
CHAPTER I

CHAPTER - I
INTRODUCTION

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1.1 : INTRODUCTION :

Globally, the poultry business has come to be more than just developing and genetic breed of rather cute chicks into value added commodities. The production of eggs and broilers will, of course, remain the main stay of this industry.

The poultry industry has recorded an overall healthy growth during the period 1985-94. The average growth rate for broiler has been as high as 18 percent followed by 6.6 percent for egg productions. The export of poultry meat and meat products has increased from Rs. 2.28 crores in 1990-91 to Rs. 23.10 crores in 1993-94.

Realising the need for a structured growth and owing to liberalisation, the Indian industry is now also looked upon quite favourably by the investors in the form of "Sunrise Industry".

For instance, the "World Poultry" a premier journal on the poultry and hatchery business, feels that most of the growth in the current decade will be witnessed in the developing countries of Asia, like China, India and others.

During the last two decades, a substantial change has taken place in the poultry industry in our country. This has been brought about by the emergence of genetically superior breeds and the entry into this field of "gentleman farmers" who have been very receptive to improved techniques of poultry management and production. The facinating output of the ameliorated hen laying 260 eggs a year as against 60 of the "desi" type has been an irresistible incentive for the new entrepreneurs.

1.2 : SIGNIFICANCE OF THE STUDY :

The study of the socio-economic characteristics has important implication for the growth of the poultry farm. The adoption of poultry enterprises, as a principal occupation is still considered with indifference in the rural areas, due to caste and religious bias, low education, and lack of knowledge of the poultry technology. The emphasis on rural development programmes and development of infra-structural facilities for poultry farming have made a large number of poultry entrepreneurs plunge into the expanding poultry industry.

India is perhaps the only country in the developing world that can boast of having self-sufficient breeding capacity, with excellent technology and training facilities

comparable to the best in the world. The production technology adopted by the poultry industry is of a high grade, with an annual production of more than 17,500 million.

India is the fifth largest egg producer in the world. China, U.S.S.R., U.S.A. and Japan stand in the order of merit respectively.

At present, this sector contributes nearly Rs. 1300 crores a year to the gross national product, while compared with other developed and developing countries, India's per capita consumption of eggs and meat is very low (i.e. 19 eggs), as against the world average per capita consumption of 124, and of developed countries 306 and developing nations 60 eggs. In broilers meat, world average is 5.9 kg., developed countries 15.6 kg. and developing countries 2.5 kg., whereas India's average is hardly 300 to 400 gms.

Another important contribution of poultry to rural economy is that, the 2.8 million tonnes of manure, whose efficiency is equivalent to that of 9.3 lakhs tonnes of fertilizers. Now, due to improved modern technology the poultry manure is also used for manufacturing gas. The

government gives more importance, and subsidy at $33\frac{1}{3}$ to the gas manufacturers. It is one of the important step taken by the government for economic development of our country.

The other benefits from the poultry industry are rural employment, elimination of poverty, in addition to that it increases the per capita income. This will create at least 50000 additional jobs in production, distribution and marketing of eggs. Nearly 60000 families directly depend on poultry farming, with a half million engaged in support operations like hatcheries, feed mills, medicine, laboratories, transportation and retailing of eggs and poultry meat etc.

The region that is in the forefront of broiler development is in Western India. Some of the biggest broiler farms in the country are located in Maharashtra, in Bombay and in Poona. They have capacity to produce over 10,000 to 20,000 broilers per week.

In southern region, the broiler production has rapidly increased from 4 million in 1980 to 64 million in 1988. It accounts for almost 40% of the total broilers production in the country. Further Andhra Pradesh has emerged as the leading producer of broiler in the country,

29 million, Assam 3 million, Haryana 10 million and Maharashtra 28 million, Karnataka 17 million. Andhra Pradesh is also the leading state in egg production, and the per capita availability is 67, whereas in Arunachal Pradesh per capita availability is 43, Assam 21, Bihar 15.

In the years to come, poultry will become increasingly important in meeting the demand for animal proteins. There is a great scope for export of eggs, hatching eggs, day old chicks, poultry breeding, processed chicken and chicken meat products, medicines etc., to the other developing countries. South Africa, Brazil, and U.S.A. are heavily subsidising the export of these food materials directly and indirectly.

Poultry has recorded a phenomenal growth in the last two decades. Poultry farming is emerging as an important activity for nutrition and providing employment. So government has provided Income Tax deductions at the rate of $33\frac{1}{3}\%$ to poultry farmers with effect from April 1990. (Union budget presented by Finance Minister on 28th February, 1989). In view of this, it is felt necessary to the researcher to study the working of poultry farms in Karwar taluka.

It is expected that the demand for egg products in developing countries will go up by 3.5 percent per annum. The world egg production will see a massive 50 percent increase in the developing countries, led by China, India and Brazil. World egg production is expected to reach 43 million tonnes, 7 million more than present figure. As per "World Poultry Journal", demand for eggs in India during 1990's is expected to grow round about 4.2 percent. Egg country's egg production, though had risen from 29,700 millions in 1990 to 42,228 million in the next year, it falls to 35,000 million in 1992. But it is on the rise again to meet the growing consumption. Table No. 1.1 shows estimated egg production from 1989 to 2000.

TABLE NO. 1.1

Estimated Egg Production increase in Metric Tonnes
from 1989 to 2000

China	37,57,600
India	6,34,600
Brazil	4,10,700
Mexico	3,09,400
Indonesia	2,54,800

SOURCE : (World Poultry) by Amol Dhariya - Poultry Industry set to take wings - Finance factor. Page No. 27.

World Poultry demand is expected to reach 44.3 million tonnes during 1995. Total world growth has been forecast at 3.8 percent, while the growth rate in India for poultry meat during the current decade is forecast at 5.7 percent, by the F.A.O. About 60 percent of the growth taking place in the world poultry meat production will go to meet the needs of the developing countries, says the F.A.O.

It is also felt, the developing countries will be confronted with technological challenges in the next decade, improvement in hatchery hygiene to minimise contamination and maximise chick's quality, to reduce manual chick handling and quality control to promote egg selection, and standardisation are a few significant pre-requisites for a successful development of the industry. The table No. 1.2 shows actual and projected production and consumption of poultry meat.

TABLE NO. 1.2

Actual and Projected Production and Consumption of Poultry Meat

Market	Production (Tonnes)		Consumption (Tonnes)	
	Actual (1990)	Projected (2000)	Actual (1988)	Projected (2000)
World	35,659	57,988	7.2	9.3
Developing	14,136	25,548	3.5	5.2
Developed	25,523	32,440	19.1	24.6

SOURCE : Finance Factor - September 1994 -
 Poultry Industry set to take wings -
 by Amol Dhariya. Page No. 26 & 27.

1.2.1 : An Egg is a complete food -

It is observed that broodly hen is used for hatching fertilized eggs, and from such eggs after 21 days chicks come out. For development of a chick the all contents of a fertilized egg are used, hence egg is also a complete food.

It appears that from the Table No. 1.3. The egg contains, the maximum number of proteins and fatt compared to meat and milk. (Refer Table 1.3)

TABLE NO. 1.3

Major Constituents of Meat, Milk and Egg (per 100 gms.)

Constituents	Meat	Milk	Egg
1. Water	66	83	66
2. Proteins	11	3.5	13
3. Fat	9	3.5	10
4. Minerals	14	10	11

SOURCE : By P.A.Bhat - Guidelines for poultry management.

The egg contains 95% of proteins, compared to other foods, like milk, rice, pig meat and fish. Table No. 1.4 shows the details of protein contents in egg, milk, rice, pig meat and fish.

TABLE NO. 1.4

Proteins content in egg, milk, rice, pig meat and fish
(per 100 grams)

1. Egg	95%	Proteins
2. Milk	85%	"
3. Rice	80%	"
4. Pig meat	74%	"
5. Fish	69%	"

SOURCE : Refer Table No. 1.3.

Further the table No. 1.5 shows that the egg is also content maximum number of vitamins. Especially Vitamin A & B₁ are more compare to rice, cow milk and meat. Moreover Vitamin D found only in egg.

-- Please see on next page. --

TABLE NO. 1.5

**Average Vitamin contents in Rice, Cow milk,
Chicken eggs and Meat**

Vitamins	Amount (Per 100 grams)			
	Rice	Cow Milk	Egg (Chicken)	Meat (Chicken)
Vitamin - A	-	140	1300	-
Vitamin - D	-	-	50	-
Vitamin - B ₁	0.22	0.04	0.26	0.2
Vitamin - B ₂	0.04	0.18	1.3	0.3
Vitamin - B ₄	-	0.31	2.5	0.7

SOURCE : Poultry Production - By Sunilkumar Das,

Page No. XVI

1.2.2 : Nutritive Value of egg -

Egg is a rich source of high quality animal protein. The animal protein is more valuable than plant protein. The following figure shows vertical section of hen's egg showing its internal organisation.

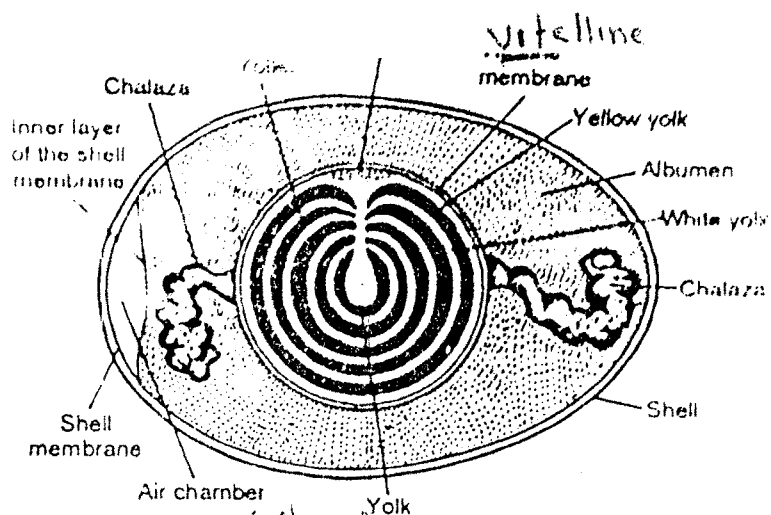


Fig 1.1 Vertical section of hen's egg showing its internal organisation

Chicken lay average 240 eggs a year, but birds like Duck 110 to 175, Fowl 40 - 60, Goose 15 - 50 and Pigeon 12 - 15. (Refer Table No. 1.6)

TABLE NO. 1.6

Egg production capacity of various birds

Species	Month	Production of egg per year	Weight of egg
Chicken	5-6	240	57
Duck	7-8	110-175	80
Goose	24	15 - 50	215
Guine fowl	10-12	40 - 60	9
Pigeon	6	12 - 15	17

SOURCE : (Refer Table No. 1.5)

As the table No. 1.7 shows, chicken with average weight of 58 gms. contains more albumin, yolk and shell than most of the birds.

TABLE NO. 1.7**Egg contents in various species**

Species	Average Wt. (gms)	Albumin (%)	Yolk (%)	Shell (%)
Chicken	58	55.8	31.9	12.3
Duck	80	52.6	35.4	12.0
Pigeon	17	74.0	17.9	8.1
Goose	200	52.5	35.1	12.4
Quail	10	47.4	31.9	12.3

SOURCE : Refer Table No. 1.5.

1.2.3 : Top Ten egg producing countries -

The Table No. 1.8 and figure 1.2 illustrate that India is the fifth largest egg producer in the world, next to China, U.S.S.R., U.S.A. and Japan. At present the production of poultry sector is nearly 18,750 million eggs.

TABLE NO. 1.8**World's top ten egg producing countries (in million)**

Sr.No.	Country	Production
1.	China	1,37,160
2.	U.S.S.R.	81,917
3.	U.S.A.	69,588
4.	Japan	39,567
5.	India	18,750
6.	Maxico	16,685
7.	Brazil	15,400
8.	France	15,300
9.	West Germany	12,920
10.	England	12,070

SOURCE : Indian Poultry year book - 1990

TOP FIVE EGG PRODUCING COUNTRIES

WORLD -- 1988 (BILLION EGGS)

(13)

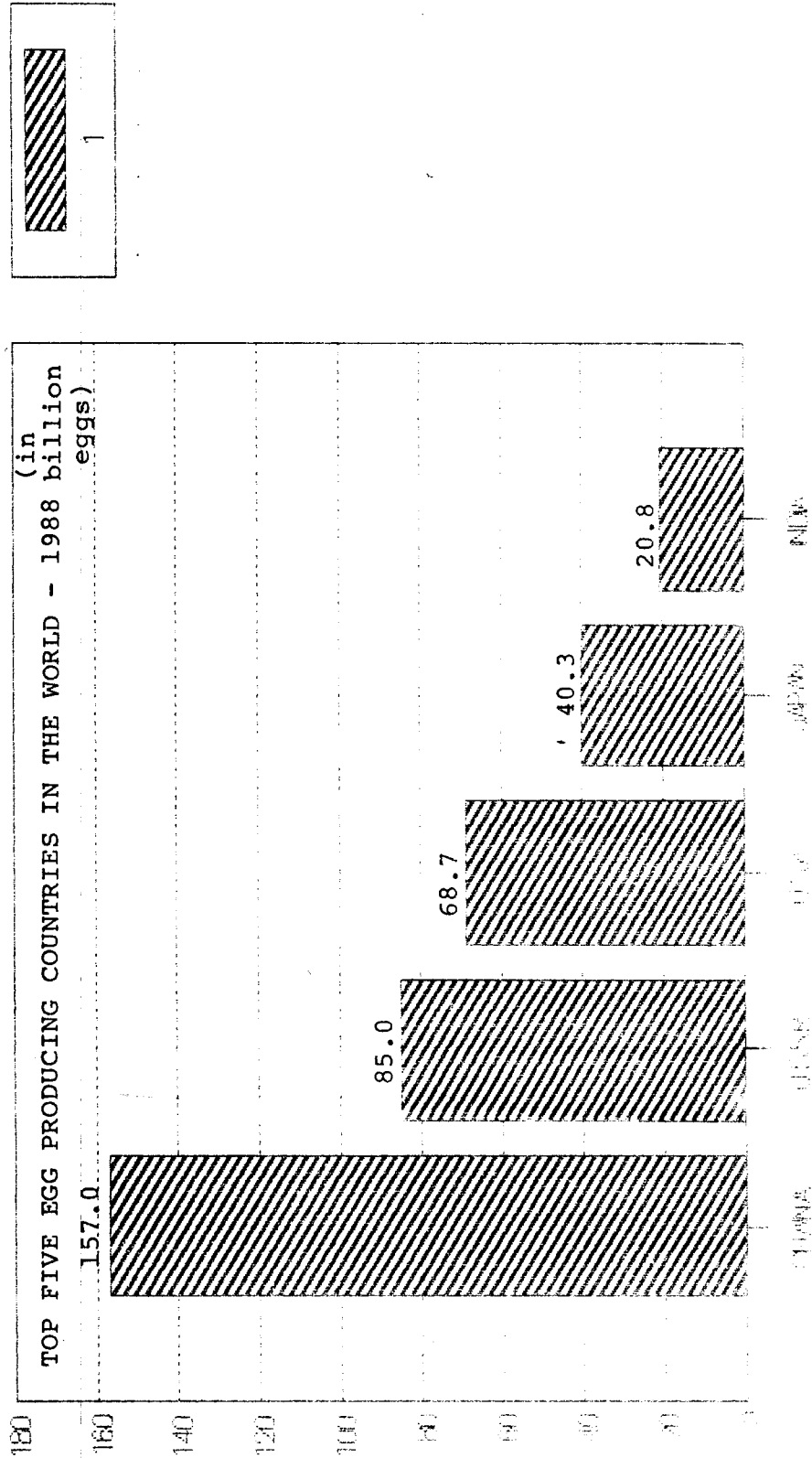


Fig. No. 1-2

STATISTICS AND ANALYSIS OF THE WORLD ECONOMY

1.2.4 : Per Capita Egg Availability -

Today India ranks as the worlds fifth largest egg producing country, but in terms of per capita availability is lowest among the countries. The per capita availability of poultry production is 30 eggs per year, whereas Sri Lanka's per capita consumption of eggs is 40 and China about 100 eggs. Table No. 1.9 and figure No. 1.3 illustrate the continuous progress of per capita availability of eggs.

TABLE NO. 1.9

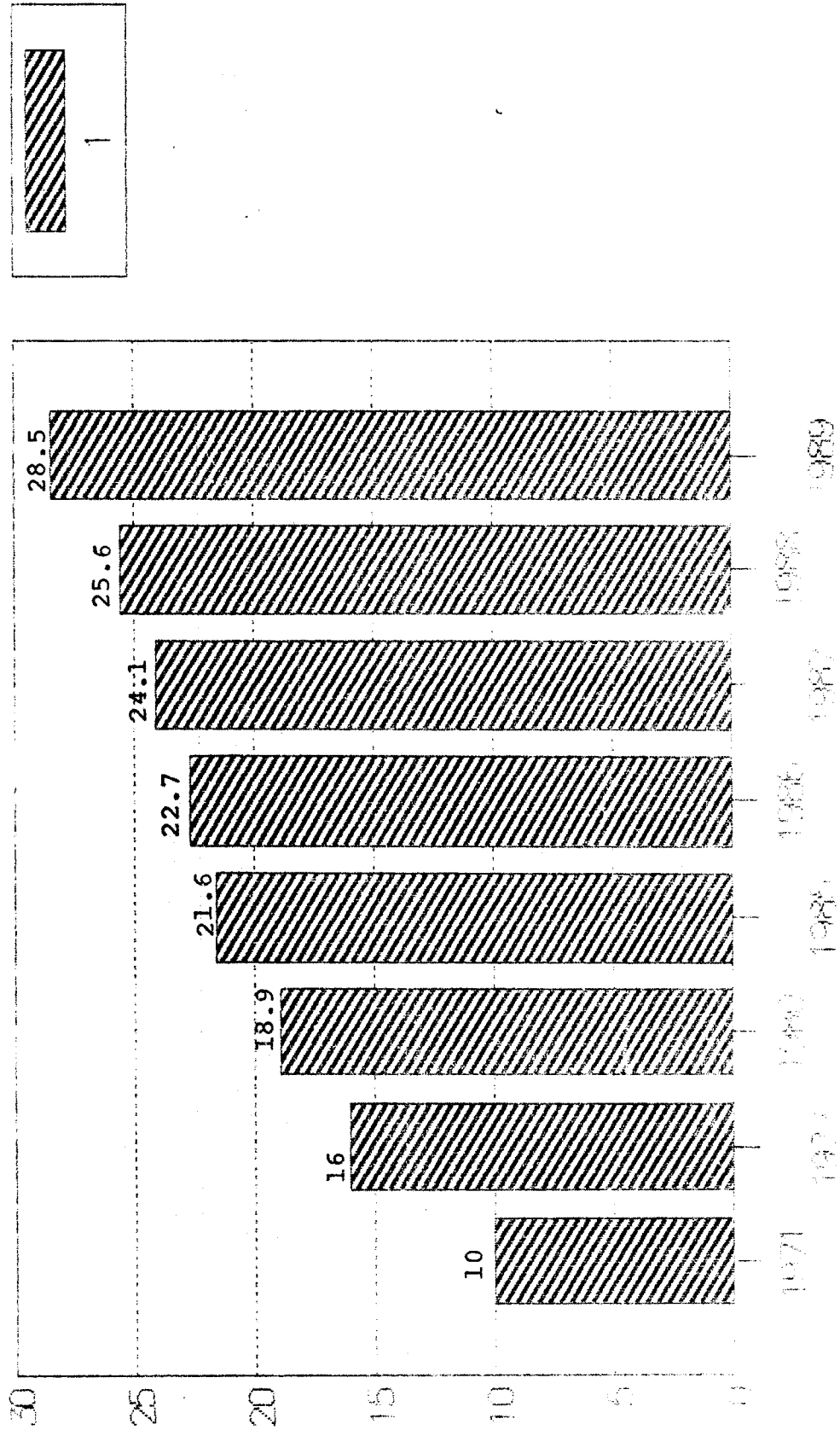
Per capita Egg Availability
(1970 to 1990)

Year	Availability per capita egg	In percentage
1951	5	100%
1961	7	140%
1971	11	220%
1981	18	360%
1986	23	460%
1987	24	480%
1990	30	600%

SOURCE : Indian Poultry Year Book - 1990

INDIAN POULTRY

PER CAPITA EGG AVAILABILITY



INDIAN POULTRY YEARBOOK

Fig. No. 1.3

1.2.5 : Per Capita Poultry Meat Availability -

Table No. 1.10 and Figure No. 1.4 illustrate the increased in per capita meat availability 155 gms. to 625 gms. in 1990, compared to 1971. The per capita meat availability in the seventees and eighties increased very slowly i.e. in the year 1986 and 1989 by 263 gms and 405 gms respectively, whereas in 1990 it rapidly increased to 625 gms due to increase of poultry firms and birds.

TABLE NO. 1.10

Per Capita Meat Availability

Year	Availability per capita	In %age
1971	155 gms	
1977	172 gms	111
1980	190 gms	123
1985	241 gms	155
1986	263 gms	170
1987	309 gms	199
1988	354 gms	228
1989	405 gms	261
1990	625 gms	403

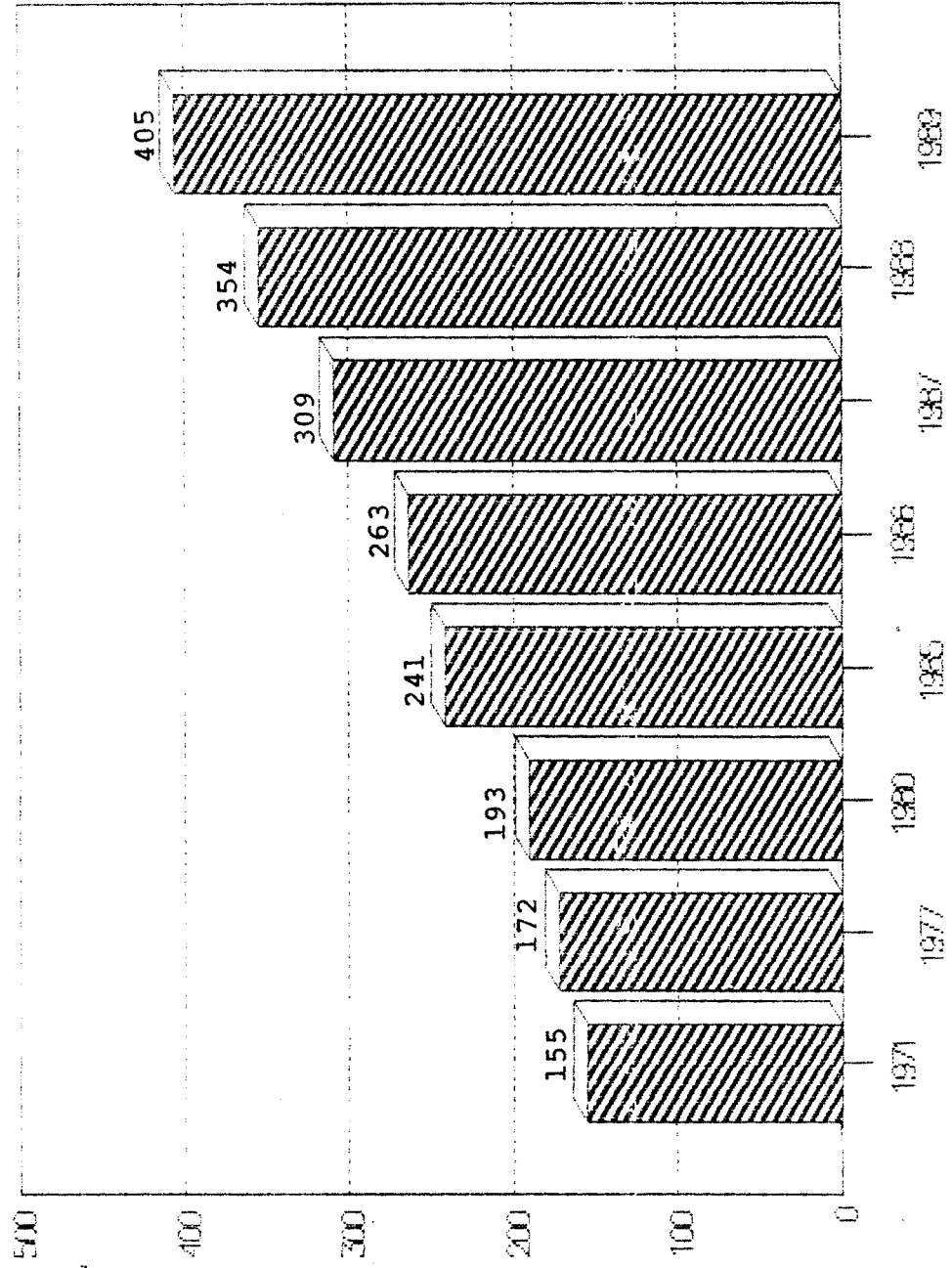
NOTE : Figures in parentheses denote percentage Base Year-1971.

SOURCE : Refer Table No. 1.9

PER CAPITA POULTRY MEAT AVAILABILITY

Fig.No. 1.4

(IN GRAMS)



SOURCE-- NIGAN POULTRY YEAR BOOK 1990

Table No. 1.11 shows that total poultry meat production in 1990.

TABLE NO. 1.11

Total Poultry Meat Production in 1990

('000 tonnes)

Country	Production
China	2000
India	365
Iran	400
Irak	350
Thailand	600

India's average	0.30	per capita availability
Developed countries	15.60	--"---
Developing countries	2.50	--"---
World average	5.90	--"---

SOURCE : Refer Table No. 1.9

1.2.6 : Expenditure on Poultry in the Five Year Plans -

Percentage of expenditure made by Government and total expenditure upto sixth five year plan is shown in table no. 1.12, figure no. 1.5.

The contribution of livestock to the Gross National production was Rs. 24,193 crores in 1986-87 (9.2% of G.NP). The Government investment in poultry in five year plans amounted to Rs. 97 crores, this calls for greater investment by government in Poultry Sectors. Table No. 1.12 and figure No. 1.5 shows the detail planwise investment made by the Government.

TABLE NO. 1.12**Expenditure on Poultry in the Five Year Plans**

IInd Plan	2.8	Expenditure	2.89%
IIIrd Plan	4.6	-----"	4.74%
IVth Plan	11.5	-----"	11.86%
Vth Plan	35.5	-----"	36.60%
VIth Plan	42.6	-----"	43.92%
	-----		-----
TOTAL	97.0	Crores	100%
	-----		-----

EXPENDITURE ON POWER

IN THE FIVE YEAR PLANS



IND PLAN III D PLAN IVTH PLAN VTH PLAN WITH PLAN VIII PLAN

Fig. No. 1.5

1.3 : OBJECTIVES :

The study has been undertaken especially with the following broad objectives.

1. To take a review of poultry farming business in Karwar taluka.
2. To examine the working of poultry farming.
3. To study the problems and prospects of poultry farms.
4. To study the techno-economic feasibility of poultry farming.

1.4 : DATA AND METHODOLOGY :

For this investigation, both primary as well as secondary data were collected from poultry farms owners.

For the collection of primary data an open-ended questionnaire was prepared and administered to the sample.

Personal interviews were supplemented by long and detailed discussions with the farm owners, Bankers in the study area.

The primary data required for this investigation have been collected from the 27 poultry farmers of Karwar taluka. All these poultry farms were then grouped into three different size groups based on the number of birds kept by them. (See table No. 1.13)

TABLE NO. 1.13

Different size group of poultry farms

Sr. No.	Group	No.of birds	Total No. of farms
1.	Small farms	200 birds to 750 birds	3
2.	Medium farms	751 birds to 1500 birds	5
3.	Big farms	Above 1500 birds	13
		Total farms	21

(NOTE : For this study purpose farms having less than 200 birds are not considered).

These poultry farm owners were personally interviewed and data were collected with the help of Questionnaire.

Secondary data was collected from Journals, Statistical data from Banks, Poultry Yearly Books, Government Publications, Finance Factors etc.

Contd...

1.5 : CHAPTER SCHEME :

- (1) First chapter deals with Introductory part of study, which consists of its objectives etc.
- (2) Second chapter deals with the management of poultry farms.
- (3) This chapter deals with the Analysis and Intrepretation of data.
- (4) In chapter four an attempt is made to illustrate the problems faced by poultry farms in Karwar taluka.
- (5) Finally, in chapter fifth, an attempt is made to bring all the threads of study together in the form of conclusion, and some suggestions have been made for further effectiveness and betterment of poultry farms especially in Karwar Taluka.
