CURRENT SITUATION AND PERSPECTIVE OF THE HORTICULTURAL FARMS IN BULGARIA – CASE IN THE PLOVDIV REGION

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Abstract

Agriculture/horticulture has traditionally been an important sector in the economy of Bulgaria. In the last two-three decades, agriculture has changed dramatically due to factors including economic reform from a centrally planned economy to a free market economy, political conflicts between the governing parties, agricultural reform, inefficient governmental decisions, poor legislation, lack of capital for investments, de-population of rural areas and the accession process towards the European Union (EU). This paper reviews the structural changes in Bulgarian agriculture since the period of Communism began (1944) and discusses the current situation for horticultural farms of different sizes in the Plovdiv region of Bulgaria. The respondents identified their cropping structure and land ownership patterns together with their marketing structure. Farm managers' future vision is also discussed. The small-scale farms (less than 2 ha) were mainly subsistence farms that were primarily involved in vegetable production and their farmers (most often the land owners), perceived farming as a way of living and surviving in the transition towards a free market economy and joining the EU. The 'medium' farms (2-10 ha) were transitional and working under pressure for either survival or expansion. They mainly produced annual crops (vegetable and other agricultural crops) for the local market. The 'big' farms (farms over 10 ha) were more market and business orientated and were aiming at economic viability within the unstable and competitive environment. Together with their annual crops they also grew some perennials (fruits and grapes). Recent Bulgarian Ministry of Agriculture and Forestry (MAF) reports indicate that the number of farms over 10 ha has been increasing slowly and will likely represent the future of farming in Bulgaria. The dynamic external environments in Bulgaria over the last three-four decades did not provide stable conditions for farm modernisation, land expansion or establishment of new orchards and vineyards. Despite the difficult economic environment of the country, it can be argued that the horticultural farms have significant potential due to favourable natural and weather conditions together with the tradition of growing horticultural crops that has existed for centuries. Joining the EU will present new challenges and opportunities for the successful and sustainable future development of farm businesses in Bulgaria.

Keywords: horticultural farms, farm characteristics, farm marketing, SWOT analysis, Bulgarian agriculture

Introduction

Agriculture has traditionally been an important sector in the economy of Bulgaria. In the last two decades, agricultural industry has undergone dramatic changes due to the economic reform from a centrally planned economy to a free market economy, political conflicts between the governing parties, agricultural reform, inefficient governmental decisions, poor legislation, lack of capital for investments, de-population of rural areas, accession process towards the EU and joining the EU in 2007 (OECD, 2000; Kostov and Lingard, 2002; MAF, 2002; Doichinova, 2003; Bachev, 2005; Bencheva, 2005).

This paper evaluates the current situation of the different sized horticultural farms in the Plovdiv region of Bulgaria and is divided into five sections. The next section reviews the agriculture in Bulgaria. The

methodology is described in section three. The analysis of the data is reported in section four. The final section draws some conclusions.

Current Status of Agriculture/Horticulture in Bulgaria

Bulgaria enjoys good natural conditions for agriculture/horticulture such as the fertile soils which, combined with a mild continental climate, provide a diversity of production systems (EC, 1998; OECD, 2000; Bencheva, 2005).

In 1989, the transition towards a 'free market' economy began in Bulgaria. The reform in agriculture started with the introduction of a range of new regulations and laws that were developed in order to re-introduce private farming after 45 years of a Communist regime. The agricultural reform was characterised by the liquidation of the Agri-Industrial Complexes (AICs), the development of a private sector, land restitution, privatization and price liberalisation. As a result agriculture/horticulture was in a critical situation due to accumulated problems inherited from the period of Communism, the slow pace of reforms, lack of clear and consistent policies, reduced domestic demand and loss of the main export markets (EC, 1998; MAF, 2000; Georgieva, 2003).

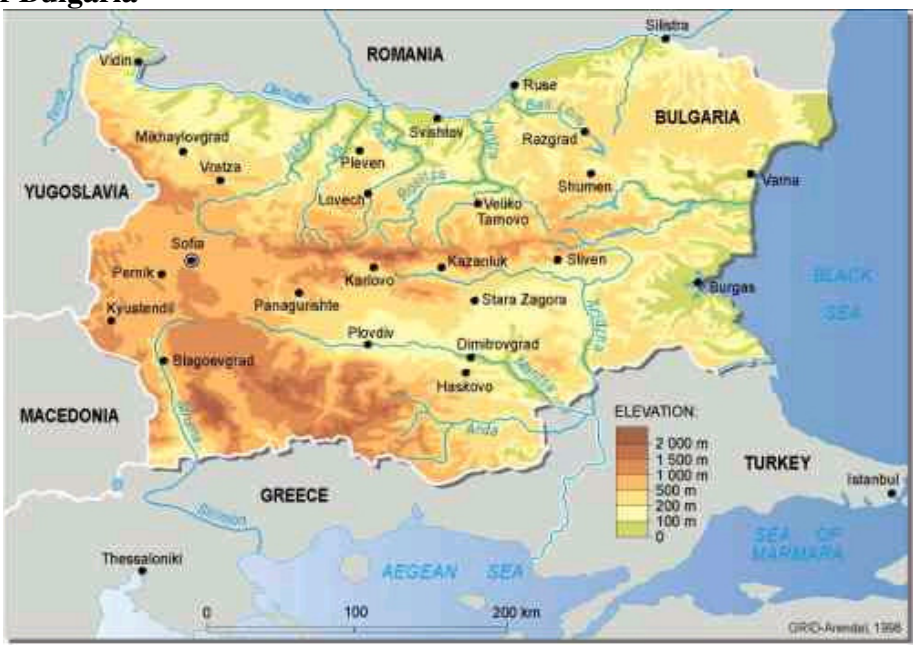
The farming structure that emerged after the liquidation of the AICs was a large number of private farms, (average size about 1.5 ha), private production co-operatives (average size of 600) and public partnerships. The majority of these agricultural enterprises (individual farms and co-operatives) are still transitional, in need of significant improvements and consolidation in order to be able to operate under the EU conditions (FAO, 1999; Georgieva, 2003; MAF, 2006).

After 1998, a radical agricultural reform began in Bulgaria. Agricultural policies became more consistent with long-term goals to develop an efficient, competitive and export-orientated agricultural sector, to improve the incomes of those working in agriculture and to prepare the country for the EU accession. The Special Accession Programme for Agriculture and Rural Development (SAPARD) was introduced to prepare Bulgaria for the entry into the EU. In 2007, Bulgaria joined the EU and the impact of the CAP on Bulgarian agriculture is yet to be evaluated (EC, 2000; MAF, 2000; SENTER, 2000; Georgieva, 2003 MAF, 2006).

Methodology

This study is one of the first to adopt strategic approaches to analyse agriculture/horticulture in Bulgaria. It is also one of the first to focus on the horticultural industry in Bulgaria and includes a sample of horticultural farms in the Plovdiv region. The Plovdiv region, one of the 28 regions in Bulgaria, is situated in central-south part of Bulgaria (Figure 1).

Figure 1: Map of Bulgaria



In this research horticulture includes fruits, vegetables and grapes. Data collection was undertaken during 2001. The research method used was structured face-to-face interviews as this took account of the farmers' lack of experience with research interviews and the innovative nature of this study. Purposive sampling was employed due to the lack of an accurate and up-to-date list of the agricultural/horticultural farms in the Plovdiv region in 2001. The chosen sampling procedure (purposive) produced valid information for analysing the horticultural industry in the Plovdiv region. A total of 108 farmers were interviewed in their working places.

A review of the literature suggested that size of the farm is a very important factor as it has a strong influence on the farm business performance and development. Farms in the sample were divided into the following groups: 'small' farms – less than 2 ha; 'medium size' farms – between 2-10 ha; and 'big' farms – more than 10 ha.

The majority of the data collected was quantitative and was analysed using the Statistical Package for Social Sciences (SPSS). Some qualitative data derived from open ended questions. A range of descriptive analytical techniques were employed to determine patterns and relationships between variables.

Main results

Cropping Structure of the Farms

More than half of the interviewees (53%) were cultivating *fruit* (Table 1). The most common fruits were apples, plums and cherries. The Plovdiv region is the biggest apple producer and second biggest producer of plums in Bulgaria (SENTER, 2000). The respondents cultivated fruit because they inherited their orchard/s as part of the land restitution process. They also stated that fruit were profitable during the transition period and have been traditionally grown in the Plovdiv region. The results also revealed that the farms of different size differed in their fruit orientation (χ^2 = .023). The majority of the 'big' farms (76%) had fruit, whereas 60% of the 'small' farms did not cultivate any fruits (Table 1).

Table 1: Crop cultivation of the farms with different size

FRUITS	SIZE OF FARMS						TOTAL	
	SMALL		MEDIUM		BIG			
	Count	%	Count	%	Count	%	Count	%
Yes	10	40	28	48	**19**	**76**	**57**	**53**
No	**15**	**60**	**30**	**52**	6	24	51	47
Total	25	100	58	100	25	100	108	100
Significance Value	(χ^2 = .023)							
GRAPES								
Yes	**13**	**52**	25	43	11	44	49	45
No	12	48	**33**	**57**	**14**	**56**	**59**	**55**
Total	25	100	58	100	25	100	108	100
Significance Value	(χ^2 = .747)							
VEGETABLES								
Yes	**20**	**80**	**44**	**76**	**18**	**72**	**82**	**76**
No	5	20	14	24	7	28	26	24
Total	25	100	58	100	25	100	108	100
Significance Value	(χ^2 = .803)							
OTHER CROPS								
Yes	**15**	**60**	**46**	**79**	**22**	**88**	**83**	**77**
No	10	40	12	21	3	12	25	23
Total	25	100	58	100	25	100	108	100
Significance Value	(χ^2 = .051)*							

*Note: * The validity of the chi-square test results is questioned because 20% of the cells have expected count of less than 5 and one or more cells have expected values less than 1*

Grapes (table and wine) were cultivated by 45% of the respondents (Table 1). According to the interviewees, the rationale for cultivating grapes was very similar to those for the fruits, which were: inherited vineyards after the land restitution, profitability and increased demand from the increased number of private wineries. Grape production was largely stable during the transition period in the Plovdiv region, which is the second biggest in terms of area of vineyards after the Bourgas region (near the Black Sea) (MAF, 2002). One of the traditional varieties of wine grapes in Bulgaria 'Mavrud' is specific to the Plovdiv region and is a very popular crop for cultivation. There was no significant difference between the grape orientation of the farms with different size (χ^2 = .747) (Table 1).

The favourable natural conditions in the Plovdiv region, on the Thracian plain around the river Maritsa, has historically provided a sound basis for the development of the horticultural industry in the region and for growing vegetables in particular (MAF, 2002). This was confirmed by the respondents as the majority of them (76%) stated that *vegetables* were very important crops in their production system (Table 1). The reasons, according to the respondents, were that vegetables are annual crops that do not need big or long-term investments, they have traditionally been grown in the Plovdiv region and they were profitable having maintained relatively high prices. The most popular vegetables among these producers in the sample were tomatoes, peppers and potatoes. Farm size did not present any significant difference with the vegetable orientation of the enterprises investigated (χ^2 = .803) (Table 1).

A range of agricultural crops that were part of the production structure of some of the farms in the sample were collectively referred as *'other' crops* and included arable crops, herbs, tobacco, etc. The majority of the farm managers that participated in this study (77%) cultivated together with their horticultural crops some 'other' crops. The main reasons for combining horticultural products with 'other' crops were: using resources available within the farm such as land, machinery and labour, profitability and necessity for

crop rotation. The results indicated that there were similarities between the farms with different size and the 'other' crop cultivation (χ^2 = .051) (Table 1).

Marketing Structure

FAO (1999), SENTER (2000) and EC (2002) argued that the marketing structure in Bulgaria was poor due to the loss of the main international markets, reduced domestic purchasing power, the slow process of privatisation of the agri-food processing industry, lack of marketing skills among the farmers and limited marketing support by the Government. Prior to 1989, Bulgaria was a major exporter of agri-food products to the former USSR and other ex-socialist countries. Since then the country has not gained new market due to low competitive power, poor quality of products and increased competition from EU and other countries (OECD, 2000; MAF, 2002).

The current *markets* of the farms within the sample in the Plovdiv region were investigated and the results revealed that 75% of them sold their production locally in the region. The national market was supplied by 21% of the farms and only 4% of them had international markets (Table 2). Farms of different size used different markets for their produce (χ^2 = .004). The results revealed that 50% of the farms of more than 10 ha sold their production nationally. In comparison, the vast majority of the 'small' and 'medium size' farms (93% and 81%) were oriented towards their local market (Table 2).

Table 2: The main markets of different types of farm in 2000

Current market	SIZE OF FARMS						TOTAL	
	SMALL		MEDIUM		BIG			
	Count	%	Count	%	Count	%	Count	%
Local	**13**	**93**	**34**	**81**	4	33	**51**	**75**
National	1	7	7	17	**6**	**50**	14	21
International	0	0	1	2	2	17	3	4
Total	14	100	42	100	12	100	68	100
Significance Value	(χ^2 = .004)*							

*Note: * The validity of the chi-square test results is questioned because 20% of the cells have expected count of less than 5 and one or more cells have expected values less than 1*

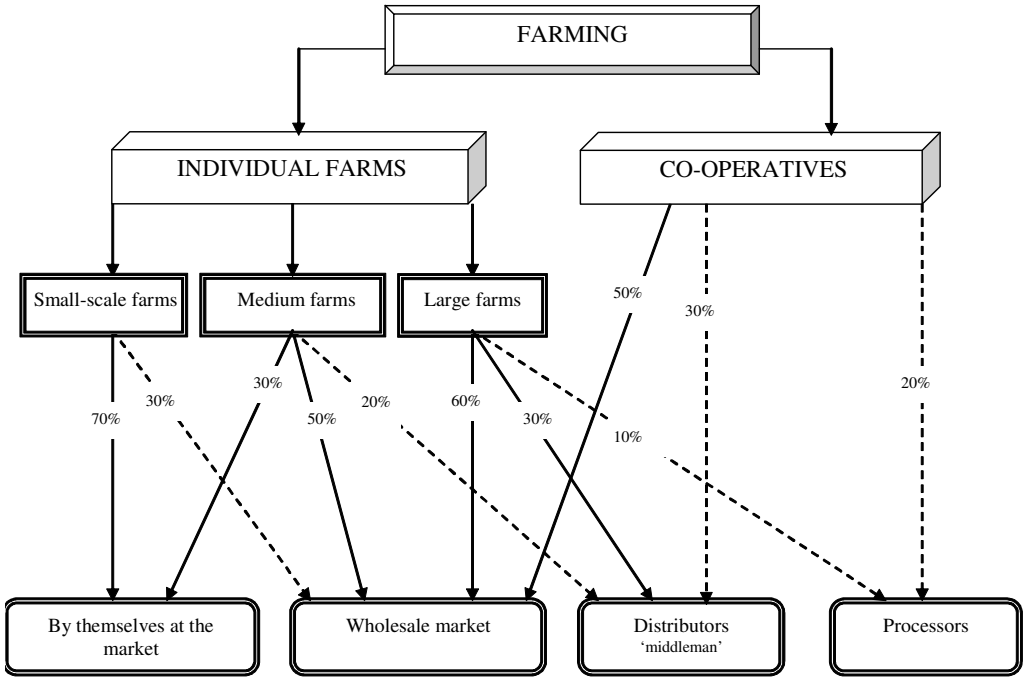
The farmers in the Plovdiv region have an advantage; one of the three established wholesale markets in Bulgaria is located in the Plovdiv region. However, according to FAO (1999) and Bachev (2005), the existing wholesale markets have functioned ineffectively and have been in need of significant improvement.

FAO (1999) and SENTER (2000) argue that the *distribution channels* in Bulgaria have been under continuous development since the economic reform began and are still not well developed. After 1989, the large state monopolies in marketing and distribution in Bulgaria were dismantled. The wholesale and retail channels were privatised and that process resulted in the emergence of a large numbers of new private agents (suppliers, processors, intermediaries).

This paper discussed the current distribution channels of the farms in the sample. About half of the respondents used a wholesale market for their products. The farms of less than 2 ha kept some of their production for self-consumption and sold the rest of it by themselves at the market. The 'medium' farms

mainly marketed their produce at the wholesale market (50%). The large farms, cultivating over 10 ha, mostly used wholesale markets and due to their bigger capacity also sold to distributors or processors. In comparison, some of the co-operatives used their previous contacts with processing factories to deliver their production or used distributors or the wholesale market (Figure 2).

Figure 2: The distribution channels in the Plovdiv region of Bulgaria



Source: (Author)

Both the secondary sources and the primary data suggested that the practice of growing under contract does not appear to be widely used among the respondents. However, a few commercial farms marketed relatively large amount of products trough advanced marketing channels (*e.g*. contract relationship with national or international companies).

SWOT Analysis of the Farms

Studying the internal capacity of the farms (strengths and weaknesses) provided helpful information for discussing the farm development. The results revealed that the key ***strengths*** of the farms within the sample were: possession of experience in agriculture (63%); availability of own machinery (48%); traditionally important sector in the Plovdiv region (41%); good natural conditions (37%) and independent management (24%) (Table 3). Farms of different sizes had different strengths. The vast majority of the farmers with 'big' farms (84%) identified the availability of their own machinery, while those with plots of less than 10 ha stated that their previous experience was their key strength. Another disparity observed was that 36% of the producers with a farm of more than 10 ha considered that independent management was one of their vital strengths compared to 16% of the growers with 'small' farms (Table 3). During the period of Communism, the government took all the managerial decisions and the role of the farm manager was to follow their directions. However, in the condition of a market economy, the farmer is responsible for all the business decisions, a challenging task that has been welcomed by some and frightened others.

Table 3: The top strengths, weaknesses, opportunities and threats of the farms with different size

STRENGTHS*	SIZE OF FARMS						TOTAL	
	SMALL		MEDIUM		BIG			
	Count	% of cases	Count	% of cases	Count	% of cases	Count	% of cases
Having experience	**17**	**68**	**37**	**64**	14	56	**68**	**63**
Own machinery	4	16	27	47	**21**	**84**	52	48
Traditionally grown crops	16	64	24	41	4	16	44	41
Good natural conditions	15	60	19	33	6	24	40	37
Independent management	4	16	13	22	9	36	26	24
WEAKNESSES*								
Lack of, or old machinery	20	80	**39**	**68**	**18**	**73**	**77**	**72**
Using old technologies	**21**	**84**	37	64	12	49	70	65
Having fragmented land	12	48	38	66	12	49	62	58
Having old plots of perennial crops	6	24	15	26	9	36	30	28
OPPORTUNITIES*								
Planting new crops	9	36	26	45	**9**	**36**	**44**	**41**
Farm size expansion	7	29	**27**	**47**	4	16	38	36
Maintaining the same business	6	24	16	28	5	20	27	25
Applying new technologies	**10**	**40**	10	17	5	20	25	24
Market expansion	7	29	10	17	6	24	23	22
THREATS*								
Unpredictable weather	**20**	**80**	**44**	**76**	**19**	**76**	**83**	**77**
Lack of or uncertain market	19	76	39	67	13	52	71	66
Unstable agricultural policies	15	60	31	53	17	68	63	58
Decreased consumer demand	7	28	17	29	7	28	31	29

*Note: * This table includes only the most frequent answers given by the respondents. Percentages are based on multiple response answers. They are the percentages of cases rather than responses therefore they do not sum to 100%*

The key ***weaknesses*** stated by the respondents are presented in Table 3 and they were: lack of machinery or having obsolete machinery (72%); using old technologies (65%); having fragmented land (58%) and having old plots of perennial crops (28%). These findings were similar to those of FAO (1999), MAF (2002) and MAF (2006) which stated that after 1989 agriculture in Bulgaria had been characterised by a low level of technological innovation and this problem is yet to be solved. Although the farms within the sample inherited the same problems, accumulated over the periods of Communism and transition, there were some minor differences in terms of the weaknesses of the different sized farms. The results revealed that more than two thirds of the respondents with farms of more than 2 ha considered the lack of machinery or possession of obsolete machinery (more than 15-20 years) as their main weakness. However, the growers with farms of less than 2 ha stated their major weakness to be the use of old technologies (84%) (Table 3).

As a result of the economic transition in Bulgaria after 1989 and joining the EU in 2007, the respondents confirmed that some ***opportunities*** has arisen and they identified the following: planting new crops (41%) to follow the new customers preferences and needs; expanding farm land (36%) assisted by the EU financial mechanisms; maintaining existing business level (25%) in a dynamic competitive environment; implementing new technologies (24%) and expanding new markets (22%). The results also revealed that the key opportunity for the 'small' farms was the application of new technologies (40%), whereas, the 'medium size' farms identified farm expansion in terms of their land (47%) and the 'big' farms were mainly oriented towards developing new crops (36%) (Table 3).

Changes in the external environment may either have beneficial or harmful effects upon the farm businesses, therefore any negative influences have to be avoided or overcome. Table 3 shows that the most important ***threats*** identified by the farmers were: unpredictable weather conditions (77%); lack of, or uncertain, market (66%); unstable agricultural policies, including high level of bureaucracy (58%); decline in consumer demand (29%). All farms irrespective of their size were threatened mostly by the unpredictable weather (Table 3).

Conclusions

Horticulture is an emerging field of research in Bulgaria and this study is one of the first to adopt strategic approaches. The research results suggested that the small-scale (often subsistence) farms (less than 2 ha) were involved primarily in vegetable production and their farmers, perceived farming generally as a way of living and surviving during the economic transition and joining the EU. The 'medium' farms (2-10 ha) were transitional and were working under pressure for either survival or expansion under the EU conditions. They produced mainly annual crops (vegetable and other agricultural crops) for the local market. The 'big' farms were more market orientated (farms over 10 ha) and were aiming at business viability within the competitive environment. Together with their annual crops they also grew some perennials (fruits and grapes).

An investigation of the internal business capacity of the horticultural farms demonstrated that the key strengths were previous experience and owning machinery (although obsolete), while their major weaknesses were lack of machinery and the application of old technologies. The external environment both threatens and provides opportunities for the farm businesses in Bulgaria. The most noticeable opportunities and threats were the collapse of the Communist system and joining the EU in 2007. The main opportunities identified by the farmers were developing new products and land expansion while the key threats were the unpredictable weather conditions and uncertain markets.

This research demonstrated that despite the difficult economic environment of Bulgaria, it can be argued that the horticultural farms have significant potential due to favourable natural conditions coupled with the tradition of growing horticultural crops has existed for centuries. Equally, joining the EU in 2007 has presented new challenges and opportunities for the successful future development of farm businesses in Bulgaria.

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