Economy and Ecology: Twin Span for a Qualitative Agricultural Production in Europe?

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Abstract. It is an objective of the European Union (EU) to reach the right balance between a competitive agricultural production (economy) and the respect for nature and environment (ecology). Since Agenda 2000, the Common Agricultural Policy (CAP) has two pillars: the market and income policy (first pillar) and the sustainable development of rural areas (second pillar). In both pillars the 2003 CAP reform and the 2008 Health Check brought greater quality to environmental integration. Concerning market and income policy, the cross-compliance is the core instrument. The 2003 CAP reform also involved decoupling most direct payments from production. From 2005 (2007 at the latest) a single payment scheme was established, based on historical reference amounts. As regards the rural development policy, compliance with minimum environmental standards is a condition for eligibility for support under several rural development measures. The complexity of the relationship between agriculture and the environment has conditioned the approach to environmental integration in the context of the CAP. Central to the understanding of this relationship is the principle of Good Agricultural Practice which corresponds to the type of farming that a reasonable farmer would follow in the region concerned. The ecological footprint is a useful indicator for assessing progress on the EU Resource Strategy. A public consultation held in 2010, identified food security, environment protection and rural diversity as the three main goals of the future policy. The European Commission unveiled last November 2010 its blueprint for reforming the CAP and the debate was started July 2011.

Keywords: Common Agricultural Policy, rural development, cross compliance, agro environment measures, good agricultural practice, traceability.

INTRODUCTION

Roughly ten thousand years ago the farmers story started somewhere around the rivers Tigris and Eufrat. The early millennia of agriculture were continuous cycles of ecological and social catastrophes. The use of land for food production led to the degradation, salination or erosion of the soil. This pattern was found from the Mediterranean region to old China and nowaday still remains in several developing countries.

From the very beginning agriculture was intended to have a dual function: food production and land management. In this perspective, the later European history is a success story. Two major events seem to have been decisive for protecting the productivity of land or living nature. Firstly, the introduction during the 9th century of the three field farming system (Van Bath, 1960) which meant that much of the fields did not become degraded. Secondly, the
fact that the practical management of natural resources took place at local community level, even a long time under feudal regime.

Although most of the European agro-ecosystems survived to our modern times, one should not forget that the daily life of most people was for centuries full of hunger and suffering. In the late 18th century it was recognized that one doesn’t need only to protect the productivity of the land but that can also improve its productivity. And farmers - deliberated from the feudal system - had an interest to develop the productivity of their own land. Economists like Adam Smith and David Ricardo recognized the impact of the production factor ‘work’ in the economy. Ricardo (1817) is responsible for developing theories of rent, wages, and profits. In his ‘On the Principles of Political Economy and Taxation’. He defined rent as “that portion of the produce of the earth, which is paid to the landlord for the use of the original and indestructible powers of the soil”. The model for this theory basically said that while only one grade of land is being used for cultivation, rent will not exist, but when multiple grades of land are being utilized, rent will be charged on the higher grades and will increase with the ascension of the grade. As such, the author believed that the process of economic development - which increased land utilization and eventually led to the cultivation of poorer land - benefits first and foremost the landowners because they would receive the rent payments either in money or in production.

His theory got its counterforce by Karl Marx. The Marx doctrine applied for the concentration and industrialisation of agriculture in the collective farming systems ‘sovkhozes’ (private initiative not allowed) and ‘kolkhozes’ (some private initiative allowed) as an antithesis to individual or family farming. But both, the liberal theory and the socialist one, faced the same problem. What to do with farmers, not willing to leave their farms, united the production factors land, labour, capital and entrepreneurship, although conventional economic theories said that these production forces should be separated.

In practice the political development was more complicated. In the beginning of the 19th century all European societies had around 60% of their population in or close to agricultural production. Under these conditions the socialist ethos and tactics became inside the rural communities a pro small farmer movement. This developed a dilemma: the need for a double agrarian strategy on national level for both ‘industrialization of agriculture’ and ‘support to small single farms’. Reflections on this are made in the current debate on European agriculture. Liberalism and socialism, as well as science and technology set the stage for the first modernization wave in Europe. Society asked for more, cheaper and safer food and the farmers responded to this request. Farmers organized their unions and their cooperatives to defend themselves but also to adapt themselves. The first power for this change was driven by the market. Agriculture was supported by mechanical and technical innovations, chemistry and cheap energy. But there was also the policy as the second power.

These days ecology and environment were not a part of the discussion. Farmers used their small areas of land carefully, most in hand work and later with machinery, to increase production and provide better quality. And also the surroundings - the ways to reach the land, the watering, the trees, and so on - were handled with care and without any extra financial support.

THE EUROPEAN AGRICULTURAL POLICY

George Marshall’s (1947) speech of the 5th of June at the Harvard University, initiated the post-war European Aid Program commonly known as the Marshall Plan. In his text he wrote: “The farmer has always produced the foodstuffs to exchange with the city dweller for
the other necessities of life. This division of labour is the basis of modern civilization. At the present time it is threatened with breakdown. The town and city industries are not producing adequate goods to exchange with the food producing farmer. Raw materials and fuel are in short supply. Machinery is lacking or worn out. The farmer or the peasant cannot find the goods for sale which he desires to purchase. So the sale of his farm produce for money which he cannot use seems to him an unprofitable transaction. He, therefore, has withdrawn many fields from crop cultivation and is using them for grazing. He feeds more grain to stock and finds for himself and his family an ample supply of food, however short he may be on clothing and the other ordinary gadgets of civilization. Meanwhile people in the cities are short of food and fuel. So the governments are forced to use their foreign money and credits to procure these necessities abroad. This process exhausts funds which are urgently needed for reconstruction. Thus a very serious situation is rapidly developing which bodes no good for the world. The modern system of the division of labour upon which the exchange of products is based is in danger of breaking down. The truth of the matter is that Europe's requirements for the next three or four years of foreign food and other essential products - principally from America - are so much greater than her present ability to pay that she must have substantial additional help or face economic, social, and political deterioration of a very grave character. The remedy lies in breaking the vicious circle and restoring the confidence of the European people in the economic future of their own countries and of Europe as a whole. The manufacturer and the farmer throughout wide areas must be able and willing to exchange their products for currencies the continuing value of which is not open to question."

In this historical perspective, the Treaty of Rome in 1957, was a compromise between the different interests of agriculture. The common policy of the six founding countries of the European Economic Community (EEC) was set up to increase productivity, to stabilize the market and secure people quality food for an acceptable price and guarantee farmers a reasonable income. In this Treaty are no references or obligations for farmers regarding the environment. There was no focus on ecology. Only since the last decennia, environment became also a very important item for the EU policy makers and nowadays it is the objective of the European Community to reach the right balance between a competitive agricultural production and the respect to nature and environment. Due to external trade demands and intrusion in CAP affairs by other parts of the EU policy framework environmental issues became part of the CAP.


In a recent report (EU, 2010), the Commission designated 39.6% of the EU-27 area as vulnerable zone for nitrate leaching. Member States with the highest proportion exceeding 50 mg NO_3/liter during 2004-2007 were Malta (43%) Belgium (10%) and the United Kingdom (7%).

Since Flemish (Belgian) agriculture is characterised by intensive farming systems in swine and poultry herds and to a lesser extend in cattle herds, it has to deal with high nitrate residues and consequently pollution of its surface waters (OECD, 2008). In order to meet the requirements of the European Nitrates Directive several Flemish Action Programmes have been developed. The implementation orders of the Flemish Manure Decree (including its adaptations) are called Manure Action Plans (MAPs). Monitoring activities are executed in
the scope of these MAPs, consisting of manure, soil, surface water and groundwater monitoring. Till 2006 water quality monitoring was relevant for the detection and designation of nitrate vulnerable zones. Since 2007 the Action Programme is applied on the entire territory of Flanders as the measures that were taken to reduce this nitrate content all failed so far and therefore the whole Flemish territory was declared as vulnerable zone for nitrate leaching by the EU Commission (EU, 2005). Once more the Flemish policy makers try to improve the rules and to adapt farming practices more strictly in agreement with the directive, because this is part of regulation establishing common rules for direct support schemes for farmers as discribed in the Council Regulation (EC) 73/2009.

In order to reduce the manure surplus in Flanders, a decrease in the number of animals is needed but without slowing the growth prospects of individual companies. In 2007, the Flemish government introduced a system of Nutrient Emission Rights, as a licence to grow animals. NERs are individual and tradable permits, based on the manure production of animals. Each farmer gets the responsibility to properly manage the nutrients of his farm and the farmer must ensure that he is not producing more animal manure as permitted according to the NERs. It remains possible to expand the number of animals on an individual farm. This is possible by the acquisition of permissions from other companies. The farmer who buys NERs from a particular species may not use these to keep other species. In this way the government will prevent NERs in certain sectors would flow and the price would raise to high. Expansion is also possible by receiving additional nutrients rights, not further transferable. For that one should respect a number of conditions, such as a proven and efficient manure processing.

In the autumn of 2010 more than 10,000 soil samples of agricultural land in Flanders were taken for the determination of the amount of nitrate and the Flemish government justified under the pressure of the European Commission in spring 2011 a severe fertilizer action plan. The use of chemical nitrogen fertilizer was dramatically reduced (e.g. sugar beets: from 150 kg N ha-1 to 35 kg N ha-1 on sandy soils) and also for nitrogen from animal manure the norms are tightened (e.g. maïze: from 260 kg total N ha-1 to 205 kg total N ha-1 on sandy soils) (Huygens et al., 2011).

All Member States of the European Union are obliged both to monitor the quality of their waters and the effect of their Action Programmes on these waters and to report the results to the European Commission. It arouses concern that these monitoring obligations have been interpreted differently by the various countries due to the lack of specific guidelines. Most countries, however, have increased their efforts to monitor water quality the last six years, primarily as a consequence of the discussion between the Member States and the European Commission on how the fertiliser policy should be designed and implemented. Another factor contributing to the increase in monitoring is the requirement for Member States that recently joined the EU to adapt their monitoring systems to comply with the obligations of the European Directives (Fraters et al., 2010).

Besides the nitrate contamination the problem of greenhouse gases is on the agenda. Animal farming and greenhouse heating produce mainly the aggressive nitrous oxide (N₂O), methane (CH₄) and carbon dioxide (CO₂) and ammonia (NH₃), which is responsible for acid rain. In order to cut greenhouse gases, some members of the United Nations made agreements in 1997 in Kyoto (Japan). Parties with commitments under the Kyoto Protocol (Annex B Parties) have accepted targets for limiting or reducing emissions. These targets are expressed as levels of allowed emissions, or ‘assigned amounts,’ over the 2008-2012 commitment period. Emissions trading, as set out in Article 17 of the Kyoto Protocol, allows countries that have emission units to spare - emissions permitted them but not ‘used’ - to sell this excess
capacity to countries that are over their targets. Thus, a new commodity was created in the form of emission reductions or removals. In Belgium, greenhouse gas emissions were 9.9 percent less in 2007 by comparison with the reference year. In horticulture the switch from solid fuel to gaseous fuels and later on to gaz is observed, together with the development of biomass fuels. This has resulted in a reduction of the CO\textsubscript{2} emission factor for a given level of energy consumption. The more rational use of energy is also developing. In agriculture, CH\textsubscript{4} and N\textsubscript{2}O emissions are decreasing, reflecting a drop in the livestock population and certain changes in agricultural practices. In solid waste disposal, biogas recovery and use has resulted in a net reduction of CH\textsubscript{4} emissions. Actions in agriculture focus primarily on further reducing the factors of energy (greenhouse consumption), the factors of production (establishing new land application standards for animal manure, limiting growth of the livestock population) and improving farming practices (treatment, storage and spreading of manure, recovery of waste, combating soil degradation, etc.). Reforestation and forest conservation are encouraged by specific laws. Belgium will need to use the Kyoto mechanisms to fulfill its emission reduction commitment. The federal government aims to purchase emission rights at the level of 12.2 million equivalent tonnes of CO\textsubscript{2} over the 2008-2012 period.; the estimate for the Flemish emission credit for the period 2008-2012 is currently 8.9 Mton CO\textsubscript{2}-eq. (UN, 2011).

All this implies an active pursuit of coherence between agricultural and environmental policy. The complexity of the relationship between agriculture and the environment - harmful and beneficial processes, diversity of local conditions and production systems - has conditioned the approach to environmental integration in the context of the CAP of the European Union. Central to the understanding of this relationship is the principle of Good Agricultural Practices (GAP) which corresponds to the type of farming that a reasonable farmer would follow in the region concerned. This includes at least compliance with the Community and the national environmental legislation. However, wherever society asks farmers to accomplish environmental objectives beyond the reference level of good farming practices, and the farmer incurs, as a result, a cost or loss of income, then society must pay for the environmental services provided through agro-environmental measures.

Since Agenda 2000, the Common Agricultural Policy has two pillars: the market and income policy (first pillar) and the sustainable development of rural areas (second pillar). In both pillars the 2003 CAP reform brought greater quality to environmental integration, with new or amended measures to promote the protection of the farmed environment. The Common Agricultural Policy reflected two principles - the ‘polluter pays principle’ and the ‘provider gets principle’ – (Carlier et al., 2010) in integrating environmental concerns into the policy through two mechanisms: cross-compliance and agri-environment measures. Most CAP payments are linked to the respect of selected statutory requirements (cross-compliance) give rise to a penalty for failure to comply by payment reductions. The policy also includes the payment for the provision of environmental public goods and services going beyond mandatory requirements (agro-environment measures).

Concerning market and income policy, the cross-compliance is the core instrument. The reform 2003 CAP reform also involved decoupling most direct payments from production. From 2005 on, all farmers receiving direct payments are subject to compulsory cross-compliance (Council Regulation (EC) 1782/2003 repealed by Council Regulation (EC) 73/2009 and Commission Regulation (EC) 796/2004). In the fields of environment, public, animal and plant health and animal welfare, nineteen legislative acts applying directly at the farm level have been established and farmers will be sanctioned by reduction or exclusion of direct support in case of non-compliance. For ensuring sustainable agricultural activities, farmers are obliged to respect common rules and standards for preserving the environment.
and the landscape. The common rules and standards are mandatory and form the very basis for ensuring that agricultural activity is undertaken in a sustainable way. Beneficiaries of direct payments will also be obliged to keep land in good agricultural and environmental conditions. These conditions will be defined by Member States, and should include standards related to soil protection, maintenance of soil organic matter and soil structure, and maintenance of habitats and landscape, including the protection of permanent pasture. In addition, Member States must also ensure that there is no significant decrease in their total permanent pasture area, if necessary by prohibiting its conversion to arable land.

In 2008 the Directorate Environment of the European Commission published a study which showed the ecological footprint as a useful and unique indicator for assessing progress on the EU Resource Strategy (EU, 2008). The term ‘ecological footprint’ (EF) was first defined by William Rees (1992) as a measure of human demand on the ecosystems of the Earth. It represents the amount of biologically productive land and sea area needed to regenerate the resources a human population consumes and to absorb and render harmless the corresponding waste. Per capita ecological footprint is a means of comparing consumption and lifestyles and confront it with the ability of nature to provide for this consumption. The tool can inform policy by examining to what extent a nation uses more (or less) than is available within its territory, or to what extent the nation's lifestyle would be replicable worldwide. The footprint can also be a useful tool to educate people about the carrying capacity and over-consumption, with the aim of altering personal behavior. Ecological footprints may be used to argue that many current lifestyles are not sustainable. This global comparison also clearly shows the inequalities of resource use on this planet at the beginning of the twenty-first century. In 2005 there were 13.4 billion hectares of biologically productive land and water available and 6.5 billion people on the planet. This is an average of 2.1 global hectares (gha) per person. Since the world's population is growing rapidly, this number is decreasing very fast. In 2006 the figure worldwide was approximately 1.8 global hectares (gha) per person. The U.S. footprint per capita was 9.0 gha, and that of Belgium 8.0 for Bulgaria 4.1 for Romania 2.7 while for China's it was only 1.8 gha per person.

Agro-environment measures play a crucial role for meeting society's demand for environmental outcomes provided by agriculture. Environmental objectives often go beyond what can be expected farmers to deliver by respecting compulsory legislation. If farmers are requested to engage voluntarily in action to enhance the environment beyond the mandatory requirements, employ their own private resources and factors of production to deliver environmental public goods and services which are of interest to the wider public and society, society has to provide appropriate incentives. Where farmers are remunerated for voluntarily engaging in environment-related activities, one speaks about the ‘provider-gets-principle’. Farmers commit themselves, for a minimum period of at least five years, to adopt environmentally-friendly farming techniques that go beyond legal obligations and in return, farmers receive payments that provide compensation for additional costs and loss of income. Examples of commitments covered by national/regional agro-environmental schemes are:

- environmentally favourable extensification of farming;
- management of low-intensity pasture systems;
- integrated farm management and organic agriculture;
- preservation of landscape and historical features such as hedgerows, ditches and woods;
- conservation of high-value habitats and their associated biodiversity.

This is more related to sustainable agriculture (Carlier, 2001) and can be defined as an integrated system of plant and animal production practices having a site-specific application that will, over the long term, satisfy human food and fiber needs; enhance environmental
quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations and enhance the quality of life for farmers and society as a whole.

The Health Check of the CAP reform in 2008 aimed to modernize, simplify and streamline the CAP and remove restrictions on farmers, thus helping them to respond better to signals from the market and to face new challenges. Climate change, renewable energy, water management, biodiversity and dairy restructuring had become crucial challenges for Europe's rural areas, agriculture and forestry.

THE EUROPEAN DILEMMA

The Common Agricultural Policy has evolved over time, in the beginning product support (meat, milk, sugar, ...) resulting in overproduction, followed by the 'quota' system, set aside and finally the 'single payment' direct support. Two major changes in agriculture have upset its equilibrium with biodiversity. These is the intensification of the production, on the one hand and the under-utilization of land, on the other hand. The specialization, the concentration and the intensification of agricultural production that have occurred during the last decades, are widely recognized as potentially threatening biodiversity conservation. Many species have a direct interdependence with agriculture (i.e. many bird species nest and feed on farmland). However, it is difficult to isolate the effects of changes in land use from others such as urbanization and the progression of infrastructure, which also occur in rural areas.

One should not only think about economy and ecology, but also about food safety. Remember the BSE crises and the dioxin crises and very recently the EHEC infection. As usual response to the recent problems has been that there no such a thing as ‘zero risk’. After hundreds of years of famine and natural food risks, for some generations people experienced that one can have enough safe food at a reasonable price. But the consumer now says that is not reasonable to take new/any risks. So far the European farmers have been able to serve better and better the European consumer and the whole society. But sometimes there appear new problems, that sciences or economics are not able to predict or even not to explain. Questions remain open. What will be the result of the implementation of GMO farming on the long term? Is the European agricultural model economically and ecologically able to survive in a global free trade and face those who don’t care about ecological or safety concerns or who have by nature a more productive agro-ecosystem, often accompanied by lower labour costs? Is the new CAP policy recently figured out in Council Regulation 73/2009 the real answer on these questions?

In the debate on economy, ecology and food safety, a lot of so called ‘stakeholders’ are present. In the from ‘farm to fork’ production system, the whole food chain is involved and has to take care of economical, ecological and food safety principles. This new situation reflects painfully on farmers as a simultaneous economic price pressure and ecologic cost pressure. But one should not fall in the trap to resist economic pressure by using an ecologic argument ant to resist ecologic pressure by using economic arguments. In that case, one would continue to lose on both sides. The European Commission must develop a consistent policy between agriculture, trade, environment, food safety, enlargement and budget. Farmers were (are) pushed simultaneously to opposite directions (e.g. product support versus area support, quota versus set aside, organic farming versus GMO farming...). The European leaders, in close cooperation and mutual understanding with the farmers on their land and the
consumers in their kitchen, have to develop a conciliating wisdom for qualitative and safe food, provided by agriculture and in respect to nature.

The ‘acquis communautaire’ of the EU, with more than 100,000 pages of Regulations and Directives, gives the today farmers a broader responsibility concerning the whole food chain and the environment. Consumers may claim qualitative and safe food. Traceability as the ability to trace and follow food feed, and ingredients through all stages of production, processing and distribution is the utmost important to follow the responsibility of each partner in the food chain. The Regulation EC/178/2002, applicable from 1 January 2005, contains general provisions for traceability which cover all food and feed, all food and feed business operators, without prejudice to existing legislation on specific sectors such as beef, fish, GMOs etc. Importers are similarly affected as they will be required to identify from whom the product was exported in the country of origin. Unless specific provisions for further traceability exist, the requirement for traceability is limited to ensuring that businesses are at least able to identify the immediate supplier of the product in question and the immediate subsequent recipient, with the exemption of retailers to final consumers (one step back-one step forward). The WHO and FAO (2003) published the updated version of the Codex Alimentarius which serves as a guideline to food safety.

The family farm, typical for Western European countries, is not just a nostalgic epithet. Historically, the farmers production responded to the immediate need of the ‘next door consumer’ and his land management took care of sustainability in the interest of the next family generations. Farmers and consumers trusted the public authorities to rule and control the outside farm business. Some EU Commissionaires had another concept, based on the US industrialized agriculture with corporate clusters of 100,000 beef lots or pig units or 5,000 dairy cows. The Mansholt Plan was an idea that sought to remove small farmers from the land and to consolidate farming into a larger, more efficient industry. The aim of the Plan was to encourage nearly five million farmers to give up farming in the six Member States at that time. Farming's special status, and above all the extremely powerful farming lobbies across the Continent saw the Plan disappear from the Union's objectives. Although most policy makers in Europe agree that they want to promote ‘family farms’ and smaller scale production, the CAP in fact rewards larger producers. Because the CAP has traditionally rewarded farmers who produce more, larger farms have benefited much more from subsidies than smaller farms, because the subsidy is arranged per hectare. As a result most CAP subsidies have made their way to large scale farmers. In the last decennium, rumours for the industrialization of agriculture in Europe are again in mind of some visionaries. Or what to think about the agribusiness with developing strategies for ‘life science’ or ‘bio-material’ industries? The vision is that the global market and newest technologies (bio technology) will integrate agriculture step by step to control the globally concentrating clusters of food processing, medical industries. In future life science industries and some parts of the genomically controlled biomass production will be detached from the land. Is this really what what should be realized? And what will be the role of the farmer in this case?

The whole idea of the multi functionality of agriculture, developed by the European Commission in its Council Regulation (EC) 73/2009 means that the farmers thorough their multiple functions respond also to needs that cannot be satisfied through the market. Farmers land management is now more and more recognized as a public good. Farm management has always accompanied, in the first place, the production function in order to mange lands nature in good shape for the next generation. But is the farmers job today not underestimated, undervalued and underpaid, compared to the job description? The cross compliance of the above mentioned Council Regulation, describes the 18 requirements concerning public,
animal and plant health, environment and animal welfare and the additional requirements for the good agricultural and environmental condition that farmers have to comply in order to receive their financial support. Therefore they make their own choice what to produce. But what will happen if one day the food quality seems problematic, like in the case of the EHEC bacteria? Fresh vegetables like cucumbers, tomatoes, later vegetable sprouts were indicated as the origin of the infection. In a couple of days consumers refused to by these products and farmers producers couldn’t sell their products...

THE FUTURE OF THE EUROPEAN FARMING

The European Commission unveiled last November 2010 its blueprint for reforming the EU's Common Agricultural Policy (CAP), proposing to increase subsidies to smaller East European farmers and to link direct payments to environmental and food security goals. The proposals, contain no details on the future size of the CAP budget, which consumes about €55 billion of the bloc's €130 billion annual budget.

The debate was started July 2011, when the Commission made clear its proposal for the EU's long-term budget (2014-2020). The Commission's other big priority is to do more to support the diversity of European agriculture with a rural policy dimension that includes a green component. Agricultural practices which could be supported under the scheme could for example include maintaining green cover during the winter period to enrich the soil, rotating crop rotation, creating ecological fallows or permanent pastures. Subsidies must be based on environmental criteria, with support ‘targeted at active farmers who really need it’. The EU executive also underlines the importance of local markets and direct sales to support innovative farmers. Small farms do not necessarily have to become bigger in order to be more efficient, they sometimes better respond to the demands of the market. A risk management toolkit would help in dealing with market uncertainties and income volatility by providing a safety net for farmers. In its communication, the European Commission outlined three options for the future EU farm policy.

- A minimalist option involving a more equal distribution of funds to benefit newer EU member states while continuing with the reorientation of the policy to meet new challenges. However, there would be no changes to the current direct payment system.
- A reformist option that would also involve more equal distribution of funds to benefit newer EU member states. Compulsory additional aid would be linked to specific ‘green’ goals while a new scheme would be introduced for small farms. Support would be more focused on meeting environmental and climate goals.
- A more radical option that would see a complete phase-out of direct payments in favor of environmental and climate change objectives.

A public consultation held in 2010, identified food security, environment protection and rural diversity as the three main goals of the future policy. With reform, the CAP needs to:
- better respond to the economic, environmental and territorial challenges;
- be more sustainable, balanced, better targeted, simpler, effective and more accountable;
- improve current CAP instruments and design new ones.

CONCLUSIONS

The early millennia of agriculture were continuous cycles of ecological and social catastrophes. Better yields increased the population and that demanded more production. From the very beginning agriculture had a double function: food production and land
management. Most of the European agro-ecosystems survived to our modern times, one should not forget that the daily life of most people was for centuries full of hunger and suffering. Private initiative always has a positive effect on the production in terms of yield and quality. In the beginning of the 19th century all European societies had around 60% of their population in or close to agriculture, nowadays less than five percent of the active people in the 27 member states of the EU is involved in agriculture: an exodus of millions of people to industry. The Treaty of Rome signed by six countries in 1957, was the real beginning of the EU cooperation and a was compromise between the different interests of agriculture: an increase in productivity, the stabilization of the market, to secure people quality food for an acceptable price and guarantee farmers a reasonable income. The first references to respect the environment this Common Agricultural Policy (CAP) were made by the EU Council in the late 70ties. The most recent Regulation (EC) No1782/2003 establishes the principle that farmers who do not comply with certain requirements in the areas of public, animal and plant health, environment and animal welfare are subject to reductions of or exclusion from direct support. This new situation reflects painfully on farmers as a simultaneous economic price pressure and ecologic cost pressure. But one should not fall in the trap to resist economic pressure by using an ecologic argument ant to resist ecologic pressure by using economic arguments. In the debate on economy, ecology and food safety, a lot of so called ‘stakeholders’ are present. In the from ‘farm to fork’ production system, the whole food chain is involved and has to take care of economical, ecological and food safety principles. The European Commission must develop a consistent policy between agriculture, trade, environment, food safety, enlargement and budget. The ecological footprint is a useful indicator for assessing progress on the EU’s Resource Strategy.

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