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SWOT Analysis of the Horticultural Farms in the Plovdiv Region of Bulgaria

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Abstract

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Agriculture/horticulture has traditionally been an important sector in the economy of Bulgaria. This paper reviews the changes in agriculture/horticulture in the Plovdiv region of Bulgaria after 1989 when the transition towards a free market economy began. In particular, it provides a review of the internal capabilities (strengths and weaknesses) of the horticultural farms and the impact upon them of the external environment (opportunities and threats). While many farmers regarded their experience as a strength, farmers having farms of different size identified additional different strengths, and different weaknesses and opportunities. Whereas, all of them were influenced by similar threats and the relative importance of these perceived threats did not varied depending upon the size of the farm.
Key words: horticultural farms, SWOT analysis, Plovdiv region, Bulgaria

Introduction

Agriculture has traditionally been an important sector in the economy of Bulgaria. Post 1989, agriculture/horticulture has been in a critical situation due to political, economic and social challenges such as, 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 investment, and de-population of rural areas (OECD, 2000; MAF, 2002).

Research regarding the agricultural/horticultural industry in Bulgaria has become a popular area for investigation in the last 6-7 years. Agribusiness issues such as agricultural reform, agricultural markets, farm competitiveness, agri-environmental policies and subsistence farming have been investigated (Ivanova, 1999; Hristova, 2001; Mergos et al., 2001;

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Kopeva and Noev, 2002; Kostov and Lingard, 2002; Rissina and Dimitrov, 2002; Doichinova, 2003; Georgieva, 2003).

However, this study was one of the firsts that adopted a strategic approach to the agricultural/horticultural industry in Bulgaria. The key aim of this paper is to provide a SWOT analysis of horticultural farms of different size in the Plovdiv region of Bulgaria. The analysis is based on a farm survey and is divided into the following sections. The next section reviews the agricultural/horticultural industry in Bulgaria. The methodology is described in section three, while the analysis and discussion of the data are reported in section four. The final section draws some conclusions.

Current Status of Agricultural/Horticultural Industry 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; SENTER, 2000).

In 1989, the transition towards a 'free market' economy began in Bulgaria. 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 and strategies, reduced domestic demand and loss of the main export markets (EC, 1998; MAF, 2000; Georgieva, 2003). The reform in agriculture started with an 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 characterized by the liquidation of the AICs (Agricultural Industrial Complex), the development of a private sector, land restitution, privatization and price liberalization. These structural changes in agriculture led to a significant decrease in the area farmed and the production of different agricultural/horticultural crops (FAO, 1999; SENTER, 2000; Georgieva, 2003).

The farming structure that emerged after the liquidation of the AICs consisted of a large number of private farms (average size about 1.5 ha producing mainly for self-consumption), and private production co-operatives (average size of about 700 ha) (FAO, 1999; MAF, 2000; Georgieva, 2003). The majority of these agricultural enterprises (individual farms and co-operatives) are still transitional and in need of significant improvements and consolidation. Consequently, they do not display a clear strategic vision for their long-term future development (Bankova, 1999; EC, 2002). Bankova (1999) also suggests that many of these small-scale farms in Bulgaria will disappear in the long term. In comparison, the average farm size in the other countries of EC is between 20-50 ha, except for those in Greece, Portugal and Italy where the average size ranges from 5 to 10 ha (EC, 2002).

After 1997 radical agricultural reform began in Bulgaria with the completion of the process of land restitution together with the establishment of a land market. New agricultural policies became 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 EC accession (MAF, 2000). The Special Accession Programme for Agriculture and Rural Development (SAPARD) has been introduced to prepare Bulgaria for entry into

the EC and to solve priority problems in agriculture and rural development before the candidate countries, including Bulgaria, become members of the EC (EC, 2000; MAF, 2000; Georgieva, 2003).

Methodology

This study is one of the first to focus on the horticultural industry in Bulgaria and included a sample of horticultural farms in the Plovdiv region. In this study horticulture includes fruits, vegetables and grapes. Data collection was undertaken during January - April 2001. A total of 108 farmers were interviewed at their work places. The research method used was structured face-to-face interviews as this took account of both the farmers' lack of experience with research interviews and the innovative nature of this topic. The same research method (face-to-face structured interviews) was used in Greece for investigating alternative farm enterprises and their strategies (Damianos and Skuras, 1996) and in New Zealand for assessing farmers' behaviour (Gary and Wilkinson, 1997).

Purposive sampling was employed due to the lack of an accurate and up-to-date list of the horticultural farms in the Plovdiv region. Farmers were chosen due to their relevance to the research topic and their ability to produce the required data. Purposive sampling was also used in Spain for analysing the production and marketing strategies of Spanish citrus farms (Poole, 2000).

The size of the farm is a very important factor that might influence the business performance of the farms as well as their future development which was confirmed by various associations and researchers (FAO, 1999, Kanchev and Doichinova, 1999; Mishev et al., 1999; OECD, 2000). Therefore, farm size was chosen as an independent variable. 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. More than half of the enterprises (54%) had an area under cultivation of between 2 - 10 ha. There were equal proportions of 'small' and the 'big farms (23%) (Table 1). Some of the farms were not strictly horticultural (growing only horticultural products) as they also cultivated some agricultural crops such as cereals, herbs, tobacco, etc.

The data collected was analysed using the Statistical Package for Social Sciences (SPSS). A range of descriptive analytical techniques together with multiple response tests were employed.

Main Results and Discussion

Farmers' profile

The majority of the respondents were male and more than 40 years old. The proportion of the interviewees who were over 60 years old was 25%. In comparison, the results of the previous investigations by the FAO (1999) and the EC (2001) reported that 60% the people who work in agriculture in Bulgaria were over 60 years of age. The horticultural focus of this study might explain the fact that 75% of the

Table 1
Farm size of the horticultural farms within the sample

Farm size	Count	%
Less than 2 ha	25	23
2 -10 ha	58	54
More then 10 ha	25	23
Total	108	100

interviewees were of working age (under 60 years), as young people were more likely to go to horticultural crops because these crops (especially grapes and fruits) were more profitable during the period 1989-2000 compared to other agricultural crops.

The interviewees were well educated and with significant experience of working in agriculture/horticulture. More than half of the respondents (57%) had secondary qualification (11-12 years education) and 32% had a university degree. More than two thirds of the farmers (69%) had worked in the agricultural/horticultural sector previously and their years of experience varied between 1 and 50 with an average of 21 years (Mean = 21.04). Both, the FAO (1999) and the OECD (2000) argue that the experience of farmers in Bulgaria was gained either within the state AIC's or as a result of having small household gardens (for self-consumption) during the period of Communism and/or during the first years of transition towards a free market economy. SENTER (2000) added that the existence of well-educated and experienced farmers is the main competitive advantage of the Bulgarian agriculture.

SWOT analysis of the farms

Strengths of the farms

Studying the internal capacity of the farms (strengths and weaknesses) provided information for understanding the current situation of the farms. The results of the interviews revealed that the key strengths of the farms within the sample, in descending order of perceived importance, were:

- possession of considerable experience in agriculture/horticulture (63%);
- availability of own machinery (48%);
- agriculture/ horticulture has traditionally been an important sector in the Plovdiv region (41%). Various reports emphasize that for centuries cultivating agricultural/ horticultural crops was main activity in Bulgaria and in the Plovdiv region respectively (FAO, 1999; OECD, 2000);
- good natural conditions (37%). The Plovdiv region is very suitable for growing horticultural crops due to the mild weather and fertile soils;
- independent management (24%) (Table 2).

Other strengths that were mentioned by the respondents were good location of the farm, i.e. near the market, and having big plots of consolidated land.

Farms of different size had different perceived 'key' strengths. The vast majority of the farmers with 'big' farms (84%) identified availability of their own machinery, while those with plots of less than 10 ha stated that their experience in agriculture/horticulture was their key strength. The respondents who cultivated large plots of land managed to buy machinery from the old organizational structures (e.g. AIC's) after their liquidation. 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 key strengths compared to 16% of the growers with 'small' farms (Table 2). 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 new 'free' market economy, the farm manager has the responsibility for taking all the business decisions, which is a challenging task that has been welcomed by some and has frightened others.

Table 2

The top five strengths of the farm 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

Note: *This table includes only the most frequent five answers and excludes all the other answers. Percentages are based on cases and may not sum to 100%

Weaknesses of the farms

The FAO report in 1999 stated that after 1989 agriculture/horticulture in Bulgaria has been characterized by a low level of technological innovation due to a lack of financial support for buying new machinery, equipment and technologies. It also identified that the machinery and technologies inherited from the large AICs were not suitable for small-scale farming (FAO, 1999). The key weaknesses stated by the respondents are demonstrated in Table 3 and they were as follows, again in descending order of importance:

- lack of machinery or having obsolete machinery (72%);
- using old technologies (65%);
- having fragmented land (58%). This was to be expected because the process of land restitution resulted into high fragmentation of the land due to the fact that one plot of land often had too many heirs (MAF, 2000; OECD, 2000 Mihailova, 2000);

Table 3

The top four weaknesses of the farm with different size

Weaknesses*	Size of farms						Total	
	Small		Medium		Big			
	Count	% of cases	Count	% of cases	Count	% of cases	Count	% of cases
Lack 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

Note :*This table includes only the most frequent four answers and excludes all the other answers. Percentages are based on cases and may not sum to 100%

Table 4

The top five opportunities of the farm with different size

Opportunities*	Size of farms						Total	
	Small		Medium		Big			
	Count	% of cases	Count	% of cases	Count	% of cases	Count	% of cases
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

Note: *This table includes only the most frequent five answers and excludes all the other answers. Percentages are based on cases and may not sum to 100%

• having old plots of perennial crops (28%).

Although the farms within the sample in the Plovdiv region inherited the same problems, accumulated over the periods of Communism and transition, there were some minor differences in terms of the weaknesses of the farms of different size. 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%) followed by lack of machinery (80%) (Table 3).

Opportunities of the farms

As a result of the economic transition in Bulgaria after 1989, the respondents confirmed that some opportunities had arisen and they identified the following as the main opportunities:

• planting new crops (41%) - In their studies, Damianos and Skuras (1996) and Oosten (1998) argue that the customers are changing their product preferences relatively quickly and the farmers have to be flexible in terms of product orientation. Therefore, it was not unexpected that the respondents stated planting new crops as an opportunity for maintaining a profitable farm business.

• expanding farm land (36%) - The official completion of the process of land restitution and the establishment of the land market created a positive basis for increasing the size of the farms through leasing or buying land.

• maintaining existing business level (25%) - Running a farm business in Bulgaria and in the Plovdiv region had been a challenging task due to the changeable legislation, poor marketing system and limited financial resources.

• implementing new technologies (24%).

• expanding new markets (22%) (Table 4).

The results revealed that the key opportunity for the 'small' farms investigated was the application of new technologies (40%), whereas, the 'medium size' farms identified farm expansion in terms of their

Table 5

The top four threats of the farm with different size

Threats*	Size of farms						Total	
	Small		Medium		Big			
	Count	% of cases	Count	% of cases	Count	% of cases	Count	% of cases
Unpredictable weather	20	80	44	76	19	76	83	77
Lack of or uncertain market	19	76	39	67	13	52	71	66
Bad 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 four answers and excludes all the other answers. Percentages are based on cases and may not sum to 100%

land as the key opportunity (47%) and the farms of more than 10 ha were mainly oriented towards developing new crops (36%) (Table 4). The OECD (2000) argue that the ongoing development of the size structure of private farms in Bulgaria is still not completed and that the middle sized farms (2-5 ha) are most likely to be affected.

Threats to the farms

Changes in the external environment may either have beneficial or harmful effects upon the farm businesses, therefore these negative influences have to be avoided or overcome. Table 5 shows that the most important threats identified by the farm managers were:

- unpredictable weather conditions (77%);
- lack of, or uncertain, market (66%);
- poor agricultural policies and the high level of bureaucracy (58%) - This finding is in agreement with the OECD (2000) and SENTER (2000) reports, which identified that the Government did not have clear objectives or agricultural policies during the first 6-7 years of transition (1990-1997);
- decline in consumer demand (29%) (Table 5) - This may be explained by the increased level of unemployment, limited job opportunities and price liberalisation that were also stated by OECD (2000). Hristova and Hristov (1999) also argued that reducing the real income of the population was a result of price liberalisation and that this led to inflation and a high rate of unemployment.

All farms irrespective of their size were threatened mostly by the unpredictable weather conditions. Therefore, no difference was demonstrated when comparing the threats perceived by farmers operating different size of farms (Table 5).

Conclusions

Horticulture is an emerging field of research in Bulgaria. This study is one of the first to adopt strategic approaches and directly ask the farmers with different sized farms to evaluate their internal capacity and the challenges presented by the external environment within which they are operating. In regard to the internal business capacity of the farms (strengths and

weaknesses) the results have demonstrated that the main perceived strengths were previous experience, ownership of machinery (although obsolete) and cultivating crops that have traditionally been grown for centuries, while their major weaknesses were lack of or obsolete machinery and application of old technologies.

The external environment both threatens and provides opportunities for the farm businesses in Bulgaria. The most notable threats include the collapse of the Communist system, the resulting process of transition towards a free market economy and the process of accession to the EU. The main opportunities identified by the farmers were developing new products and land expansion while the key threats were the unpredictable weather conditions, uncertain markets and poor agricultural policies.

The research results demonstrated that farms of different size attached different levels of importance to the perceived different strengths, weaknesses and opportunities, while all of them were threatened by the unpredictable weather conditions. The small-scale farms (less than 2 ha) were mainly subsistence farms that were relying upon the farmer's experience to survive during the transition towards a free market economy, while their main weakness was the use of old and inefficient technologies, which they were hoping to modernize given an improvement in the external environment. The second type of farm (2-10 ha) were 'transitional' and were working under pressure either for survival or expansion. They were also relying upon the previous experience of the farm managers and had problems with modernization (machinery and technologies). The third type of farm (farms over 10 ha) was more business orientated and were aiming at business viability within the unstable and competitive environment. They had their own machinery that was often obsolete and wished to be market driven and address the opportunity of cultivating new crops.

This research has demonstrated that despite the difficult economic environment of the country, it can be argued that the horticultural farms in particular have significant potential due to favorable natural and weather conditions coupled with the tradition of growing horticultural crops that has existed for centuries. Equally, joining the European Union will present new challenges and opportunities for the successful and sustainable future development of farm businesses in Bulgaria.

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