REFORM AND DEVELOPMENT PROCESS IN THE EUROPEAN AGRICULTURE SECTOR - THE COMMON AGRICULTURAL POLICY AND THE LISBON STRATEGY

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The Common Agricultural Policy (CAP) appears as the formal result of a widespread necessity for synchronisation of EU organisation in agriculture (economics, bio safety and animal welfare) as well as food stock exchange. A recent survey shows that European citizens appreciate the benefits of changes in the ways CAP supports farmers and rural areas. 66 % of EU citizens consider the adjustment of CAP from a system based on production-linked subsidies to one which funds the protection and development of the overall rural economy (as well as providing direct support to farmers) as a good thing.

On 2 February 2005 the European Commission relaunched the Lisbon Strategy for the European Union (EU). The strategy seeks to tackle the EU's urgent need for higher economic growth and job creation and greater competitiveness in world markets. It is a major EU policy priority. The Lisbon Strategy aims to provide people with a better standard of living in an environmentally and socially sustainable way.

The guiding principles for the contribution of CAP to the Lisbon Strategy were set by the European Council in Göteborg in 2001 and confirmed in the Lisbon Strategy Conclusions in Thessaloniki in June 2003: they include "strong economic performance" that goes hand in hand with "the sustainable use of natural resources".

These principles have shaped recent CAP reforms.

Without CAP, many rural areas of Europe would face major economic, social and environmental problems.

Rural development measures, in particular, can play a significant role in fostering and maintaining prosperity in rural areas. CAP will continue to make a concrete contribution to more growth and jobs in the future.

Parallel agricultural and rural constituency is important. Rural areas cover 90 % of the EU's territory and are home to approximately 50 % of its population. Agriculture and forestry are the main land users and play a key role in the management of natural resources in rural areas and in determining the rural landscape.

Europe's citizens are deeply attached to the diversity of landscape created by the wide variety of agricultural structures and farming types in the EU. Safeguarding this means investing in the future, creating new employment possibilities and encouraging rural diversification. People must be offered opportunities to create wealth as well as long-term rewarding job prospects. That is why the Lisbon Strategy is as important and relevant to rural areas as it is to urban Europe.

CAP has been in a process of ongoing reform since the early 1990s. Reforms have focused mainly on increasing the competitiveness of agriculture by reducing support prices and compensating farmers by the introduction of direct aid payments. A decisive step came in the 2003/2004 with the decoupling of direct aids from production and a realignment of CAP with consumer concerns. This reform was a key step towards a more market-oriented and sustainable CAP.

The new CAP, post 2003/2004, is a fundamental contribution to the Lisbon process.

The new CAP focuses farmers on their businesses and places emphasis on market orientation rather than market support. It removes many of the negative incentives within the old CAP. A more entrepreneurial approach will require a change of culture and working habits in many organisations and will require support and encouragement (both political and financial). This will remain a major challenge in the coming years. For these reasons, the instruments of rural development will grow in importance. An example from Serbia and Montenegro is Agri@cademic, a South Backa regional multisector initiative that will reach the Vojvodina level, spreading the activities towards an international level. Goals that have to be achieved are minimisation of the "Brain Drain" and "Rural

ageing" phenomena by stimulating youth production and entrepreneurship in refinement services through presentation of ambient options in socio-economy and neighbourhood co-operation, followed by transparency of demands for agriculture reform towards CAP implementation. Factual data show that almost 40% of all EU law is in the domain of agriculture, and in Serbian law reform the percentage ratio is 60 (agriculture): 30 (human rights) :10 (other). At present, the focus is actually on Lower Danube region cross-border co-operation, where unfortunately the Banat water catastrophe has appeared as a strong signal for those needs...

A new start for the Lisbon Strategy

Jobs, growth, the environment and a proper social network. These are, in a nutshell, the main concerns of Europe's citizens. The current lack of economic growth affects all of us; our pensions, salaries and our standard of living considerably suffer from it.

If there is no immediate action, a valued social and environmental model will become unaffordable. In the face of international competition and an ageing population, growth could soon decrease to 1% per year (more than half of today's growth).

To avoid this, heads of state and the Government of the European Union met in Lisbon in 2000 and launched a series of ambitious reforms at national and European level. By establishing an effective internal market, by boosting research and innovation and by improving education, to name only a few reform efforts, they aimed to make the European Union "the most dynamic and competitive knowledge-based economy in the world" by 2010.

WE are now half-way through the process and the results are not very satisfactory. Implementation of reform in Member States has been quite scarce. The reform package consists of 28 main objectives and 120 sub-objectives, with 117 different indicators. The reporting system for the 25 Member States adds up to no fewer than 300 annual reports. Nobody reads of all of them.

To remedy this lack of commitment on their part, the Commission proposed to establish a new kind of partnership with the Member States. It also decided to focus efforts on two main areas: productivity and employment.

To make things simpler and more coherent, there shall be just one national growth programme and one EU growth plan.

The European Union cannot boost productivity and employment if Member State do not play their part.

A EUROPEAN INFORMATION SOCIETY FOR GROWTH AND EMPLOYMENT –NEW INITIATIVE I2010

Best-bet investment for growth and jobs

Information and communication technologies (ICT) are a powerful drive for economy-wide productivity, growth and jobs—and are arguably Europe's best-bet investment for the future. A quarter of the EU's GDP growth and 40% of our productivity growth are due to ICT. The ICT industry generates 8% of Europe's GDP and employs 6% of its workforce.

Technology for life

There is good evidence that rapid technological progress has brought us to a turning point in the history of the information society. Widely deployed, ICTs have the potential to transform the way in which we work, live and interact. The digital convergence of media and information services, networks and devices provide unique opportunities: for firms, to modernize their business processes and deliver a wide range of services; for consumers, to experience a range of new media and content services, and for governments, to offer efficient, modern, interactive public services on-line.

New impetus for the Lisbon strategy

"i2010" stands for a package of proactive policies to harness the potential of the digital economy to deliver growth, jobs and modern, on-line public services. It is a key component of the EU's renewed "Lisbon" competitiveness strategy. In the agriculture sector, direct implementation of ICT is perceptible through new farming methods supported by satellite navigation parameters known as "Precision Farming".

PRECISION FARMING

The electronics revolution of the last several decades has spawned two technologies that will impact agriculture in the next decade. These technologies are Geographic Information Systems (GIS) and the Global Positioning System (GPS). Along with GIS and GPS there have appeared a wide range of sensors, monitors and controllers for agricultural equipment such as shaft monitors, pressure transducers and servo motors. Together they will enable farmers to use electronic guidance aids to direct equipment movements more accurately, provide precise positioning for all equipment actions and chemical applications and analysis of all that data in association with other sources of data (agronomic, climatic, etc). This will add up to a new and powerful toolbox of management tools for the progressive farm manager.

Precision farming should not be thought of as only yield mapping and variable rate fertilizer application and evaluated on only one or the other. Precision farming technologies will affect the entire production function (and by extension, the management function) of the farm.

Yield monitoring

Instantaneous yield monitors are currently available from several manufacturers for all recent models of combines.

They provide a crop yield by time or distance (e.g. every second or every few metres). They also track other data such as distance and bushels per load, number of loads and fields.

Yield mapping

GPS receivers coupled with yield monitors provide spatial coordinates for the yield monitor data. This can be made into yield maps of each field.

Variable rate fertilizer

Variable rate controllers are available for granular, liquid and gaseous fertilizer materials. Variable rates can either be manually controlled by the driver or automatically controlled by an on-board computer with an electronic prescription map.

Weed mapping

A farmer can map weeds while combining, seeding, spraying or field scouting by using a keypad or buttons hooked up to a GPS receiver and data logger. These occurrences can then be mapped out on a computer and compared to yield maps, fertilizer maps and spray maps.

Variable spraying

By knowing weed locations from weed mapping spot control can be implemented. Controllers are available to electronically turn booms on and off, and alter the amount (and blend) of herbicide applied.

Topography and boundaries

Using high precision DGPS a very accurate topographic map can be made of any field. This is useful when interpreting yield maps and weed maps as well as planning for grassed waterways and field divisions. Field boundaries, roads, yards, tree stands and wetlands can all be accurately mapped to aid in farm planning.

Salinity mapping

GPS can be coupled to a salinity meter sled which is towed behind an ATV (or pickup) across fields affected by salinity. Salinity mapping is valuable in interpreting yield maps and weed maps as well as tracking the change in salinity over time.

Guidance systems

Several manufacturers are currently producing guidance systems using high precision DGPS that can accurately position a moving vehicle within a foot or less. These guidance systems may replace conventional equipment markers for spraying or seeding and may be a valuable field scouting tool.

Records and analyses

Precision farming may produce an explosion in the amount of records available for farm management. Electronic sensors can collect a lot of data in a short period of time. Lots of disk space is needed to store all the data as well as

the map graphics resulting from the data. Electronic controllers can also be designed to provide signals that are recorded electronically. It may be useful to record the fertilizer rates actually put down by the application equipment, not just what should have been put down according to a prescription map. A lot of new data is generated every year (yields, weeds, etc). Farmers will want to keep track of the yearly data to study trends in fertility, yields, salinity and numerous other parameters. This means a large database is needed with the capability to archive and retrieve data for future analyses.

Several benefits are achieved from an automated method of capturing, storing and analyzing physical field records.

Detailed analyses of the farm production management activities and results can be carried out. Farmers can look at the performance of new varieties by site specific area, measure the effect of different seeding dates or depths and show to their banker the actual yields obtained and the associated risk levels. It is imperative that trends and evaluations are also measured over longer time spans. Cropping strategies to control salinity may take several years to evaluate while herbicide control of an annual weed should only take one season. Precision farming can be approached in stages, in order to ease into a more complex level of management.

Precision farming allows for improved economic analyses. The variability of crop yield in a field allows for the accurate assessment of risk. For example, a farmer could verify that for 70 % of the time, 75 % of the barley grown in field "A" will yield 50 bushels. By knowing the cost of inputs, farmers can also calculate return over cash costs for each acre. Certain parts of the field which always produce below the break even line can then be isolated for the development of a site-specific management plan. Precision farming allows the precise tracking and tuning of production.

Precision farming makes farm planning both easier and more complex. There is much more map data to utilize in determining long term cropping plans, erosion controls, salinity controls and assessment of tillage systems. But as the amount of data grows, more work is needed to interpret the data and this increases the risk of misinterpretation. Farmers implementing precision farming will likely work closer with several professionals in the agricultural, GPS and computing sciences.

Precision farming does not "happen" as soon as one purchases a GPS unit or yield monitor. It occurs over time as a farmer adopts a new level of management intensity on the farm. Implicit in this is an increased level of knowledge of the precision farming technologies such as GPS. What is perhaps more important for the success of precision farming, at least initially, is the increased knowledge that a farmer needs of his natural resources in the field. This includes a better understanding of soil types, hydrology, microclimates and aerial photography. A farmer should identify the variance of factors within the fields that affect crop yield before a yield map is acquired. A yield map should serve as verification data to quantify the consequences of the variation that exists in a field. Management strategies and prescription map development will likely rely on sources other than yield maps. The one important key source of data a farmer should not start precision farming without is an aerial photograph.

RISK AND CRISIS MANAGEMENT IN AGRICULTURE

An important reform domain for safe and confident agriculture production is insurance.

The Commission Communication on risk and crisis management in agriculture looks at possible new measures to help farmers in the European Union manage risk and to provide an improved response to crises in the agricultural sector. Three options that refer to agricultural insurance, mutual funds and an income crisis tool are presented for discussion. In addition, specific training could also help farmers make better use of risk management instruments.

Recent reforms to the Common Agricultural Policy (CAP) encourage European farmers to be more market oriented.

However, crises caused by natural disasters, livestock diseases or plant pests, or economic crises caused by the unexpected closure of important export markets, may endanger a farm's viability or even affect the economic stability of an entire rural area.

Farmers should have access to appropriate risk and crisis management strategies. The Communication identifies three options for encouraging the development of risk management tools at EU level and providing an improved response in the event of crisis:

Option 1 explores the possibility of contributing to the payment of premiums, where farmers take the insurance against natural disasters, extreme weather conditions or disease. The role of reinsurance is also considered.

Option 2 encourages the development of mutual funds for agriculture, by granting temporary and degressive support for the funds' administration.

Option 3 puts forward the idea of new instruments to provide basic coverage in the event of income crises.

In presenting these options, the Commission's aim is to help farm businesses withstand temporary shocks and improve their access to finance for developing their activities. Any new measures would clearly not be intended to offer the kind of guarantees formerly provided by CAP.

The purpose of the Communication is to launch a broad debate on risk and crisis management in the context of the reformed CAP. It fulfils the Commission's commitment to the Agricultural Council when CAP reform was agreed.

The mandate was to examine two issues: how some of the funds generated by the new "modulation" mechanism might be used to finance risk, crisis and disaster measures in agriculture, and whether it was appropriate to include provision for crisis in each Common Market Organisation (CMO), as exists in the beef CMO. This latter option was rejected.

The Communication is accompanied by a Commission staff working document that describes the risks and crises agriculture is subject to and the management measures that currently exist.

Rural development is the key tool for the restructuring of the agriculture sector, and to encourage diversification and innovation in rural areas. Enlargement has changed the agricultural map and getting the restructuring process right is essential for macroeconomic growth. Rural development policy can help steer this process towards a higher value added, more flexible economy—in line with the Lisbon Strategy.

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