



THE WILLIAM DAVIDSON INSTITUTE
AT THE UNIVERSITY OF MICHIGAN BUSINESS SCHOOL

*The Marketing System in Bulgarian Livestock
Production – The Present State and Evolutionary
Processes During the Period of Economic Transition*

by Yordan Staykov, Team Leader

Working Paper Number 212
October 1998

Comments Welcome

Copyright Janet Mitchell, 1998. Disseminated by the Davidson Institute with permission of the author.

THE WILLIAM DAVIDSON INSTITUTE
UNIVERSITY OF MICHIGAN BUSINESS SCHOOL
U S A

PROJECT:

"THE MARKETING SYSTEM IN BULGARIAN LIVESTOCK PRODUCTION - THE
PRESENT STATE AND EVOLUTIONARY PROCESSES DURING THE PERIOD OF
ECONOMIC TRANSITION"

Final Report for the period October 1996 - October 1998

ADMINISTERED BY THE PROJECT TEAM OF
THE AGRICULTURAL FACULTY, THRACIAN UNIVERSITY
STARA ZAGORA
BULGARIA

Team Leader:.....

(Assoc. Prof. Yordan Staykov, PhD)

Contact address:

Agricultural Faculty
Thracian University
6 000 Stara Zagora
Bulgaria
Tel.: 00 359 42 77 036
Email: tulao26@uzvm.uzvm.bg

1. SUBJECT AND SCOPE OF THE SURVEY

This survey on the marketing system in Bulgarian livestock production is up to now and to our knowledge the first systematic attempt to investigate the present structure and evolutionary processes during the period of economic transition of the livestock farms, to evaluate the existing markets and livestock in the farms and to estimate the market requirements for the expansion of the existing productive capacity as well as for the modernization and refurbishment of the livestock farms, in order to increase efficiency, to reduce production costs and to improve the quality of the livestock products.

1.1. METHODOLOGY OF THE SURVEY

1.1.1. The Questionnaire and the Interviews

For the future execution of the survey a rather detailed questionnaire has been used (Appendix A). This questionnaire has been compiled in consultation with experts from Mississippi State University, Michigan State University and many Bulgarian specialists in different fields of the survey.

The research assistants selected to perform the survey have very good knowledge of agriculture and the livestock sector.

After short training course on the Bulgarian version of the questionnaire and after the clarification of all the questions raised during this training the survey started. The surveyors together with the members of the project team visited selected farms located in different representative for Bulgaria areas.

Each interviewer was supplied with a letter addressed to the farmers and signed by Team Leader of the Project, explaining to farmers the purpose of this investigation and asking for there collaboration.

1.1.2. Selection of the Farm Sample

In this transitional period of change in the Bulgarian economy and society changes are also occurring in the agricultural sector, which affect dramatically the structure of livestock farming. New private livestock farms are emerging, while the framework for the operation of the traditional small livestock farmers has also changed significantly and continues to change. One third of the farms selected have been established during the last 3 years.

In the present time no stable structures exist in Bulgarian agriculture. The ongoing process of land restitution and of liquidation of the state farms and of old "cooperatives" as well as the subversive changes in the legal and institutional frame work constitute great forces of change in the emerging private agricultural sector.

CONTENTS

1. SUBJECT AND SCOPE OF THE STUDY.....	3
1.1. METHODOLOGY OF THE SURVEY	
1.1.1. The Questionnaire and the Interviews	
1.1.2. Selection of the Farm Sample	
1.1.3. Processing and Analyzing of the Data	
2. THE STATE OF BULGARIAN LIVESTOCK PRODUCTION.....	5
3. RECENT DEVELOPMENT OF THE LIVESTOCK SECTOR.....	5
3.1. Decreasing Livestock Numbers	
3.2. Livestock Numbers	
3.3. Livestock Products	
3.4. Land Restitution and Private Livestock Farming	
4. PREVAILING AGRICULTURAL FARMS	
4.1. THE STRUCTURE OF THE PRIVATE LIVESTOCK FARMS.....	14
4.1.1. Some Important Characteristics	
4.1.2. Human Resources	
4.1.3. Types and Size of Agricultural Farms	
4.1.4. Farm Buildings in Livestock Farms	
4.1.5. Location of the Livestock Farms	
5. MARKETING OF LIVESTOCK PRODUCTION.....	18
5.1. Recent State of the Marketing System of Livestock Production	
5.2. Retailing of Livestock Products at Shops and Animals on the Local Animal Markets	
5.3. Problems of Feed Production	
5.4. Development of Extension Advisory System for Livestock Producers	
5.5. Forming of Agricultural Producer Organizations	
5.6. Governmental Initiatives for Private Agricultural Producers	
5.7. Working by International Organizations	
5.8. Privatization of the Agricultural Production Related Industries	
5.9. Marketing Problems of Livestock Production	
5.10. The State of Fish Market	
6. ACKNOWLEDGEMENT.....	60
7. APPENDIX A	
8. APPENDIX B	

2. THE STATE OF BULGARIAN LIVESTOCK PRODUCTION

The difficulties of the transition period to a market economy created a recession in Bulgarian agricultural production. Since 1989 it decreased more than 50 % due to political and economic changes in Eastern European countries.

Before 1989 the past centralized management system did not encourage initiative. The managers of state owned enterprises had to follow instructions concerning farm management and marketing of agricultural products. They had to feed, grow animals and harvest agricultural crops according to a predetermined program. Managers of the farms did not apply the concept of marketing and also gross margin efficiency of the agricultural production. The high production costs, excessive administration costs, lack of marketing channels and stopping of state subsidizing of agricultural production during the economic transition resulted in economic losses and accumulation of debts in farms. As a result, financial bankruptcy of state owned enterprises increased. Understanding the difficulties of such farms in the transition period to a market economy the government decided to sell or to rent whole or part of these enterprises. In spite of this decision there were many reasons which stopped the development of profitable private agricultural farms in the beginning period. One of them was and now is also that producers do not understand the concept for the marketing of products and they do not apply it when they organize their own farms. In addition, present private farmers who create new small and mid size rural enterprises have not enough professional experience in this field and it is resulting in low profitability of their activities.

3. RECENT DEVELOPMENTS IN THE LIVESTOCK SECTOR

3.1. Decreasing Livestock Numbers

The rapid decrease in the total livestock numbers in Bulgaria, which started 7 years ago, continues and there is no apparent sign of reversion in the downwards trend. According to the recent developments, while the non-private livestock sector (state and cooperative) is collapsing, the private farming sector is still not in the position to fill the widening gap (Tables 1 and 2). Only in the branch of private cattle farming there is a clear tendency of steady increase in the animal numbers, but the rate of increase is now completely insufficient to compensate the losses of the non-private sector. In the sheep and pigs private farming branches despite some significant increase during the years 1990 - 1995, fluctuation in the numbers indicates that there is not real upwards tendency. In the poultry branch numbers are falling in both sectors, private and non-private, but more rapidly in the second one.

3.2. Livestock numbers

1997 saw more animals grown in the private sector:

- cattle farming - 96 %;
- pig farming - 64 %;
- sheep farming - 92 %;
- fish farming - 75 %.

There is bases for the solid research work into the structure of marketing system in private farming, because everything is in the process of change. This situation constituted also increasing interest for such kind of investigation.

The survey on the marketing system of private farming in Bulgaria was carried out by means of a questionnaire and on a sample of farms which were selected initially from the two areas: *Varna region* and *Plovdiv region*. Additionally, to these sample farms were included private farms from other regions.

Due to the available financial budget and resources for this investigation it has been decided to take a sample of private livestock farms from different regions of Bulgaria, taken into consideration the relative importance of the livestock activity in those areas.

Following the significant movement of Bulgarian livestock farming only a commercial private livestock farms have been included in the sample. This means that subsistence farms were excluded.

The selection of farms to be included in the survey constituted a major problem, because there is no official register of private livestock farms and because of the rapid changes in this sector in the last few years. This problem has been solved by local visits and in consultation with local authorities and/or livestock specialists.

First the villages were selected with significant livestock activity and then in each village a certain number of farms was chosen.

Efforts were made to select farms which represent as good as possible the existing reality in Bulgaria, by their commitment to the agricultural markets. It is believed that this sample represents quite well the real situation of the agricultural marketing system in Bulgaria during the period of the transition economy.

1.1.3. Processing and Analyzing of the Data

The entering of the data into the computer and the processing were made at the computer center of Thracian University on Pentium133, RAM-16Mb, HDD-1.028Gb. It was also prepared the program for the data elaboration.

The framework for the Relational Database model was designed and all technical aspects of database administration were solved. It was taken in consideration that the database system has to provide the flexible access to collected information, maintaining data integrity, protecting the data from destruction and unauthorized use, providing data shareability and reliability, independence, reducing data redundancy and increasing data security.

The data which were obtained during the visits of all farms and organisations were put together and were analyzed in order to receive the real state of the present marketing system in Bulgaria

The Marketing System in Bulgarian Livestock Production -- the Present State and Evolutionary Processes during the Transition Economic Period

TABLE 2

Livestock Index Numbers 1989 - 1995

1989 = 100

	1989	1990	1991	1992	1993	1994	1995
Cattle Total	100	97.64	90.33	81.22	57.90	46.50	39.55
Non-Private	100	98.25	81.08	67.78	33.89	18.47	9.80
Private	100	91.86	127.04	136.16	158.96	165.15	165.80
Sheep Total	100	94.44	92.21	77.86	55.92	43.71	39.47
Non-Private	100	94.45	80.56	58.25	20.85	7.95	4.43
Private	100	94.41	117.70	120.78	132.67	121.96	116.15
Pig Total	100	105.20	101.65	76.27	65.08	50.29	48.23
Non-Private	100	103.46	94.07	69.20	54.92	39.48	27.55
Private	100	113.22	134.95	107.33	109.69	97.77	139.01
Poultry Total	100	86.92	66.97	51.92	47.53	43.56	45.75
Non-Private	100	93.28	64.41	45.76	32.67	23.72	22.96
Private	100	78.28	70.46	60.30	67.75	70.55	76.75

Table 1. Livestock Number 1989 – 1995 (in thousands)

	1989	1990	1991	1992	1993	1994	1995
Cattle							
Total	1613	1575	1457	1310	934	750	638
Non Private	1316	1293	1067	892	446	243	129
Private	307	289	390	418	488	507	509
Sheep							
Total	8609	8130	7938	6703	4814	3763	3398
Non Private	5909	5581	4760	3442	1232	470	262
Private	2700	2549	3178	3261	3582	3293	3136
Pig							
Total	4118	4332	4186	3141	2680	2071	1986
Non Private	3354	3470	3155	2321	1842	1324	924
Private	764	865	1031	820	838	747	1062
Poultry							
Total	41805	36338	27998	21707	18872	18211	19126
Non Private	24091	22471	15517	11025	7871	5714	5531
Private	17714	13867	12481	10682	12001	12497	13595

Table 3. Livestock Numbers in Bulgaria

		1989	1995	1996	1997	% of change 1989/1997
Cattle Total	X1000	1613	638	632	582	- 63,92
Sheep Total	X1000	8609	3398	3383	3020	- 64,92
Pig Total	X1000	4118	1986	2140	1500	- 63,57
Horse Total	X1000	433	795	833	848	+ 95,84
Ass Total	X1000	329	276	281	290	- 11,85
Poultry Total	X1000	41805	19126	18609	16227	- 61,18

After the changes in 1989, there was a dramatic decrease in livestock numbers in Bulgaria. The rapid decrease in the number of *cattle, sheep, asses* continued until 1995 (Table 3 and 4).

The number of *pigs* showed an increase after 1995, but in 1997 it decreased again. The change for 1996/1997 is -29,91 %. The similar situation is also true for *poultry* numbers – the change for 1996/1997 is -12,80 %. Only *horse* numbers increased in the period after 1989 and horse numbers have more than doubled in 1997 compared to 1989.

In spite of the tendency in all livestock numbers towards stabilization, it is clear that there is a dramatic decrease of livestock numbers except in *horses* in 1997 compared with 1989. If the livestock numbers are to increase in the future back towards 1989 level this will have to occur in the private sector.

3.3. Livestock Products

As the figures in the Tables 5 and 6 indicate, *livestock production* has shown in the last few years almost the same dramatic decrease as livestock numbers.

The drop in the production between the years 1989 and 1993 varies from about 30% to 50%, according to the kind of the product.

Only cattle meat shows a significant smaller decrease (- 4%). This is mainly due to the slaughtering of a great number of the restituted milk cows, because private farmers were unable to keep and feed them properly and profitably.

It is expected that the decrease in the livestock production will continue in the next years with more dramatic drop in the production of cattle meat, after the slaughtering of the productive animals will take an end and stabilization in this activity will be reached.

Similar to production, *consumption of livestock products* decreased very fast during the last 4 - 5 years (Table 7). Per head consumption, with exception of sheep and goat meat which increased slightly, has fallen for all animal products, with greater decrease in pork meat, cattle meat, poultry meat, yogurt and milk. Per head consumption of the most animal products in Bulgaria is now less than 50% of the average in the Western European Countries. Therefore it is with certainty expected that consumption in Bulgaria will increase in the future as the economy will grow and available personal incomes will increase, taken also into consideration that income elasticity of animal products is usually greater than 1 (one). This means that market for animal products in Bulgaria are expected to expand in the future and higher demand will result to better prices for the producers.

The decrease in milk production from different kinds of animals for the period 1989 – 1996 varies from 33,33 % to 60,14 %. In this period only the production of *goat* milk has increased with 90,41 %. But in the last two years there has been a tendency for stabilization of milk production from all animals (Table 6).

Table 5. Production of Livestock Products in Bulgaria

		1989	1995	1996	% of changes 1989/1996
Milk Total	Mil l	2427	1403	1387	- 42,85
Cow milk	Mil l	2060	1129	1126	- 45,34
Buffalo milk	Mil l	18	12	12	- 33,33
Sheep milk	Mil l	276	120	110	- 60,14
Goat milk	Mil l	73	142	139	+ 90,41
Meat Total	X1000 t	810	476	498	- 38,51
Cattle meat	X1000 t	128	71	80	- 37,50
Sheep meat	X1000 t	81	50	59	- 27,16
Pork	X1000 t	413	258	267	- 35,35
Poultry meat	X1000 t	188	97	92	- 51,06
Fish Total	X1000 t	12	5	6	-60,00
Eggs	Mil l	2731	1996	1734	- 36,51

Table 4. Livestock Index Number

	1989	1995	1996	1997
Cattle Total	100	39,55	39,18	36,08
Sheep Total	100	39,47	39,29	35,08
Pig Total	100	48,23	51,97	36,42
Horse Total	100	183,60	192,38	195,84
Ass Total	100	83,89	85,41	88,14
Poultry Total	100	45,75	44,51	38,81

1989 = 100 %

TABLE 7

Per Head Consumption of Livestock Products in Bulgaria

In kgs

	1989	1990	1991	1992	1993	% Change 1989/93
MEAT (Total)	35.8	36.5	26.2	31.4	30.2	-16%
Pork	14.7	15.9	11.8	9.1	7.6	-48%
Cattle Meat	2.7	2.8	1.8	1.5	1.4	-48%
Sheep and Goat Meat	4.0	4.1	4.2	4.7	4.8	+20%
Poultry Meat	10.2	9.1	4.3	5.9	6.6	-35%
Fish						
MEAT PRODUCTS	17.5	18.0	15.0	18.1	15.5	-11%
Milk	53.0	55.7	52.6	41.9	40.4	-24%
Yogurt	63.7	65.5	50.0	36.4	30.1	-53%
Cheese	15.5	15.2	12.2	14.1	12.5	-19%
Eggs	170	166	154	153	148	-13%

Table 6. Livestock Index Products

	1989	1995	1996
Milk Total	100	57,81	54,15
Cow milk	100	54,80	54,66
Buffalo milk	100	66,67	66,67
Sheep milk	100	43,48	39,85
Goat milk	100	194,52	190,41
Meat Total	100	58,76	61,48
Cattle meat	100	55,47	62,50
Sheep meat	100	61,73	72,84
Pork	100	62,47	64,65
Poultry meat	100	51,59	48,94
Fish Total	100	40,20	45,10
Eggs	100	73,09	63,49

1989 = 100 %

The classification of investigated farms have been made by the interviewers and we believe that they are close to reality, because more than 50 % from farmers were experienced animal husbandry specialist.

The analysis of the data shows that with almost full capacity work only fish farms. Pig and poultry farms work by 30 to 50 % from the capacity and cattle and sheep farms work with 50 – 60 % from their capacity. The agricultural producers who do not use 100 % from the capacity of their farms develop additional business – agricultural or other kind of business (bee keeping, horse breeding, agritourism , restaurants, sport fishing).

During the second farm visit was realized that three agricultural producers included in the survey were put in bankruptcy situation, two producers decided to stop their business because it is not enough profitable.

4.1.2. Human Resources

About 50 % of all farmers have enough good skills in the field of agricultural production and they have been in this business more than 10 years. More than 30 % of owners employ managers and the rest part of producers have not appropriate qualification and they are in agricultural production 2-3 years ago. The responsibility for making important decisions take mainly the owner of the farm, but in the bigger agricultural farms - the owner and manager of the farm.

The age structure of the farmers are as follow: 10, 5 % are less than 30 years of age and about one half (than 43 %) are in the age group 45 to 65. Over 65 years of age are 11 % of all farmers, the rest farmers are between 31 to 45 years.

Most of owner of fish farms employed between 3 and 15 full time workers and 2-8 part time workers. Cattle and sheep farms are mainly family farms and only in 15-20 % of them are employed 1-3 full time workers. In pig and poultry farming about 30 % are family farms in which are working 2-3 members of the family, in the rest number of farms are employed about 5 – 6 full time workers. The other kind of farms are 100 % family farms and some of them rear use one part time worker.

4.1.3. Types and Size of Agricultural Farms

Most of the investigated farms are single operation enterprises with only one or predominantly one livestock activity. More than 10 % of the farms have more than one activities. The distribution of the agricultural farms is the following:

Cattle	- 17,9 %
Sheep and Goats	- 12,0 %
Pigs	- 24,8 %
Poultry	- 14,5 %
Fish	- 10,2 %
Others	- 20,6 %

Meat production from different animals also dramatically decreased in the period 1989 - 1996. This decrease varied from 27,16 % to 51,06 %. There has been a tendency for stabilization of the meat production from all livestock sectors (Table 6).

The production of freshwater fish dramatically decreased in 1996 and the change 1989 - 1996 was 54,72 %

3.4. Land Restitution and Private Livestock Farming

We are not going to investigate the causes of the present real sad situation in the Bulgarian livestock farming. The development of the last years are very well known and they are analyzed and highlighted from all aspects. But we would like to emphasize that unless favorable and stable conditions and structures are created for private farming and in the private sectors of processing and marketing of livestock products, no steady-state growth in the livestock activity can be achieved. To reverse the downwards trend in livestock production significant efforts need to be made to improve the investment climate, for the small or medium farmer in the villages as well as for bigger private investors intending to invest in livestock farming.

At present one of the greatest impediments to the investment decisions in livestock farms is the existing situation in land ownership and restitution. From the total 6,1 mil. ha agricultural land (4,6 mil. ha arable land and 1,5 mil. ha pasture land) only 2,18 mil. ha have been restituted and only 14% of that with final boundaries and titles of ownership. This means that only 5% of total agricultural land is fully restituted and the owners know exactly the size and the location of their land.

The development of a dynamic private livestock sector would be greatly accelerated if restitution of land could be speeded up. Many decisions for investment in livestock farms are being delayed, because farmers have not yet the land or because they do not now the precise locations of the land being provisionally restituted. Unless the problems of land restitution and land tenure have been solved satisfactory no major developments in the private livestock sector can be expected, because farmers under the existing circumstances are delaying decisions for investment in buildings, livestock, machinery, etc.

4. PREVAILING AGRICULTURAL FARMS

4.1. THE STRUCTURE OF THE PRIVATE LIVESTOCK FARMS

4.1.1. Some Important Characteristics

The greatest number of the farm investigated are private, followed by cooperative farms and state owned farms. More than 35 % of all farms in the survey have been established in the last 3 years. A big percentage of agricultural farms (40 %) included in the survey are characterized as "traditional", more than 45 % are with old technologies of production and the rest (only one from ten farms) – as farms with appropriate investment policy for reconstruction of production facilities.

4.1.4. Farm Buildings in Livestock Farms

During the farm visit was realized that they were built after 1970. After 1990 there are five new built pig farms, two – poultry farms and one small cattle farm. Most of investigated fish (about 66 %) farms were reconstructed in the last few years. Recently the owners of cattle and sheep farms have not good investment policy for the future of their farms. The quality of farm buildings is presented in Table 10.

Table 10. Distribution of Farm Buildings (in %) Depending their Quality

Farm	Very good	Good	No good
Cattle	12	35	53
Sheep/goat	5	15	80
Pig	14	68	18
Poultry	15	52	33
Fish	10	65	25
Other	8	18	74
Average	10,67	42,16	47,17

4.1.5. Location of the Livestock Farms

A great percentage of all investigated agricultural farms are situated in the villages. About 63 % of all livestock farms are close to the family house of the farmers (Table 11). An other 9 % of the farm buildings are in the villages but not in the house yard of the farmers. The rest (about 28 %) of the farm buildings are outside the villages.

The analysis of the data show that nearby to farms according the producers (about 70 % of them) included in the survey there are 3 – 5 agricultural farms from the same activity. The rest of them are not interesting from their colleagues and do not know the location of their farms. Almost all of fish farmers knew very well their colleagues and the location of their farms not only in their region but also in the rest regions of the country.

In the Table 8 and 9 are presented all types and distribution of farms according to their size.

Table 8. Number of Productive Animals

Farms	Small	Medium	Big
Cattle	1 - 5	6 - 15	15 +
Sows	5 - 10	11 - 30	30 +
Sheep/Goat	10 - 50	51 - 100	100 +

Table 9. Distribution of Farms by Size

Farms	Small	Small	Medium	Medium	Big	Big	Total	Total
	Number	%	Number	%	Number	%	Number	%
Cattle	12	57,14	4	19,05	5	23,81	21	100
Sheep Goat	3	21,45	8	57,10	3	21,45	14	100
Pig	12	41,38	9	31,03	8	27,59	29	100
Poul- try	10	58,83	6	35,29	1	5,88	17	100
Fish	6	50,00	2	16,67	4	33,33	12	100
Other	11	45,83	9	37,50	4	16,67	24	100
Total	54	46,15	38	32,48	25	21,37	24	100

The stable ratio DM : Lv (1 : 1000) and low inflation ratio during 1998 are the reasons for the stable prices of livestock production, feeds, energy, etc. This permits long term prognoses and increasing of investments in agricultural sector. The bigger and more stable income of population is reason for the increasing of consumption of livestock products and it is the base for increased livestock production in the next years. State Fund "Agriculture" was created to help agricultural producers during the transition period. During 1997 growing of broodstock was subsidized from the governmental budget as follow:

Number:

Cows	-	4 273
Sows	-	14 646
Hence	-	434 882
Sheep	-	6 911

The stabilization of an economic situation during 1998 resulted positively on the development of livestock production in private sector (Table 13). The number of cattle, pig and poultry is increased as follow: 6,0 %, 8,6 % and 4,4 %. There is decreasing only of sheep number with 5,6 %, but the tendency is for almost 100 % private sheep farming.

There is a tendency for decreasing of breeding activity in cattle breeding and almost lack veterinary activity for security control in cattle farms. Bigger amount from cow milk is not keeping safely according hygiene standards. About 70 % from raising cow are for milk production, but there is also tendency for increasing the number for combine production – for milk and meat. At the moment there are good conditions for milk production because the ratio milk: grain is about 1 : 2,65. Buffalo milk is not very important for Bulgaria, but our country exports breeding animals in many countries: Argentina, Venecuella, Filipinies , Australia, Romania.

With the increasing of sheep in private sector there is a problem with breeding activity in sheep farming. Now there are more breeds sheep for milk production due to higher prices of milk on the domestic market and decreasing of sheep breeds for wool.

For supplying of products for private farms most of the population, including and this from big towns raising goats. All number of goats are raised in private farms and their total number has increased in comparing with 1996 with 13 % and has reached 769660.

The biggest crisis in pig farming is during 1997 and the pig number is decreased with 29,91 % in comparing with pig number in 1996. The main reason for this is the grain crisis during 1996 and 1997. The breeding activity in pig farming is also in crisis and during 1997 only 10, 6 % from sows are including under breeding activity. There is almost 100 % privatization of all pig farms, including biggest pig complexes.

One of the reasons for decreasing of poultry numbers is the high price of feed, because the components for them are mainly imported – soy meal and fish meal. The average egg production per hen/annually is 176 eggs and the reason for this low productivity is old technologies in poultry farming and not good feeding.

Table 11. Location of the Livestock Farms

Farm	In the village		Outside of the village
	Close to the Family house	Other place	
Cattle	84	7	9
Sheep/Goat	90	2	8
Pig	56	10	34
Poultry	58	12	30
Fish	8	13	79
Other	82	9	9

5. MARKETING OF LIVESTOCK PRODUCTION

5.1. Recent state of the marketing system of livestock production

The livestock number during 1998 is relatively stable and it is as follow:

Cattle	-	612 000
Sheep	-	2 846 000
Pig	-	1 480 000
Poultry	-	14 766 000

This fact is a result of the stabilization of the economic situation in the last year (Table 12).

Table 12. Macroeconomic data

	1996*	1997*	1998**
GDP-changes in %	- 9	- 4	4
Average annual inflation (%)	311	579	35
Average interest %	113,0	43,1	10,0

* data from the National Statistical Institute

** data from Governmental Budget

Meat production during the period 1995 – 1997 is mainly in private sector. It is shown on the Fig. 1, 2 and 3. At the last year only 3 % from the total meat production is produced in non private farms. In the same period the biggest part from the total meat production is pig meat, follow by poultry and cattle meat (Fig. 4, 5 and 6).

During 1995 the total meat production is 468 841 tons, including 379 276 tons total meat production from private farms. The total meat production from different kind of animals is as follow: cattle meat production is 65 702 tons, including 58 502 tons cattle meat production from private farms.; pig meat production is 256 430 tons, including 204 122 tons from private pig farms; sheep meat production is 49 495 tons, including 48 027 tons from private farms; poultry meat production is 92 199 tons, including 83 265 tons from private farms; the other meat production is 5 015 tons, including 5 000 tons from private farms (Fig. 7). The same tendency for total meat production during the next two years – 1996 and 1997 in private and non private sector is shown in Fig. 8 and 9. During 1997 almost total cattle and sheep meat production is from private farms.

The total livestock production (live weight) during the period 1995 – 1997 is shown in Table 14.

The analysis of the data in Table 15 and 16 show that for the period 1995 – 1997 the biggest import is for cattle meat, followed by poultry meat. The consumption of meat during the above period is stable for pig meat and there is a tendency for increasing of consumption of the rest kind of produced meat. For the above period all supplied amount of meat is consumed, but the consumption of meat per capita per month is low – 1,5 – 2,1 kg/month. During the analyzed period from the imported meat the biggest part is for cattle meat. The exported sheep, pig and poultry meat is more than the imported meat from the same kind of animals (Table 15 and 16). During 1997 was imported 35 933 tons meat from all kind of animals. This amount meat is three time more than 1996 and 1,3 times more than 1995 (Fig. 10). The tendency for increasing of the import of poultry meat is a result from lower international prices if this kind of meat and decreased poultry production in Bulgaria. The import is mainly from Belgium, USA and UK.

The export of meat from different kind of animals during 1997 is 21 311 tons (Fig.11). This amount is 21,51 % less than exported meat during 1996. The bigger amount of exported meat during 1996 is due to grain crisis and slaughtered animals and quotas which were given for exporting of fresh and frozen meat in the countries from EC. But the number of exported live animals is decreased. During 1995 this number is 505 0111 and during 1997 – only 23 776. The main reason for decreased export is decreased with 96 % export of sheep and lambs on the traditional export markets – Greece, Italy and Arabian countries.

The prices of animals and livestock products for the period January 1996 – December 1997 are increased as follow (Table 17 and 18):

**Table 13. Changes of Livestock Number 1996 – 1998
(in thousands)**

	1996	%	1997	%	1998	%	1998 as % from 1997
Cattle							
Total	632	100	582	100	612	100	105,1
Non Private	120	19,0	15	2,6	11	1,8	73,3
Private	512	81,0	567	97,4	601	98,2	106,0
Sheep							
Total	3383	100	3020	100	2846	100	94,2
Non Private	240	7,1	34	1,1	27	0,9	79,4
Private	3143	92,9	2986	98,9	2819	99,1	94,4
Pig							
Total	2140	100	1500	100	1480	100	98,7
Non Private	873	40,1	253	16,9	126	8,5	49,8
Private	1267	59,9	1247	83,1	1354	91,5	108,6
Poultry							
Total	18609	100	16227	100	14766	100	91,0
Non Private	4856	26,1	2726	16,8	667	4,5	24,5
Private	13753	73,9	13501	83,2	14099	105,5	104,4

**Fig. 2. Total Meat Production 1996
(1 - private sector; 2 - non private sector)**

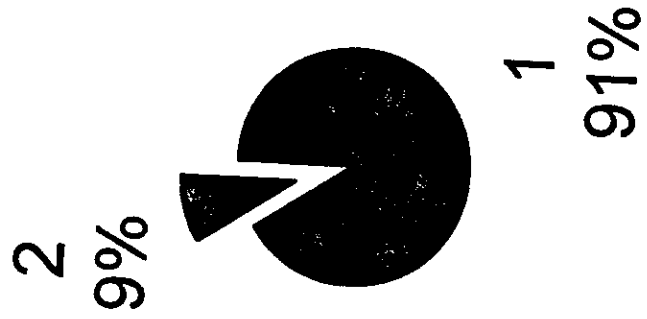


Fig. 1. Total Meat Production 1995 (1 - private sector; 2 - non private sector)

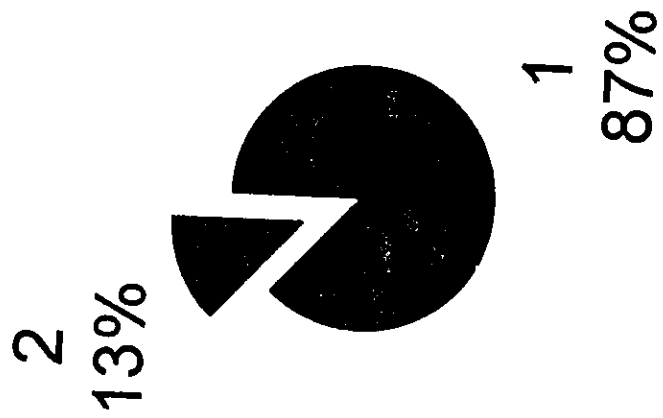
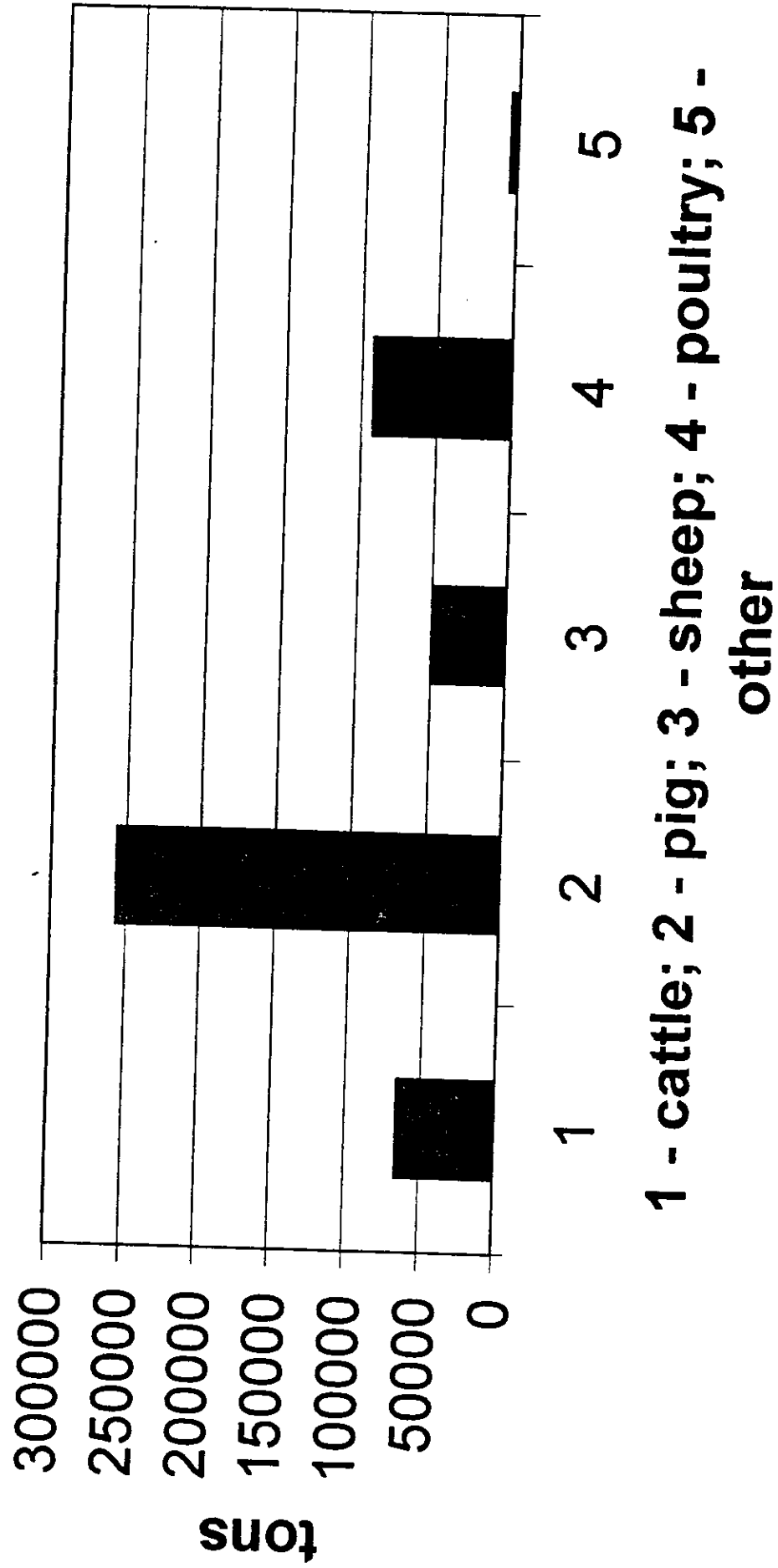


Fig. 4. Total Meat Production 1995



**Fig. 3. Total Meat Production 1997
(1 - private sector; 2 - non private sector)**

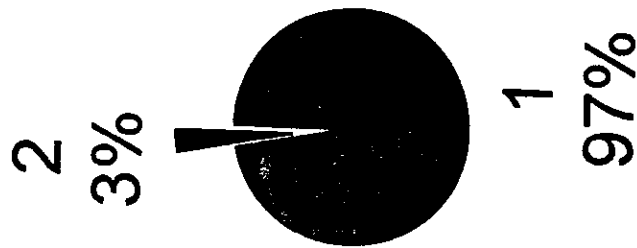


Fig. 6. Total Meat Production 1997

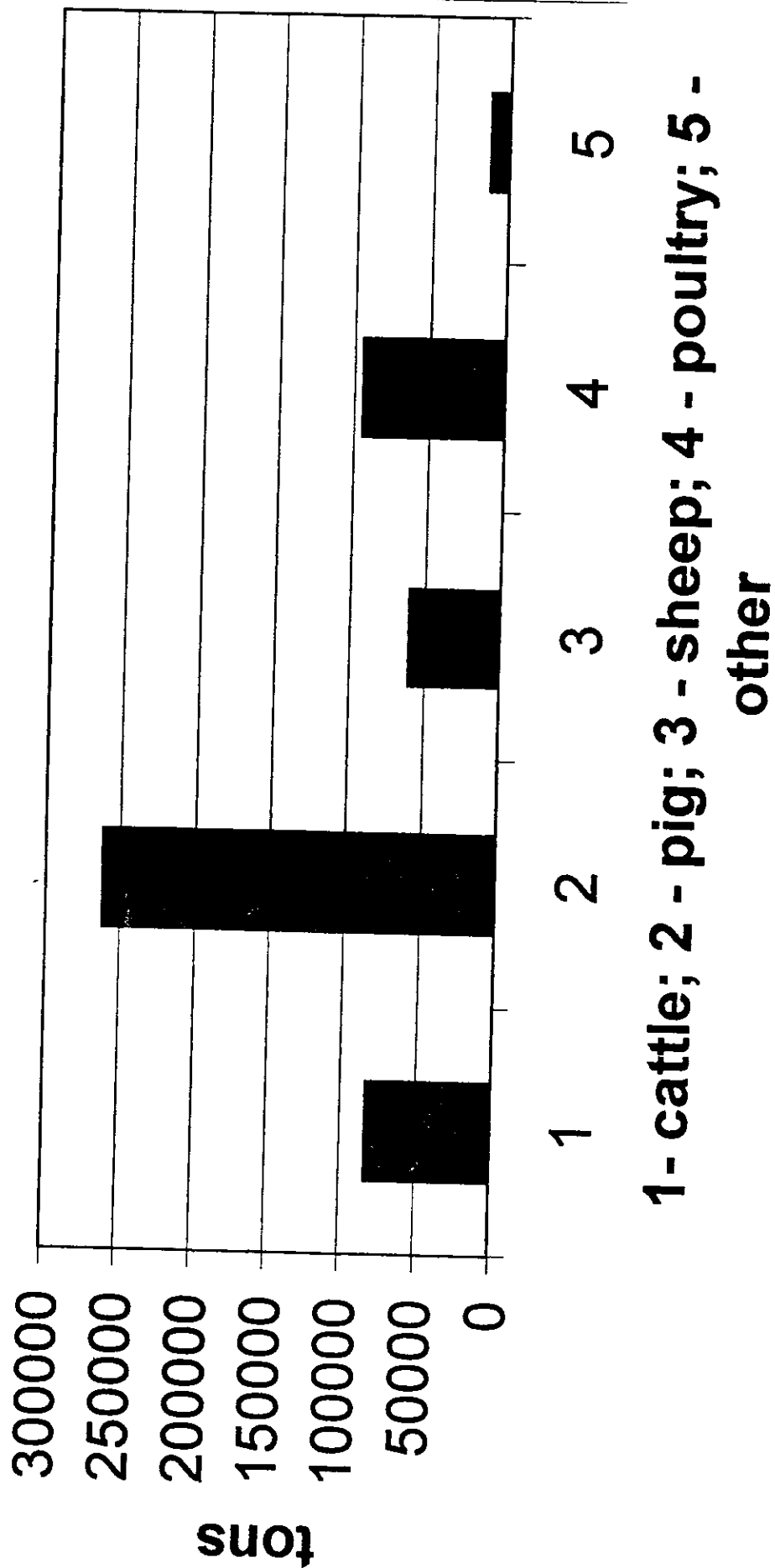


Fig. 5. Total Meat Production 1996

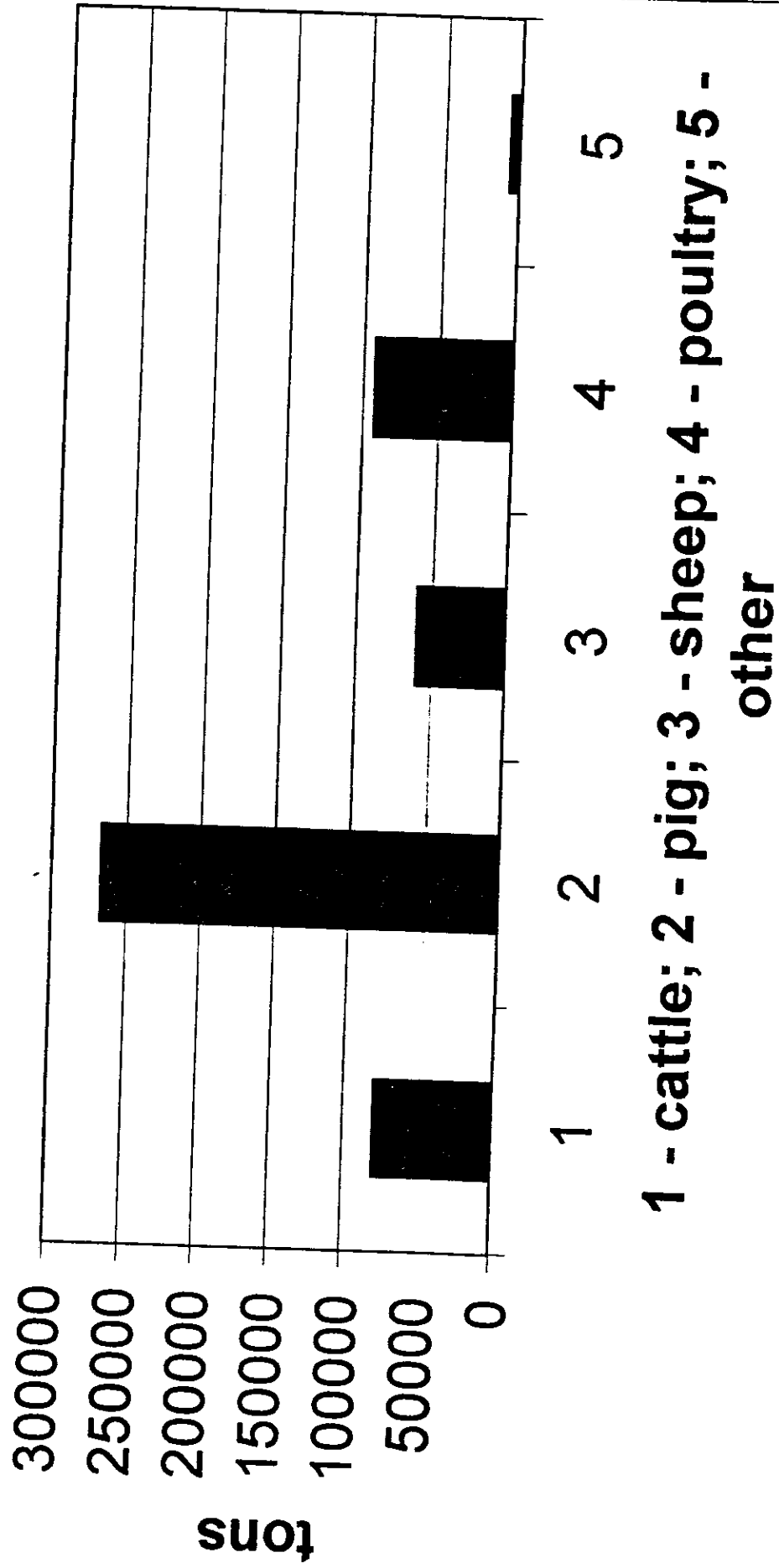


Fig. 8. Meat Production 1996

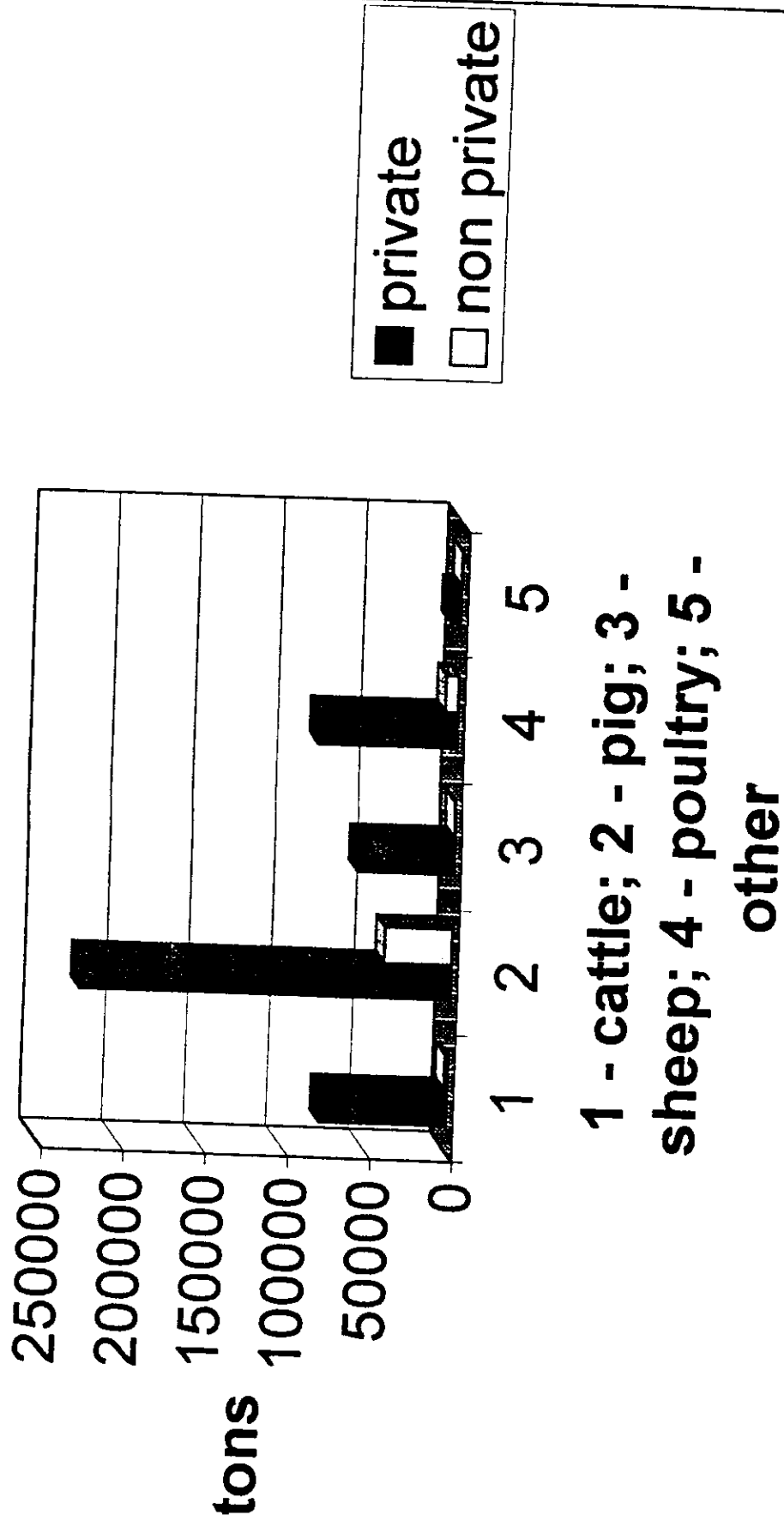


Fig. 7. Meat Production 1995

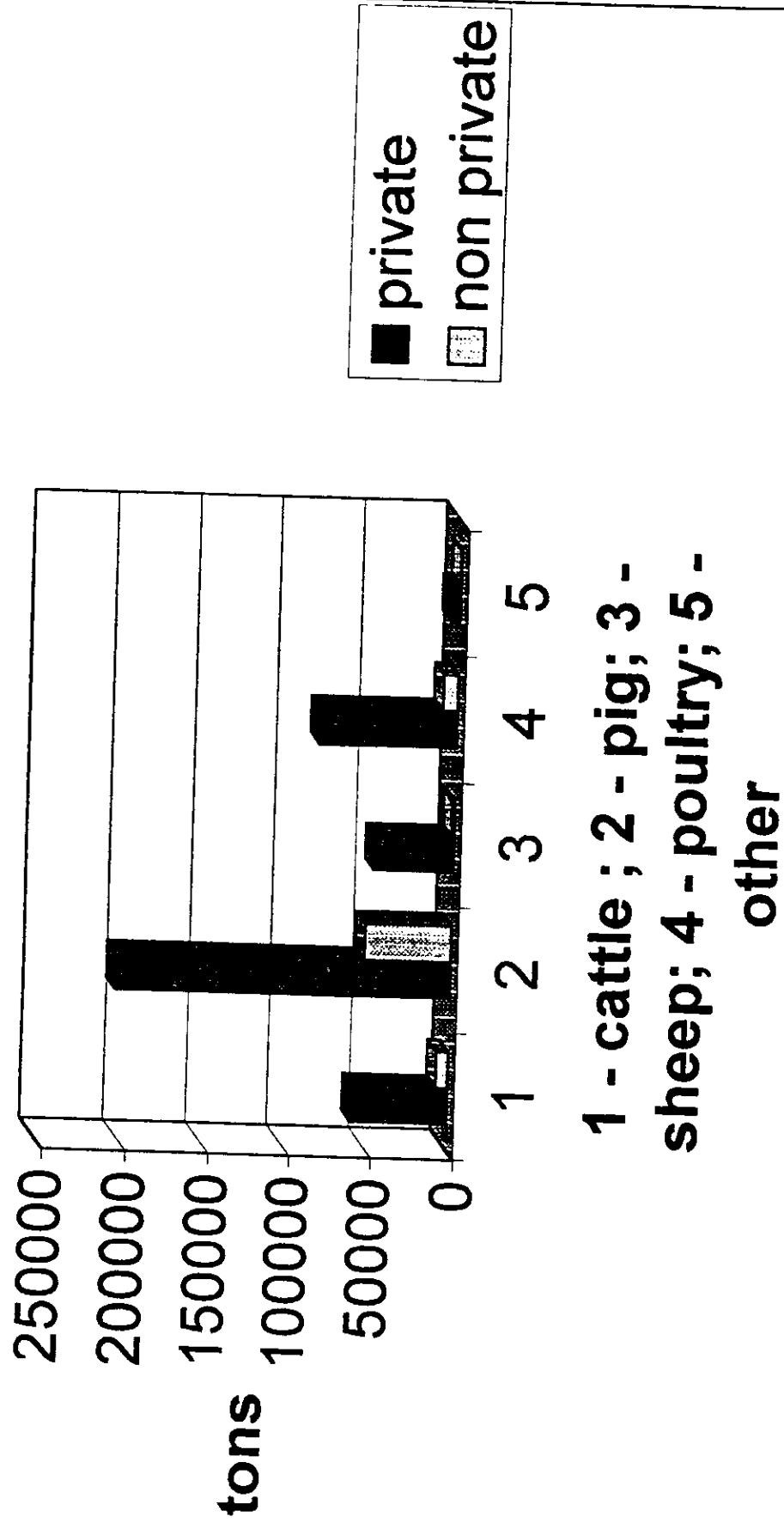


Table 14. LIVESTOCK PRODUCTION (LIVE WEIGHT, TONS)

	LIVE WEIGHT (TONS)		
	1995	1996	1997
Total	766 598	837 350	796 829
Private sector	658 255	759 803	772 366
Cattle Total	126 804	154 013	159 757
Private sector	112 804	150 163	158 176
Pig Total	386 887	402 693	385 077
Private sector	307 969	340 745	369 030
Sheep Total	115 818	140 556	142 334
Private sector	112 329	139 715	141 903
Poultry Total	128 052	128 443	130 773
Private sector	116 114	117 546	123 977
Other Total	9 037	11 645	23 265
Private sector	9 009	11 634	23 255

Fig. 9. Meat production 1997

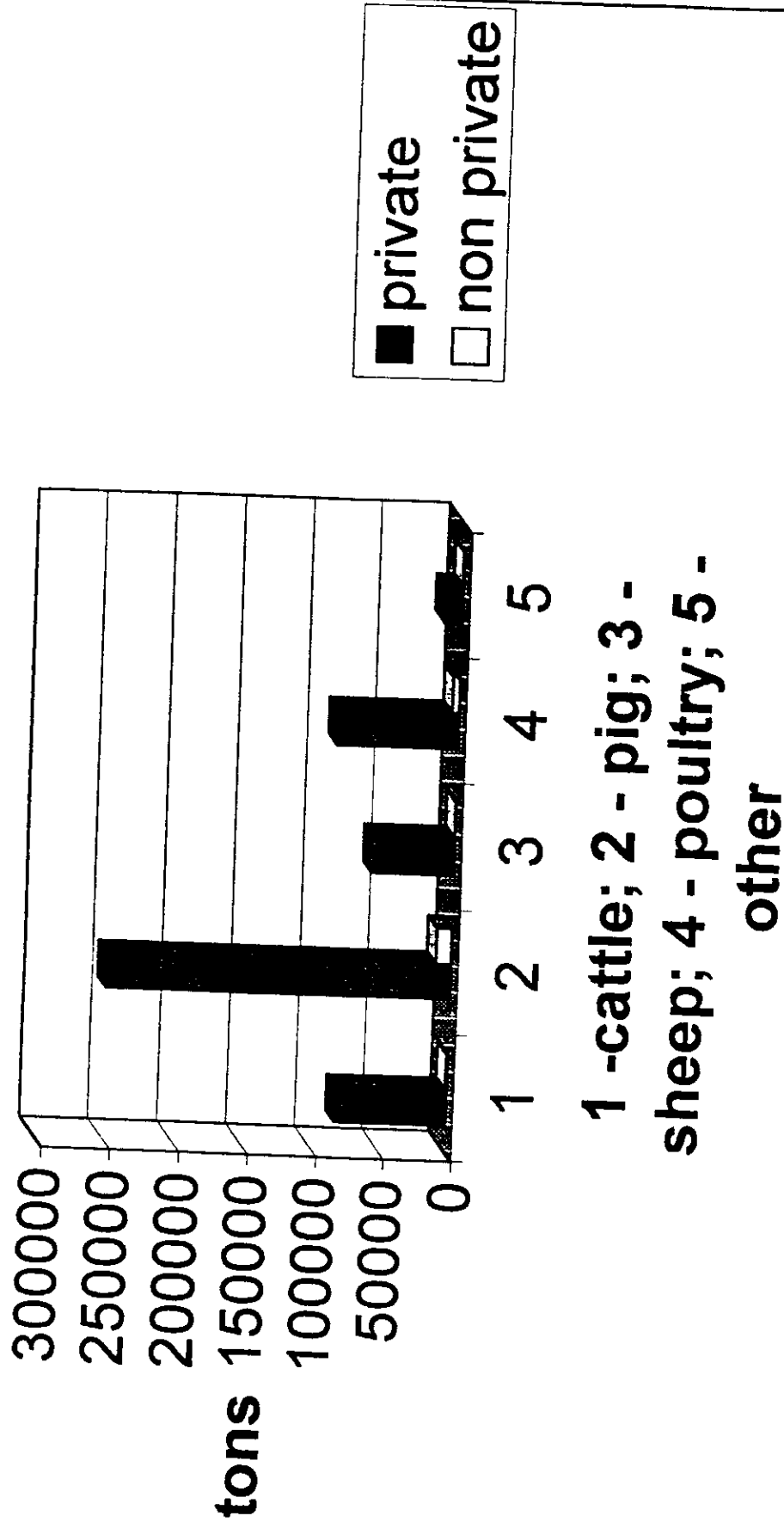


Table 16. SUPPLY AND CONSUMPTION OF MEAT
(thousands tons)

Years	PIG			POULTRY		
	1995	1996	1997	1995	1996	1997
Production	256	267	262	92,2	92,5	94,2
Import	0,7	0,2	3,0	4,7	4,3	12,6
Total supply	256,7	267,2	265	96,9	96,8	106,8
Export	1,0	10,6	6,3	8,0	10,0	10,5
Consumption	255,7	256,6	258,7	88,9	86,8	96,3

Table 15. SUPPLY AND CONSUMPTION OF MEAT
(thousands tons)

Years	CATTLE			SHEEP		
	1995	1996	1997	1995	1996	1997
Production	66	80	83	49	59	60
Import	22,2	8	20	0,12	0,01	3
Total supply	88,2	88	103	49,12	59	63
Export	1,24	2	0,3	1,73	4,36	3,8
Consumption	86,96	86	102,7	47,39	54,64	59,2

Fig. 11. Export of Meat

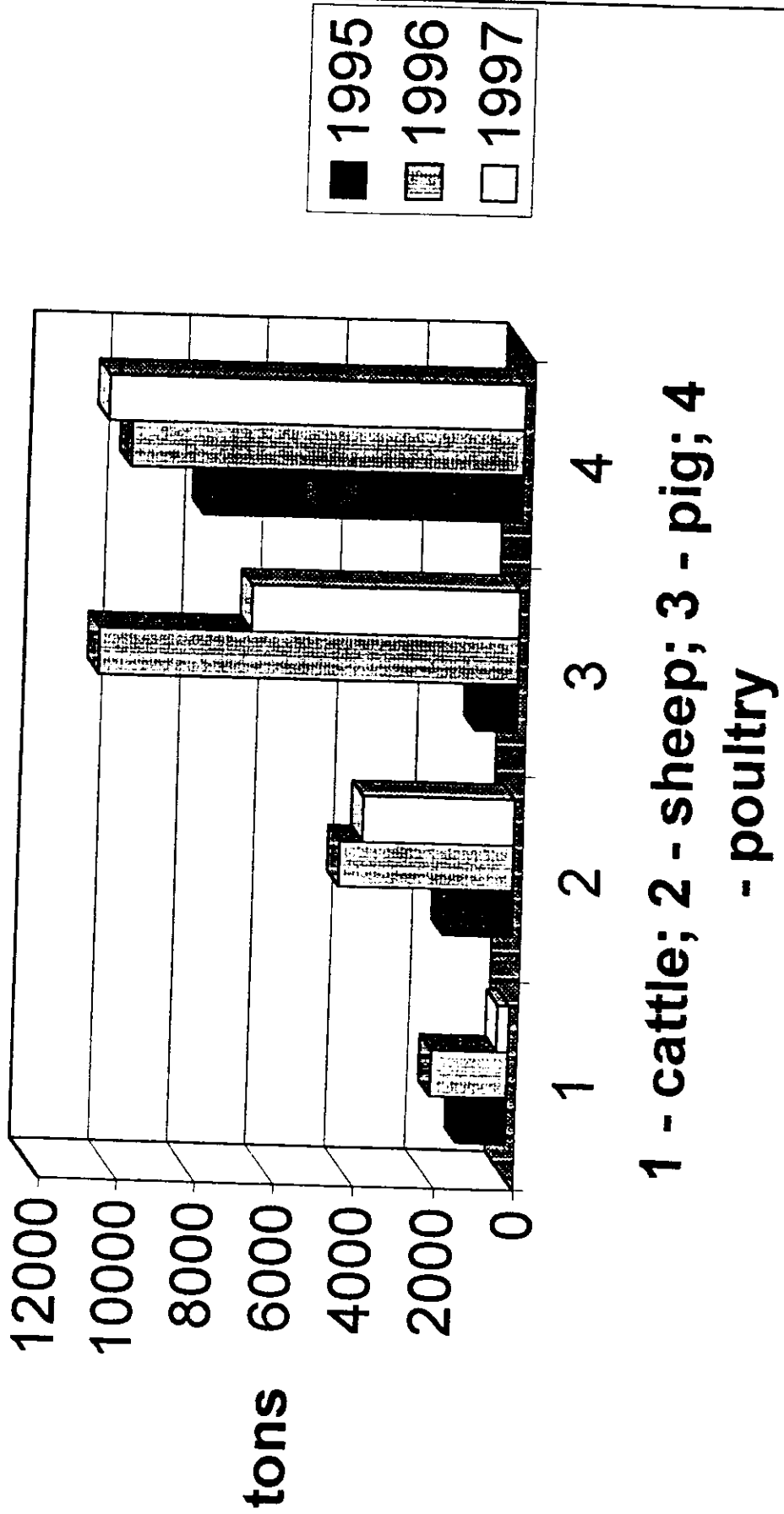
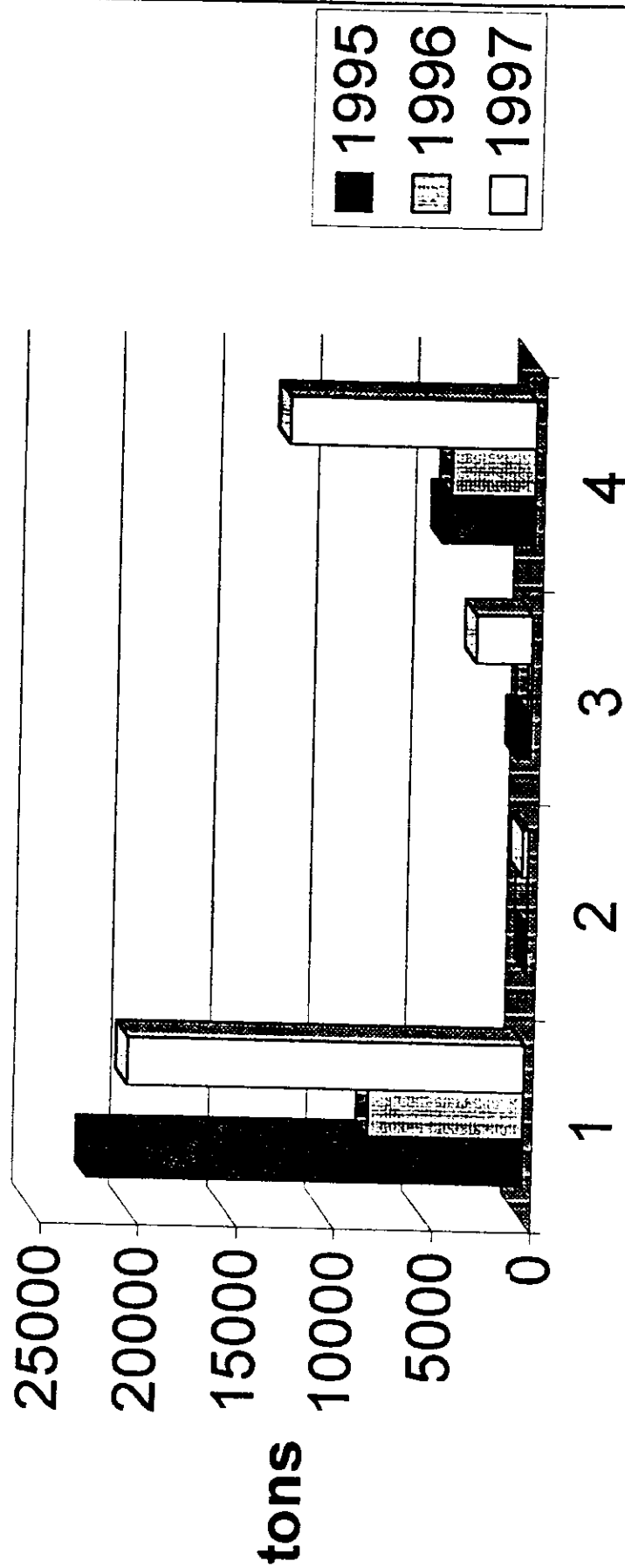


Fig. 10. Import of Meat



1 - cattle; 2 - sheep; 3 - pig; 4
- poultry

Table 18. PRICE OF ANIMALS AND LIVESTOCK PRODUCTS

ANIMALS AND PRODUCTS	1 9 9 7				
	Jan-March	Apr-June	July-Sept	Oct-Dec	
Cattle lv/kg live weight	649,73	1337,27	1380,05	2166,94	
Calf lv/kg live weight	711,97	1411,65	1610,25	1693,62	
Sheep/Goats lv/kg live weight	111,00	No data	944,57	1718,00	
Lamb lv/kg live weight	2659,86	1697,67	2075,78	2464,64	
Pig lv/kg live weight	770,74	2009,23	2784,51	2648,30	
Poultry lv/kg live weight	813,60	1630,80	1887,81	1946,55	
Cow milk lv/l	182,47	211,83	314,65	392,17	
Sheep milk lv/l	489,29	427,57	472,97	431,46	

Table 17. PRICE OF ANIMALS AND LIVESTOCK PRODUCTS

ANIMALS AND PRODUCTS	1 9 9 6				
	Jan-March	Apr-June	July-Sept	Oct-Dec	
Cattle lv/kg live weight	62,83	66,55	86,33	101,94	
Calf lv/kg live weight	75,51	78,77	98,16	115,19	
Sheep/Goats lv/kg live weight	43,83	47,22	60,29	66,78	
Lamb lv/kg live weight	100,77	87,92	159,05	118,07	
Pig lv/kg live weight	71,08	66,38	111,65	383,58	
Poultry lv/kg live weight	63,83	74,48	138,00	178,76	
Cow milk lv/l	16,56	16,12	22,14	No data	
Sheep milk lv/l	27,65	29,50	29,96	45,13	

Table 19. PRICES INDEX

ANIMALS AND PRODUCTS	1 9 9 6				
	Jan-March	Apr-June	July-Sept	Oct-Dec	
Cattle lv/kg live weight	59,84	52,40	39,97	29,72	
Calf lv/kg live weight	71,91	62,02	45,44	33,58	
Sheep/Goats lv/kg live weight	41,74	37,18	27,91	19,47	
Lamb lv/kg live weight	95,97	69,23	73,63	34,42	
Pig lv/kg live weight	67,70	52,27	51,69	111,83	
Poultry lv/kg live weight	60,79	58,65	63,89	52,12	
Cow milk lv/l	15,77	12,69	10,25	No data	
Sheep milk lv/l	26,33	23,23	13,87	13,16	
Inflation Index 1994 = 100	1,05	1,27	2,16	3,43	

The Marketing System in Bulgarian Livestock Production – the Present State and Evolutionary Processes during the Transition Economic Period

= cattle	- 34,49 times;
= calf	- 22,43 times;
= sheep	- 39,20 times;
= lamb	- 24,46 times;
= pig	- 37,26 times;
= poultry	- 30,50 times;
= cow milk	- 23,68 times;
= sheep milk	- 15,60 times.

The main reason for increasing of prices is the unstable economic situation in the country during the transition to market economy – high bank interest and high inflation ratio. But the analyzing of the data shows that the real prices of all animals and livestock products are decreased considerably (Table 19 and 20).

The highest increasing of wholesale prices of meat from different kind of animals for the period 1995 – 1997 is for sheep meat – 48,5 times, follow by cattle meat – 32,1 times; poultry – 30,3 times; pig meat – 28,5 times and calf meat 24,1 times (Table 21). In the same table are shown the wholesale prices of livestock products.

The increasing of the retail prices of meat from different kind of animals and livestock products is considerably (Table 22):

- pig meat with bones – 29,0 times;
- calf meat with bones – 28,4 times;
- milk – 18,4 times;
- cow cheese – 22,4 times;
- cow yellow cheese – 21,2 times.

The analyses of distribution of incomes in the chain producer – wholesaler – retail saler shows that during 1996 and 1997 the income of the producer is from 33,0% to 35,0% from the retail price of the produced product. This income is a low percentage from the retail price of livestock production and it does not stimulate development of agricultural production

For improving the breeding activity in cattle and pig farming during 1996 the government decided to give rights for importing of animals from different breeds without taxes. Due to the high prices of these animals and lack of capital farmers did not exploit fully this possibility and were imported only 362 cows and 140 sows.

The livestock production depends closely from the feed production and the prices of feed. There are good facilities for production of feed mixture in Bulgaria. The capacity of these plants is about 1 200 000 tons and all of them were privatized during the last two years. The highest price is for broiler feed mixture and in the end of 1997 it is more than 480 lv/kg (Fig. 12). In same period the prices of pig and calf mixtures are similar and they are about 310 – 320 lv/kg.

The prices of the main forages – corn, wheat and barley – influence on the

Table 21. WHOLESale PRICES OF LIVESTOCK PRODUCTS

Livestock products	Years		
	1995	1996	1997
Price lv/kg			
Cattle meat	125,93	189,77	4074,72
Calf meet	142,68	203,48	3444,17
Sheep meat	62,62	80,89	3038,38
Pig meat	108,94	202,34	3099,49
Poultry meat	83,03	210,98	2516,17
Butter	181,45	381,09	3603,24
Cow cheese	130,74	244,41	2768,16
Sheep cheese	170,03	277,29	3353,73
Yellow cheese	180,09	341,72	3634,74
Yogurt	27,66	54,63	632,14
Cow milk lv/l	19,82	36,63	402,78

Table 20. PRICES INDEX

ANIMALS AND PRODUCTS	1 9 9 7				
	Jan-March	Apr-June	July-Sept	Oct-Dec	
Cattle lv/kg live weight	39,95	56,33	52,88	79,29	
Calf lv/kg live weight	43,79	59,46	61,70	61,97	
Sheep/Goats lv/kg live weight	6,83	No data	36,20	62,86	
Lamb lv/kg live weight	163,58	71,55	78,51	90,18	
Pig lv/kg live weight	47,40	84,63	106,69	96,90	
Poultry lv/kg live weight	50,04	68,69	72,33	71,22	
Cow milk lv/l	11,22	8,92	12,06	14,35	
Sheep milk lv/l	30,09	18,01	18,12	15,79	
Inflation Index 1994 = 100	16,26	23,74	16,10	27,30	

Fig. 12. Wholesale prices of feed for finishing animals 1997

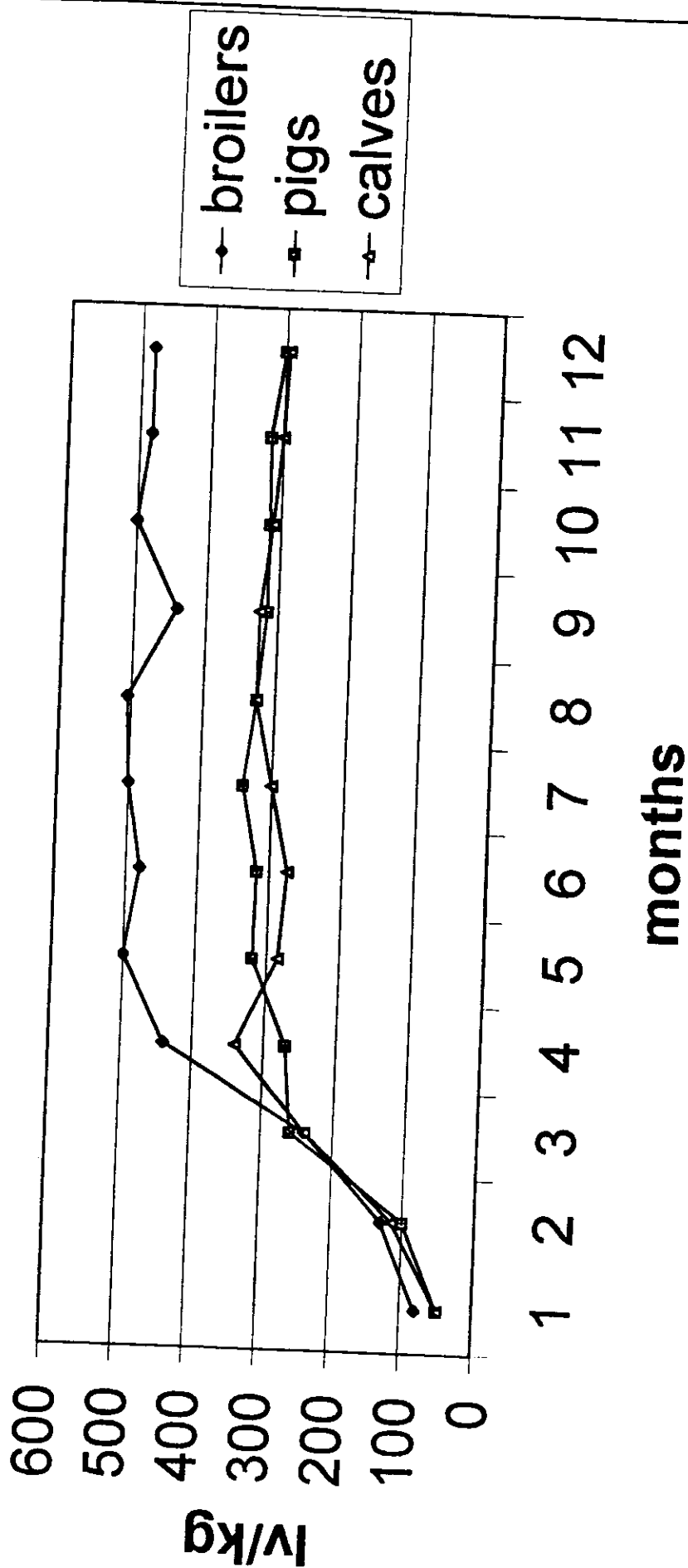


Table 22. RETAIL PRICES OF LIVESTOCK PRODUCTS

Livestock products	YEARS		
	1995	1996	1997
Price lv/kg			
Pig meat with bones	218,57	390,62	6337,17
Pig meat without bones	272,71	479,78	7800,65
Calf meat with bones	179,18	291,77	5089,55
Calf meat without bones	263,51	392,95	6120,67
Lamb meat	220,62	304,18	5444,49
Sheep meat	138,37	112,79	No data
Poultry meat	116,54	305,27	3873,66
Butter	256,00	564,96	5962,64
Cow cheese	149,30	287,50	3351,75
Sheep cheese	209,83	356,43	4736,98
Cow yellow cheese	248,12	462,49	5265,55
Sheep yellow cheese	322,31	520,07	7330,06
Yogurt	32,60	66,04	675,38
Dry milk	375,31	677,14	7676,65
Milk lv/l	24,52	45,06	451,26

Table 23. Prices of pigs and corn

	1996					1997				
	Jan-March	Apr-June	July-Sept	Oct-Dec	Jan-March	Apr-June	July-Sept	Oct-Dec		
Price of pigs, live weight lv/kg	71,08	66,38	111,65	383,58	770,74	2009,23	2784,51	2648,30		
Price of corn Lv/kg	9,00	15,00	31,00	35,00	70,00	225,00	270,00	192,00		
Ratio Pig live weight:corn	7,90	4,42	3,60	10,96	11,01	8,93	10,31	13,79		

profitability of pig production. In this connection we analyzed the ratio of wholesale prices of pig live weight and the prices of these grain forages for the period 1996 – 1997 (Table 23, 24 and 25). The data show that in the period Jan-March'96 the producers have purchased 7,9 kg corn, 9,23 kg wheat and 9,87 kg barley with one kg pig meat (live weight). During the period of grain crises – Apr – Sept'96 – there is a lack of grain forages and increasing of their prices. Due to this the ratio has changed and influenced negatively on the pig production. During the period July-Sept'96 the producers purchased only 3,6 kg corn, 3,99 kg wheat and 4,71 kg barley with one kg pig meat (live weight)

In the end of 1996 and during 1997 the prices of pig meat (live weight) were increased faster than the prices of grain forages and it resulted on the profitable pig production.

5.2. Retailing of Livestock Products at Shops and Animals on the Local Animal Markets

During the study time the data obtained from agricultural farms, shops and markets show that there is wide margin between the wholesale prices of livestock products and their retail prices.

There are few types of private livestock producers who organize retailing of livestock products:

- Livestock producers who own or rent shops – they have own livestock production and 1-2 own or rent shops for retailing of their products. Some time they retail products from other producers;
- Livestock producers who own processing units and shops – they have own shops near to processing unit and retailing own livestock products. Some time they have shops or even chain of shops in the town or in the other towns in the region.
- Livestock producers who own slaughtering, milk processing units and shops – these owners are big livestock producers, own storage facilities. They have own marketing staff and promote very hard their products through different ways.

The main problem for small livestock producers is a prohibition for marketing of eggs, milk, fish directly to consumers in open market stands. These farmers have not enough capital to open or rent shops and they sell their products to wholesalers. The profit of these farms is very low and some time they are loosing.

There are few spontaneously created animal markets and about 15 – 20 animal markets, established from state organization in different regions in the country. These markets work 1 – 2 times weekly, mainly in Saturday and Sunday. They have local importance and marketed animals are not very big number (Table 26). The data including in the Table 26 show the situation of the some regional markets in first week of July 1998

5.3. Problems of Feed Production

There are good facilities for feed production in Bulgaria. But during the last few years due to decreased livestock number they are working with non full capacity. The data collected from different kind of agricultural producers (cattle, sheep, pig, fish producers) show almost the same problems from feed point of view. The quality of feed is low with high FCR, the prices are very high and all these are not stimulated the development of profitable livestock production.

Recently there is a tendency for improving the quality of produced feeds, because most of the feed plants started to produced feeds, including imported components with better quality. In the same time there are many trade firms which import feed from different countries (Greece, Italy, France, Holland, Belgium). Independently from better quality of imported feeds only small number, mainly from big agricultural producers have a financial possibility to use these feeds.

Only 20 % of the agricultural producers have own feed production. The rest part from agricultural producers use the service from different feed distributors, who are mainly in a distance 10 – 50 km from their farms. But the tendency in pig, poultry and fish farming is to be cooperate efforts and to build own feed production units to supplied their needs. There are also farmers who wish to rent land and produce corn, wheat, barley.

5.4. Development of Extension Advisory System for Livestock Producers

In the period of transition economy there is a need for creating effective extension services and they will play a vital role in agricultural production. The extension services have to be independent in the process of consulting farmers. This is very difficult especially in the cases when the government finances them.. However the contacts between extension services and governmental institutions have to be evolutionary, not revolutionary, because extension activities are needed to be well coordinated with other governmental programs for agricultural development.

The Thracian University in Stara Zagora was a pioneer in the realization of the idea for creating of Extension office, and did a contract with the Citizens Democracy Corps (CDC), USA in 1992 for organizing an information consultation bureau of the University (Extension Service). In 1997 the Thracian University was included as a Local Advisory Office at National Agricultural Advisory System at the Ministry of Agriculture, Forestry and Agrarian Reform. This office started to function as a service for helping and supporting the agricultural producers in their own business. The aim is turning the agricultural business into successful entrepreneurs, innovation, increasing the welfare of producers, and finally survival and prosperous of agricultural production.

The functions of the University Local Advisory Office are as follows:

Education-Educating farmers is a most essential part of educational activities, since it is oriented to the final clients. Subject matter programs are developed for the goals

Table 25. Prices of pigs and barley

	1996					1997				
	Jan-March	Apr-June	July-Sept	Oct-Dec	Jan-March	Apr-June	July-Sept	Oct-Dec		
Price of pigs, live weight lv/kg	71,08	66,38	111,65	383,58	770,74	2009,23	2784,51	2648,30		
Price of barley Lv/kg	7,20	11,20	23,70	32,00	85,70	193,40	177,60	166,20		
Ratio Pig live weight:barley	9,87	5,93	4,71	11,99	8,99	10,39	15,68	15,93		

In the process of organizing aquaculture extension services there is a need to:

- select and train Bulgarian experts;
- select demonstration farms and provide them with comprehensive extension service;
- extend the results from the demonstration farms to other similar farms by direct and mass media communication;
- publish a farm management handbook and establish a data-base of the data from the farms.

The extension system has to be constantly changing to meet the changing needs and priorities of the farmers. Its mission is to help fish farmers to improve the efficiency of an agricultural production through an educational process that uses scientific knowledge focused on issues and needs.

During the farm visits was realized that more than 70 % from agricultural producers use the services offered from different extension services at the Universities, Institutes and Local Advisory Offices at National Agricultural Advisory System. Most of farmers are using these services one time per month and prefer to receive appropriate information by post offices. Producers are prefer to attend different short time meetings and demonstration farms where they have a possibility to meet their colleagues and change different opinion.

It was realized that agricultural producers wish mainly to be developed investment and business plans for their farms. The main reason for this is their wish to take a loan from banks to be invested in their farms.

5.5. Forming of Agricultural Producer Organization

Recently there are more than 20 Agricultural Organizations (associations, unions, etc.). The purpose of these organizations are to protect the interest of agricultural producers. They are helping for the profitable development of agricultural production through investigation of markets, price policy, introducing of new technologies, animals, breeds. They also organize demonstration farms, training courses, exhibitions.

At the moment these Agricultural Organizations (Agricultural Organizations (Association of Pig Producers; Association of Milk producers; Association of Feed Producers; Association Fish Producers; Association of Wine Producers; Association of Cattle Producers, Union of Sheep Producers; Union of Bee Producers, etc) work effectively but there is a need from their joint work during the transition period to market economy. Recently through the effort of FLAG Consortium, USA Organization is started the idea for creating of Union of Non Governmental Organizations which will lobby in different State Organizations.

and needs of agricultural businesses, including two main directions: general business issues (agricultural environment) and problems caused by certain needs (technological questions, looking for know-how, prophylactics, and treatment of different diseases, etc.).

Information and Consultation. At this state it is the function of information and consultation that must be applied in the extension activities. It seems to be an unofficial way of educating farmers and producers. The extension specialists have to get information for educational programs for farmers, latest scientific applied investigations, governmental and legislative decisions, market prices for inputs and outputs, natural resources, different agricultural magazines, etc.

Applied Research. The third main factor is Applied Research through feedback, the extension workers collect and systematically approach problems and questions in agricultural production. In this way problem groups increase their abilities for solving problems as they share their sphere of applied research.

Public relation. The fourth function concerns the contacts and links with society. Its purpose is to advertise extension activities and to enlarge the number of the clients (through press, radio, TV, etc.).

Coordination. The fifth function is coordination. It supports the above functions. Its success will be a prerequisite on the ability to contact other organization and institutes which could be helpful and supportive in the work with rural producers. These are all agricultural universities, scientific research institutes, experimental stations, unions, and associations of farmers, international societies, foundations, governmental organizations, and other extension bureaus, etc.

The analysis of the problems and needs of agricultural producers for extension services shows that have to be applied follow approaches in the process of ruling the extension activities:

- extension programs have to be initiated from the farm level;
- understanding the problems of agricultural producers;
- to help agricultural producers to identify and solve their own problems;
- to explain that new production technologies are progressive and profitable for agricultural producers;
- to help agricultural producers for creating associations, cooperatives;
- to transfer and explain the governmental agricultural policy to agricultural producers.

Agriculture Extension Services may be organized:

- in the structure of Ministry of Agriculture, Forestry and Agrarian Reform with the governmental budget;
- as private extension services;
- in the structure of agricultural associations and cooperatives;
- in the structure of the Universities, Scientific Institutes, etc..

5.6. Governmental Initiatives for Private Agricultural Producers

There is a law, accepted 1995 and improved May, 1998 the purpose of which is to help the development of a profitable private agricultural production. The state support agricultural producers through structural, economic and organizational activities. The state also helps to be organized extension services and appropriate training of producers. Through National Agricultural Advisory System at the Ministry of Agriculture, Forestry and Agrarian Reform the information for agricultural production (markets, prices, meetings, etc.) is supplied to agricultural producers free of charge. For financial support of agricultural producers was created State Fund "Agriculture". The main purposes of this law are:

- Creating of private agricultural enterprises and organizations,
- Development of agricultural production in poor economic regions and regions with difficult natural conditions.

The State Fund "Agriculture" support agricultural producers in the process of realization of their investment projects. For this purpose there are follow investment programs which offer preferential credits:

- Starting of New Agricultural Production (financing support to 15 mln lv.);
- Bulgarian Farm (financing support to 90 mln lv.);
- Program "Development" (financing support to 182 mln lv.);
- Mountain Agriculture (financing support to 15 mln lv.);
- Ecological Agriculture (financing support to 60 mln lv.);
- Young Agricultural Producer (financing support to 15 mln lv.).

The financial support from these investment programs may be used in follow directions:

- purchase of machinery and equipment for land cultivation,
- purchase of animals;
- purchase of machinery and equipment for land cultivation;
- new building of farm buildings;
- creating of new vine yard fruit production;
- purchase of new land for expanding or starting of new agricultural production

5.7. Working by International Organizations

There are different international organization (USDA, Citizen Democracy Corps, Inc. USA, Volunteers in Oversea Cooperative Assistance, Land O'Lakes Inc., USA FLAG, PHARE Program, ABC Int.) working for the success of Bulgarian agricultural production during the transition to market economy.

The support of agricultural producers is mainly through organizing training courses for specialists and farmers, demonstration farm meetings, foreign specialists helping Bulgarian farmers, development of business and investment programs. Some of the international organizations invested in building of new effective type private livestock farm (Private Pig Farms - Foundation – Holland).

5.8. Privatization of the Agricultural Production Related Industries

The Ministry of Agriculture, Forestry and Agrarian Reform (MAFAR) has offered all related enterprises with agricultural production (feed plants, processing meat and milk factories, veterinary services, agricultural marketer, etc.) for mass denationalization. This process started since 1996 and recently almost 100 % of farming related industries are privatized.

This privatization will stimulate the development of agricultural production and its revitalization. In this way will be closed the production cycle in agriculture and will be increased farm profit. The agricultural enterprises will be more competitive on the market and will have a possibility for flexible marketing and price policy.

The data collected from all kind of agricultural farms show that big producers wish to build new, own or purchase existing enterprises related with agricultural production. Small and mid size agricultural producers like to cooperate their effort for processing of livestock production and to be built milk processors with capacity 1000 – 2000 l milk/ per day and meat processing units with capacity 2000 – 3000 kg per day.

5.9. Marketing Problems of Livestock Production

Marketing of livestock production is new concept for the private producers during the transition period. In the past the state was responsible for all activities – planning of production, distribution of all produced animals and livestock products and in the same time subsidized the agricultural production. Recently there are some positive changes in the marketing of livestock production. Now marketing is in the hands of agricultural private producers and only part of marketing of livestock production is still in the hands of state owned firms.

During the period of our study we investigated the prevailing situation on the Bulgarian market for livestock products and particular problems of agricultural producers. For this purpose agricultural farms, markets and shops have been visited and obtained data have been put together in order to receive representative figures for the recent problems of marketing system for livestock products.

The recent analysis of the information for the marketing of livestock production from the farms which were included in our survey shows the following tendencies:

- producers sell about 60 % of their livestock products directly to regional (opened) markets;
- about 25 % is distributed through wholesale markets to retail markets;
- the rest - about 15 % - is distributed through agricultural stock exchange – wholesale markets – retail markets;
- more than 90 % from livestock products are marketed on the domestic market.

The conditions needed to improve the marketing of livestock products in Bulgaria are the following:

The Marketing System in Bulgarian Livestock Production – the Present State and Evolutionary Processes during the Transition Economic Period

- setting prices according to the quality of the livestock products;
- using better methods for the evaluation of the quality of livestock products;
- continuing the process of privatization of processing plants in the agricultural sector;
- improving the marketing structure for livestock products;
- creating an effective marketing information system for agricultural products;
- creating new laws for business contracts between producers;
- to increase product variety;
- to increase the promotion of livestock products.

The main problems presented by agricultural producers and the possible decisions for them are presented as follow:

Problems	Decisions
Low quality of livestock products	Good hygiene, acceptable from international requirements Using of properly technologies for ecological housing of animals Properly store of products Improving of breeding activities
Low wholesale prices of livestock products High retail prices of livestock products	Creating of marketing cooperatives Actively distribution of livestock products to shops and markets Own or rent shops and market stands Possibilities for export of products Good marketing strategy of farms
Lack of appropriate legislation for creating of family (small size)farms	Creating of lobby and suggestions for new laws Changes of recent rules for building of new farms and for transformation of agricultural land for building purposes Creating of professional unions for protection of farmer rights.
Low production of farms	Combine technologies for agricultural production New progressive technologies Employment of specialized managers and workers New breeds and hybrids Energy saving technologies Feed with better quality and FCR
Environmental problems	New technologies in livestock production Combine technologies for agricultural production
Lack of farm machinery and facilities	Cooperative using of farm machinery Using of not high level of facilities Leasing of farm machinery

<p>Lack of working capital</p>	<p>Borrowing from banks Contract farming Leasing Future's contracts Governmental credit lines Joint venture firms Financing from international funds Attending international meetings in order to identify foreign businessmen</p>
<p>Short term tenancy agreements and insecurity of tenure</p>	<p>Negotiation the best balance between rent cost and the rent period Creating of lobby and suggestions for new laws protecting of tenancy contracts</p>
<p>Lack of information</p>	<p>Creating of net for distribution of recent information Creating of system for collection of information Subscription for appropriate magazines, TV information, Internet information Information from Extension Services</p>
<p>Lack of knowledge for agricultural production</p>	<p>Involving in appropriate training courses Employment of managers with specialized qualification Advises from Extension Services</p>
<p>Lack of secure of farm properties</p>	<p>Insurance of animals, buildings, machinery, agricultural products, etc. Using of security systems</p>

5.10. The State of Fish Market

Development of fish farming in Bulgaria as an agricultural activity begins on the end of XIX century. Compared to the other animal husbandry productions it is a new activity. The potential of Bulgarian fish farming is great with the availability of about 70000 ha water area. Within this water area for producing freshwater fish there are dams with more than 30000 ha water area, 3700 ha carp farms, 42.1 ha trout farms and 14.2 ha net cages for raising rainbow trout and carp. The main fish species reared in Bulgaria are carp and rainbow trout. Grass carp, silver carp, and bighead carp were introduced in 1964, and channel catfish was introduced in 1975. Technologies for raising of some marine species were developed in Bulgaria more recently

There are two main periods in the development of fish farming from the point of view of the aims and economic effectiveness. The first period is connected with the need for the development and organization of this new branch of agriculture, with

controlled production of fish and placement on the market of a bigger assortment of fish species. During this period the managers of the state-owned fish farms were not concerned with the concept of marketing the produced fish and fish products, only of meeting state-levied production quotas. There was no thought to applying effective economic estimation of the fish production. The amount of produced fish was regulated only by the capacity and the features of the productive facilities without accounting for the economic effect from this activity.

During the second period the main purpose of the farmers has been to realise a profit. This coincides with the political and economic changes after 1989 and the period of transition to a market economy and with the establishment of many new private producers in fish farming in the period 1996 - 1998. However, in this period the lack of capital, insufficient professional experience, and unregulated markets has resulted in many farms being lost. Fish farming under the conditions of a market economy is dynamic and effective but it is necessary for the new Bulgarian private farmers to optimise the amount of the production in such a manner as to be highly competitive on the market and to have maximal profit for their farms. This will allow intensification of fish production, an increase in its economic effect, and the gradual return to its previous place in the priority branch in the agricultural sector.

Significance for arising of the crisis in fish farming has avoid of the state from the state owned fish farms and stopping of financial support, which confirm the crisis period for Bulgarian fish farming (1993 - 1997). State fish farms were unprepared to react in an adequate manner to the new economic situation in Bulgaria. With the collapse of the national economy, fish farms became unstable economically. The state stopped subsidising their activities and traditional markets for exporting fish were lost (Western European countries). During this period the farms increased storage of the debts to the banks and dramatically decreased total amount of the fish production. At the same time, this amount is difficult to be sold on the domestic market because of significant increases in the prices of fish and fish products, and because of a decrease in consumer demand. As a result of financial bankruptcy some state owned fish farms are selling off part of their possessions and renting their production facilities to individuals, many of whom use them for performing activities other than fish farming.

Thus, many state-owned fish farms are partly disabled or excluded from fish production and therefor fish production for consumption decreased from 15400 tons in 1982 to 4500 tons in 1997. Pointed criteries developed in the base of freshwater fish farming process gives summarised characteristics to first aftermath from the transition to market oriented economics:

- a majority of state-owned fish farms suffering from insolvency or being closed for financial distress;
- transformation of the state and co-operative ownership on the fish producing powerfulness in private one on the way of it privatization with not clear roles.

The analysis of the data collected from different fish farms shows that the economic survival of the fish farms during the transition period to market economy depends completely on an optimal combination of fish production, producing of quality fish

products and their marketing. Fish farmers must organize and optimise the amount of production in their fish farms in such manner as to minimize production risk and to observe the above three activities in a ratio which will ensure high market competitiveness and maximal farm profit. They have to look for new exporting markets in neighboring countries. The additional problems and weaknesses from marketing point of view in the development of fish farming in Bulgaria during the transition period to market economy are as follows:

- lack of working capital and an inability to utilize the achievements of the intensive and superintensive technologies for fish production;
- lack of an integration among fish farming, processing of fish, and marketing of fish and fish products;
- increased competition from foreign markets;
- unrealistic increases in the differences between wholesale and retail prices of fish and fish products;
- underutilization of the distribution outlets of the domestic market;
- lack of the security of ownership of the private farmers;
- low quality of produced fish and fish products;
- weak legislation for security of contracted relations;
- lack of information, which includes data for the market prices, the amount sold fish and fish products and for forecasts of productions;
- lack of organizations of fish farmers (associations, unions, etc.), which will protect their interest on the local, regional and national level;
- no effective extension system in the field of fish farming.

Most importantly, the stability of Bulgarian fish farming development depends on the organizing of effective marketing systems for produced species, which will guarantee appropriate gain for fish farmers and will decrease the risk from price fluctuation. Improvement of the marketing system will reduce the difference between the wholesale and retail prices of fish and fish products, and will enlarge the ability for increasing of the profits of producers. For reducing of production risk in fish farming the state must organize a good information system, which includes data for the market prices, for the amount sold fish, for the number of fish producers, and for forecasts of productions.

To be competitive the private fish farmer must offer on the market not only live and fresh fish, but also high quality fish products. The private co-operatives must build enterprises for processing fish, must create marketing groups, must produce fingerlings and must supply farmers with feeds.

Marketing of the most part of the fish and fish products is in the hands of private fish traders, operating processing and exporting firms, fish shops (owned or rented) and stands in central fish markets. For the analyzes of the marketing policy of fish farming were visited different shops, central markets, and their owners were interviewed. The results show that there are big differences between the wholesale prices on the farm and retail prices in the fish shops (more than 100%). Part of the fish (80% from rainbow trout and 50-60% of carp) were exported in neighboring countries (Yugoslavia, Greece, Macedonia). The farmers who are doing these activities have good results and large farm profits.

The Marketing System in Bulgarian Livestock Production – the Present State and Evolutionary Processes during the Transition Economic Period

Bigger part from fish farmers are small producers (10-30 tons fish annually) and they have to be organized in partnership to have their own shops and in this way to have good prices on the market. It is not necessary for them to wait for wholesalers to visit them, but they have to be active and distribute their production in shops and processing factories.

Marketing of the most part of the fish and fish products is in the hands of private fish traders, operating processing and exporting firms, fish shops (owned or rented) and stands in central fish markets. For the analyzes of the marketing policy of fish farming were visited different shops, central markets, and their owners were interviewed. The results show that there are big differences between the wholesale prices on the farm and retail prices in the fish shops (more than 100%). Part of the fish (80% from rainbow trout and 50-60% of carp) were exported in neighboring countries (Yugoslavia, Greece, Macedonia). The farmers who are doing these activities have good results and large farm profits. During the last few years the development of fish farming is profitable. The example for the average expenses in big fish farms is presented in Table 27.

Bigger part from farmers are small producers (10-30 tons fish annually) and they have to be organized in partnership to have their own shops and in this way to have good prices on the market. It is not necessary for them to wait for wholesalers to visit them, but they have to be active and distribute their production in shops and processing factories.

The Marketing System in Bulgarian Livestock Production - the Present State and Evolutionary Processes during the Transition Economic Period
Table 27. Cash Flow in Fish Farm with Big Capacity of Production

MONTH	I'98	II'98	III'98	IV'98	V'98	VI'98	VII'98	VIII'98	IX'98	X'98	XI'98	TOTAL
INCOME												
Loan	0	0	0	1000000	0	0	0	0	0	0	0	0
Sales: Carp	0	0	0	0	0	0	0	0	0	0	0	0
Carp Fingerlings	0	0	0	0	0	0	0	0	0	0	0	0
Bighead Carp	0	0	175000	75000	0	0	0	0	900000	750000	150000	1800000
Services	20000	0	0	0	0	0	0	0	0	0	0	250000
TOTAL INCOME	5500	5500	5500	5500	5500	5500	5500	5500	5500	30000	210000	300000
EXPENSES												
Fingerlings:												
Carp Fingerlings	25500	5500	180500	1080500	5500	5500	5500	5500	5500	945500	785500	3418000
Bighead Fingerlings	0	0	125000	0	0	0	0	0	0	0	0	125000
Grass Carp Fingerlings	0	0	15000	20000	0	0	0	0	0	0	0	35000
Feed:												
Fingerlings:	0	0	0	0	0	0	0	0	0	0	0	0
Starter Feed	0	0	0	0	0	2100	0	0	0	0	0	0
Pellets	0	0	0	0	0	6000	15000	24000	12000	6000	0	2100
Ongrowing Fish	0	0	0	0	0	0	0	0	0	0	0	0
Pellets	0	0	0	0	0	0	0	0	0	0	0	0
Grain	0	0	0	27200	61200	108800	90000	80000	55200	0	0	422400
Vet Expenses	0	0	0	0	0	0	0	0	0	0	0	0
Salary Full Time	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	12000
Salary Part Time	750	750	750	750	750	750	750	750	750	750	750	7200
Salary Taxes	2835	2835	2835	2835	2835	2835	2835	2835	2835	2835	2835	5250
Electricity	5000	5000	5000	7000	7000	7000	7000	7000	7000	7000	7000	32445
Transport	5000	5000	5000	7000	7000	7000	7000	7000	7000	7000	7000	80000
Insurance	0	0	0	0	0	0	0	0	0	0	0	0
Repairing Machinery	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	30000
Repairing Buildings	0	0	0	0	0	0	0	0	0	0	0	0
New Buildings	0	0	0	0	0	0	0	0	0	0	0	0
Telephone	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	12000
Other	500	500	500	500	500	500	500	500	500	500	500	6000
Interest Bank Loan	0	0	0	16666.67	16666.67	16666.67	16666.67	16666.67	16666.67	15772.21	14844.45	13916.67
Bank Loan	0	0	0	0	0	0	0	0	0	0	0	55555.56
TOTAL EXPENSES	23685	23685	167585	98451.67	107386.7	160096.7	170186.7	197186.7	130386.7	55555.56	56555.6	144533.3
MONTHLY BALANCE	1915	-18085	12915	982048.3	-101886.7	-154596.7	-164896.7	-191686.7	-124886.7	840567.2	687515	268442.7
Q.M. MONTHLY BAL.	126,915	108,830	121,745	1,103,783	1,001,907	847,320	682,833	480,947	368,080	1,206,847	1,894,162	2,037,805
OPEN BALANCE												
Initial Bank loan 20%												
Annual Proceeds	0	0	0	1000000	1000000	1000000	1000000	1000000	1000000	944444	888889	833333.4

Cash Flow is in DM

ACKNOWLEDGMENTS

The first stage of the survey could not succeed without the active cooperation of many persons, to whom we are deeply obliged.

First I would like to mention Prof. Frank Brewer, Michigan State University, Assoc. Prof. Terry Obert, Ph.D., Assoc. Prof. Charlie Forrest, Ph.D. and Ass. Prof. Michael Newman, PhD, Mississippi State University, USA, and to thank them for their guidance and advises, contributed greatly to the preparation of the questionnaire.

Prof. Avram Petkov, Ph.D., Dean of Agricultural Faculty, Thracian University, Stara Zagora, Bulgaria made everything run smooth with his administrative arrangements.

All agricultural producers, the staff of Research Institutes, statistical centers and Ministry of Agriculture, Forestry and Agrarian Reform who supplied the needed information for the development of this project are acknowledged.

The authors would like to acknowledge the William Davidson Institute at the University of Michigan Business School, USA for financial support for the development of the present project. Thanks also of Martha Lee and Sharon Nakpairat for kindly support during the project period.

Finally I would like to thank to the research assistants for their contribution in the process of data collecting from the Ministry of Agriculture and Bulgarian Statistical Institute.

APPENDIX A

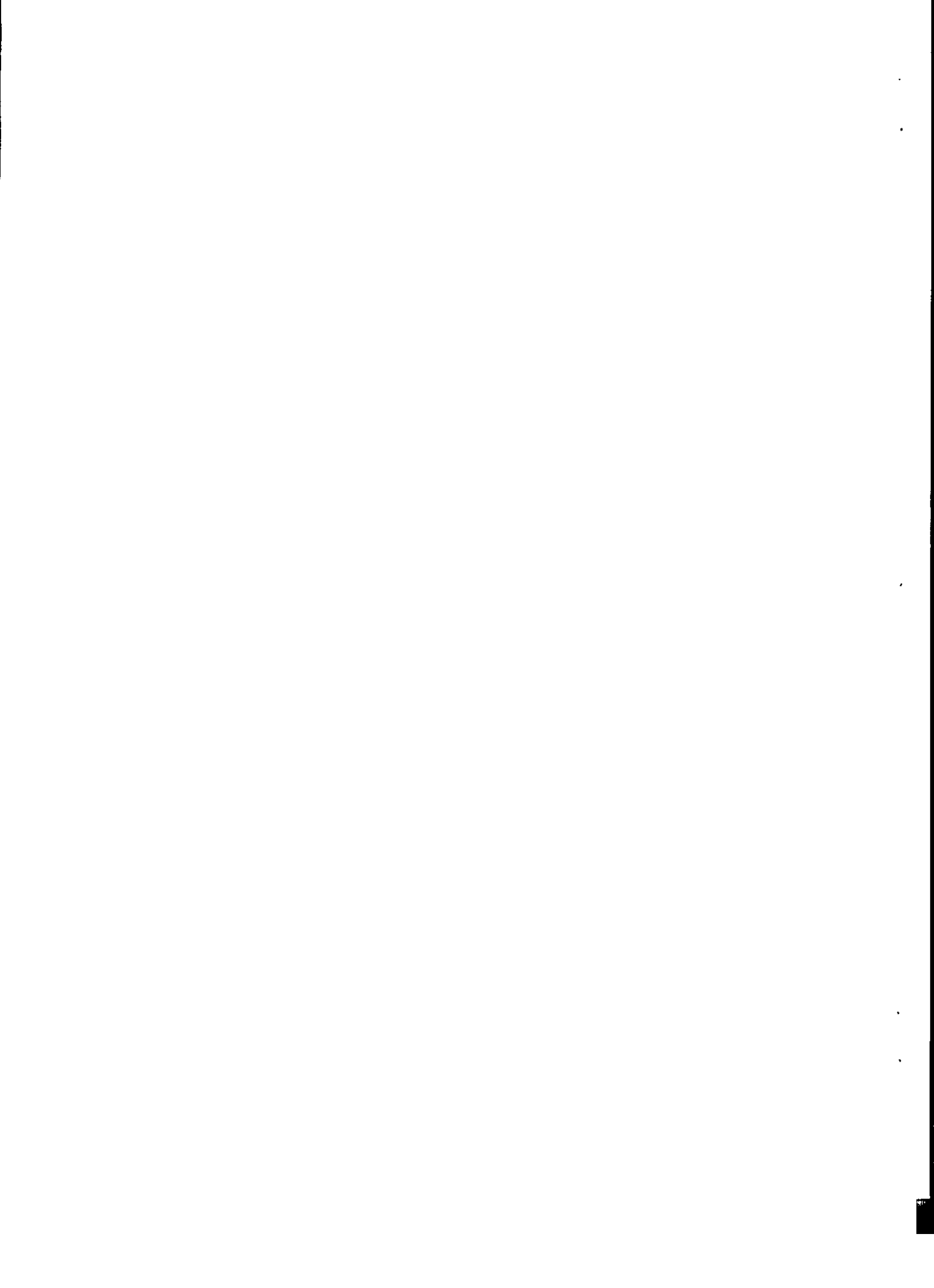
**THE WILLIAM DAVIDSON INSTITUTE
UNIVERSITY OF MICHIGAN BUSINESS SCHOOL, USA**

P R O J E C T:

**"THE MARKETING SYSTEM IN BULGARIAN LIVESTOCK PRODUCTION -
THE PRESENT STATE AND EVOLUTIONARY PROCESSES DURING
THE PERIOD OF ECONOMIC TRANSITION"**

OCTOBER 1996 - SEPTEMBER 1998

**TO BE ADMINISTERED
BY THE AGRICULTURAL FACULTY,
THE THRACIAN UNIVERSITY,
STARA ZAGORA, BULGARIA**



MARKETING SYSTEM IN LIVESTOCK PRODUCTION

The following questions attempt to determine what marketing system is used by you on your farm production cycle. By answering the questionnaire you will contribute to a better understanding of the recent marketing problems in your farm. Your opinion for these problems, your proposals and our professional vision will be used to analyze the advantages and disadvantages of the marketing system in livestock production. All these will be used for the development of a marketing model for the success of your farm during the transition period to market economy. The information that you provide will be strictly confidential.

Thank you for your time and your effort in responding to this survey.

Name of person interviewed _____

Position in the farm _____

Farm _____

Address _____

A. WHAT IS YOUR BRANCH OF AGRIBUSINESS:

(PLEASE FILL IN THE BLANK)

			% cash receipts
1. Cattle farming	___ Yes	___ No	___
2. Sheep farming	___ Yes	___ No	___
3. Pig farming	___ Yes	___ No	___
4. Poultry farming	___ Yes	___ No	___

8. How many part time employees does the farm use ?.....
.....
9. How long do you use them ?.....
10. What is the production capacity of your farm ?.....
.....
11. What part of this capacity do you use ?.....
.....
12. Why don't you use all this capacity ?.....
.....
.....

C. DESCRIPTION OF THE FARM PRODUCTION:

(PLEASE FILL IN THE BLANK) :

1. What are the farm's product(s) ?.....
.....
2. On which product(s) will the farm focus ?.....
.....
3. What are the major inputs required for production ?..
.....
4. What do these inputs cost now ?.....
.....
5. What did you pay for them last year ?.....
.....
6. Who are your principal suppliers of inputs and what
proportion of the total inputs do they supply ?.....
.....
7. What are your terms of payment to your suppliers ?...
.....
8. Are these major suppliers private or state

owned companies?.....
.....
.....

9. If they are state owned will they be privatized in
near future ?.....
.....

10. Do you have any long term contracts with your
suppliers for your animal production ?.....
.....

11. What level of stocks of unfinished goods are normally
kept, as a percentage of production ?.....
.....

12. Description of the principal production facilities
and their respective functions ?.....
.....
.....
.....
.....
.....
.....

13. Description of the farm equipment ?.....
.....
.....
.....
.....
.....
.....
.....
.....

D.ADDITIONAL QUESTIONS:

(PLEASE FILL IN THE BLANK)

1. How many farmers from your branch are there in your region ?.....
2. What categories of animals from your branch are farmed in your region ?.....
3. What systems of farms are represented in your region extensive, intensive, superintensive ?.....
4. Which of these farms are most prevalent ?.....
5. How many processing factories are there in your region?.....
6. How far is the nearest processing factory from your farm?.....
7. Do you have your own processing facilities ?
 Yes No
8. How many feed distributors are there in your region?
9. How far are they from your farm ?.....
10. Do you have your own production of feed ?
 Yes No
11. How many suppliers of equipment for farms are there in your region ?.....
12. How far are they from your farm ?.....
13. Are there consulting services in your region ?.....

14. Do you use these services ?

___ Yes

___ No

15. How many times per year do you use them ?.....

.....

16. How long have you been in this business ?.....

.....

17. How are your prices established for animals and
animal products ?.....

.....

.....

.....

18. How often do you make pricing decisions for your
production (circle one) ?

(a) once a year

(b) twice a year

(c) quarterly

(d) monthly

19. How have these prices fluctuated in the last 12
months ?.....

.....

.....

.....

20. Is there a demand for the animals you plan to farm in
your region ?.....

.....

21. What are the farm's principal markets ?.....

.....

.....

22. Which companies and organizations are your major
customers ?.....

.....

23. How many customers do you have locally ?.....

.....

24. Where are your wholesale and retail markets ?.....
.....

25. Did you have any export sales ?

____ Yes ____ No

26. What is the approximate percentage of your animal production which was exported in 1995 and 1996 ?

Species (please specify)	% of export	
	1995	1996
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

27. Where are your principal export markets ?.....
.....
.....

28. Who is the largest single customer for your production ?.....
.....

29. Who are the farm's chief competitors ?.....
.....
.....

30. From which competitors does the farm propose to take market share ?.....
.....

31. How do the farm's products compare to those of their competitors - are they less expensive, better; have they more flexible production schedules ?.....
.....
.....
.....

32. How are the products marketed - through one or more

wholesale distributors or by the farm's own sales force ?

33. How many people work on marketing and how are they organized ?.....

34. Do you plan to produce new product(s) in the next two years (please specify) ?.....

35. Why did you choose these to be your new product(s) ?

36. What promotional plan will be used to introduce new product(s) to the market ?.....

37. How have the government laws affected your decisions for the marketing of animals and animal products the last two years ?.....

38. What are the main problems for the marketing of your animal production ?.....

39. Are you satisfied with your present methods of marketing your production ?

____ Yes ____ No

47. How many of the total hectares that you farm do you own ?

_____ ha

48. What is the renting price of the rented land ?

_____ lv/ha

49. How many animals did you produce in (no. of head):

Category:	1995:	1996:
.....	-----	-----
.....	-----	-----
.....	-----	-----

50. What was the average selling weight of your animals?

Category:	1995:	1996:
.....	---	---
.....	---	---
.....	---	---

51. Did you make a profit from your farm in 1995 and 1996?

_____Yes _____No

52. Do you expect to increase the profit from your farm in 1997 ?

_____Yes _____No

THANK YOU VERY MUCH FOR YOUR HELP !

NOTICE:

lv = Leva (Bulgarian currency)

APPENDIX B

aquaculture specialists to evaluate the present state of the farm. After that he developed a business plan and identified the short- and long-term goals of the farm.

IMPROVING PRODUCTION

In the end of 1995 the main restructuring work in the fish farm "Tundja-73" was done. The manager developed a new structure for management of the farm's human resources. The manager's background was in fish production technologies so he was able to improve the production process on his farm. Until 1989, the farm used very intensive and investment consuming technologies to produce maximum fish production annually. To make the production more efficient the manager and others on the management team applied less intensive technology, called semi-intensive, using smaller stock densities of growing fish. This production system decreased costs and helped reduce the number of salaried workers. At the same time it permitted production of a bigger size of carp species which could be supplied to the market earlier than other fish farms. With the production of bigger sized carps, the farm was able to export a significant part of its production to neighboring countries, where the demand is for bigger sized fish. The manager offered long-term contracts to smaller fish producers who were only growing market sized fish to supply them with fingerlings if they would sell back their fish to the fish farm "Tundja-73" (Fig. 2).

This increased the power of the farm and it had a possibility to supply the markets with a big amount of different carp species and different graded fish with different quality for satisfying different customers.

In the process of improving the production, the stock densities of growing fish was decreased and the yield from one hectare was decreased also. However, the profit of the farm was increased because the semi-intensive technologies permitted largest part of the total yield of fish to come from using the natural food in the ponds, thus decreased the amount of artificial feeds, used in the farm.

Further improvements in the production process were made by the manager, who developed a program for training his workers to improve their skills as fish producers. According to the manager, one of the most important contributions to the farm's turnaround was the savings obtained by a reduction in salaried staff. The number of administrative staff was reduced and one specialist became to be responsible for more the activities on the farm. The number of workers was also reduced and a scheme was developed to make it the individual responsibility of the fish producers for growing of the fish in their ponds (Fig. 3). They also had obligations for transportation activities for the farm products.

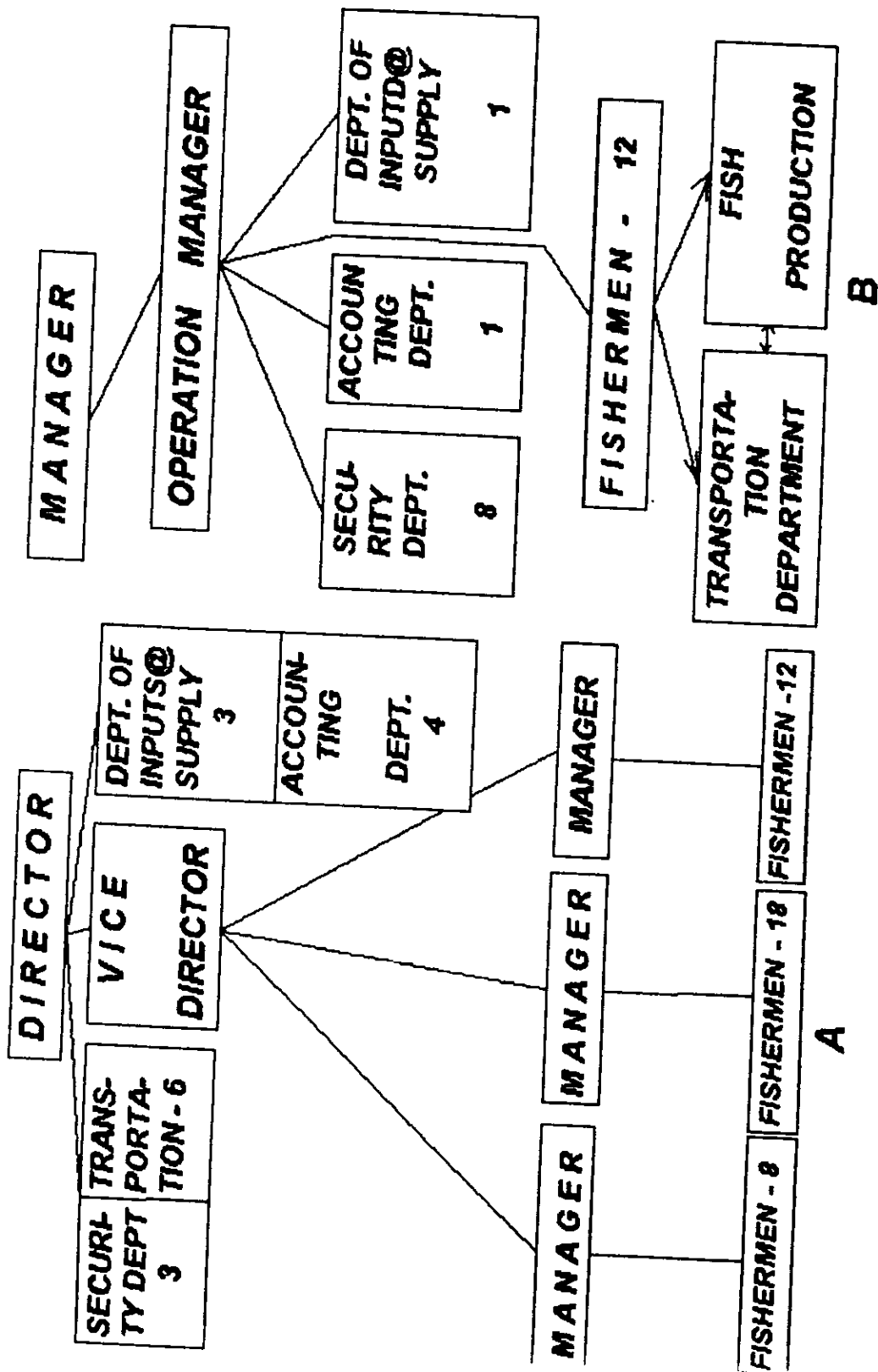


Fig. 3. Organisation chart: A. State owned fish farm B. Private fish farm

FINANCIAL PERFORMANCE

The fish farm "Tundja-73" was privatized through the governmental privatization program for 75 500 000 lv. In 1997 the farm received a loan from the private bank in the amount of 136 000 000 lv. The management team decided to increase the intensity of restructuring of the facilities and to build new ones. The manager increased also the intensity of the production technology and invested part of the money in this direction.

The fish farm's net sales and profitability were improved during the years 1996-1998. Net income in these years was stable, except the starting year 1996 of the private farm when the net income was negative. After the privatization, the fish farm "Tundja-73" turned around its activities and in the period of 1996-1998 it had a good profit from fish production, and in the same time the management team had a success to restructure the farm and to apply profitable technology for growing of fish (Tables 1-3).

MARKETING STRATEGY

The fish farm "Tundja-73" marketing strategy was to expand the production of different species of fish and fish products and to supply a bigger share on the market. In the same time the manager centered his efforts on development of a better scheme for the production of fingerlings, because in this time there was a big demand from the other fish farms for fingerlings.

In the first production year the private fish farm concentrated its efforts on successfully selling all produced fish, alive or fresh, without additional processing. The improvement in the fish production, and the increase in the farm's profit permitted the farm to own a chain of shops to sell the fish, and to build a small processing factory in the region of Stara Zagora. The farm increased its share of the domestic market and supplied different groups of customers. In this period the fish farm "Tundja-73" developed new markets in Serbia, Macedonia, Greece, Belgium for exporting a significant part of its fish production (Fig. 4).

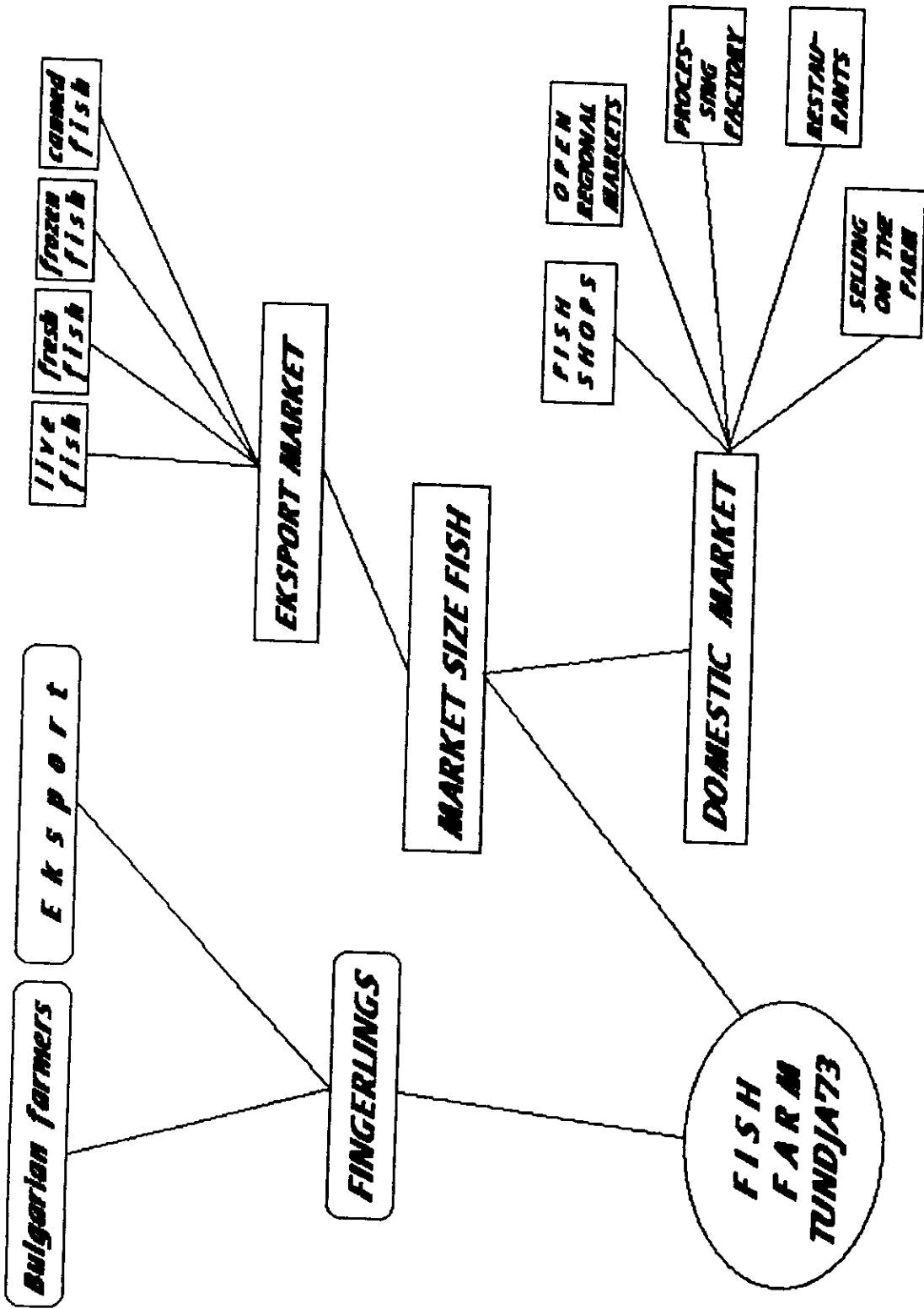


Fig. 4. Distribution channels of fish farm "Tundja - 73"

THE FUTURE

The fish farm "Tundja-73" turnaround from a state-owned structure to a private one, and the profitable business of the private fish farm in the period 1996-1999 caused the farm to be viewed as an example of what can be accomplished from the change of the property and from the personnel management techniques. The manager knew that they needed positive changes in the production program and in the management of human resources. He developed a new program for expanding the production of fish and fish products. For increasing the share on the domestic and international markets, the manager understood that he had to change the narrow market segment in supplying the market only with fresh and live fish. He built a processing factory and expanded the production of different fish products.

Since 1989 many Bulgarian fish farms have been in bankruptcy, but the fish farm "Tundja-73" with the recent manager at the helm was able to restructure and become a profitable business in fish production. The fish farm "Tundja-73" continued to follow the way ahead.

Acknowledgments

The authors would like to acknowledge the William Davidson Institute at the University of Michigan Business School, USA for financial support for the development of present case study.

Table 1

INCOME STATEMENT

Year ending 30 March, 1996

INCOME:

Fingerlings	-	0
Market size fish:		
- common carp	-	22 500 000
- bighead carp	-	0
- grass carp	-	0
TOTAL INCOME:	-	22 500 000

EXPENSES:

Inventory Change	-	22 500 000
Fingerling:		
common carp	-	0
bighead carp	-	0
grass carp	-	0
Feed:		
market size fish	-	0
fingerlings	-	0
broodstock	-	0
Medication	-	0
Labor base wage	-	0
Social Security	-	472 000
Turnover Tax	-	165 375
Electricity	-	875 000
Truck expense	-	675 000
Insuarance	-	500 000
Telephone	-	60 000
Interest bank loan	-	0
Interest state loan	-	0
Start-up expense-buy	-	2 000 000
Depreciation	-	1 011 364
TOTAL EXPENCES	-	28 258 739
NET INCOME	-	(5 758 739)

BALANCE SHEET

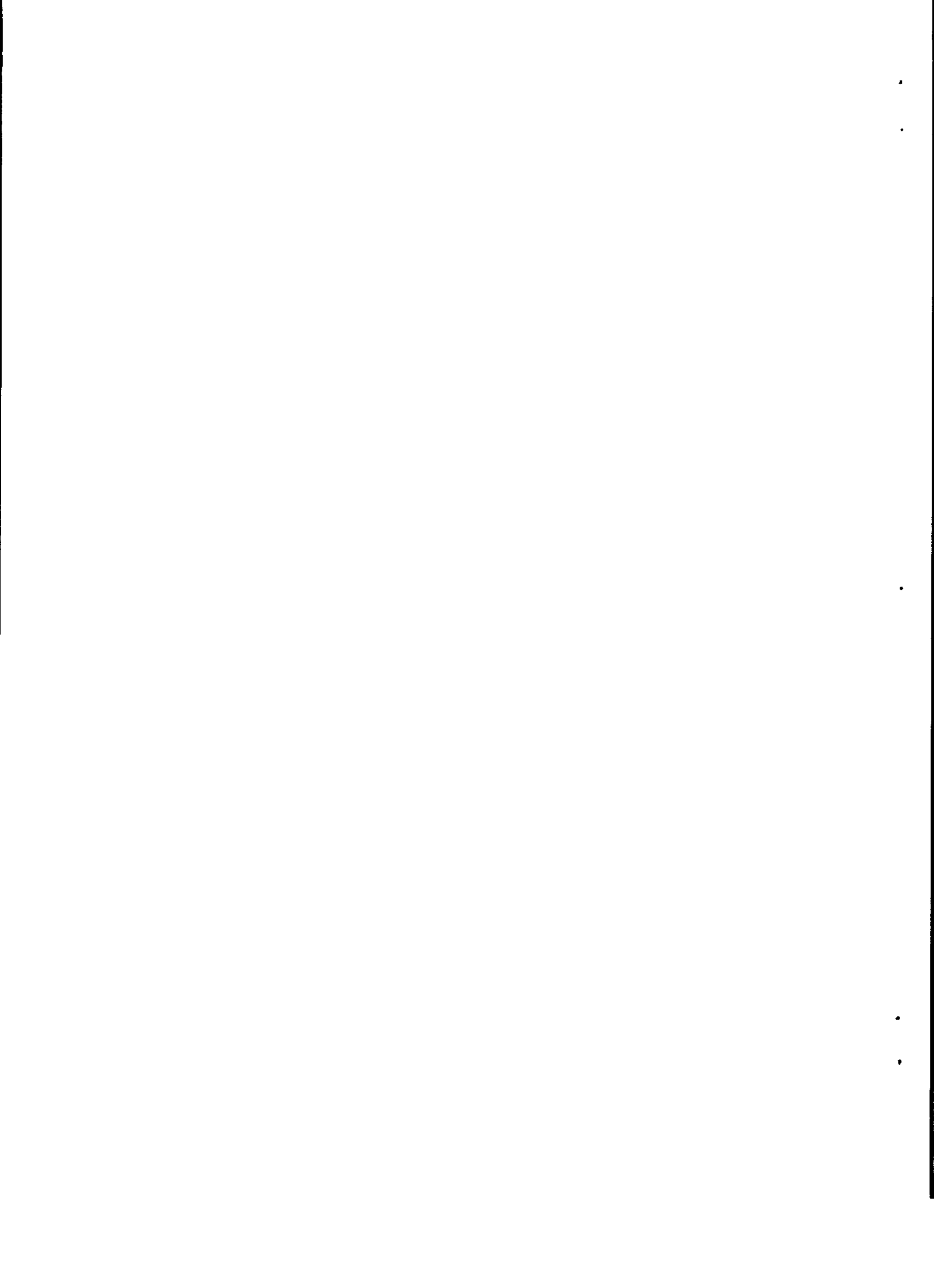
Year ending 30 March, 1996

ASSETS

Current Assets		
Cash	-	16 902 125
Fingerlings	-	30 000 000
Market size fish	-	0
Accounts receivable	-	0
TOTAL CURRENT ASSETS	-	46 902 125
Fixed Assets		
Building&equipment	-	10 000 000
Less accum.depr.	-	1 011 364
Net build.&equip.	-	8 988 636
Capitalized lease	-	32 500 000
Trucks	-	0
TOTAL FIXED ASSETS	-	52 500 000
TOTAL ASSETS	-	99 402 125

LIABILITIES AND EQUITY

LIABILITIES		
Long term debt		
owed to banks	-	20 000 000
Balance owed		
to state	-	0
Bank loan	-	0
Accounts payable-		0
TOTAL LIABILITIES	-	20 000 000
EQUITY		
Owners init.equity-	75 500 000	
Retained earnings	-	0
Current year earn-	(5 758 739)	
TOTAL EQUITY	-	69 741 261
LIAB & EQUITY	-	89 741 261



INCOME STATEMENT

Year ending 30 March, 1997

INCOME:

Fingerlings	- 13 500 000
Market size fish:	
- common carp	- 97 386 017
- bighead carp	- 14 037 624
- grass carp	- 3 509 406
TOTAL INCOME:	-128 433 047

EXPENSES:

Inventory Change	-	0
Fingerling:		
common carp	- 14 485 500	
bighead carp	- 1 740 000	
grass carp	- 290 000	
Feed:		
market size fish	- 17 110 997	
fingerlings	- 3 150 000	
broodstock	-	0
Medication	- 1 000 000	
Labor base wage	- 2 640 000	
Social Security	- 924 000	
Turnover Tax	- 323 400	
Electricity	- 1 750 000	
Truck expense	- 5 628 285	
Insuarance	- 1 000 000	
Telephone	-	120 000
Interest bank loan	- 8 160 000	
Interest state loan	- 2 519 564	
Start-up expense-buy	-	0
Depriciation	- 4 330 031	
TOTAL EXPENCES	- 65 171 777	
NET INCOME	- 63 261 270	

BALANCE SHEET

Year ending 30 March, 1997

ASSETS

Current Assets	
Cach	- 191 204 975
Fingerlings	- 24 841 082
Market size fish	-
Accounts receivable	-
TOTAL CURRENT ASSETS	- 216 046 057
Fixed Assets	
Building&equipment	- 78 780 000
Less accum.depr.	- 5 341 394
Net build.&equip.	- 73 438 606
0	
Capitalized lease	- 32 500 000
Trucks	-
TOTAL FIXED ASSETS	- 190 060 000
TOTAL ASSETS	- 406 106 057

LIABILITIES AND EQUITY

LIABILITIES	
Long term debt	
owed to banks	- 10 879 170
Balance owed	
to state	-
Bank loan	-136 000 000
Accounts payable-	0
TOTAL LIABILITIES	-146 879 170
EQUITY	
Owners init.equity-	75 500 000
Retained earnings -	(5758739)
Current year earn	- 63 261 270
TOTAL EQUITY	- 133 002 531
LIAB & EQUITY	- 279 881 701

Table 3

INCOME STATEMENT

Year ending 30 March, 1998

INCOME:

Fingerlings	- 13 500 000
Market size fish:	
- common carp	- 97 386 017
- bighead carp	- 14 037 624
- grass carp	- 3 509 406
TOTAL INCOME:	-128 433 047

EXPENSES:

Inventory Change	-	0
Fingerling:		
common carp	- 14 485 500	
bighead carp	- 1 740 000	
grass carp	- 290 000	
Feed:		
market size fish	- 17 110 997	
fingerlings	- 3 150 000	
broodstock	-	0
Medication	- 1 000 000	
Labor base wage	- 2 640 000	
Social Security	- 924 000	
Turnover Tax	- 323 400	
Electricity	- 1 750 000	
Truck expense	- 5 628 285	
Insurance	- 1 000 000	
Telephone	- 120 000	
Interest bank loan	- 8 160 000	
Interest state loan	- 664 554	
Start-up expense-buy	-	0
Depreciation	- 4 330 031	
TOTAL EXPENCES	- 63 316 767	
NET INCOME	- 65 116 280	

BALANCE SHEET

Year ending 30 March, 1998

ASSETS**Current Assets**

Cash	- 288 083 187
Fingerlings	- 20 759 547
Market size fish	- 0
Accounts receivable	- 0
TOTAL CURRENT ASSETS	- 308 842 734

Fixed Assets

Building&equipment	- 78 780 000
Less accum.depr.	- 9 671 425
Net build.&equip.	- 69 108 575
Capitalized lease	- 32 500 000
Trucks	- 0
TOTAL FIXED ASSETS	- 190 060 000
TOTAL ASSETS	- 498 902 734

LIABILITIES AND EQUITY**LIABILITIES**

Long term debt		
owed to banks	-	0
Balance owed		
to state	-	0
Bank loan	- 125 214 971	
Accounts payable-		0
TOTAL LIABILITIES	- 125 214 971	

EQUITY

Owners init.equity-	75 500 000
Retained earnings -	99 605 492
Current year earn-	110 130 845

TOTAL EQUITY	- 285 236 337
LIAB & EQUITY	- 410 451 308