CHAPTER II

SOCIO - ECONOMIC DEVELOPMENT
INTRODUCTION

Economic development has been much to do with human endowments, social attitudes political conditions and historical accidents. Underdeveloped nations possess social institutions and display such attitudes as are not conducive to economic development. According to the UN Report on processes and problems of industrialization in underdeveloped countries there are elements of social resistance to economic change, which include institutional factors characterized by rigid stratification of occupations reinforced by traditional beliefs and values; attitudes involving 'inferior valuation attached to business roles and their incompatibility with the patterns of living and concepts of social dignity upheld by the high status of groups.'

Such factors tend to inhibit social and geographical mobility and constitute a drop on progress. The people of such countries are averse to accept new values created by the impact of innovations.

The family is the primary economic and social unit. Family attitudes are responsible for population pressures and attachments to land. They also limit the range of individual freedom in making economic decisions, which in turn influence the motives to save and invest. Money is hoarded in gold, jewellery or in real estate or is spend to meet social obligations on ceremonial occasions to maintain status.

Kinship or status caste clan or creed influences people in underdeveloped nations. Moreover, administrators, managers, Politicians, and policy makers belong to the privileged and dominant class of society. Social attitudes towards education are further inimical to economic progress. Purely academic education, which trains people of government and other clerical jobs, is preferred to technical and professional education in such nations.
Oriental religions give less inducement to the virtues of thrift and hard work. The qualities associated with the Eastern culture make for life and stability; those of the west for progress and adventure.

Economic development is measured in four ways. One of the methods to measure economic development is in terms of an increase in the economy's real natural income over a long period of time. 'Real, national income refers to the country's total output of final goods and services in real term rather than money terms.

The GNP figure also does not reveal the costs to society of environmental pollution, urbanization. It considers national resources to be free and treats the earth 'like a business in liquidation'.

Dissatisfied with GNP/GNP, per capita as the measure of economic development certain economists have tried to measure it in terms of social indicators. Some are nutritional standards or number of hospital beds or doctors per head of population. The direct provision of such basic needs as health, education, food, water, sanitation and housing affects poverty in a shorter period and with fewer monetary resources than GNP/GNP per capita strategy which aims at increasing productivity and incomes of the poor automatically over the long run.

Hicks and Straiten consider six social indicators.

In the context of India, development thus refers to a sustained increase in the real capita income together with an improvement in the distribution of material welfare. This also implies advancements in two aspects namely income and distribution.

Factors Affecting Economic Growth

A) Capital
The basic obstacle to economic growth is the shortage of capital. This stems from the Vicious circle of poverty. Poverty is both a cause and a consequence of a country's low rate of capital formation. In a developing country the masses are poverty ridden. They are mostly illiterate and unskilled; use outmoded capital equipment and
methods of prediction. They practice subsistence farming, lack mobility and have little connection with the market sector on the economy. Their marginal productivity is extremely low. Low productivity leads to low real income, low saving, low investment and a low rate of capital formation. The consumption level is already so low that it is difficult to restrict it further to increase the capital stock. That is why millions of farmers in such countries use outmoded and obsolete capital equipment. The inclinations to board are due to the absence of banking facilities in rural areas.

B) Labour

Human Resources have been an important factor in modern economic growth. Economic growth does not depend on the mere size of human resources but on their efficiency.

In developing nations the existence of surplus labour is to a considerable extent due to the shortage of critical skills undeveloped human resources results in low labour productivity of factor mobility, limited specialization in occupation, and in customary values and traditional social institutions that minimize the incentives for economic development. Since less developing countries have a dearth of critical skills and knowledge, physical capital, whether indigenous or imported cannot be productively utilized.

C) Technology

In developing countries production techniques are inefficient over a made range of industrial activity (whole of agriculture, small-scale units and handicrafts. Lack of research and development (R&D) weak communication between the research institutes and industries, abundance of labour and capital scarcity is some obvious reasons for the use of techniques with have otherwise become absolute. Developing Countries do not have large effective institutions working for discovering appropriate technology. Under the circumstances, an attempt is made to import technology from developed countries, which often fail to adopt local situations.
II SOCIAL DEVELOPMENT IN INDIA

Since independence, the government of India has claimed that it has wanted to work towards social development. On the eve of independence, Jawaharlal Nehru, while addressing the constituent assembly, declared that the independence meant the redemption of a pledge. But he also stated that this achievement "is but a step, an opening of opportunity, to the great triumphs and achievements that await us the ending of poverty and ignorance and disease and inequality of opportunity". A lot has been achieved in the past half century. The incidence of poverty has declined from over 50 per cent in the 1950s to less than 30 per cent in the late 1990s. The literacy rate has increased from less than 20 per cent in 1951 to 65 per cent in 2001. According to the recent Human Development Reports of UNDP, India has moved from the category of "low" human development to that of "medium" level and its present rank is 127. Nevertheless, the movement will depend on women's participation in cultural renewal.

Last but not the least; Jain believes that with all the efforts so far, the women's movement has still failed to influence the "minds of men" (p 165). The crux of the future women's movement in the global arena, or on domestic terrain, lies in invading the male mind, or rather fighting and breaking the exclusion which women's issues are subjected to. Once the contradictions with the male viewpoint are resolved and more and more men are with the women's movement, attainment of women's rights and their true participation in the decision-making process will become a reality. Performance of India in social development is far from satisfactory, and could have been much better (Dreze and Sen 1995).

In the last few decades, it became clear that India and other developing countries had neglected social aspect of development. As Amartya Sen says in his writings, social sector development has both instrumental value (means to development) and intrinsic value (an end in itself in terms of increasing capabilities, opportunities and freedom). The UNDP's global and national Human Development Reports since 1990 focused attention on various aspects of human development. The concept of social development is supposed to be broader than that of human development. The Council for Social Development (CSD), New Delhi has now brought out a volume entitled India : Social Development Report. The difference between this report and UNDP's reports is that the present one analyses social
The social problems of contemporary India including the exclusion problem are rooted in history and culture. Many of these problems have not been seriously addressed by government policies and strategies since independence. In the post-reform period, while there have been improvements in economic growth, increases in foreign exchange, the IT revolution, acceleration in export growth, etc.

III Poultry Farming

The Poultry refers to domesticated birds which are reared for their flesh, eggs and feathers and it includes a number of avian in species such as chicken, duck, turkey, geese, swan, guinea – fowl, pigeons, pheasants, quail etc. But it is very often used synonymously to chicken.

Chicken and ducks are kept for commercial production of both eggs and meat. Poultry keeping is a source of pleasure as well as income from selling of eggs and meats. Poultry farming has become very encouraging enterprise in modern India for small farmers, landless laborers and educated unemployed as well as for big entrepreneurs keeping birds on industrial pattern. Poultry industry. The Bayard poultry farming started fading out with the establishment of commercial enterprise. The per capita availability is hardly around 20 eggs, one of the lowest in the world as against per capita consumption of about 200 eggs per annum as recommended by the nutritional Advisory council. This would given an idea about the scope for increasing poultry production in the country.

Importance of Poultry Farming

(i) Poultry provides eggs and meats. Eggs are highly nutritive supplementary food.

(ii) Economic improvement of rural masses can be substantially achieved with introduction of scientific poultry farming.

(iii) Poultry farming as a tool of socio-economic transformation of rural poor has immense potential in country like India where more than 30 percent of the people live below the poverty line.

(iv) Poultry farming requires less investment to start the enterprise.
Eggs and table birds can be sold for cash as the pullet starts laying at about six months of age and broiler gets ready for marketing at the age between 6 to 8 weeks. As a result quick return can be expected from the investment. Poultry farming also provides continuous source of income.

Poultry farming in rural area has become a cottage industry.

Poultry and poultry products provide promote in rich food at low cost.

Mixed farming with poultry provides opportunity for additional income during dull season of crop cultivation.

Poultry farming provides employment opportunity directly or indirectly.

### Average composition of edible protein of Rice, cow milk, eggs and chicken meat.

<table>
<thead>
<tr>
<th>Component (Percentage)</th>
<th>Rice</th>
<th>Coe Milk (Whole)</th>
<th>Eggs</th>
<th>Chicken</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hen</td>
<td>Duck</td>
</tr>
<tr>
<td>Water</td>
<td>13.0</td>
<td>87.3</td>
<td>74.0</td>
<td>71.0</td>
</tr>
<tr>
<td>Protein</td>
<td>7.1</td>
<td>3.5</td>
<td>12.4</td>
<td>13.0</td>
</tr>
<tr>
<td>Fat</td>
<td>1.1</td>
<td>3.5</td>
<td>11.7</td>
<td>14.5</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>78.0</td>
<td>5.0</td>
<td>0.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Fiber</td>
<td>0.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ash</td>
<td>0.8</td>
<td>0.7</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Calories per 100 gms.</td>
<td>359</td>
<td>65.0</td>
<td>163.0</td>
<td>189.0</td>
</tr>
</tbody>
</table>


Poultry manure is an extremely rich source of nitrogen and organic matter. Poultry manures contain 1.0 - 1.8% N, 1.4 - 1.8% P₂O₅ and 0.8 to 0.9% K₂O. The built up litter is a balance organic manures. It contains 3% N, 2% P₂O₅ and 2% K₂O.
Characteristics of Poultry Birds

i. Poultry birds are warm bodied tetra products.

ii. Body is covered with epidermal feathers.

iii. Neck flexible and long.

iv. The forelimbs are modified as wings for flight. Feather provided with muscles at the base.

v. The hind limbs are covered with scales and armed with claws.

vi. The beak is horny and there is not teeth in the mouth.

vii. Hind limbs are modified for walking or hopping in land and perching on trees and in aquatic or semi aquatic birds for swimming.

viii. The digestive system includes a crop and gizzard, the rectum opens into a cloacae, no urinary bladder. The ureters communicate with cloaca, the urine is semi fluid.

ix. The heart is four chambered with two atria and two verticals, a aortic arch persists. No sinus venous us.

x. Eyes with sclerotic plates with eyelids and nictitating membrane.

xi. Ear, the auditory aperture lies behind the eye sunk deep hidden by feathers.

xii. The sexes are separate; the right ovary and oviduct are usually absent. The fertilization is internal.

xiii. Eggs with large yolks is covered by a hard cell.

xiv. The fertile egg undergoes moralistic segmentation. The incubation of egg is external.

xv. There are twelve pair of cranial nerves.

Origin

India and neighboring countries are the ancestral home of the present day domestic fowl. Jungle fowls are believed to be ancestors of modern domestic breed. The birds are domesticated for the production of meat and eggs. Poultry keeping in India was a predominantly a village occupation. The indigenous breeds are small in size and lay small number of small size egg. Scientific poultry keeping was first advocated by Christian missionaries towards the beginning of the 20th century A.D. Their exotic breeds are superior to those of the dies fowls in their performance. The poultry production gets preference in different five years plan. Organized effort to
develop poultry in the country was started in 1957, when second five year plan was launched.

Poultry birds provide food materials rich in animal protein comparatively at a low cost. We should have conditions that are necessary for poultry production. We should considered the followings for the economics of poultry production.

1. **Site Selection:**

Open place having transport facilities should be selected for poultry farming. The place must be high enough to facilitate drainage.

2. **Capital:**

Capital is prime need of starting poultry farm. Capital is needed according to size of the farm and their management practices. Capital invested by poultry farmer is good for running poultry farming (NABARD) along with commercial and Cooperative banks financing a large number of Poultry Scheme all over the country for increasing production of eggs and broiler meats.

3. **Construction of houses:**

Poultry house should be constructed most economically by using locally available materials. The poultry house should be constructed according to the system of poultry rearing.

4. **Collection of improved breeds:**

Collection of improved breed is of prime need for starting poultry farm. Poultry breeding research centre have evolved the following layer and broiler stocks.

**Layers:**  
H H - 260, BH - 78, ILM - 90, ILR - 90, ILI - 80, Bhubaneswar Rhodo White, Arbor Aeres Leghorn cross, XL - Link, Starcross - 288 etc.

**Broilers:**  
Ven Cobb, Bab Cobb, IBL - 80, B - 77, IBB - 83, CA - 42, Starbro CA - 47 etc.
5. **Vaccine and Medicine:**

The healthy and disease free stock produces eggs and meats satisfactorily. Vaccine and medicine should be available as and when needed. Administration of proper vaccine and medicine is essential for prevention and treatment of diseases respectively.

6. **Feed:**

Egg and meat production is closely related with supply and consumption of balanced feed. The balanced food for the poultry is now available in the market. Major ingredients such as rice Polish, till oil cake etc. are available abundance at remunerative price. These can be used in poultry feed.

7. **Selection of birds:**

Selection of birds is essential to cut down the expenditure and to prevent the disease. The weak, disease affected and unproductive birds should be culled or shelled out if possible. The laying birds should be culled after completion of first year of laying.

8. **Marketing:**

The present market demand as well as remunerative price for poultry products should act as incentive for Poultry production. There should be regular marketing of eggs and meats.

9. **Skill and training:**

Skill in Poultry production is helpful for becoming a successful poultry farmer. In most of the states and Union Territories, regular training is being given to the farmers in Poultry Production. All the states Poultry farms are in a position to cater necessary practical training to develop skill in Poultry Production. The agricultural universities throughout the country and Tamil Nadu veterinary and animal Sciences University, Central Avian Research Institute (CARI) at Izatnagar offer undergraduate, postgraduate and doctorate degree in different areas of poultry production respectively. The college of veterinary science, Andhra Pradesh Agricultural University at Hyderabad offers Post graduate and Doctoral degree in Poultry sciences. The central Poultry training Institute at Hessarghata (Bangalore) Provides a series of short term course in various aspects of poultry production to trainees coming from different states of India as well as from foreign countries.
Table - 2

EGG PRODUCTION OF POULTRY

<table>
<thead>
<tr>
<th>Species</th>
<th>Age of sexual maturity (month)</th>
<th>Production of Egg/year</th>
<th>Weight of eggs (Grams)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>5 - 6</td>
<td>240</td>
<td>57</td>
</tr>
<tr>
<td>Duck (Peking)</td>
<td>7 - 8</td>
<td>110-175</td>
<td>80</td>
</tr>
<tr>
<td>Goose</td>
<td>24</td>
<td>15-50</td>
<td>215</td>
</tr>
<tr>
<td>Turkey</td>
<td>7</td>
<td>105</td>
<td>85</td>
</tr>
<tr>
<td>Quail (Bob white)</td>
<td>8 - 10</td>
<td>150-200</td>
<td>9</td>
</tr>
<tr>
<td>Guinea fowl</td>
<td>10-12</td>
<td>40-60</td>
<td>9</td>
</tr>
<tr>
<td>Pheasant</td>
<td>8-10</td>
<td>40-60</td>
<td>32</td>
</tr>
<tr>
<td>Pigeon</td>
<td>6</td>
<td>12-15</td>
<td>17</td>
</tr>
</tbody>
</table>

Sources: Poverty is cruel is curable. The only known cure is economic pragmatism instead of ideology. In a poor country like India there can never be social justice without economic growth.

IV ROLE OF POULTRY IN RURAL DEVELOPMENT

In India poultry production which has remained as backyard venture till 1960 has emerged into an encouraging enterprise for rural folk especially for small farmers, landless labourers and educated unemployed and also for big entrepreneurs maintaining the birds on large scale in thousands. Poultry rearing is no more considered as low prestigious occupation fit for only weaker sections of the society. It has become a full-time job for many and the size of flock maintained ranges from 100 to 50,000. After achieving self-sufficiency in cereal production the attention has been diverted to plan and develop potential arena for better and protective foods such as eggs, poultry meat, milk and milk products. Poultry industry with about 139 million population producing 12,500 million eggs annually has been deemed to be a commercially viable enterprise contributing more than Rs.400 core to the Gross National Product (GNP). India actually requires one lakhs million eggs against the present availability of about 12,500 million a year. Thus it is warranted that the egg production should be increased by 10 times to reach the level of recommended requirements of half an egg per day per individual for half of the Indian population comprising of non vegetarian group.
Poultry production has an appreciable advantage of being relatively easy to raise and at the same time the enterprise can be adopted under diversified agro climatic conditions of our country. The initial requirements of land and capital required to initiate this enterprise on a moderate scale are within the limits of the rural sector of our country. The agricultural farmers who are generally not engaged through out, will be occupied all the year round and the income derived from egg and meat production will be a continuous process through out the year. The manure obtained from the poultry having more essential nutrients of Nitrogen, Phosphate and Potash (NPK) than the other organic manures, can supplement the synthetic fertilizers which have become costlier due to hike in the price of petroleum products. The poultry forming finds a source for utilizing the surplus and coarse grains which from the bulk of the poultry mash. Poultry development by utilizing these coarse cereals helps in stabilizing the prices of the coarse grains in the long run, which otherwise might not fetch degree price to the agricultural producers. Poultry farming creates a greater depend for agro industrial by products and wastes which are utilized and incorporated in the poultry feed. Poultry industry helps in promoting ancillary industries and as on today there are nearby 200 standard feed manufacturers all over the country producing 5 lakhs tones annually. One of the salient futures of the rapid progress of the poultry industry has been the remarkable growth in the production of egg and meat, which cannot be compared by any sector of agriculture.

Considering the large number of unemployed of more than ten millions and an equal number, if not more, may be unemployed in rural areas who may not come in the register of Live Employment Register, it is essential to find out suitable occupation for the poor rural sector. With the advent of 6th Five – Year Plan, it is being proposed to create 50 million jobs during the period with great priority to be bestowed on the removal of unemployment and significant underemployment. With greater attention towards rural sector than urban sector the Government now stress more towards generating employment in the rural area which is the nerve centre of Indian Economic Progress and Prosperity, where most of the people comprise mostly small and marginal farmers with small holdings and landless labourers depending on manual labour for their livelihood. Therefore it becomes imperative to improve the lots of small farmers, marginal farmers, landless labourers, artisans, tribal, backward and depressed classes who form large segment of rural population. The small fragmented holdings possessed
by the small and marginal farmers do not bring forth enough remuneration to meet their family requirements. Lack of funds at appropriate times for implementing improved methods of agriculture besides the limitation in the productive capacity of the land render the pattern of generating employment in rural area to remain static. Bearing this in mind the National Commission of Agriculture has suggested poultry programmes on massive scale, which can generate employment and improve the income of the rural poor through production of eggs and meat on small, holdings.

Poultry farming fits in squarely with the primary objectives envisaged in the integrated rural development programmes. The main objective of sixth plan of eliminating unemployment and significant underemployment can be attained to large extent by means of poultry farming which, by virtue of its employment potential may become the most popular medium of self-employment among the rural masses.

V POULTRY INDUSTRY AS AN AGRIBUSINESS

Compared to the other livestock sectors, the poultry industry is showing a characteristic tendency towards rapid application of advanced technologies. This is not difficult to understand. There are some clear differences between poultry husbandry and animal husbandry in general which can explain the fast developments in the poultry industry. The distinctive features of the poultry business, which set it apart from other livestock business, are:

(i) High rate of reproduction
(ii) Quick return on capital invested
(iii) No requirement for large areas of land.

Fast growth, together with application of modern husbandry methods, is also seen in many developing countries in the hot climatic zones. This is not surprising. The technical knowledge and experience needed to run modern poultry units is internationally available, and the management methods are more or less the same all over the world. Modern poultry breeds are also able to adapt themselves to tropical circumstances fairly well, certainly better than the exotic breeds in other types of livestock. And if problems arise, say in the form of heat stress, there are numerous solutions available especially through an effective climate control.
Yet, opportunities to control the situation are not always used. Besides, there are problems like heat stress in heavy broiler breed flocks, which are not easy to solve. Generally, the main constraints are health problems, lack of feed resources, bad feed quality, and failing climate control. The consequences are low efficiency in the use of stock, feed, and housing facilities. Under these circumstances, adequate management practices as described in this manual, are of utmost importance.

VI PRESENT STRUCTURE OF THE POLUTRY INDUSTRY

The present structure of the poultry industry as an agribusiness is the result of developments, which have taken place during the last two decades. Only 50 years back poultry was generally kept in small units as part of a mixed family farm. Large poultry units were then exceptions.

With the onset of large-scale manufacture of feed poultry farming was no longer confined to arable land owned by the farmer. The size of the poultry units could now grow unhampered. Simultaneously, tremendous technical developments took place, for the greater part designed for labour-saving purposes, so that poultry units could grow larger and larger. Eventually, poultry began to be kept on large specialized units definitely for removed from the old types farms. Of course this development has taken place gradually. In many places, both large and small units still exist together in the same region, but consideration of economy of scale are changing the picture in favor of large poultry enterprises.

In Western countries, the question whether the large poultry farms should specialize in one category of birds within the total chain of production, or keep more than one category of birds representing more than one link in the chain of production is still valid. In the laying sector many poultry farmers do not restrict themselves to laying hens only. They rear their own replacement pullets. However, this is not yet a common practice. In the broiler sector, there are both specialized broiler farms, and also hatching egg supply farms.

In many European countries, most poultry farmers have opted for an independent specialized farm. But on the other hand they have nearly always voluntarily entered into a contract with other participants in the sector involved. Such a
group of poultry farmers, participating in one organization, is often called an integration group. The planning and organization for such groups is done by one company (the integrator) mostly a feed company.

Again this background, the question might be asked whether it would be wiser to have production links more or less in one handier, owned by one integrated company? Though a high capital investment is needed for this form of enterprise, there is something to be said in favor of this arrangement. In an integrated poultry enterprise the margins of every single link merge sensitive to price fluctuations of the end product than the smaller margins for every single product within the production line. Therefore, the risk on account of price in a integrated company is smaller. On the other hand, contracts have proven to be excellent means for price stability.

It is remarkable to see the integrated form of farm organization prevailing in many developing countries. The reason might be that maintaining contract conditions is not always easy. Moreover, the system requires a controllable and reliable feed industry. This is often difficult to realize. So, a completely integrated organization in the hands of one company with its own feed manufacturing is the only option left.

VII MODERN POULTRY INDUSTRY

Modern poultry farms cannot give satisfactory results without a good infrastructure, in the widest sense of the word. Roads, telephones and other means of communication are necessary to buy and supply feed, equipment, and other inputs, and to sell and transport farm products. Besides, there must be adequate water supply. Regular feed supply is not enough: its quality has to be guaranteed.Availability of a nutritionist within the firm, together with laboratory facilities, can be of great help. Regular testing of feed ingredients on the spot in the manufacturing unit will prevent serious problems.

Power supply is always necessary. If, in an exceptional case, it might fail, there ought to be standby electricity generator, in this respect an alarm installation would be necessary to warn of power breakdown or occurrence of extreme environmental conditions.
Veterinary services must also be available at the spot, or at least on call. Diagnosing ability, supported by laboratory and post-mortem facilities, is also necessary. Another service needed is maintenance expertise to ensure that all the equipment can work at full capacity. Measures must be taken for regular disposal of all the waste, both solids (manure) and effluent.

On success can be expected without the help of experienced personnel. Once all these conditions are fulfilled, a definite set-up of the enterprise can be chose. The first condition to satisfy is that a given poultry unit must have the right size. The question about what exact size it must be is not easy to answer. Technically, there is an optimum size per house, mainly determined by the running capacity of the feed supply equipment. Another measure is the number of birds that one person can take care of on the basis of hygienic considerations. But the answer to this depends of course on the degree of mechanization adopted.

The poultry units as a whole, individually owned or part of an integrated company, should be large enough to get the advantage of discounts in prices of inputs, and/or extra charges to be paid for the off-farm products.

Within an integrated enterprise, the unit sizes must be attuned to the planning and set-up of the enterprise as a whole. For example, for every rearing unit there must be three laying units of the same size to ensure that all the houses are completely utilized.

The question whether mechanization should be adopted or not, is first of all a matter of labour costs. But the liability and skill of the labourers can also play a role in this decision.

Finally, the layout of the farm should be such that the all-in-all-out principles can be maintained. This means only one age at one location. The labour organization must also be adapted to this aim.

**Nutritive Value of Eggs and Poultry Meat**

According to British data (Shrimp ton, 1987) the average composition of two-day old chicken egg, weighing 62.5 g, is as given in Table 28.1
Table - 1

AVERAGE COMPOSITION OF 2-DAY OLD EGGS

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight (g)</th>
<th>Proportion of intact egg (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg white</td>
<td>35.8</td>
<td>57.3</td>
</tr>
<tr>
<td>Yolk</td>
<td>19.3</td>
<td>30.9</td>
</tr>
<tr>
<td>Shell</td>
<td>7.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Loss on separation</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>62.5</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Sources: Obviously, the nutritive value of the egg must be derived from the egg white and the yolk. The major nutritional constituents of these two components are protein and fat.

Table - 2

COMPOSITION OF EGG WHITE AND YOLK

<table>
<thead>
<tr>
<th>Component</th>
<th>White</th>
<th>Yolk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (g)</td>
<td>35.8</td>
<td>19.3</td>
</tr>
<tr>
<td>Protein (g)</td>
<td>4.0</td>
<td>2.6</td>
</tr>
<tr>
<td>Fat (g)</td>
<td>0.01</td>
<td>6.33</td>
</tr>
<tr>
<td>Dextrose (g)</td>
<td>0.14</td>
<td>0.03</td>
</tr>
</tbody>
</table>

Sources: It may be noted that proteins are present both in the white and the yolk, but fat is almost entirely deposited in the yolk.