ROLE OF CUSTOMERS' DEMANDS AND ENVIRONMENT IN PRIORITIES OF DEVELOPMENT AMONG YOUNG FARMERS

Csitári Melinda
PhD Student
Szent István University, Gödöllő, Hungary
Faculty of Social and Economic Sciences

ABSTRACT

The level of a country's long-term food-supply and agricultural export is basically determined by the agricultural and food industrial investments. In Hungary the level of the agricultural output have decreased considerably in the previous years, and the investments have dropped drastically at the beginning and in the middle of the 1990s.

In the following years it is an important task to realize the missing developments, especially as our agriculture needs significant projects to comply with the increasing demands. It is necessary not only to increase the output, but also to improve the quality of the production and the products, because it is more and more important to supply the costumers with good-quality product both in the export and in the internal supply.

In the agricultural production the environmental protection also plays an increasingly significant role. The purpose of joining European Union is increasing the importance of the environmental protection, because we have to orient to the exacting requirements of the EU.

Hungarian government also realized the significance of subsidies in implanting investments, so it helps the farmers to accomplish their development plans. Through subsidies farmers should be inspired by government.

On the basis of my studies I would like to answer the next two questions:

- How significant parts are the costumers´ demands and environmental protection in planning developments among young farmers?
- What requirements have the competition in the connection with the environment and the quality of products?

INTRODUCTION

On drawing near to Hungary's join to EU, environment protection and quality grow more and more important factors in the agriculture.

Satisfaction of consumers' demands is not only significant because of the export, but the call for quality products increases at the domestic market as well. The "consumer" society emerged at the end of the XX. Century, the demand of the customers itself, and the safety of the commerce (supermarket, hypermarket) made the guarantee of product quality imperative.

Currently in the EU foodstuffs can only be sold, if their quality has been continuously checked from the field to the customer. In the EU the safeguards for the customers' interests and health has become the determinant element of the foodstuff consumption, therefore Hungarian producers can merchandise only first class foodstuffs at the EU market.

The Hungarian agriculture has many things to do in environment protection and environment management, since the environmental load of both the animal husbandry and the plant growing has to be lowered.

The environmental effect of the animal husbandry is the central topic of the environment protection, since the closed, concentrated form of animal husbandry generally in use at the present time can be regarded as the "dirty" branch of the agriculture. It is definitely more damageable to the environment due to its permanently great quantity by-product than any other branches. Its danger to both human and animal health is equally outstanding, but in the same time it can also damage considerably and permanently all nature elements (soil, water, air, ecosystem). But these effects can be cut back to a minimum extent by a well-organised operation and working at a proper standard of technology. (Sántha, 1999)

The largest problem in plant growing is the excessive and irrational use of chemicals (artificial fertilisers, plant-protection chemicals). Our soils has been charged during the last 3 decades with significantly more active agent quantity of artificial fertiliser than the mineral quantity which was drawn away from the soil by the production. Neither the extent nor the area of manuring has reached the desirable amount to sustain the organic-material content of soils. It is regrettable that the drastic reduction of use of chemicals

from 1990 based not on scientific considerations but on economical necessity. (Glatz, 1998)

The environment is an obscure question for farmers living among uncertain income conditions and working with run-down assets. Since they fight for their survival the state has the important role to evolve the ecology management.

In order to realise national economical aims the state could stimulate the forming of quality management, the strengthening of the quality and environment centric view, improving the competitiveness of the enterprises and also their preconditioning for joining to the EU with a subsidy system.

For 3 years, based on the examples of countries with developed agriculture, the investment subsidy system of young farmers is a part of the agricultural subsidy system. The purpose of this subvention is to help and inspire young farmers in establishing competitive farms. The activity, and its level is determined for 10 to 15 years by the recent investments of the farms, so they have to suit the demands and rules in the future.

MATERIAL AND METHODS

As the first step I have analysed what kind of enterprises the young farmers would start, what they would like to do. The necessary data have been collected from the applications received to the tender called for supporting farmers in 1999. I have chosen 410 pieces from the 607 application using the method of simple selection; thus the selected sample can be regarded as representative.

From the applications the following data have been collected:

- ☞ aim of the development:
  - starting a new activity,
  - increasing the quantity and the effectiveness of the existing production
  - broadening production profile
  - vertical expansion
- ☞ the breed of the animal planned to purchase

The aims of my inspections were to detect that in which extent the different agricultural branches fulfil consumers' demands and their environmental aspects.

I have constructed a questionnaire to evaluate the branches and get them filled out with 150 students.

The branches had to be sorted according to 6 aspects in a 1-5 scale:

- Aspects linked to environment protection
    1. Possibility of recycling
    2. Spare environment
    3. Emission
- For measuring customers' demands some features of the produced article had to be scored. The classification happened according to how
    1. healthy,
    2. inexpensive,
    3. popular

the articles were found.

At the different aspects the classification was carried out according to the following:

- Recycling:
    1. The waste can not be recycled.
    2. The waste can be recycled only in a small extent.
    3. The forming waste can not be recycled without a bigger expenditure.
    4. The forming waste can be mostly re-used; economical demand can be created for the utilisation
    5. The forming waste can be fully re-used; technological demand exists for them (e.g. manure).
- Environment protection:
    1. It causes permanent damage on the environment.
    2. Its effect on the environment is heavy; its social impact is considerable
    3. Its harmful effect on the environment can be defended on economic level
    4. It has a small and not permanent charge on the environment.
    5. It has no effect on the environment.
- Emission:
    1. A great isolation distance is necessary due to emissions.
    2. A smaller isolation distance is necessary.
    3. The emission is disturbing but it doesn't reach the critical value.
    4. Only the direct surroundings of the farm are affected by the emission.
    5. There is no emission.

- The health measurement of a product was based on its nutritive components. The less fat, calorie and carbo-hydrate and the more vitamins and minerals a product comprised the healthier I regarded it.
- The price and inexpensivity of the product was determined on the price of 1000 kJ calorie. The most expensive product(s) received the lowest, the cheapest product(s) the highest score.
- The measurement of popularity was carried out according to the following:
  1. The product is known by only a narrow section of population, therefore its consumption level is low.
  2. The product is widely known, but its consumption is decreasing.
  3. The product is widely known, its consumption stagnates.
  4. A dynamic expansion can be expected in the demand and consumption of the product.
  5. The product is widely known and its consumption increases.

I have averaged the scores the students gave me by the different aspects, and the scores calculated this way were regarded as the basis for further analysis. The scores of the 3 item for environment protection and another 3 for customers' demands have been summarised and the result has been shown in customers' demand matrix.
I have divided the branches into 4 groups:

- *Winner*: the scores for both the environment protection and for customers' demands has exceeded the mean value
- *Loser*: the scores of both aspects are under mean value
- *Environment oriented*: it is over the mean value regarding environment protection, but its customers' demands stays under the mean value
- *Customer oriented*: the demand for the product exceeds the mean value, but it doesn't reach the mean value regarding the environment protection

On the basis of evaluation results the research has been extended to the analysis of the enterprises.
Information for the analysis was taken from the application submitted to the tender for supporting young farmers in 1999. Picking out 70 items by simple selection from the total of 607 submitted applications I have built a representative sample. The selected

(planned) enterprises have been classified to the environment protection - customers' demands matrix, evaluating in what extent they meet customers' demands and the aims of environment protection. Since more branches have appeared within a single enterprise, I have averaged the scores of environment protection and customers' demands linked to different activities. On the basis of the results the enterprises have been shown in the matrix.

RESULTS

The viability and competitiveness of an enterprise depends greatly upon what activity it carries on and how comprehensively it is done. Complexity can increase stability, the risk derived from single activities makes a much less economical risk. On the other hand complexity increases capital demand and requires wider technical knowledge. To learn this, I have evaluated what objectives the applicants set and how complex developments they planned to carry out.

Although the support of young farmers was originally aimed for commencing farmers, starting a new activity was planned as development objective only in 48,8% of the applications in 1999. Major objectives were also expanding of quantity and modernisation of existing farms (40,5%).

37,8% of the applicants planned crop production, 47.2% animal husbandry, while 15.0% applied for both. Focusing on animal husbandry 37.7% of the applicants planned cattle farming, 24.6% pig farming, 14.8% sheep and goat farming and 11.5% poultry farming. Remarkably, many wished to deal with pig farming, though this section had overproduction problems already at that time. Pig farmers can only survive and be lucrative on the long run if they can assure a continuous good quality meat production. The planned farms could not always meet this requirement thus they can not be regarded as viable. The relatively high refusal rate indicates that examiners were very critical in these cases.

After examining development objectives the next step was to inspect in what extent the agricultural branches - can be selected by young farmers - can meet customers' demands and fit to environment protective farming.

To meet customers' demands is very important regarding both domestic supply, and export. The demand for a product is greatly influenced by how healthy and inexpensive it is held by customers. Popularity depends on the general confidence in a product (e.g.

the confidence in beef has observably fallen with the news about BSE), but can also be affected by diverse fashions trends (e.g. foreign consumption models from TV serials and newspapers can stimulate temporarily a considerable increase).

I have evaluated the branches with the method described in section Material and methods and showed them in the environment protection- customers' demands matrix. (Figure 1.)

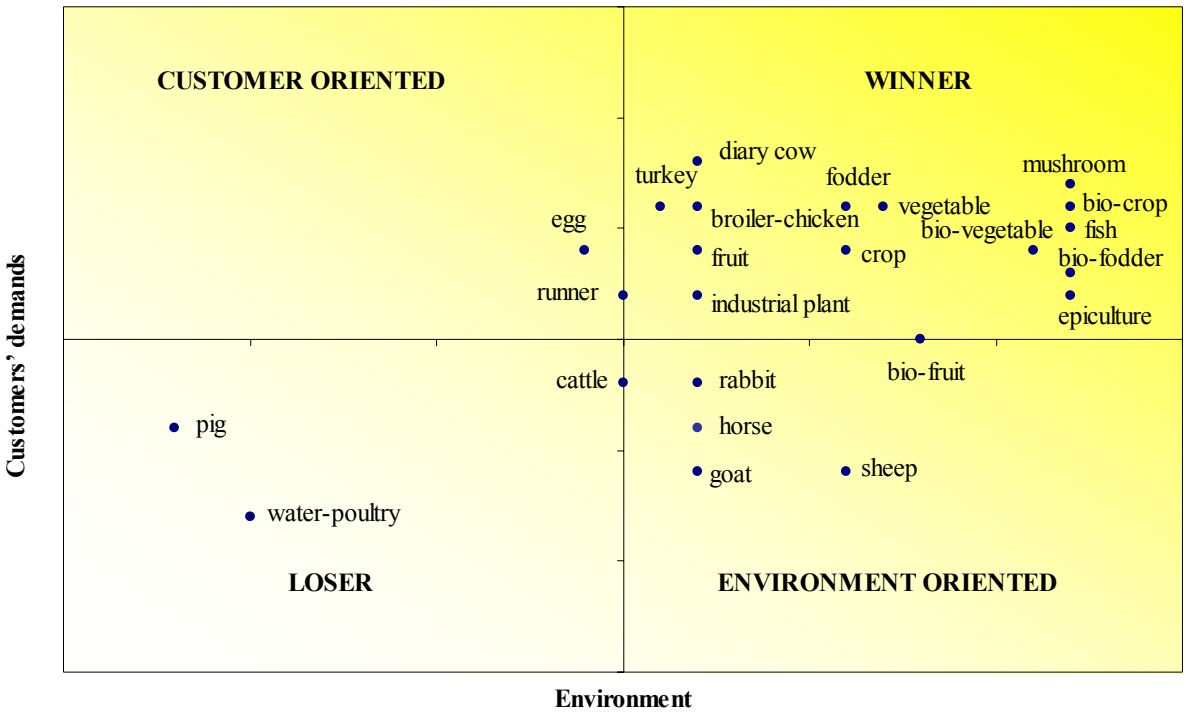

Figure 1.: Position of agricultural products in the environment protection- customers' demands matrix

According to the place they take in the matrix the winner branch is the diary cow farming, broiler-chicken farming, turkey farming, water farming, apiculture, mushroom growing and all of the plant growing branches except for bio-fruit growing.

Especially good positions were hit within the specified activities by the mushroom growing, the bio-crop production and the water farming. In these cases are the most advantageous the fulfilment of both the aspects of environment protection and the customers' demands in the same time.

Almost every plant growing branches has got into the winner category, however the branches dealing with conventional and ecological farming could be well separated from each other. General rule, that bio-fruits are less demanded for their higher price

though their growing charges environment in a smaller extent. In case of bio-fruits the demand is reduced not only by the higher price but also through the low confidence in these products (bio-fruit = “maggoty fruit”) in such an extent that it makes the branch environment oriented. Since the winner activities charge environment only in a small extent or they don’t charge it at all, and their products will be demanded and competitive in the future as well, it is reasonable their wide range spread. The realisation of the specified objectives should be supported by government subventions. Regarding that the role of ecological farming and production of bio-products grows important by drawing near to joining the EU and in Hungary due to the described reasons bio-products have a smaller demand backed, the government has an important role to increase the competitiveness of the branch.

The loser branches are the pig farming, water- poultry farming and cattle farming. In case of pig farming the most problematic point is the manure handling, which causes considerable water, air and soil pollution. In Hungary the pork consumption is relatively high though, its popularity decreases. It is promising, that 40% of the applicants planning pig farming have been rejected hopefully for the specified reasons. The environment-protection position of the cattle farming can be significantly improved, because its by-product the stable-dung can be well fitted to the ecological farming, but it is not always allowed by the technology.

The decrease of beef demand is caused chiefly due to the distrust on account of BSE.

Further subvention of the loser branches is not recommended, because they meet neither the aspects of environment protection, nor customers’ demands.

Although the environment oriented branches (sheep, goat, rabbit and horse farming, bio-fruit growing) fulfil the requirements of the ecological farming, but their products are not called for enough, thus their competitiveness is in danger. Since these branches fit into the environment management program of the EU, it is recommended to support them through subsidies in order to keep them competitive.

In case of the customer oriented products (runner farming, egg production) the demand is considerable or growing, but they are harmful for the environment. Such branches could be subventioned to achieve environment protection.

After evaluating the branches, I have analysed what positions take the planned enterprises in the environment protection - customers’ demands matrix, in other words,

in what extent the articles of planned farms fulfil the requirements of the environment protection and are competitive in the market in the same time. (Figure 2.)

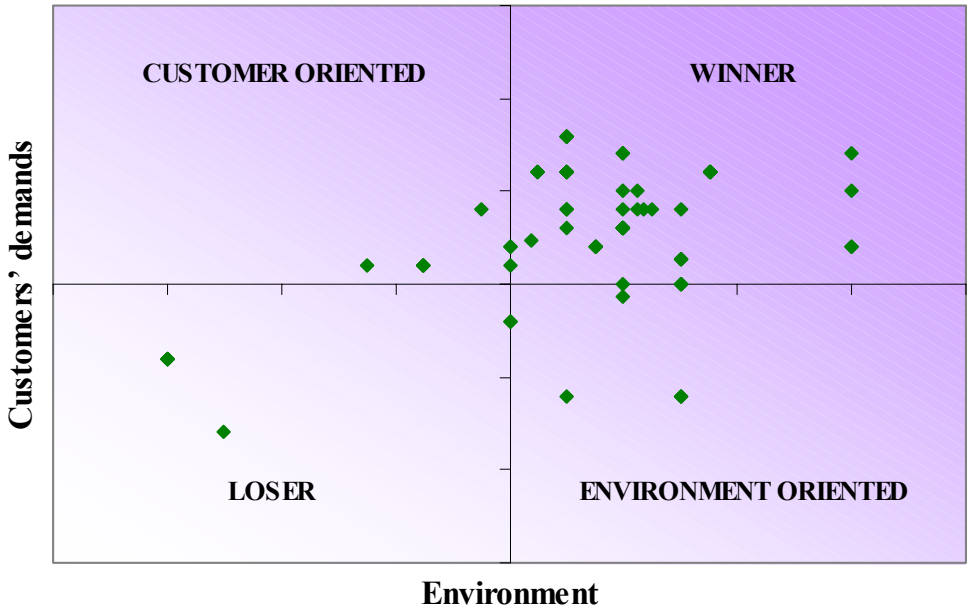

Figure 2.: Position of farms in the environment protection- customers' demands matrix

I haven't found any clause in the tender of 1999 regarding environment protection requirements, which should be fulfilled by the planned farms, so the state didn't determine any requirements in relation to this.

From the examined 70 enterprises 46 (65.7%) got to the winners; the build-up and extension of theses farms are worth to subventionize. 8 enterprises (11.4%) got into the classification of customer oriented and another 8 ones (11.4%) got to environment oriented. From these planned enterprises it is only rewarding to subventionize the environment oriented ones.

The subvention of the loser farms is economically illogical, since neither establishment of new farms nor extension of old ones are lucrative. In cases of environment oriented and consumer oriented activities other form of subvention could solve economical problems as well.

I have analysed the number of rejected applications from the 70 and also the reasons of the rejections. The number and ratio of rejections can be seen in Table 1.

Table 1.: Number and ratio of rejections

Denomination	Rejected applications	
	number	ratio
	(db)	(%)
Winner	21	45,6
Customer oriented	1	12,5
Loser	2	25,0
Environment oriented	3	37,5
Total	27	38,6

It is remarkable, that the highest ratio of rejection can be observed in enterprises where the aspects of environment protection are respected over the average, and only 1/4 of the loser branches were found inadequate. In some cases the application was rejected for administrative faults and because they didn't fulfil the requirements of the tender, but evidently the aspects of environment protection and customers' demands were not taken into consideration in a necessary degree.

CONCLUSIONS

On the basis of my examination it is obvious, that neither the environment protection, nor the customers' demands get adequately important role at writing out and prizing applications.

In subventioning of commencing enterprises the environment friendly transformation of the production could be stimulated. The parameters and their limits should be determined among the application requirements, under which an effect harmful to environment is acceptable. Concerning animal husbandry for example the upper limit of quantity of wastes released to the environment could be laid down for restriction. The subventioned enterprises could also be inspected if they adhere to the undertaken environment protection instructions.

The quality management system is already in use in the food industry. The HACCP method regularly examines every single steps of the food process from the row material till the customer. The application of the method in Hungary has already started for several years nowadays many food- processing companies have established their food-safety system or still work on it. Extending the quality management to the animal

husbandry and plant growing as well would be rewarding, and only those farms should be subventionized which meet the quality requirements.

In order to fulfil customers' demands those activities should be determined on which subventions could be used, assuring in this way the competitiveness of the established enterprises and the better efficiency of the subventions.

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BIOGRAPHY

CSITÁRI, Melinda, (Gödöllő, 15.10.1976), PhD student, Hungarian by nationality, single. Institute: Szent István University, Gödöllő Faculty of Social Sciences and Economics (H-2103 Gödöllő, Páter K. u. 1. E-mail: csmelind@freemail.hu). Diploma obtained at Agricultural University of Gödöllő, Faculty of Social Sciences and Economics in 2000. Research topic: Subsidies of beginner, young farmers.

ADDRESS:

Mailing:
CSITÁRI Melinda
Szent István University, Faculty of Social Sciences and Economics
Department of Accountancy and Finance
2103 Gödöllő
Páter K. u. 1.
Telefon: +3628522900/2017
Fax: +3628410804
E-mail: csmelind@freemail.hu