GEORGOFILI WORLD
Newsletter of the Georgofili Accademy

AGRICULTURE, SOIL MANAGEMENT AND PREVENTION OF HYDROGEOLOGICAL INSTABILITY – THE FARMER'S ROLE

by Matteo Bartolini* July 16 2015

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The correct management of agricultural and forestry land is fundamental for maintaining the environmental and climate balance at both local and global level and for reducing the

risk of hydrogeological instability.

Farmers have always played a positive role in the Community, producing food and preserving the environment.

The agricultural sector is facing major challenges: producing more food to guarantee global food security and ensuring greater sustainability in the sector in the future. Against the backdrop of climate change, farmers are being asked to make additional efforts towards broad mitigation and adaptation actions. The challenges facing the sector will only be able to be met with more agriculture and more farmers and, in particular, by way of the family-farming model.

We need to recognize the value of farmers as 'custodians', for their multi-functional activities and the way they protect the land, and take into account the central role played by the economic sustainability of agricultural holdings.

Strong opposition is needed to land consumption and the abandonment of marginal agricultural areas and more focus must be placed on research and innovation. We also need investments which help to develop mechanisms to encourage farmers and their families to apply best practices. Here, new European instruments under the second pillar of the CAP could provide an important incentive. However, the benefits of greening are less clear and it seems instead simply to put at risk the already fragile economic situation on farms.

Therefore, a new alliance is needed between farmers, citizens and other economic sectors in order to respond to the new challenges which will face humanity in the future by creating more jobs and guaranteeing sustainability.

Agriculture and forestry play a vital role in the production of public goods such as the aesthetics of the countryside, biodiversity, climate stability and the ability to mitigate natural disasters - floods, droughts, fires, etc. At the same time however, some farming practices can put pressure on the environment and bring about soil depletion, water pollution and loss of natural habitat and biodiversity. Precisely this was reported in the European Commission's 2010 Communication entitled "The CAP towards 2020" COM(2010)672/5. The Commission's Communication makes it clear that areas under farming and forestry are fundamental for maintaining the environmental climate balance at local and global level. Farmers have always worked to help the community by producing food and safeguarding the environment. However, they do all this whilst earning on average less than 50% of the salary seen in other sectors.

The future challenge of more food and more sustainability requires even more agriculture and more farmers. The UN declared 2015 as the International Year of Soils and it will be a great opportunity to consider useful policies for proper and sustainable soil management from both an environmental and an economic point of view. However, in order to have constructive discussions on the issue of soil use, we have use data as a starting point.

According to figures from the European Environment Agency published by the European Commission in 2011, the amount of occupied land in the EU increased by around 1000 km2 per year in the period 1990 – 2000. To put that into perspective, that is equivalent to 275 hectares per day or an area the size of a large city like Berlin. Between 2000 and 2006, the increase in the amount of occupied land fell to 920 km2 per year (or 252 hectares per day); a trend which is unlikely to be seen in the future. In brief, in 2006 each EU citizen was occupying roughly 390 m2 (15 m2 more than in 1990), of which roughly 200 m2 was covered by an impermeable material, for a total of 100,000 km2 or 2.3% of the EU territory.

One of the main effects of inappropriate soil use is hydrogeological instability. There are various causes starting with often disastrous territorial planning, which has depleted the usually fertile soils of the flood plains. To this, one must add the increasing abandonment of marginal farming areas and the subsequent demise of agricultural hydraulic structures, as well as preventative practices and active defence measures (ranging from water source management to regular maintenance of small dykes). These steps protected a hydrographic network, which although minor was crucial for avoiding landslides and floods. Rainfall, which in the past would simply have been called heavy rain, is now called a water bomb, thus further confusing the real causes of widespread hydrogeological instability. Faced with these considerations, the extreme climate events seen in recent years are simply the straw that broke the camel's back.

Nevertheless, farmers have continued to guarantee their presence on the land and the instruments they possess to more actively fight hydrogeological risk may now be evolving. We must recognize the functional and economically sustainable protection afforded to us through the multifunctional value of the presence of farmers on the land. However, we also have to acknowledge the leading and priority role played by farmers in cooperating with public bodies to properly manage water resources, as well as the maintenance of hydrographic networks and hillsides. Therefore, public authorities must incentivize agronomic practices that reduce hydrogeological risk, such as contour farming on hills and good agronomic practices when land is fallow in order to encourage water absorption in the rainy season. Such practices in turn extend the time of concentration and improve the recovery of agricultural hydraulic structures (from terracing to creating embankments with the subsequent benefit of a reduced solid flow rate, less erosion and an extension to the time of concentration).

Climate change is altering the existing balance. In many areas, traditional techniques are no longer well suited to new climate conditions and new rainfall conditions. At the same time, the research sector is coming forward with innovations and new agronomic techniques for improving soil structure, safeguarding biodiversity, and maintaining and increasing fertility. Therefore, with policies aimed at valuing their work as guardians of the land, farmers can commit themselves to climate change mitigation and adaptation strategies.

However, it is innovation and investment in research that will be the real allies of both farmers and the environment alike. The significant resources made available by the EU for research for 2014-2020, the new European instrument EIP (European Innovation

Partnership) and the work of the soon-to-be-created “Regional Working Groups”, provided for under Rural Development in Europe, will be an important opportunity to find new solutions and good economically sustainable practices. Farmers can be the stewards of the landscape and the territory. We need to entrust farmers and their families, in close cooperation with the public sector, with the partial management of the hydrographic network, thus encouraging their broad participation, preferably in partnerships, and practically recognising their role. It is important that farmers and their families feel involved in this conservation process and have a close link to the areas they are maintaining. This would foster the rebalancing of the relationship between urban areas and the countryside in order to reduce the hydrogeological risk. We need investments which will help to develop incentive mechanisms for those applying good practice, or for farmers who maintain the territory and defend it passively (by maintaining hydraulic structures on their own land, contour farming on hills and other innovative farm management techniques).

The CAP’s new second pillar instruments in Europe could be an important incentive for environmental actions taken by farmers to maintain the land. The relationship between this policy and the most environmentally friendly practices was strengthened in the recent reform of the CAP. It particularly focused on optimizing cross-compliance rules and agri-environment and climate measures on a voluntary basis, but this alone is not enough! In the recent reform of the first pillar of the CAP, the EU and its Member States introduced greening with ambiguous standards, which European farmers believe could be corrected and improved.

Greening today is a system that is difficult to apply, that increases administrative burden for farmers and whose environmental benefits are by no means a given. A significant proportion of European farmers’ direct payments (30%) is linked to compliance with greening measures. Even if additional sanctions are not foreseen for the first two years, a large share of direct support is nonetheless at risk immediately. In the future, farmers could be sanctioned for accidental mistakes made due to unclear mechanisms, without them receiving any incentive for the good environmental practices they routinely carry out. First pillar CAP resources should not be used in an ambiguous manner. Support to combat market risks and insufficient farm income on the one hand and incentivizing the social function of agriculture on the other are two separate aspects.

It is for this reason that we must create a new alliance between farmers, citizens and other economic sectors. An alliance which no longer sees farmers as a residual part of the system, but as key players not only for producing healthy food but also for maintaining public goods, such as the countryside and flood reduction. It is estimated in Italy, for example, that every 1 million euro spent on preventing the hydrogeological risk saves 5 million euro of spending on repairing the damage caused by hydrogeological instability.

(*President of Conseil Européen des Jeunes Agriculteurs)