raisers use red lights for lighting because in regards of brightness, it minimizes stress to the layers and as also taught to them by Dr. Diego Dumapis during their seminar.

Collection of Eggs

Table 5 shows the time of egg collection and majority (60%) of the poultry raisers collect eggs twice a day starting from 9 in the morning and then again at 10 Am. Some (30%) poultry raisers collect eggs starting from 10 in the morning and then again at 1 in the afternoon. One (10%) poultry raiser collect eggs once a day only at 3:00 in the afternoon.

Collection of eggs were done mostly in the morning because according to the farmers, the birds lay more of their eggs in the morning and to avoid for the eggs to get



dirty. They collect the eggs using bamboo baskets as shown in figure 5. They sort the eggs using egg weighing scale and some of the poultry raisers use the egg grader machine as shown in figure 6. The eggs were then cleaned using damp piece of cloth and they put them in trays and crates. Each farmer has its own stockroom where they store the eggs for several days before delivering to the market.



Figure 5. Bamboo baskets used in egg collection



Figure 6. Egg grader machine

Table 5. Frequency of egg collection

TIME	FREQUENCY	PERCENTAGE
9Am-10Am	6	60
10Am-1Pm	3	30
3Pm	1	10
TOTAL	10	100

Culling Unproductive Layers

Table 6 shows the number of months when the poultry raisers begin culling. Culling is defined as the removal of unproductive birds from the flock at the onset of laying. Culling is done because unproductive layers consume feed and occupy space in the cage without producing enough profit. Most (80%) of the poultry raisers starts culling the birds after 16 months. According to the poultry raisers, after the birds reach 16 months, most of the birds are unproductive. Some (20%) of the poultry raisers starts culling the birds after 18 months. The old layers produces large eggs compared to the young layers and this is why some poultry farmers do not cull out immediately the old layers. The culled birds are disposed and sold to stores along the Halsema highway.



Table 6. Culling frequency of unproductive layers

CULLING PERIOD	FREQUENCY	PERCENTAGE
After 16 months	8	80
After 18 months	1	10
After 19 months	1	10
TOTAL	10	100

Feeding the Layers

Time schedule of feeding. Adequate feeding is essential for growth and production of layers. Feeding of the layers has a schedule and all of the poultry raisers fed the layers twice a day.

Table 7 shows that half (50%) of the poultry raisers fed the layers at six Am and then again at two in the afternoon. Some (20%) poultry raisers fed the layers at five Am and then again at one Pm. Another 20% of poultry raisers fed the layers at seven Am and then again at three Pm. Few (10%) poultry raisers fed the layers at eight Am and then again at three Pm.



Table 7. Daily frequency of feeding

TIME OF FEEDING	FREQUENCY	PERCENTAGE
5Am and 1Pm	2	20
6Am and 2Pm	5	50
7Am and 3Pm	2	20
8Am and 3Pm	1	10
TOTAL	10	100

Quantity of feeds given per day. In feeding the layers, poultry raisers just put the feeds on the feeding troughs using a measured plastic cup. Forty percent or 4 poultry raisers feed the layers by just estimating the quantity of feeds given to the birds, another 40% or 4 poultry raisers follow the maximum required feed quantity which is 115 grams per bird. One (10%) poultry raiser feeds the layers with 100 grams per bird and another 10% or one poultry raiser feeds the layers with 118 grams per bird instead of the maximum required feed per bird which is 115 grams per bird. Their supply of water comes from natural spring water and water was provided to the layers through small plastic pipes as shown in figure 7.





Figure 7. Plastic pipes for providing water

Table 8. Quantity of feeds given to the birds

QUANTITY	FREQUENCY	PERCENTAGE
100 grams/bird	1	10
115 grams/bird	4	40
118 grams/bird	1	10
estimated, no specific measurement	4	40
TOTAL	10	100

Sources of feeds and materials. Previously, the farmers get inputs such as feeds and other materials used in poultry raising together with the BSU in order to get a lower price of

inputs because purchase is in bulk. Thus, all supplies including cages and other equipments was purchased or ordered through Benguet State University through Mr. Dumapis. However, there was one raiser who is married to someone from Bulacan who buy directly its cages in Bulacan. However, as of December 2012, due to reorganization of the university, Mr. Dumapis is no longer in-charge of the Benguet State University poultry project, poultry raisers get their feed supply from B-MEG through a poultry supply in La Trinidad, Benguet.

Table 9. Source of feeds and cages

SOURCE	FREQUENCY	PERCENTAGE
BSU	9	90
Bulacan	1	10
TOTAL	10	100

Pest and Diseases and their Control Measures

All of the poultry raisers said that their layers have been attacked by pest and disease such as colds and lice that causes death and decrease in the population of the layers.

If these diseases occur within the layers, all of the poultry raisers said that they prevent or cure this diseases by putting the infected layers into the quarantine area. In extreme conditions, the poultry raisers inject the layers and they use medicine as food supplement.

Table 10. Pests and diseases and control measures

PESTS AND DISEASES	FREQUENCY	PERCENTAGE
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Lice	10	100
Colds	10	100
Control Measures		
Quarantine	10	100
Injection	10	100
Use medicine as food supplement	10	100

*Multiple response

Marketing Practices

Market outlet. The poultry raisers in Naguey, Atok, Benguet have different market outlet.

Table 11 shows that some (40%) poultry raisers deliver their products at Sayangan, Atok, Benguet, some (40%) poultry raisers deliver their products at La Trinidad, Benguet, 20% at Sinipsip, Buguias, Benguet, another 20% at the Benguet State University-Marketing Center, one (10%) poultry raiser deliver at Baguio City, one (10%) poultry raiser deliver at Unigreen Company, one (10%) poultry raiser deliver at Saddle, Caliking, Atok, Benguet and one (10%) deliver its product as far as Tinoc, Ifugao.

Usual Time of Delivery

Table 12 shows the usual time delivery of the poultry raisers. After the eggs were collected, the poultry raisers do not deliver the eggs immediately to their market. Each raiser has its own stockroom and they store it for several days before delivering to minimize their cost of transportation. Half (50%) of the poultry raisers delivers the eggs on Saturdays, 30% of them deliver their products anytime and 20% of them deliver their products on Sundays.



Table 11. Market outlet of poultry raisers in Naguey, Atok, Benguet

PLACE	FREQUENCY	PERCENTAGE
Sayangan, Atok (stores)	4	40
Sinipsip, Buguias (stores)	2	20
Baguio (stores)	1	10
La Trinidad (stores)	4	40
BSU Marketing	2	20
Unigreen	1	10
Caliking, Atok (coop)	1	10
Tinoc, Ifugao	1	10

*Multiple response

Table 12. Time of delivery

DAY	FREQUENCY	PERCENTAGE
Saturday	5	50
Sunday	2	20
Anytime	3	30
TOTAL	10	100

Packaging Materials Used

After the eggs are collected, sorted, graded and cleaned, they put the eggs in trays. All the poultry raisers deliver their products in crates and in trays as shown in figure 8.





Figure 8. Plastic crates used as packaging materials for eggs

Table 13. Packaging materials used

PACKAGING MATERIALS	FREQUENCY	PERCENTAGE
Crates	10	100
Tray	10	100

*Multiple response

Mode of Payment

Upon delivering their products to their own market, the poultry raisers do not usually receive immediately the payment of their products. Most (80%) of the poultry raisers are paid through consignment. One (10%) poultry raiser receives the payment of its product through check and the other one (10%) poultry raiser is paid through cash (Table 14). Price is based on the price set by Benguet State University as shown in figure 9 and it is true to all the 10 raisers.

	One case	Half case	One tray	Half tray	One Dozen	Per Piece
Small	1,450	725	125	63	50	4.25
Medium	1,550	775	135	68	54	4.55
Large	1,650	825	145	73	59	4.90
XL	1,750	875	155	78	63	5.25
Jumbo	-	-	170	85	70	6.00

Thank You Very Much for Not "SMOKING" 😊😊😊

Figure 9. Poultry raisers in Naguey price their products based on the price list of BSU

Table 14. Mode of payment

MODE OF PAYMENT	FREQUENCY	PERCENTAGE
Cash	1	10
Check	1	10
Consignment	8	80
TOTAL	10	100

Problems Encountered on Production

All of the poultry raisers in Naguey, Atok, Benguet encountered problems in layer production such as pests and colds. Two or 20% raiser encountered the feather falling in layers which occurs during the month of April and according to the raisers, these causes low production (Table 15).

Problems Encountered on Marketing

All of the poultry raisers in Naguey, Atok, Benguet said that their common problem on marketing their product is their farm to market road, aside from its long distance, their roads are closed especially if there are strong typhoon that causes landslide.

Some (40%) poultry raisers experienced low demand for eggs during the month of March until the month of May because according to the poultry raisers, the month of March until May is vacation of the students and egg is one of the easiest to prepare by their parents as their “ulam” in school. Few (10%) poultry raiser said that heavy traffic delaying the time of delivery as his one problem on marketing his product as shown in Table 16.

Table 15. Problems encountered on production

PROBLEMS	FREQUENCY	PERCENTAGE
Disease and pest	10	100
Feather falling (month of April)	2	20

*Multiple response



Table 16. Problems encountered on marketing

PROBLEMS	FREQUENCY	PERCENTAGE
Farm to market road	10	100
Low demand for eggs (March-May)	4	40
Heavy traffic	1	10

*Multiple response

Other Production and Marketing Logistics and Issues

The first poultry raisers were part of the extension activities of the Benguet State University through Mr. Diego Dumapis. At first, the poultry raisers have been technically assisted by Benguet State University from their production of eggs and marketing their products. The poultry raisers started to supply the demand for eggs in their locality and as the poultry raisers are growing, they are still dependent from Benguet State University in acquiring their feed supply and stocks and other materials that is being used in egg production.

At present, there was a change in the management of the poultry project including the extension activities of Benguet State University. There is no technical assistant provided by Benguet State University to the poultry farmers but still Mr. Dumapis is volunteering in helping the poultry farmers in their needs when it comes to poultry production. The poultry farmers in Naguey are no longer getting its feed supply and stocks and materials that are used in poultry production from the Benguet State University. Instead, the poultry farmers are now buying their feed supply and stocks through poultry



supply in La Trinidad, Benguet. One example is the “Farm Choice” in km. 3 along Halsema highway and this is where some of the poultry raisers in Naguey acquired their chick layers. Poultry raisers now in Naguey are not just supplying egg demand of household consumers in their locality but the poultry raisers are now trying to supply egg demand of household consumers in other parts of Benguet like Buguias, La Trinidad, Tinoc, Ifugao and Baguio City.



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The study was conducted from October 2012 to December 2012 at Naguey, Atok, Benguet where the poultry farms are located. The study documented the production and marketing practices and problems encountered in production and marketing of eggs of the different poultry raisers in Naguey, Atok, Benguet. Gathering of data was done through a personal interview with the poultry raisers and there were 10 respondents.

The first poultry raiser in Naguey, Atok, Benguet started its production since 2004. Every following year, there were one poultry raiser added and the last poultry raiser added started its production in 2012. The poultry raisers acquired their seminars and trainings on poultry production from the Benguet State University through Mr. Diego Dumapis.

The poultry raisers use the stair stepped cages made up of steel in layer production. The poultry houses are made up of galvanized iron, some walls are made up of bamboo. The floor space per bird that is being used by the poultry raisers varies because each poultry raiser has its own desired floor space for their layers. Most of the poultry raisers follow the recommended capacity of the layer cages which is 4 birds per cage. The poultry raisers provide lighting until the birds reach the age of 21 weeks.

All the poultry raisers collect eggs twice a day. The eggs are stored before delivering to the market. Most of the poultry raisers start culling the birds after 16 months.



The poultry raisers feed the layers twice a day. Natural spring water is provided to the layers. All of the poultry raisers do not provide heating because Naguey has a favorable temperature that the layers can tolerate.

Poultry raisers get their supply of feed from the Benguet State University. However, as of December 2012, due to reorganization of the university, poultry raisers get their feed supply from B-MEG through poultry supply in La Trinidad, Benguet.

Poultry raisers deliver their products on Saturday and Sunday and some deliver their products anytime. Poultry raisers use crates and trays in packaging their products. The poultry raisers sell their products to different parts of Benguet and one poultry raiser deliver its product to Tinoc, Ifugao. Most of the poultry raisers are paid through consignment.

The poultry raisers experienced some problems in production like pest and disease. Most of the poultry raisers said that their farm to market road is one of their problem because of its long distance. The poultry raisers also experienced low demand for eggs during the month of March until the month of May.

Conclusions

Based on the findings of the study, the following conclusions were made:

1. The poultry raisers in Naguey, Atok, Benguet are knowledgeable when it comes to poultry production because all of them attended seminars and trainings on poultry production that was conducted by the Benguet State University Poultry project; 2.

There is increasing market demand for eggs that is why poultry raisers in Naguey do not just supply the demand for eggs in their locality but they also try to supply in other parts of Benguet and even outside of Benguet; and,



3. The poultry raisers do no longer get their feed supply and other stocks for poultry production from the Benguet State University as of December 2012 because of the change in the management of the poultry project including on the extension activities conducted by the project.

Recommendations

Based on the conclusion of the study, it is recommended that technical and other and logistics in poultry egg production should continuously be provided to growers and if possible encourage more producers to increase supply and meet the demand of consumers in Benguet and Baguio City. At present demand of eggs in Baguio City could not be provided by egg producers in Benguet that is why most of the eggs supply in Baguio City was imported from the lowland areas of Region 1 and 3.

Furthermore, poultry raisers may conduct experiments on brooding their own chicks so that producers here in Benguet will not be depending on the supply of chick layers from companies in the lowland areas. In addition, poultry raisers must learn other techniques in marketing their products such as technologies in transporting their products. The poultry raisers are also encouraged to explore other methods to increase production in order to meet demands of household and institutional consumers in the locality.



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