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Economic Analysis of Poultry Egg Production in Quetta District Balochistan

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Abstract

The poultry sector is one of the most organized and vibrant segments of the agriculture industry of Pakistan. This sector generates direct and indirect employment and income for about 1.5 million people. Its contribution in agriculture and livestock is 6.4 percent and 11.5 percent, respectively. Pakistan has been producing 10,000 million table eggs and 1,196 metric tons of chicken meat annually. Thus the egg poultry (layers) farmers in district Quetta, Baluchistan are incurred total expenditures of Rs.526950.00 per farm, respectively. However, the selected egg poultry farmers paid equipments of expenditures of Rs.73450.00 per farm, expenditures rearing Rs.151500.00. The labour cost paid by the selected egg poultry farmers was Rs.100000.00 per farm. As far as marketing expenses are concerned the selected egg poultry farmers incurred Rs.162000.00 per farm. Thus the selected tomato growers in district Quetta, Baluchistan incurred a total average cost of production of Rs.526950.00 per farm. It was also observed that the selected egg poultry farmers in the Quetta, Baluchistan area earned a total physical productivity of per 1000 bird farm (18 dozen eggs/bird for 900 birds, 900 spent hens weighing 1.5 kg each) and earned a gross income of Rs.1430200.00 per farm. It was further estimated that the selected egg poultry farmers after incurring all expenditure and sale of produce earned net income of Rs.71133.00 per farm at a benefit cost ratio of 1:0.81. High profit was observed in poultry egg farming in Quetta.

Keywords: Mango; Production; Contract farming; Gross income; Benefit cost ratio; Sanghar

Introduction

The agriculture sector continues to be an essential component of Pakistan's economy. It currently contributes 21 percent to GDP. Agriculture generates productive employment opportunities for 45 percent of the country's labour force and 60 percent of the rural population depends upon this sector for its livelihood. It has a vital role in ensuring food security, generating overall economic growth, reducing poverty and the transforming towards industrialization. The present government is determined to improve the quality of life of the people and to banish hunger and malnutrition from the country by making agriculture an efficient, productive and profitable sector of the economy. The poultry sector is one of the most organized and vibrant segments of the agriculture industry of Pakistan. This sector generates direct and indirect employment and income for about 1.5 million people. Its contribution in agriculture and livestock is 6.4 percent and 11.5 percent, respectively. Pakistan has been producing 10,000 million table eggs and 1,196 metric tons of chicken meat annually. "The per capita consumption of meat is only 6.6 kg and 55 to 60 eggs annually. Meanwhile, as per the standard requirement, 25 to 28 kg of meat and 250 to 300 eggs are required to be consumed by each person. The price of poultry products have more than doubled in the past few years boosting the industry's prospects. According to market watchers, the average price of chicken meat has gone from Rs.125 per kg to Rs.250-270 per kg and eggs from Rs.36-48 per dozen to Rs.96 to Rs.130 per dozen in the last couple of years [1].

Pakistan is the fast growing country having growth rate 2.2% annually with total population of 182,589,000 people, which represents an increase of 3,428,889 people compared to 2012. Most of peoples are engaged in agriculture producing food for her nation. The food is derived from agricultural products such as vegetable and animal products. Animal products are the traditional sources of milk, meat and eggs consumed by people since pre-historic times. They provide not only the essential amino acids but also the minerals, fats and vitamins. Among animal products, the egg is the most consumable item in the families especially in the children. Chicken eggs are a most common food and one of the most cooking items contains 65, 35, 12, 11, 1 and 11% water, dry matter, protein, fat, carbohydrates and ash respectively. The chicken egg also contains 163 cal/100 g. The boiled and omelet are the major food item used in diets regularly. The egg acts as a nutritional powerhouse and can help the body to prevent as well as get rid of different ailments. Eating a raw egg is similar to consuming a good health tonic, whereas having boiled eggs is equally beneficent. The breakfast time is the best time to consume eggs daily. There are many benefits of egg including maintains health, provides nutrition and protects immune system. In Pakistan, 13425 million numbers of eggs are produced for the consumption [2].

Commercial and desi are the types of eggs consumed in the country but consumption of commercial egg is high due to cheaper in price and easily availability than desi eggs. Awareness in consumption is increasing day by day through print and electronic media but still there is a deficiency. The culture, traditions, customs are influenced on egg consumption in rural and urban societies. On the consideration and importance of eggs and its consumption, the study was planned to know the consumption and cooking patterns. Very limited information is available on the consumption and cooking patterns of chicken eggs in urban and rural families of Quetta District Baluchistan [3].

Poultry eggs have been valuable foodstuffs since prehistory, in both hunting societies and more recent cultures where birds were domesticated. The chicken was probably domesticated for its eggs from jungle fowl native to tropical and subtropical Southeast Asia before 7500 BCE, where the quail had been the primary source of eggs. Eggs are a

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common food and one of the most versatile ingredients used in cooking. They are important in many branches of the modern food industry. The most commonly used bird eggs are those from the chicken. Eggs are laid by female animals of many different species, including birds, reptiles, amphibians, and fish, and have been eaten by humans for thousands of years. Chickens and other egg-laying creatures are widely kept throughout the world, and mass production of chicken eggs is a global industry. In 2009, an estimated 62.1 million metric tons of eggs were produced worldwide from a total laying flock of approximately 6.4 billion hens. Chicken eggs are widely used in many types of dishes, both sweet and savory, including many baked goods. Some of the most common preparation methods include scrambled, fried, hard-boiled, soft-boiled, omelet's and pickled [4].

A large egg yolk contains approximately 60 calories the egg white contains about 15 calories. A large yolk contains more than two-thirds of the recommended daily intake of 300 mg of cholesterol (although one study indicates the human body may not absorb much cholesterol from eggs). The yolk makes up about 33% of the liquid weight of the egg. It contains all of the fat, slightly less than half of the protein, and most of the other nutrients. It also contains all of the chlorine, and one yolk contains approximately half of the recommended daily intake. Chorine is an important nutrient for development of the brain, and is said to be important for pregnant and nursing women to ensure healthy fetal brain development. The diet of the laying hens can greatly affect the nutritional quality of the eggs. For instance, chicken eggs that are especially high in omega 3 fatty acids are produced by feeding laying hens a diet containing polyunsaturated fats and kelp meal. Pasture-raised free-range hens which forage largely for their own food also tend to produce eggs with higher nutritional quality in having less cholesterol and fats while being several times higher in vitamins and omega 3 fatty acids than standard factory eggs. Focusing on the protein and crude fat content, a 2010 USDA study determined there were no significant differences of these two macronutrients in consumer chicken eggs [5].

Poultry in Pakistan was kept as backyard business for household needs. In early sixties the need of commercial poultry was felt which resulted in 1963, in the form of a national campaign to enhance the production of feed products in the country [6]. Under this campaign the government announces a tax exemption policy on the income derived from poultry farming. Pakistan International Airlines (PIA) in collaboration with Shaver Poultry Breeding Farms of Canada started first commercial hatchery in Karachi. Simultaneously, a commercial poultry feed mill was started by Lever Brothers, Pakistan Ltd., at Rahim Yar Khan, which was followed by other pioneers like Arbor Acres Ltd. Special emphasis was laid by the Government on development of poultry industry in the country during 1965-75. The Government made major policy decisions to provide all possible facilities to poultry industry in the annual development plans. In this period was a disaster due to diseases, in 1990 the farmers suffered a great loss due to Hydro pericardium syndrome specially the farmers of Broiler and Broiler Breeder Birds. In 1991-92 another disease Gumboro attacked the chicks of broiler, layer and parent flock that resulted in great mortality. With the passage of time efforts to reduce the incidence of these diseases and prophylaxes regarding vaccination and bio-security were done, this also resulted in establishment of new medicine companies and the importation of vaccines form abroad started. At national level institutes like Poultry Research Institute, Veterinary Research Institute and Agriculture University Faisalabad also done efforts to reduce these diseases. In 1995 a new disease Avian Influenza appeared in Murree and Abbotabad and mortality in parent flock rose up to 80% due to this disease and set a challenge to the scientists at national level. Conferences at the diagnosis of this disease were conducted in which scientists discussed their point of views, after great loss measures were adopted that resulted in controlling the disease [7-10].

Most people's mental image of Egg Production is that of a farmyard in which chickens are free to roam about, to fly, and to even roost in the trees. To the side of the yard is a chicken coop, where the chickens are free to enter, to leave, and to nest and lay their eggs. Then each day the farmer comes out with his or her basket and collects the eggs for market or personal use.

Objectives

1. To study of socio-economic characteristics of the poultry egg farms in the study area.

2. To scale of operations of poultry egg production and marketing in the Quetta district of Balochistan.

3. Determine cost, returns and profitability of poultry egg production in the study area.

4. To make the suggestions for the improvement of the productivity poultry egg production in the Quetta district of Balochistan.

Materials and Methods

The study was carried out to investigate the production of poultry eggs farming in Quetta district of Baluchistan province. The study focused on the production of poultry eggs.

Research design

Study area: The study was based on primary data. The data was collected through field survey using face to face interview with farmers simple 60 producers of poultry was selected farmers were selected from Quetta district so that sample could represent all categories of farmers [11-13].

Sample size: The samples were supposed to contain poultry farmers. A sample size of 60 respondents was selected through random sampling. For data collection, Multi-stage random sampling technique was used to select villages and respondents. A village representing average conditions was randomly selected from Quetta district of Baluchistan province.

Data collection: Primary data was collected through a well structured questionnaire to get the information related to the poultry eggs farming. For the selection of respondents, multistage random sampling procedure was used. Quetta district were selected of poultry eggs farming were being chosen randomly.

Questionnaire development

In all statistical surveys questionnaires are considered as the medium for recording the information obtained in a standardized manner. Keeping in view poultry eggs farming a comprehensive questionnaire was developed; Questionnaire included important questions to obtain information about marketing pattern in poultry eggs farming along with other socio-economic characteristics of the farm house hold.

Data analysis

Collected data had both quantitative and qualitative information. So it was analyzed by following analytical measures. For data analysis

Microsoft Office Excel software package and SPSS 17 package were used.

Socio economic characteristics

The status of the sample respondents can be well described through socio economic characteristics. In this study, different indicators of respondent's socio economic features identified.

Descriptive statistics

To analyze the data, descriptive statistics technique was used to find out the mean and frequencies of different energies used and price of input and outputs. Average was calculated using following formula which was also used by Charnes et al. and Coelli [14,15].

$AM = \Sigma X / N$

Where,

AM =Arithmetic Mean

X = Value of Variables

N = Number of Observations

Σ = Total Sum of variables

Percentages

Percentage is the proportion of fraction articulated in hundredth. It was computed by

$P = F/N*100$

Where,

P = Percentage

F = frequency of desired class

N = Total number of respondents

Multiple regression models

By multiple regressions, we mean models with just one dependent and two or more independent (exploratory) variables. The variable whose value is to be predicted is known as the dependent variable and the ones whose known values are used for prediction are known independent (exploratory) variables.

Production function model was used to determine the physical relationship between inputs and output obtained, in poultry egg production to achieve specific objective ii. The implicit form of the model is expressed as follows:

$Y = f(X_1 X_2 X_3 X_4 X_5 X_6, \varepsilon)$

Where: Y = Output of poultry egg production (crate)

X_1 = Family labour (man-day/hour)

X_2 = Hired labour (man-day/ hour)

X_3 = Flock size (number)

X_4 = Feed (kg)

X_5 = Depreciation cost of equipment (N)

X_6 = Other operating expenses (N)

ε= Error term.

In the analysis, different functional forms were used which include linear, semi-log, double-log and exponential functions, and the double log function was selected and used as the lead equation. The choice of the best functional form (lead equation) selected was based on both statistical and econometric criteria (T-test, F-statistics, and R_2), number of significant variables and the a priori expectation of the signs of the coefficients. The X_1, X_4, and X_5 coefficients of a priori, was expected to be positive, while those of X_2, X_3 and X_6 negative.

Results

The study area was Quetta District of Baluchistan. The study is described into two subsections:

1. Socio-economic characteristics
2. Physical productivities and net returns on poultry eggs farming

Socio-economic characteristics

Age of farmers: Age is very important demographic factor which influences the efficient allocation of resources' it shows the ability to do work, efficiency, willingness to make progress and attitude towards various social and economic aspects of life. Age can be defined as total number of completed years since birth of a person.

Table 1 shows the association of the age of the respondents with the percent of poultry eggs farmer age group. In age group of 21-30 years, 20.00%, 31-40 years, 30.00%, 41-50 years, 31.66% of poultry eggs farmer age group. With more than 50 years old farmers, the percentage of poultry eggs farmer age group 18.33%.

Education level of farmers: Education in its general sense is a form of learning in which the knowledge, skills, and habits. The education system in Pakistan is generally divided into five levels: primary (grades one through five); middle (grades six through eight); high (grades nine and ten, leading to the Secondary School Certificate or SSC); intermediate (grades eleven and twelve, leading to a Higher Secondary (School) Certificate or HSC); and university programs leading to undergraduate and graduate degrees.

Table 2 shows the association of the age of the respondents with the percent of poultry eggs farmer education level. In education level 13.33% farmers were illiterate, while about 50.00% farmers were Primary level of education, 43.00% were middle, 16.66% matriculation and 1.66% bachelor/master education in the study area.

Farming experience of farmers: Poultry farm experience mean, which includes monitoring the welfare of the birds, feeding them and

Age	No. of farmers	Percentage
21-30 years	12	20.00
31-40 years	18	30.00
41-50 years	19	31.66
More than 50 years	11	18.33
Total	60	100

Table 1: Distributions of the respondents according to their age.

Education level	No. of farmers	Percentage
Illiterate	8	13.33
Primary	15	50.00
Middle	26	43.00
Matriculation	10	16.66
Collage/University	01	1.66
Total	60	100.00

Table 2: Distribution of the respondent according to their education level.

ensuring fresh drinking water is always available.

Table 3 shows relationship between farming experience of poultry eggs farmer. The respondents having farming experience of up to 10 years; they had 41.66%, 11-20 years of farming experience had 13.33%, 21-30 years of farming experience possessed 25.00% of poultry eggs farming. Similarly, farmers with more than 30 years of farming experience had 20.00% of poultry eggs farming.

Family size of farmers: Family is a social group in society typically consisting of parents and their children's. Two or more people who share goals and values, have long-term commitments to one another, and reside usually in the same dwelling place.

Table 4 shows about the family size of the respondent. Their family size of 5-10 members and they had 38.33% of the poultry eggs farmer 11-15 Members and they had 46.66% of the poultry eggs farmer and more than 15 Members they had 15.00% of the poultry eggs farmer.

Family type of farmers: Joint family set-up, the workload is shared among the members, often unequally. The roles of women are often restricted to housewives and this usually involves cooking, cleaning, and organizing for the entire family. Extended family defines a family that extends beyond the nuclear family, consisting of grandparents, aunts, uncles, and cousins all living nearby or in the same household. A single-family detached home, also called a single-detached dwelling or separate house is a free-standing residential building

Table 5 shows that there were 46.66% were joint family system, 10.00% were extended family type and 43.33% were single family type of the poultry eggs farmer.

Hygienic

Hygiene is a set of practices performed for the preservation of health. While in modern medical sciences there is a set of standards of hygiene recommended for different situations.

Table 6 shows about the respondents were categorized in four different categories on the basis of hygienic conditions on their farms. That 15.00% farmer is rearing birds in good hygienic condition, 51.66% in satisfactory, 35.00% in poor hygienic condition.

Farming Experience	No. of farmers	Percentage
Up to 10 years	25	41.66
11-20 years	08	13.33
21- 30 years	15	25.00
Above 30 years	12	20.00
Total	60	100.00

Table 3: Distributions of the respondents according to their farming experience.

Family size	No. of farmers	Percentage
5-10 Members	23	38.33
11-15 Members	28	46.66
More than 15 Members	09	15.00
Total	60	100.00

Table 4: Distributions of the respondents according to their family.

Family Type	No. of farmers	Percentage
Joint	32	46.66
Extended	6	10.00
Single	22	43.33
Total	60	100.00

Table 5: Distribution of respondents according to family type in the study area.

Particulars	No. of farmers	Percentage
Good	09	15.00
Satisfactory	31	51.66
Poor	20	35.00
Total	60	100.00

Table 6: Distributions of respondents according to hygienic.

Particulars	No. of farmers	Percentage
Spray chemicals	27	45.00
Fumigation	18	30.00
Not practiced	15	25.00
Total	60	100.00

Table 7: Distributions of respondents according to disinfectant methods.

Farm Capacity	No. of farmers	Percentage
Avg 1000 layers birds	60	100.00
Total	60	100.00

Table 8: Size/capacity of egg farm in the study area.

Particulars	Rate per unit	Mean
Farm rent for (1000) birds	40000.00	40000.00
Total Rs.		40000.00

Table 9: Farm rent of egg farm in the study area.

Disinfectants

Disinfectants are substances that are applied to non-living objects to destroy microorganisms that are living on the objects. Disinfection does not necessarily kill all microorganisms, especially resistant bacteria spores; it is less effective than sterilization, which is an extreme physical and/or chemical process that kills all types of life.

Table 7 shows that more than 45.00% farmers spray chemicals for disinfection purpose. It also presents that 30.00% farmers used to fumigate for disinfection purpose. It was also reported that 25.00% farmers do not exercise any such practice to disinfect their farm.

Farm size/Capacity of farmers

A farm is an area of land. It is the basic production facility in food production. Farms may be owned and operated by a single individual, family, community, corporation or a company.

Table 8 shows that there were 100.00% farmers who have farm capacity average 1000 layers birds on their farms.

Farm rent

When the lord, upon the creation of a tenancy, reserves to himself and his heirs, either the rent for which it was before let to farm, or at least one-fourth part of that farm rent, it is called a fee farm rent.

Table 9 shows that on an average per Farm rent for (1000) birds farmer spent a sum of Rs.40000.00 in study area.

Equipment expenditure of farm

Amount used during a particular period to acquire or improve long-term assets such as property, plant, or equipment (Table 10).

Expenditures rearing

Care for child during the early stages of life; bring up (Table 11).

Particulars	Rate per unit	Mean
2 electric/gas/Diesel brooders	500.00	1000.00
10 chick guard sheets	200 .00	2000.00
20 chick feeders/trays	80.00	1600.00
20 chick drinkers	85.00	1700.00
40 round feeders	150.00	6000.00
10 automatic drinkers	450.00	4500.00
1 buckets	350.00	350.00
1 wheel barrow	2300.00	2300.00
1 electric water pump	5000.00	5000.00
1 spray pump	7500.00	7500.00
16 lying nest	2000.00	32000.00
60 egg trays (plastic)	35.00	2100.00
18 curtains	400.00	7200.00
Miscellaneous expenditure		2000 .00
Total Rs.		73450.00

Table 10: Equipment expenditure of egg farm in the study area.

Particulars	Rate per unit	Mean
Cost of 1000 day-old chicks(1000)	Rs.70/each	70000.00
Cost of feed 6 kg/bird for (1000)	Rs.40/kg	40000.00
Cost of vaccination and medication	Rs.28/bird	28000 .00
Elect: and fuel consumption charges	Rs.2000/ month	12000.00
Miscellaneous expenditure		1500.00
Total Rs.		151500.00

Table 11: Expenditures rearing of egg farm in the study area.

Particulars	Rate per unit	Mean
Supervisor (1/2 monthly visit)	500.00	100000.00
Feedings/monthly	4000.00	20000.00
Cleaning/monthly	4000.00	20000.00
Watchmen	4000.00	20000.00
Drinkers/monthly	4000.00	20000.00
Total Rs.		100000.00

Table 12: Labour inputs of egg farm in the study area.

Labour charges

An indicator characterizing the expenditure of labor expressed in man-hours on a production of a given consumer value or on a technical operation.

Table 12 shows that Rs.100000.00 on an average per farm poultry farmer spent labour cost of production. This included Rs.100000.00 on Supervision (weekly visit), Feedings Rs.20000.00, Cleaning Rs.20000.00, Watchmen Rs.20000.00, Drinkers Rs.20000.00 and spraying (weekly spray) Rs.10000.00 respectively in the study area.

Marketing costs

Marketing costs are those expenses which are incurred by the farmers when poultry birds move from the producing farm (farm gate) to the final consumers for the disposal of their production, the farmers it included number of expenses on transportation, loading, unloading and commission charges.

Table 13, it is clear from result that each selected poultry farmers in study area on average per farm spent a sum of Rs.162000.00. This included Rs.36000.00 for loading, Rs.90000.00 for transportation and Rs.36000.00 of unloading.

Total expenditures

Businesses that know their production costs know the total expense to the production line, or how much the entire process will cost to produce the item. If costs arc too high, these can be decreased or possibly eliminated. Production costs can be used to compare the expenses of different activities within the company. In production, there are direct costs and indirect costs.

Table 14 showed that the selected poultry farmers in study area on average per farm spent a total cost of production of Rs.3649500.00. This included Rs.40000.00, Rs.73450.00, Rs.151500.00, Rs.100000.00 and Rs.162000.00 on Farm rent/cost, Equipment Expenditure of farm, Expenditures Rearing, Labour charges and marketing costs respectively on capital inputs.

Physical productivity/Revenue productivity

Table 15 shows that the each selected poultry farmer in study area on an average per farm earned of Rs.1430200.00 that included Rs.1296000.00 on Sale of 18 dozen eggs/bird for 900 birds, Rs.124200.00 on Sale of 900 spent hens weighing 1.5 kg each and Rs.10000.00 sale of poultry manure obtained by the farmers of poultry.

Net farm income

Net farm income is gross profits remains cash operating expenses and depreciation cost of machinery and equipments costs could be obtained by subtracting the gross revenue from cash operating expenses. Net income actually represents the reward of the entrepreneur for producing a specific. Net income Averages output or gross income after subtracting all farm expenses. Net income is calculated to judge the efficiency of farm business as a whole.

Table 16, the result cleared from the table that each poultry egg

Particulars	Rate per unit	Mean
Loading	6000.00/monthly	36000.00
Transportation	15000.00/monthly	90000.00
Unloading	6000.00/monthly	36000.00
Total Rs.		162000.00

Table 13: Marketing cost of egg farm in the study area.

Particulars	Mean	Mean
Farm rent/cost	40000.00	1000.00
Equipment Expenditure of farm	73450.00	2000.00
Expenditures Rearing	151500.00	1600.00
Labour charges	100000.00	1700.00
Marketing costs	162000.00	6000.00
Total Rs.	526950.00	4500.00

Table 14: Total expenditures of egg farm in the study area.

Particulars	Mean	Mean
Sale of 18 dozen eggs/bird for 900 birds	80.00/dozen	1296000.00
Sale of 900 spent hens weighing 1.5 kg each	92.00/kg	124200.00
Sale of poultry manure	2500.00/trolley	10000.00
Total Rs.		1430200.00

Table 15: Physical/Revenue productivity of egg farm in the study area.

Particulars	Mean	Mean
Gross income (Rs) A	1430200.00	1296000.00
Total expenditure (Rs) B	526950.00	124200.00
Net Income (Rs) A-B=C	903250.00	10000.00

Table 16: Net farm income of egg farm in the study area.

Particulars	Gross income (Rs)	Total expenditure (Rs)	Input-output ratio
Farm	(A)	(B)	A/B=C
1	1430200.00	526950.00	1:2.70

Table 17: Productivity ratio of egg farm in the study area.

Particulars	Gross income (Rs)	Total expenditure (Rs)	Input-output ratio
Farm	(A)	(B)	A/B= C
1	903250.00	526950.00	1:1.71

Table 18: Cost benefit ratio of egg farm in the study area.

farmer on an average per farm earned during study, Rs.903250.00 on net income, Rs.1430200.00 on gross income and Rs.526950.00 on total expenditure in the study area.

Productivity ratio

Productivity is the ratio of output to inputs in production; it is an average measure of the efficiency of production. Efficiency of production means production's capability to create incomes which is measured by the formula real output value minus real input value.

Table 17 show that the selected poultry egg farmers on an average per farm earned Rs.1430200.00 on the inputs at Rs.526950.00 in study area. Therefore they availed input output ratio of 1:2.70 from poultry farming in the study area; it means that with the investment of Rs.1.00 in poultry enterprises they yielded Rs. 2.70 in the study area.

Cost benefit ratio

A benefit-cost ratio (BCR) is an indicator, used in the formal discipline of cost-benefit analysis. That attempts to summarize the overall value for money of a project or proposal. A BCR is the ratio of the benefits of a project or proposal, expressed in monetary terms, relative to its costs, also expressed in monetary terms. All benefits and costs should be expressed in discounted present values. Benefit=Total revenue before deductions The BCR=Benefit/Cost where >1 is good.

Table 18 shows that the cost benefit ratio of the farming of poultry at 1:0.48 it means that the poultry egg farmers obtained Rs.0.48 on each rupee invested by them in the study area.

Discussion

In this study, identified a number of factors that believed would be influential in determining the poultry egg farming area of in district Quetta, Balochistan sustainability. The results indicate that proposed model provides an acceptable fit on the data.

The economic analysis describes the methods used in analyzing economic behavior and the application of the results obtained to solve economic problems. Economic analysis became sterile as did mere logic-consistency theorems dealing with general equilibrium, aggregate production functions and social welfare functions, devoid of any empirical content “OR” relevance [16-20].

The object of economic analysis is to verify the use of various inputs of production and income incurred. There are many economic measures to determine the profitability of farm business. Yet, none of them is perfectly suitable for all the time and for all purposes, some criteria are most suitable to derive certain conclusions. The most important criteria which are commonly used to analyze efficiency of livestock enterprise are consumption of net returns and determination of input-output ratio. These criteria were used to determine the economic analysis of poultry egg production around in district Quetta, Balochistan.

The results of present study conducted to determine the economic analysis poultry eggs production in district Quetta, Balochistan indicated that the farmers on average 1000 poultry birds (layers egg) poultry farm. They spent Rs.40000.00 per farm rent per annum.

Thus the egg poultry (layers) farmers in district Quetta, Balochistan are incurred total expenditures of Rs.526950.00 per farm, respectively. However, the selected egg poultry farmers [21-23] paid equipments of expenditures of Rs.73450.00 per farm, expenditures rearing Rs.151500.00. The labour cost paid by the selected egg poultry farmers was Rs.100000.00 per farm. As far as marketing expenses are concerned the selected egg poultry farmers incurred Rs.162000.00 per farm.

Thus the selected poultry growers in district Quetta, Balochistan incurred a total average cost of production of Rs.526950.00 per farm. It was also observed that the selected egg poultry farmers in the Quetta, Balochistan area earned a total physical productivity of per 1000 bird farm (18 dozen eggs/bird for 900 birds, 900 spent hens weighing 1.5 kg each) and earned a gross income of Rs.1430200.00 per farm . It was further estimated that the selected egg poultry farmers after incurring all expenditure and sale of produce earned net income of Rs.71133.00 per farm at a benefit cost ratio of 1:0.81.

Conclusion and Suggestions

In this study, different capacity laying hen farms in District Quetta of Balochistan, which have a considerable importance in the laying hen farming in Balochistan province, were compared in terms of performance, including feed consumption, production cost and profitability per chick and egg, and the most profitable farm size was determined. Study results indicate that farms had the highest egg yield, a lower feed consumption and better feed efficiency ratios. In addition to these technical criteria, farms were found to be more advantageous in terms of economic criteria [24-28]. When the analyzed farms are assessed in terms of profit margin, it was found that profit margin was positive. Profit margin was found to increase parallel to the farm. The poultry sector is dependent on external sources in the terms of brood. In addition, investments in manufacturing mentioned products in Balochistan should be encouraged.

Therefore, it is suggested that to adopt more and more new tech knowledge, through which farmers should be increase the production, gross margin and increase net returns. By increasing egg production farmers were improve the living intended. For the promotion of poultry egg following strategy should be adopted.

- Live bird and egg traders replied that short and inconsistent supply in market places is the most devastating constraints for the development of their business activity.
- Research and higher education institutions should give due attention to the preparation and promotion of chicken fast food recipes as part of the research development programs hand in hand with the genetic improvements of local breeds.
- Thus improving the development of infrastructures in the study areas in particular and the country as a whole would have solid implications in the development of egg production.
- Interested pilot producers should be selected and assisted to undertake semi-intensive production of local chicken under close supervision by the extension advisors.
- Advising proper combination of inputs to the farmer and giving subsidy on the inputs will result in enhanced per farm production.

- Government should provide subsidies on poultry feed, poultry medicine and other micro nutrients [29,30].
- There is need of proper guide to farmers about egg production so government should provide and activate researchers and extension department for proper guideline of farmers.

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