SUSTAINABLE USE OF AGRICULTURAL RESOURCES IN THE COMMON AGRICULTURAL POLICY CONTEXT

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Abstract: *Knowing the general framework of policies with implications in the use of agricultural resources is of utmost importance in understanding the effects of the Common Agricultural Policy and of the future CAP Reform. The three greening measures of CAP Pillar I, namely crop diversification, maintaining the permanent grassland and maintaining an ecological area on each farm are of utmost importance, in an attempt to connect the Common Agricultural Policy to the sustainable development principles.*

Key words*: Common Agricultural Policy, sustainable development, agricultural resources*

INTRODUCTION

The common policies are based on the harmonized action at European Union level for facilitating optimum results, depending on the targeted objectives. Since 1962 when it was established, CAP has experienced a continuous adjustment and reforming process. In order to prevent the degradation risks and to improve the agro-eco-system sustainability, the environment protection issues have been gradually integrated into the agricultural policies.

Sustainable development in agriculture includes eco-system, soil, water and air protection criteria as well as biological diversity conservation criteria; farm sustainable development represents a concern of scientists, mainly from the perspective of reaching an economic optimum in the conditions of natural resources conservation.

Pillar I of the Common Agricultural Policy (CAP), funded through the European Agricultural Guarantee Fund (EAGF), represents the basis of direct payments and market measures, being complementary to CAP Pillar II, funded through EAFRD.

MATERIALS AND METHODS

The challenges of agriculture and of the common agricultural policy in the years to come were defined on the basis of an analysis of past experiences, of the present conjuncture and of a large public debate organized in the year 2010. The following were identified as main challenges: food security, natural resources and balanced territorial development; the objectives established for CAP are the following: 1) reliable food production; 2) sustainable management of natural resources and climate policies; 3) balanced territorial development.

The legislative proposals included a series of changes in the Common Agricultural Policy, but probably no proposal was so contested as the "greening" of direct payments under Pillar 1. Through the regulations proposed to the European Commission for the direct payments (COM (2011) 627/3), a package of three measures was established for CAP to increase its support for the fight against climate changes and against the degradation of natural resources. The three proposed measures are the following:

1. crop diversification,
2. maintaining permanent pastures
3. development of an area of ecological interest on the farm agricultural land.

This package can benefit the farmers who are entitled to receive a payment under the basic payment scheme and who have an area larger than 3 hectares; the farmers certified in organic farming and who are beneficiaries of basic payments are already qualified for this.

Besides the above-mentioned criterion, for the crop diversification measure, the farm agricultural land should meet the following criteria:

- not to be fully covered by pasture (cultivated or spontaneous),
- not to be fully left as fallow land
- not to be fully cultivated with crops that are under water for a large part of the year,
- the arable land must be cultivated with at least three different crops; none of these crops should cover less than 5% of the arable land, and the main crop should not exceed 70% of the arable land.

For the areas of ecological interest, the farmers must ensure that at least 7% of their eligible hectares, except for the areas with permanent grassland, represent zones of ecological interest, such as fallow land, terraces, landscape elements, protection areas and forested areas.

Crop rotation represents one of the main available techniques for the diminution of the incidence of diseases, of weed and pest infestation, which is a less expensive means to obtain high yields and to protect the soil and the environment. Crop rotation can be designed so as to meet the requirements of different agro-eco-systems, with beneficial effects both on the agricultural production and on soil quality, while monoculture has as main effect soil "exhaustion". Crop diversification on the farm should start from the principle of maintaining a balance between the great groups of crops: a) small grains, which through the radicular mass and the incorporated vegetable remains provide organic carbon to soil; b) leguminous crops, which provide nitrogen to soil; c) row crops, which leave the soil free of weeds and d) fodder crops, which improve soil structure.

The analysis used official statistical information sources, the information from the reports on the situation of natural resources; the impact studies on farms were also used, conducted both at EU and national level, from the perspective of the new Common Agricultural Policy proposals.

The research on the effect of agricultural policy measures identifies the changes that have been produced in our country's agriculture after the accession, while highlighting the sectoral particularities from the perspective of the resources utilization, the concordance between the crop system and the soil and climate suitability conditions. For the purpose of crop diversification analysis, information from a field survey conducted in over 750 farms was used. Homogenous groups of farms were created, and the shares of the main groups of crops in the cultivated area of the farms were determined for the qualitative evaluation.

RESEARCH RESULTS

From the perspective of natural resources melioration and conservation, the specific support measures for the agricultural sector had different effects. Thus, in the period 2007 - 2011, the modifications in the agricultural land use by fertility classes reveal the following:

- the efficiency of direct payments accompanied by the respect of good agricultural and environment conditions is materialized into a relatively deficient management of the arable land; this lost over 130 thousand hectares from the quality classes I and II, and the less fertile arable area (classes III, IV and V) increased;
- the agro-environmental measures generated positive changes in the case of pastures and hayfields;

- in the vine sector, beneficiary of the restructuring/reconversion market measure, a better location of plantations takes place, in more favourable areas from the soil quality point of view, together with the diminution of areas from less favourable locations.
- the same trend as in the case of vineyards can be noticed for orchards, yet with a lower intensity.

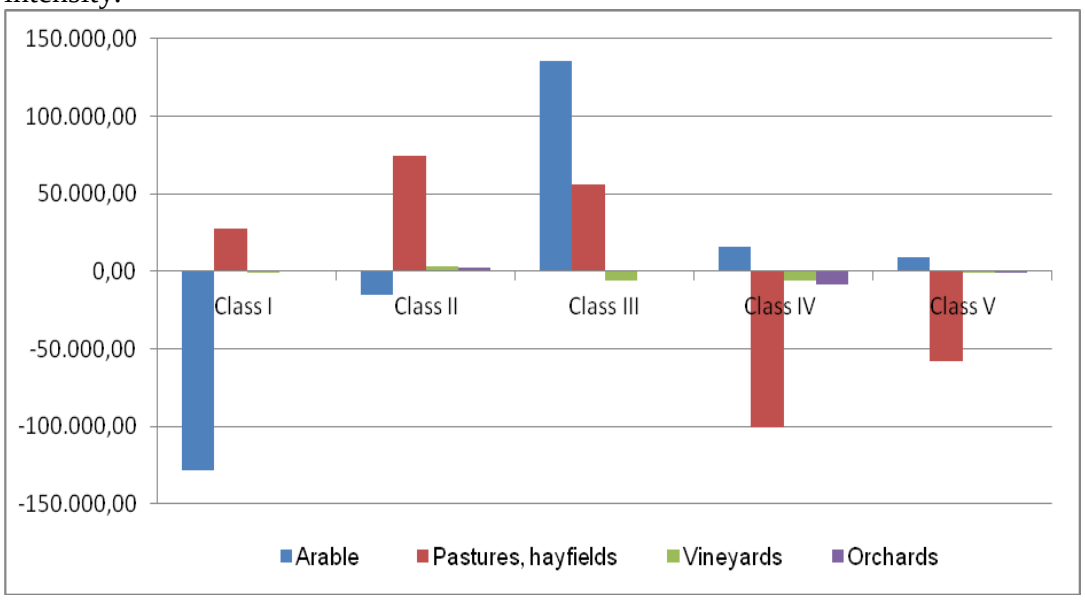

Figure 1. Changes in the soil quality classes, according to the soil quality score for the category of use, 2011 versus 2006

Source: processing of data from the National Environmental Report, years 2006 and 2011

The total eligible area for the area payments was 9 722 thousand hectares in 2011. Out of this, arable land represents about 63% of total, the eligible arable area totaling 6124 thousand hectares. According to the regulation proposal on direct payments, maintaining 7% of the arable area for zones of ecological interest is materialized into a total area of 428.7 thousand hectares arable land.

The farms that are eligible for payments fall into the category 1 hectare and over 100 hectares. According to the General Agricultural Census data of 2010, the non-utilized area belonging to the farms larger than 1 hectare amounts to 474 thousand hectares. From this point of view, the measure on maintaining an area of ecological interest will have beneficial effects, conditioning the farms to a better agricultural land management, on the condition that until the enforcement of the new regulations, each farm eligible for payments should fully farm its land.

The crop diversification analysis reveals that, from the point of view of agro-technical requirements, most farms from the investigated sample can operate crop rotations that should comply with certain restrictions referring to the requirements related to the precursor crop. The area of farms that grow one or two crops accounts for almost 6% in the arable land of sample; the group with 3-5 crops accounts for 51% of the arable land, while the area of the group in which more than 5 crops and which could perform a complex rotation accounts for 44%.

Table 1

Structure of crops on the farms from sample

Number of crops on the farm	Small grains	Row crops	Leguminous crops	Annual fodder crops	Perennial fodder crops (alfalfa, clover)	Arable idle land	Pastures, hayfields
1 -2 crops	41.2%	42.9%	0.0%	1.4%	5.2%	2.3%	7.1%
3-5 crops	42.0%	49.1%	0.0%	1.8%	2.9%	1.7%	2.5%
> 5 crops	41.8%	46.8%	0.5%	2.4%	2.9%	2.6%	3.0%

Source: processing of data from field survey

The interpretation of results from the perspective of the requirements of the sustainable production systems reveals that, regardless of the number of crops grown, there is a qualitative disequilibrium of the groups of crops, mainly small grains and row crops being used in the crop rotation; these cover more than 84% of the area of the first group of farms (1-2 crops), over 91% in the case of farms with 3-5 crops and almost 90% on the farms that grow more than 5 crops. From the crop diversification perspective, as this was defined in the regulation proposal on direct payments, 95 % of the sample area meets the proposed criteria.

CONCLUSIONS

The direct payments accompanied by the respect of good agricultural and environment conditions prevented the arable land degradation only to a less extent.

The different financing systems in the case of vineyards and orchards led to different results, which can be explained by the access to finance, namely: viticulture through market measures, materialized into lump sums that are granted by measure, much easier to be accessed, and the establishment of orchards through NRDP, with more complicated procedures with regard to the access to funds and carrying out the investment.

From the perspective of conditioning part of the sum for greening direct payments the possible positive effect will be generated by the farm obligation to till the entire land area. The crop diversification measure will have quite limited effects, through the possibility to maintain the qualitative disequilibrium between the main groups of crops.

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