

## Agricultural reform, markets and prices in Bulgaria

Mishev P., Tzoneva M., Ivanova N.

*in*

Mergos G. (ed.).

Agricultural price reform under transition in Bulgaria, Romania, and Slovenia

Chania : CIHEAM

Options Méditerranéennes : Série B. Etudes et Recherches; n. 22

1998

pages 36-50

Article available on line / Article disponible en ligne à l'adresse :

<http://om.ciheam.org/article.php?IDPDF=CI01.02.38>

To cite this article / Pour citer cet article

Mishev P., Tzoneva M., Ivanova N. **Agricultural reform, markets and prices in Bulgaria.** In : Mergos G. (ed.). *Agricultural price reform under transition in Bulgaria, Romania, and Slovenia.* Chania : CIHEAM, 1998. p. 36-50 (Options Méditerranéennes : Série B. Etudes et Recherches; n. 22)



<http://www.ciheam.org/>  
<http://om.ciheam.org/>

# AGRICULTURAL REFORM, MARKETS AND PRICES IN BULGARIA

Plamen Mishev, Maria Tzoneva, and Nedka Ivanova

---

## ABSTRACT

This paper examines the changes that have taken place in the economy and agriculture of Bulgaria since the beginning of the transition, in particular the macro-economic developments, the process of agricultural reforms, the liquidation of collectives, the restructuring of upstream and downstream industries, the liberalisation of agricultural prices and the development of agricultural markets. Agricultural reform has been radical, with land returned to previous owners and the liquidation of the collectives. However, support for newly-emerging private farmers has been limited, restructuring of upstream and downstream industries was delayed, and market development lagged. This led to a substantial decrease in agricultural production, inefficient operation of markets, and significant decline in consumption.

## Keywords:

BULGARIA, TRANSITION ECONOMIES, AGRICULTURAL POLICY

---

## 1. Introduction

The transition process towards a market economy, which has been underway since 1990, has been accompanied by a strong economic recession. Bulgaria has a traditionally strong agricultural sector and at the beginning of the transition agriculture was seen as an engine for the recovery of the economy. Now, several years after the reform began, less is expected of agriculture, but its role in the national economy and social life of the country is still enormous.

Agriculture contributes significantly to the Bulgarian GDP and provides employment for nearly a quarter of the national workforce. It is a very important sector for the generation of exports. A large part of the Bulgarian population is surviving the current economic difficulties through on-farm consumption. There is also an important flow of agricultural products via a short marketing chain from the rural zone to the towns, which supports urban dwellers during the crisis.

Agriculture has an important role to play in the process of the integration of Bulgaria into the EU. As a sensitive sector for both the EU and Bulgaria, the transformation and changes in agriculture during the pre-accession process are of crucial importance.

The transformation process has created a unique farming structure and a need for new approaches to agricultural policy. The transition from a centrally-planned to a market economy is a unique process which constitutes an interesting research area in all its aspects. The objectives of this chapter are: (i) to examine the macroeconomic framework in which Bulgarian agriculture is developing, (ii) to monitor agricultural reform in Bulgaria and to examine its main elements, which are land reform and the liquidation of collectives, restructuring and privatisation of upstream and downstream industries, price and trade liberalisation, and the development of market infrastructure, and (iii) to analyse the current situation of agricultural markets with emphasis on the detailed examination of measures of price policy and price movements, structure and dynamics in the transitional period.

## 2. Macroeconomic Framework

The process of transition towards a free market economy, which has been underway since 1990, has been accompanied by a strong economic recession (Table 1). During the period 1990-1993 Bulgaria experienced a negative economic growth with a decrease in GDP of 27%. 1994 was the first post-reform year in which a positive growth was registered in Bulgaria; GDP increased by 1.4%. The positive economic growth continued in 1995 and was even higher than in 1994, at 2.5%. The growth trend changed again in 1996. Delayed structural reforms, heavy internal and external debt and inadequate policy measures are some of the reasons for the negative growth of 9%.

Bulgaria has been more affected by the collapse of the previous system and trade arrangements than the other CEECs, because of the high level of integration it used to enjoy within the CMEA. In addition to this the reforms are relatively slow and inconsistent, strongly influenced by the inertia of the centrally planned system. Crucial policy measures are delayed. Privatisation of large State-owned industrial enterprises and the continuation of relatively mild constraints have increased the internal debt, which by the end of 1995 reached 343 billion leva and accounted for 40% of GDP. This debt was due to a great extent (50%) to the transformation of the bad debts of State-owned enterprises into a State debt, and to the financing of the budget deficit (39%). This neutralised the effects of successful negotiation for the rescheduling of international commercial debts and of the tight policy on salaries in the public sector.

Inflation was generally high during the whole post-reform period. After a certain slowing-down was achieved in 1995 the enormous State deficit (113% of GDP in 1995) has increased inflation dramatically in 1996 to 310.8%.

The crisis was accompanied and to a certain extent even accelerated by the crisis in the financial sector. State banks still prevailing in the sector had to keep granting loans to loss-making State-owned enterprises. Nor was their credit policy towards the private sector prudent. As a result they accumulated a great number of bad debts and in 1996 the liquidity of many of them ran out. At the beginning of 1996 half of the 40 banks in Bulgaria had a negative balance of capital and 75% of their loans are classified as bad loans.

The socio-economic situation is difficult, with high unemployment and continuous erosion of purchasing power due to high inflation. The increase in food prices was stronger than that for other goods. For a large part of the population the living standards continue to decline, and poverty affects a significant part of it, although production on household plots permits on-farm consumption and thus eases the situation of many families.

At the beginning of 1997 the deteriorating economic and social situation in the country gave rise to great social tension and a turn to more radical economic reforms. With the assistance of the IMF the currency board was introduced on 1<sup>st</sup> July, 1997; the first results are positive. The macroeconomic situation has been stabilized. Nominal interest rates and inflation have substantially decreased. The banking system is now more stable and the controls on the banks have increased. Certain improvements can be observed in the system of collection of taxes and duty and as a result the State deficit has decreased. The process of privatization has accelerated and market speculations and disorder are less extensive.

Table 1 - Some macroeconomic indicators

	1990	1991	1992	1993	1994	1995	1996
GDP (mill lv)	45,389.8	135,711	200,832	298,934	548,015	871,396	1,660,237
Agriculture (mill lv)	8,055	20,735	22,940	28,682	60,184	111,041	188,833
Food industry (mill lv)	NA	15,008	18,826	16,001	29,045	NA	NA
CPI index	123.79	538.50	179.50	164.00	221.9	132.9	510.8
GDP deflator*	126.2	358.9	168.9	158.7	183.2	149.7	NA
<b>Share of agriculture and food industry in GDP (%)</b>							
Agriculture	17.75	15.28	11.42	9.59	10.98	12.74	11.7
Food industry	NA	11	9	5	5	NA	NA
<b>EXPORT</b>							
Exchange rate (lv/US\$)	0.876	16.678	23.339	27.648	54.247	67.168	175.821
<b>Share of agricultural and food industry exports in total of exports (%)</b>							
Crops	2.2	2.45	4.34	1.82	3.23	4.19	1.72
Livestock	0.49	1.02	2.81	1.32	1.44	0.62	0.76
Food industry	12.39	18.43	18.63	17.27	17.38	16.89	16.51
<b>IMPORT</b>							
<b>Share of agricultural and food industry imports in total of imports (%)</b>							
Crops	0.87	2.86	0.51	1.33	1.37	0.9	1.5
Livestock	0.09	0.02	0.15	0.12	0.18	0.12	0.07
Food industry	3.39	4.36	6.7	8.06	9.24	6.9	5.7

\* Angelov I. et al. (1996). The Economic Outlook of Bulgaria up to 1998, in the newspaper "Pari", 05.03.1996

Source: "Statisticheski godishnic", 1990-1994, NSI, Sofia, "Statisticheski spravochnik", 1996, Statisticheskio izdatelstvo, Sofia

### 3. Agricultural Reform

#### 3.1. Structure and resources of agriculture in the pre-reform period

Historically, Bulgaria has always had a strong agricultural sector. The country is well-endowed with natural resources for agriculture and has some of the most potentially productive land in Eastern Europe. Of its 11.1 million Ha, 6.2 million Ha are used for agriculture. Most cultivable land is located along the Danube River, in the valley of the Maritsa River and along the Black Sea coast. The climate ranges from a continental one along the Danube, to a more Mediterranean-type one towards the Greek border and along the Black Sea coast. The annual rainfall ranges from 400 mm to 700 mm. More than two-thirds of the 4.7 million Ha of cultivated area have fertile soils, with 28% of these equipped for irrigation.

Crop production is dominated by grain and pulses, accounting for about 36% of the area cultivated, fodder (15%), industrial crops and tobacco (7%), vegetables (3%), and perennials (5%). The main activities in animal production are dairy, pig and poultry production.

At the end of the socialist period and the beginning of the transformation, agriculture provided 18% of total GDP and employed 18% of the active labour force (1990). The development of Bulgarian agriculture was subject to the meeting of objectives similar to those pursued by the other socialist countries. Self-sufficiency in food was an important goal, and the generation of an agricultural surplus a high priority. With a surplus, it becomes possible for agriculture to provide food for people in other sectors, for farm workers to migrate to urban industry, for import substitution and exports to improve the trade balance, and for savings extracted from agriculture to fuel industrial investments. These goals were pursued through centrally determined prices, indicative planning targets and physical quotas, and collectivisation. The Government managed the system entirely, leaving little of the decision-making where crops or livestock were concerned to farmers. Consumers also had scant choice, for most food products were in short supply at given prices.

Two periods can be defined in the development of Bulgarian agriculture during the period of the centrally-planned economy. In the period 1956-1983 total production at constant prices doubled, resulting in an annual average growth rate of 2.6%. After 1983 agricultural production and yields

generally declined. (Table 2)

**Table 2 - Growth in the production of representative crops, 1982-89 (% per annum)**

	Production	Yields
Wheat	2.5	-4.8
Maize	-7.0	-10
Barley	0.5	-5.9
Sugar beet	-7.6	-11.7
Vegetables	0.2	-6.5
Tobacco leaves	-3.2	-5.5
Grapes	-3.3	-8.3

The yields of most crops and the results of livestock production were well below those of Bulgaria's main competitors on the world market. In the livestock sector increasing yields in milk and eggs have been sufficient to offset a major decline in the cow and hen populations. In the case of wool and beef, however, modest increases in yield from sheep and cattle were insufficient to compensate for declines in the national herds; production fell from the mid-1980s onwards. The agricultural trade balance worsened. For the period 1980 - 1987 the positive trade balance for agricultural products decreased from 1.325 million to 617 million US\$. Annual wages paid to agricultural workers and employees were 14% lower than the earnings of similar labourers in the industrial sector (not including the incomes from private plots). The centrally guided investments in agriculture decreased from 12.4% of the total investment in the economy in 1980 to 8.3% in 1989. The intensification of production on the unchanged technological base resulted in a decrease in the technical efficiency of agricultural production and an increase in material cost per unit of production.

At the end of the 1980s it was clear that agriculture had to be transformed along with the whole economy. The negative trends described above could not be overcome through traditional centrally-planned economic measures.

At least three measures were needed for the transformation. These were: (i) privatisation, (ii) price liberalisation, and (iii) the creation of a market infrastructure. Privatisation leads to clearly defined property rights over land and other resources. This could ensure adequate economic and effective functioning of the major production factors - land, labour, capital and management.

Price liberalisation would create the right channels for the transmission of market signals to producers. Established on a commodity-by-commodity basis and on a cost-plus principle, the prices of agricultural products in the centrally-planned economy were incompatible with international prices. Another negative effect of the socialist price system was the way of pricing of the resources. They were not valued on an opportunity cost principle and their allocation was not made according to the variations in their relative prices in different contexts. The decisions about what, how, and how much to produce were taken by the Communist party and the Government, which created substantial structural imbalances in the centrally-planned economy.

The transformation of agriculture requires the creation of a market environment, including: (i) the abolition of commodity monopoly organisations, which were responsible for domestic and foreign marketing of agricultural commodities, (ii) trade liberalisation, (iii) the establishment of market institutions - commodity exchanges, wholesale markets, etc. and (iv) the creation of a market information system.

### **3.2. Agricultural policy during the transition**

The reforms started in 1990 were accelerated from the beginning of 1991. The major agricultural policy objective has been to create a decentralised agriculture based on private ownership of land and privatised and competitive input supply, processing and marketing sectors. Farming in a market economy requires a clearly-defined legal framework. Farmers must have access to resources and technologies; they require price incentives and a sufficient income and they need suitable

infrastructures, institutions and marketing possibilities. To achieve all these the main directions of agricultural reform in Bulgaria were as follows: (i) the restoration of land ownership rights and liquidation of the collectives ("Production co-operatives" in the centrally-planned system), (ii) restructuring, de-monopolization and privatisation in the upstream and downstream industries (iii) price and trade liberalisation, and (iv) the creation of market infrastructure.

A. A special land law (Ownership and Use of Farm Land Act) was passed by Parliament in February 1991 and subsequently amended several times, most notably in March, 1992. The main provisions of the law are to reconstitute the land to pre-collectivisation owners (or their heirs) and to liquidate the existing State cooperative farms. Pre-collectivisation landowners (or their heirs) were invited to submit claims for their land supported by evidence of their previous ownership. These claims had to be received by the specially established Municipal Land Councils (MLC) by August 1992 (this deadline was subsequently extended for one year). Private land on which there were no claims was pooled as a municipal land reserve.

The law required that reinstatement of property was to be made within the real boundaries of land owned, where these still exist. Where boundaries of land no longer exist, reinstatement of ownership would be made within the real boundaries of farm land of equivalent area and quality in compliance with a plan showing farm land division.

The process of land restitution was complicated and involved many stages. After claims were submitted, they were checked for authenticity and accuracy. They were aggregated for each so-called territory belonging to a settlement, so that the claims could be compared with the land available. In some territories, mostly in mountainous and semi-mountainous regions where old boundaries are easily recognisable and restorable and where land has not been transferred to other users, it was a relatively straightforward process for the MLCs to issue documents upon which final title can be based. The final stage of issuing the titles of ownership or notarial act is carried out by notaries. In 1994 the law was amended to permit the issue of final titles of ownership of land by MLCs. This is considered to make the process of land ownership restoration easier and less expensive (the issue of a notarial act by an MLC is two times cheaper than the issue of such an act by a notary).

Normally the process of restoration of land ownership is not so straightforward. In the plains, real boundaries are no longer visible and the total area claimed generally exceeds that available. In these cases ownership claims are settled in several stages. In the first stage, each recognised claimant is provided with a certificate indicating the amount of land to which he is entitled in each quality grade. The total amount offered in this way is the claim, which could be reduced by two coefficients: one to adjust for the loss of agricultural land in the territory and the other to adjust for distribution of land between the quality grades.

Such a certificate is not a sufficient basis for the issue of a title deed as it does not specify location; this requires the elaboration of a land division plan. The plans allocate each claimant a specific piece of land. In some cases landowners may receive their land back consolidated into one piece in the TBS. These procedures also permit several people to obtain contiguous pieces of land, enabling them to set up some form of producer association.

Once the land division plan has been completed, claimants are given one month to react and appeal if they think they have been treated badly. In the interim period, the certificate specifying just the amount and quality of the land can be the basis for the issuing of temporary usage certificates to individuals or groups of individuals. The temporary certificates allow farming activity for one season. After the land division plan has been agreed, a sketch of each plot must be prepared by the MLC with reference to existing or new cadastral maps. Receipt of the form pertaining to the sketch means that owners are considered to be "granted into possession". A final decision of the MLC specifying quantity, quality and location of land and a sketch of the plot is the basis for issuing the final legal

document for ownership.

**Land has to a large extent been privatised.** Out of 5.5 million hectares earmarked for restitution by the end of August, 1997, a total of 1.03 million hectares have been restored within real or restorable boundaries, 2.48 million hectares finally restored with land division planes and 1.8 million hectares are privately cultivated under temporary use certificates. Thus at this stage of the reform of agriculture, about 91% of the land is privately cultivated and 64% has been finally returned to its owners.

**Liquidation of the collectives.** Under the Land Law there was provision for the liquidation of former State co-operatives and distribution of their non-land assets among eligible owners. Each collective farm appointed liquidation committees (LCs) whose task it was to distribute the non-land assets, and continue to run the collective until this was completed. The principle behind the distribution of non-land assets is as follows: the assets were subject to inventory and valuation. The valuation was made by inventory commissions appointed by the Ministry of Agriculture. They were asked to compile inventories and valuations for machinery and equipment, buildings, perennial crops and breeding animals. Valuations were based on estimates of current value given the physical condition of the asset. The allocation of shares in the assets of a collective is determined on the basis of each member's contribution of land, his years of service to the collective farm and money paid by him without subsequent reimbursement for the acquisition of the collective's machinery and equipment. After subtraction of an allowance for unreimbursed contributions of farm machinery and equipment, the remaining assets are distributed so that half represents contributed land and half years of service. The overall share of each member is applied separately for each category of assets. Thus, if a particular cooperative member is entitled to a 1% share, he is issued coupons to the value of 1% of the machinery, 1% of the buildings, and 1% of the perennial crops and animals. The assets which are of no interest to those people entitled to shares and which cannot be returned directly are sold either by open, or by closed auction (i.e. only for members of the collective).

With the amendments to the Ownership and Use of Farm Land Act (May 1995) the liquidation committees were abolished. The final distribution of non-land assets will be made by committees elected from amongst the owners (private members of collectives) and not by the liquidation committees, as has been the case up to now. In villages where some of the non-land assets have still not been distributed, this process could go on for years, but the latest amendments to the Land Law might be considered as constituting the legal documentation which declares the end of the collectives.

**Privatisation of upstream and downstream industries.** With the inception of reform the process of restructuring and de-monopolization of State-owned enterprises in upstream and downstream industries began with the dismantling of State monopolies for the purchase, processing and marketing of agricultural products. With decree No. 110 of the Council of Ministers in November, 1990, the State monopolistic organisations were dismantled and each regional enterprise became independent.

Substantial changes have taken place with the restructuring of the State enterprises. They were transformed into limited liability and shareholders' companies with a substantial increase in the independence of the managers of the enterprises. After long public discussions the Law on Transformation and Privatisation of State and Municipally Owned Enterprises was passed in Parliament in 1992. 443 agricultural enterprises (mainly poultry and pig breeding, greenhouses and enterprises providing services to agriculture) are State-owned, under the responsibility of the Ministry of Agriculture. Up to the end of October, 1997, 129 enterprises had been privatised.

An important feature of the process of restructuring of upstream and downstream industries is the bankruptcy of loss-making enterprises. Up to the end of November 1996, 50 State enterprises in agriculture and the agro-industry were liquidated.

**Price and trade liberalisation** was implemented in February, 1991 as a part of general macroeconomic reform and not as a special policy for the agricultural sector. With the exception of the prices of a few energy products (electricity, coal, gasoline, etc.) all prices including input prices for agriculture, farm gate prices of agricultural products, wholesale and retail prices of food stuffs were entirely liberalised.

A sharp increase in prices, even for staple foodstuffs, forced the Government to make some exceptions to this general strategy of price liberalisation. The Government tried to control prices of some basic food products by a "projected - price" system. Projected prices were based on minimum purchasing prices and a normative profit margin (as a percentage of costs) through the downstream sector. The profit margins were different for producers, processors and traders and could not be exceeded by them. These projected prices continued to exist until 1993 when they were replaced by ceiling prices calculated on the base of normative costs and fixed profit margins.

Another Government measure directly affecting the prices of agricultural products is the regime of minimum guaranteed prices for some basic agricultural commodities. The minimum guaranteed price systems were introduced and abolished several times. A system brought in during August 1990 was abolished in November, 1990; in July 1991 one was re-introduced only to be transformed to a system of projected prices in August 1991. In 1992 minimum guaranteed prices were in force between April and the end of the year. Unlike in the countries of western Europe, where minimum prices are usually a trigger for public support buying, minimum prices in Bulgaria were set by Decree of the Council of the Ministers to establish a floor below which producers could be compensated. Normally, the level of minimum prices determined is below the market price level.

There were substantial changes in foreign trade policy. The State monopoly on foreign trade was removed and trade has been liberalised. The general regime of licences for products was abolished and exports and imports are conducted on the basis of customs' declaration. Agricultural and food products are subject to different regulations, including registration and licensing, temporary export bans, quantitative restrictions on export and import, export and import taxes, exemptions from import duties and, in some cases, minimum export prices. The foreign trade regime is changed substantially each year and sometimes there are also changes during the course of a year. It is used as a tool to overcome temporary imbalances in the domestic market and is the policy measure which is most frequently changed, through many amendments.

### **3.3. Market infrastructure**

Since 1990 tremendous changes have occurred in the marketing chain for agricultural products. The large State enterprises still dominate in many areas but many newly-established private firms are entering the field. Changes in the wholesale and retail sector are even more substantial. More than 77 % of the retail trade in 1996 was carried on by private companies and shops. Many new market institutions have appeared, such as commodity exchanges, auctions, wholesale markets, etc.

The changes in agriculture in the period 1990 - 1996 were more substantial than sometimes considered. The emerging of new production structures which react to market signals and consumers, maximising their benefits, show that the basic prerequisites of a market economy have appeared. Unlike the centrally-planned economy where both the quantity to be produced and the producer price were fixed by the planning authority, now quantity and prices are market-determined. One of the most important results of the agricultural reform in Bulgaria was the emergence of markets and the market price system.

The liberal economic and agricultural policies which have been followed by the Bulgarian governments determine the way the agricultural price system operates. A substantial decrease in agricultural production and agricultural exports, unfavourable economic conditions for agricultural production, and strong public pressure have led to attempts to bring about significant changes in

agricultural policy and reform in the last two years.

## 4. Current Situation of Agricultural Markets

### 4.1. Supply side

One of the main purposes of agricultural policy, both in the pre-reform period as well as in the period of transition, has been to ensure the supply of agricultural and food goods on the domestic market at lower prices. As a result of this policy the main source of supply of the agricultural products on the domestic market in Bulgaria has been domestic production. In the pre-reform period more than 90 % of the domestic demand for food goods was met by domestic production (Table 3). Although during the period of transition 1990-1996 there has been a substantial decline of agricultural output, domestic production still continues to be a major source of supply for the domestic market .

**Table 3 - Self-sufficiency of the domestic market (%)**

	1990	1991	1992	1993	1994	1995	1996
<b>Wheat</b>	104.3	95.3	102.4	105.9	118.1	102.0	74.4
<b>Barley</b>	93.6	97.9	103.0	101.6	101.2	112.7	64.8
<b>Maize</b>	94.0	98.1	95.8	100.0	99.9	99.9	75.9
<b>Sunflowers</b>	102.8	170.0	89.3	119.2	130.9	94.2	NA
<b>Veal</b>	97.1	1.00	103.1	94.3	91.7	87.0	NA
<b>Pork</b>	105.5	99.7	98.9	96.7	100.0	98.0	NA
<b>Chicken</b>	116.3	120.3	99.0	103.9	103.2	100.0	NA
<b>Tomatoes</b>	111.1	101.0	101.0	101.0	102.0	101.0	NA
<b>Apples</b>	112.4	103.1	102.0	82.0	84.7	90.9	NA
<b>Grapes</b>	196.1	105.3	103.1	66.2	86.2	101.0	NA

Gross agricultural output in 1996 at 1990 prices declined by more than 55% compared to that in 1990. This decrease in domestic production is combined with a change in the structure of production. The share of crops in gross agricultural output has increased from 46% in 1990 to 48.8% in 1995 while the share of livestock products has decreased from 48 to 46.9%. In 1996 the share of livestock products rose to 54.8%; this was not due to changes in structure, but to an extremely unfavourable year for crop production.

The main reasons for the decline and the restructuring of production in agriculture during the transition are: i) the delay in the process of land restitution, (ii) liquidation of the existing production structures (old collective farms) at the beginning of the process of land restitution without the establishment of new ones, (iii) unfavourable macroeconomic conditions with high inflation, large foreign debts, high interest rates (iv) the shrinking of the foreign market for agricultural and food products, and v) decreased yields of the main crops (see Table 4)

On average the decrease in crop production during the transitional period from 1990 to 1996 is about 52% (Table 5), and one of the most significant factors here is the decrease in industrial crops, 46% in tobacco and 85% in sugar beet alone. This decrease is not reflected so much in the supply to the domestic market. Tobacco production has been export orientated and the decrease in tobacco production has been mainly due to a decrease in exports.

The grain sector is the most important sub-sector of crop production. There has been a 58% decrease in production in the grain sector during the transition, with 66% in wheat alone. In spite of the increase in the amount of land under the cultivation of grain and especially that of wheat, production of the latter has declined as a result of the substantial decline in the yields. The decrease in grain production and the intention of the Government to maintain a balanced supply of bread have led to frequent changes in the trade regime and especially to the introduction of bans on export. These trade restrictions have kept domestic prices of cereals comparatively low, a fact which is reflected in a further decrease in production. Production of fruit and vegetables has also substantially

declined. The production of tomatoes has declined by 60%, that of apples by 54%, and that of grapes by 6%. This has been reflected in a change in the share of domestic production on the domestic market as well as in a change in the structure of exports.

**Table 4 - Yields per hectare (kgs/Ha)**

	1989	1990	1991	1992	1993	1994	1995	1996
Grains - total	4,240	3,898	3,863	2,893	2,452	2,765	2,997	1,876
inc. wheat	4,765	4,550	3,744	3,105	2,836	2,870	2,907	1,860
maize	3,999	2,866	4,921	2,809	2,565	2,938	3,761	2,280
barley	4,363	3,853	3,902	3,046	1,855	2,760	2,949	1,740
Industrial crops								
Sugar beet	24,576	16,668	23,359	17,781	9,299	13,899	17,054	10,340
Vegetables								
Tomatoes	27,183	29,139	24,825	23,837	18,801	18,480	16,760	17,008
Cucumbers	16,903	20,229	19,457	19,214	13,272	12,754	11,708	NA
Potatoes	13,681	10,465	11,660	11,800	9,009	10,042	11,512	7,535
Fruits								
Apples	16,686	15,388	3,776	7,705	4,151	2,584	4,471	7,955
Peaches	10,609	7,508	6,341	5,989	4,799	3,547	2,999	NA
Cherries	3,911	3,056	2,193	2,869	1,658	1,749	2,662	NA
Grapes								
wine grapes	4,551	4,415	4,91	4,943	3,674	3,741	5,077	5,514
table grapes	5,261	4,909	5,402	5,012	3,804	3,385	6,315	5,514

Source: Statistical Yearbook 1993, 1994, Statistichsko Izdatelstvo, Sofia Plosti, Dobivi, Proizvodstvo 1995, Statistichsko Izdatelstvo, 1995, Sofia

**Table 5 - Production (in thousands of tonnes)**

	1990	1991	1992	1993	1994	1995	1996
Grains - total	8,216	9,072	6,644	5,717	6,478	6,595	3,459
inc. wheat	5,292	4,497	3,443	3,618	3,788	3,435	1,786
maize	1,221	2,775	1,742	983	1,362	1,817	1,089
barley	1,387	1,502	1,195	933	1,146	1,173	456
Industrial crops							
oriental tobacco	57	57	53	36	26	12	31
sugar beet	584	856	304	95	112	157	87
Vegetables							
tomatoes	813	610	408	325	443	514	325
cucumbers	108	115	71	62	58	91	118
potatoes	433	498	566	357	465	649	320
Fruits							
apples	411	145	221	110	76	149	189
peaches	80	72	76	54	57	72	NA
cherries	72	53	66	32	48	75	NA
grapes	731	748	787	482	516	699	
inc. wine grapes	563	576	616	394	430	536	519
table grapes	68	80	81	47	85	163	71
Meat							
Veal*	126	115	154	122	96	69	80
Pork*	408	362	319	277	210	257	252
Sheep meat*	73	78	84	65	69	40	59
Poultry*	182	100	89	97	74	97	99
Milk	2,385	2,005	1,806	1,531	1,420	1,403	1,389
Eggs	2,461	1,866	1,639	1,624	1,751	1,996	1,734

\* carcass weight

Source: Statistical Yearbook 1993, 1994, Statistichsko Izdatelstvo, Sofia Plosti, Dobivi, Proizvodstvo 1995, Statistichsko Izdatelstvo, 1995, Sofia

In addition to the common reasons for the decline in agricultural output there are also specific reasons for the decrease in crop production. The liberalisation of prices which took place at the beginning of 1991 has led to a 17- to 32-fold increase in the prices of inputs, with a 3- to 11-fold increase in the prices of crop products. This has led to a reduction in the use of fertilisers and plant

protection chemicals and, as a result, to a decrease in yields and production. As a consequence of land reform and the liquidation of the former collectives crop turnover has been disrupted, particularly in the case of the permanent crops.

The situation in the livestock sector is approximately the same as that in the crop sector. Until 1990 Bulgaria was a net exporter of animal products but during the later years of the transition it became a net importer. There was a continuation of the tendency towards a reduction in the number of animals kept that had begun in the mid-Eighties. On average for the period 1990-1997 the number of animals decreased by about 68%, with the greatest decrease in the number of pigs. During the first years of the transition there was a decrease in the number of animals on State farms only, but in 1996 there also was some decrease in the number of animals kept on private farms. Another specific characteristic of the livestock sector in Bulgaria in the transition period is that, as a result of the liquidation of the old collectives, livestock production is concentrated on small farms. It is very significant that, particularly for milk and veal production, about 80% of cattle are based on farms with not more than 2 cows. Simultaneously with the decline in the number of animals, yields also declined. As a result meat production during the period 1990-1996 decreased by 36%, including poultry (by 46%) and pork (by 38%), and milk (by 58%).

In general, imports of the major foodstuffs have had an insignificant effect on the supply of the domestic market. Although the import of some foods, especially meat, has increased during the transition period, this source of supply for the domestic market is still insignificant for the major products, except beef. However as a result of the increase in imports of meat at the end of the period under examination, Bulgaria changed to a net importer of meat, particularly veal and pork. Also, recently the impact of imports on the domestic market has been significant in the case of fresh fruit and vegetables, especially early tomatoes, cucumbers and apples.

#### **4.2. Demand side**

During the period of transition domestic demand for foodstuffs has also declined. During the period 1990-1995, calculated on the basis of production, export and import, there was a decrease in the domestic consumption of some food goods, e.g. wheat (44%), barley (25%), veal (38%), pork (37%) and chicken (43%).

The major reason for the decline in domestic demand for food goods has been the substantial decrease in family incomes; the purchasing power of consumers has decreased significantly. One example here is that, in the period 1991-1996 the quantity of bread that could be obtained with an income equal to the total per capita income declined by 48%, that of milk by 32%, and that of pork meat by 30%.

### **5. Price Policy Developments**

#### **5.1. Price policy and intervention mechanisms**

Price reform began in Bulgaria in 1990, with the liberalisation of the retail prices of fruit, vegetables and utilities. Price liberalisation on a large scale for all economic sectors was accomplished by February 1991. The advent of the latter and the measures implemented by the Government to decentralise the economy led to the establishment of price formation under market principals, depending on demand and supply. In order to reduce the negative consequences of the transition period for the economy and for consumers the Government continued its intervention in price formation for some groups of goods. Firstly there was central determination of fixed prices for fuel, electricity, heating, coal, transport and communication services. Secondly, the Government kept the retail prices of some major goods under control. During the transition period the list of commodities to

be monitored and the rules for the control have changed. While in 1992 and 1993 retail price control covered 11 commodities including bread, meat, milk and milk products, in 1995 the list of monitored commodities expanded to 33 items, including food and some non-food products such as shoes, some technical goods and taxes on domestic transport.

Until March 1993 the control on consumer prices was carried out through a system of so-called projected prices. They were based on the normative determined expenditure plus normative margins. Processors and traders were obliged to pay minimum prices which were consistent with the estimated production costs. Those minimum prices added to their normative costs and profitability margins gave the projected retail prices. Before they came into effect the Government announced the projected retail prices.

The system was changed in March 1993 and old intervention concepts were re-introduced. The Council of the Ministers approved new rules for controlling the prices of basic foods through ceiling price. The ceiling prices were calculated as costs plus normative profit margins.

The dynamics of the price increases for monitored foods during the period 1993-1995 show that there is no uniformity in the changes in the price level when compared with the average price levels of foodstuff. In 1993 eleven food products were monitored; comparable data exist for ten, out of which the prices of eight show an increase less than that for the average prices of food. Since April 1994 the number of foodstuffs subject to price monitoring was increased to 23. Out of those, in 1994 the prices of 11 products increased less than the average. In 1993, the prices of three of the newly-introduced products (those of yellow cheese, eggs and butter) exhibited an increase of less than the average, but in 1994, when they were inside the monitoring system, the increase was much larger. In 1995 only eight products recorded a price increase which was less than the average; the prices of two other products rose at a rate identical to the average for food. The remaining 13 products recorded an increase above the average.

The above facts show that in general, with few exceptions, the prices of monitored products that increased more than the average belonged to the product group in which the prices of non-monitored products also registered a higher than average increase, and vice versa. The only explanation for this is that the system was not effective, despite strong government intervention..

During the transition period minimum prices for farmers were introduced. They were valid for certain periods and were repeatedly abolished. In 1992 for example, the minimum prices covered wheat, milk and all kinds of meat and meat products and were valid only from April to the end of the same year. Because of the fact that State traders and processors are independent and monopolists at the regional level, minimum prices quite often became maximum prices, except when there was a government subsidy. This was the case with grain in 1992, when the State grain agencies and mills received a subsidy of 127 million leva to purchase grain at a price not much higher than the minimum price.

Despite the inefficiency of the monitored price system the Government decided to support its price intervention through the power of legislation; a Law on Prices was passed in September 1995. Its scope was general and not specific to agriculture. Six types of intervention were provided for: fixed prices, ceiling prices, ceiling profit margins, minimum prices, protective purchasing prices, and freezing of prices for a period up to six months. The Law re-introduced a fund which existed in the pre-reform era, used to subsidise prices at different levels of the production chain; its ultimate purpose was to subsidise consumers. There were no differences between the lists of products included in the Law whose prices were subject to different regulations, and the lists that existed previously. Thus, at first instance, the scope of the price intervention has not been widened, but a margin for further increase was established. Fixed prices were provided for electricity, heating and coal (for industrial use only). Ceiling prices and ceiling profit margins apply to the same main food products as well as a few industrial products and services. The Law gave a clear signal that price intervention was not seen as a temporary step taken to ease the burden of transition on the

Bulgarian population.

After the introduction of the Currency Board substantial changes were made to the price policy for agricultural and food products. The monitored price system was abolished. A system of contract prices was introduced for some of the basic products: flour, bread, liquid milk, white and yellow cheese, meat and meat products, sunflower oil, butter, eggs, and sugar. The contract prices were not a means of controlling price level or profit margins, but constitute a requirement that the retail prices of these products be negotiated directly between producers and retail traders. The expectations were that this procedure would limit the number of middlemen, and as a final result decrease the level of retail prices for the basic foodstuffs. In the case of wheat, the minimum price was introduced at a level two times higher than the level in previous years. The mills were obliged to purchase wheat from the producers at this price (130 US\$).

However, it should be noted that during the period under examination prices have also been indirectly regulated through the regime of foreign trade. Through export restrictions and the opening of zero duty quotas for imports the Government reacted to the temporary imbalances on the domestic market and created both a great deal of uncertainty in the agricultural sector and price unpredictability. The most frequent changes in the foreign trade regime applied to grains and oilseeds. Over the period of each marketing year there have been changes in export impediments from an export quota to an export tax, followed by a complete ban. This has been most disruptive where management decisions in the farm sector are concerned, and in 1996 it brought about a severe grain shortage. On some occasions, particularly during the early years of transition, there were also bans on the export of cattle, but they were more temporary in nature than the bans on grains and oilseeds.

Certain steps have been taken towards the liberalisation of the regime of foreign trade in agricultural goods. The ban on the export of grains was lifted on 1st July and replaced by an export tax. The Government took on the responsibility of liberalising the trade regime in grain and grain products entirely up to the end of 1997. Another liberalisation of the trade regime is linked with the reduction of import taxes on some meats and meat products.

A "Law on the Protection of Agricultural Producers" was passed in June 1995. The law could be considered as the first attempt at the market regulation of agriculture as a sector. The Law introduced "protective purchasing prices" for the basic agricultural products - wheat, maize, sugar-beet, potatoes, (from sheep and cows), pig meat, lamb and veal. These intervention prices are determined on the basis of average production costs, plus a percentage profit allowance. The prices were not to be above 85% of the world price, measured as a three-year average export price.

At these prices the State is to purchase pre-determined quantities (by means of purchase contracts signed with producers) through private and State processors and traders, selected on a tender basis. If the market price falls below 95% of the protective price, the intervention purchases will be extended to quantities outside the pre-determined and contracted levels. Because the procurement prices are fixed at a lower level than the world market prices, the Government intervention does not necessitate large budget outlays. At the same time the depression of farmers' prices continues.

The institution that deals with support to agriculture is the "State Fund For Agriculture" (SFA). Funds from the State Budget directly contribute to it, as well as other earmarked financial flows. The SFA should operate in two directions: (i) instigating market policy and market control on agricultural commodity markets, and (ii) providing funds and subsidies for agricultural production.

Up to now the only activity of the SFA has been the provision of financial support to farmers, for which purpose the following schemes are applied: (i) direct subsidies per unit area for wheat, maize and sunflowers, (ii) preferential credits for working capital for wheat, maize and sunflowers, (iii) forward contracts with wheat producers, and (iv) credit subsidies for investment loans for agricultural machinery, animal breeding and crop production.

In addition to the above-mentioned interventions, which have brought about taxation rather than support to farmers, two support measures for agricultural producers have also been applied. The first of these is exemption from taxes, i.e. the profit tax for incorporated types of farms and tax on incomes from agricultural activity of individual farmers and members of cooperatives. The second programme, which has been introduced each year but on a small scale, has involved credit subsidies for working capital during the spring and autumn agricultural campaigns.

## 5.2 Price developments

In nominal terms input prices in Bulgaria increased four- to six-fold during the period 1991-1995 depending on the type of input (Table 6). The lower increase (4-fold) was registered for electricity and fuel. This has been due to Government intervention in price setting, namely with fixed prices; these were increased step by-step by the Government, but in general they were kept below the market prices. The largest increase of input prices was recorded for feed (more than 6-fold). In between these two levels of increase are those recorded for the two types of fertilisers, nitrogen and phosphates, which are most frequently used in Bulgaria.

**Table 6 - Agricultural Input Prices (leva/t)**

	1991	1992	1993	1994	1995	% change
Electricity	207	329	395	518	755	364.73
Fuel	2,912	4,969	5,467	8,819	10,910	374.66
Fertilisers						
nitrogen 100%	4,431	6,550	6,779	13,272	20,267	457.39
phosphate 100%	4,984	6,513	7,600	15,369	24,010	481.74
Plant protection chemicals 100%	24,290	54,539	55,219	160,360	140,941	580.24
Feed	1,177	1,833	3,276	5,224	7,303	620.48

Source: National Statistical Institute, Price Department, Unpublished data

Farm prices in Bulgaria also increased during 1991-1996 (Table 7). However, there were large differences in price dynamics between crop and livestock products. While for most crop products the nominal increase was between three- and five-fold with the exception of wine grapes (seven-fold), the prices of almost all livestock products examined increased from seven- to eleven-fold. The lowest increase in the livestock sector was for poultry (five-fold).

These price developments have brought about substantial changes to relative price when crop and livestock prices were compared (Table 8). While in 1991 the price of cattle was four times the price of wheat and the price of pigs and lambs seven times, in 1995 the corresponding figures lie between 10 and 16 times. These changes in relative price during the post-reform period have been mainly due to the fact that after the removal of the State subsidies the livestock sector was placed in a worsening situation. The pre-reform pattern of subsidisation was mainly orientated towards livestock production. During the period of market price setting livestock prices increased more because greater sources of distortion were removed and subsequently the adjustments were larger. The changes in relative prices between grains and livestock have been due to the Government policy of depressing farm grain prices. This is also demonstrated by the enormous change in relative prices in 1996, due to the shortage of grain, in comparison to that in the period 1991-1995.

The ratio between the prices of grains and the prices of fertilisers and plant protection chemicals during the period 1991-1995 shows that the internal terms of trade deteriorated when viewed in conjunction with the crop sector in Bulgaria (Table 9). While in 1991 3.4 tonnes of wheat were required in order to buy a tonne of nitrogen fertilisers, 3.8 tonnes to buy a tonne of phosphates and 18.7 tonnes for a tonne of plant protection chemicals, the quantity of wheat necessary for the same transaction increased in 1995 to 4.5, 5.3 and 31.1 tonnes respectively. The terms of trade for livestock, expressed by the price relation between feed and pork and poultry, remained stable.

During the whole of the period under examination, about 100 kgs of pork (live weight) or poultry were required in order to buy a tonne of combined feed.

**Table 7 - Farm Prices**

		1991	1992	1993	1994	1995	1996
<b>Crop Products</b>							
Wheat	Leva/ T	1,298	1,522	2,621	3,330	4,525	22,995
Barley	"	1,222	1,342	2,326	3,090	3,830	22,008
Maize	"	1,514	1,767	3,145	4,268	5,902	21,810
Sugar beet	"	247	299	384	847	1232	3158
Tomatoes	"	1,112	1,308	2,181	2,524	3,126	12,522
Cucumbers		3,188	4,160	8,253	12,858	15,980	N/A
Potatoes		2,805	2,558	4,585	7,381	13,118	25,603
Apples		1,645	1,411	1,752	5,209	7,396	10,161
Peaches		2,291	2,105	3,694	5,020	10,219	N/A
Cherries		6,309	4,909	4,833	7,453	19,712	N/A
Grapes	"	1,930	2,314	2,910	8,164	13,120	
wine grapes		1,903	2,347	2,855	8,250	13,126	30,685
table grapes		3,001	N/A	N/A	N/A	10,389	33,030
<b>Animal Products</b>							
Cattle*		5,555	9,285	14,867	28,187	63,214	76,493
Calves*	"	9,548	14,134	19,013	33,477	72,798	87,335
Sheep*		4,384	6,672	10,141	26,638	44,152	91,053
Lambs*		9,056	15,999	27,100	35,426	85,019	118,789
Hogs*	"	8,966	14,369	22,346	38,504	67,997	11,1374
Chickens*	"	9,742	13,347	19,641	35,330	50,821	106,155
Cow milk**	leva/1000L	1,693	2,712	4,911	8,403	12,977	2,3529
Sheep milk***		2,947	4,151	8,856	12,837	24,980	29,460

\* live weight, \*\* 3.6% fat content, \*\*\* 6.5% fat content

Source: National Statistical Institute, Price Department, unpublished data

**Table 8 - Relative Farm Prices (wheat price = 1)**

		1991	1992	1993	1994	1995	1996
<b>Crop Products</b>							
Wheat		1	1	1	1	1	1
Barley		0.94	0.88	0.89	0.93	0.85	0.96
Maize		1.17	1.16	1.20	1.28	1.30	0.95
Sugar Beet		0.19	0.20	0.15	0.25	0.27	0.14
Tomatoes		0.86	0.86	0.83	0.76	0.69	0.54
Cucumbers		2.46	2.73	3.15	3.86	3.53	N/A
Potatoes		2.16	1.68	1.75	2.22	2.90	1.11
Apples		1.27	0.93	0.67	1.56	1.63	0.44
Peaches		1.77	1.38	1.41	1.51	2.26	N/A
Cherries		4.86	3.23	1.84	2.24	4.36	N/A
Grapes		1.49	1.52	1.11	2.45	2.90	
wine grapes		1.47	1.54	1.09	2.48	2.90	1.33
table grapes		2.31	0.00	0.00	0.00	2.30	1.44
<b>Animal Products</b>							
Cattle		4.28	6.10	5.67	8.46	13.97	3.33
Calves		7.36	9.29	7.25	10.05	16.09	3.80
Sheep		3.38	4.38	3.87	8.00	9.76	3.96
Lambs		6.98	10.51	10.34	10.64	18.79	5.17
Hogs		6.91	9.44	8.53	11.56	15.03	4.84
Chickens		7.51	8.77	7.49	10.61	11.23	4.62
Cow milk		1.30	1.78	1.87	2.52	2.87	1.02
Sheep milk		2.27	2.73	3.38	3.85	5.52	1.28

The aggregate input-output price relation that constitutes by the domestic terms of trade for agriculture has deteriorated in transition. For the period 1990-1994 the agricultural aggregate price index was 928.6 while the aggregate input price index was 2164.7.(Table 9).

**Table 9 - Aggregated Price Indexes**

	Farm-price indexes*			farm inputs price index**	CPI*
	agriculture	crops	livestock		
1990	100	100	100	100	100
1991	273.1	286.1	260.6	601.8	573.9
1992	373.3	340.1	398.6	921.3	1029.9
1993	588.4	529.7	638.4	1262.4	1688.7
1994	928.6	795.0	1107.7	2164.7	3784.0
1995	1375	1124.7	1775.9		4981.1
1996					

\*Base indexes are calculated on the basis of monthly indexes, published by NSI

Source: Maria Tzoneva, Agricultural Price Policy and Factors Determining the Price Level, paper presented to the conference " Policy and Strategy for Agricultural Developments", 1996, Sofia

## 6. Conclusions

Bulgaria is a country with traditionally strong agricultural and food-processing sectors. Both sectors contribute significantly to the trade balance of the country and play an important role in the transitional period. This is the reason why the problems of the transformation of agriculture from a centrally-planned to a market economy attract so much attention in the country.

Agricultural reform in Bulgaria was the most radical in Central and Eastern Europe. The agricultural land was returned to its former owners, State-dominated production units dating from the pre-reform period were liquidated and all their assets were distributed among the owners of the land and workers in the former "cooperatives". Strong limitations were placed on subsidisation of the sector. These substantial changes were not accompanied by support for the newly-emerging private farmers in the form of the appropriate structural policy for development of the sector. Loss of former international markets and general macroeconomic instability are additional strong factors which adversely influence agriculture. The results were a substantial decrease in agricultural production, inefficient agricultural markets, and a significant drop in consumption.

An important measure against these negative tendencies is price policy. Unfortunately, in the transition period all price measures were used to support consumers, not agricultural producers. Through the enforcement of restrictive trade measures on producers the result of price policy in the transition has been to suppress farm prices, and thus punish farmers.

The design of a new agricultural policy is now a matter of public concern. It should include measures for the support of market-orientated producers, preparation for integration with the EU in the area of agriculture, and measures for sustainable development in rural regions. The present research is based on in-depth analysis of the recent trends in the supply and demand of agricultural products, and constitutes the first step which would support the design of a new agricultural policy. The most desirable next step would be the construction of a reliable model of the agricultural sector for the purpose of policy analysis, so that an evaluation of the various public policy measures proposed can be made

## REFERENCES

- Davidova S., Ivanova, N. (1996). Agricultural prices in Central and Eastern European acceding countries - medium term perspective. Study on Bulgaria and Rumania, Final Report to Commission of the European Communities Directorate General II.
- EC Directorate General for Agriculture Working Document (1995). The agricultural situation and prospects in the Central and Eastern European countries: Bulgaria
- Mishev, Pl. (1996). Bulgaria. In: *Long-term agricultural policies for Central Europe*, Chapter 6. Ed. D. Gale Johnson, International Center for Economic Growth, USA,