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NOTE

from : Presidency
to : Delegations

Subject : Informal meeting of the Ministers for Agriculture
 (Växjö, 13-15 September 2009)
 Climate Change and Agriculture

Delegations will find attached a document prepared by the Presidency on the abovementioned subject, with a view to discussion at the Informal meeting of the Ministers for Agriculture in Växjö on 15 September 2009.



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Climate Change and Agriculture

Climate change is one of the crucial challenges facing our planet. The European Union's high ambitions to take the lead in tackling climate change and the objectives set for reducing its impacts are key factors in the development of the European economy. Agriculture can make an important contribution to meeting that challenge. To fully exploit this potential, more knowledge about mitigation as well as action will be needed at EU, national and local level.

Climate change leads to new challenges and opportunities for the rural economies of the EU. Rural populations and enterprises have to respond to the changes if they wish to maintain and improve their income and quality of life. Exchange of knowledge at farm level and between Member States plays an important role in facilitating adaptation to climate change. Both individual and common resources should be used wisely throughout this process.

Mitigation

The main emissions from agriculture are methane and nitrous oxides, but carbon dioxide also plays a role. On a global scale the contribution from agriculture's emissions of methane and nitrous oxide to total anthropogenic greenhouse gases (GHG) emissions is about 10-12 %. The corresponding figure for EU agricultural emissions has decreased, partly as a consequence of diminished production. Among the EU Member States, the part of agricultural in total emissions correlates with the size of a country's agricultural sector and ranges from below 5 % to 26 %. **The Commission Staff Working Document "The role of European agriculture in climate change mitigation"**¹ provides a more detailed description and overview of emissions and trends in the agricultural sector.

¹ SEC(2009) 1093.

Emissions from agriculture can be influenced by the activities on the farm: i.e. what is produced, farming techniques and practices and how resources are used. Agricultural GHG are often of diffuse nature, which is why the mitigation challenge is further complicated by uncertainties about emissions and the efficiency and effectiveness of measures.

The emissions from agriculture can be reduced in the following ways:

- Change in agricultural output. Consumer preferences may contribute to shifting agricultural production towards other commodities.
- Change in production methods, such as improved input/output ratios and alternative technologies, e.g. in manure and fertiliser management, land use changes, improved farming techniques, feed optimisation, enhanced carbon sequestration and reduced losses of carbon in agricultural soils.
- Additional activities, agricultural and other, aimed at offsetting emissions, e.g. the replacement of fossil energy by renewable sources.

Governments need to provide incentives in order to effectively and efficiently mitigate climate change and reach adopted EU targets on GHG emissions and on the share of renewable energy. This can result from international agreements, with a post-Kyoto agreement in Copenhagen being of particular importance, and from EU and national policy measures. Such policies are needed because of market failures associated with GHG emissions. Important elements to consider when designing policy measures and legislative or market-based instruments are the polluter pays principle, efficiency and effectiveness.

The current rural development programming period allows Member States to target policies directly or indirectly on mitigating climate change while at the same time taking account of specific local conditions. The Commission Staff Working Document summarises the knowledge on current and possible future mitigation measures in the agricultural sector.

Adaptation

Agriculture is highly dependent on climate in its role as a provider of food, energy and eco-system services. Climate-related factors such as temperature, sunlight, precipitation and soil moisture are important for agricultural production and its environmental impact.

Climatic changes are expected to continue to vary at regional, national and local level. The **Commission Staff Working Document "Adapting to climate change: the challenge for European agriculture and rural areas"**² accompanying the **White Paper "Adapting to climate change: Towards a European framework for action"**³ provides an overview of the most important effects of climate change on EU agriculture and analyses the need for adaptation, the implications for the common agricultural policy and possible further action.

It is not possible to generalise about the predicted impact of climate change on crop production, since it differs widely between and within regions. The main effects are a lack or surplus of water, heat stress, and the damage caused by pests and diseases. It is important that systems for prediction, early warning, risk evaluation and monitoring are developed where applicable. In addition, it is important that production methods meet the new climatic conditions, e.g. regarding the adaptation of crops and the creation of unfavourable conditions for pests and diseases.

A changing climate may also affect the health and productivity of livestock. Water scarcity will be a concern for high water-consuming operations such as dairy farming. There are three main aspects of livestock health that give cause for concern: heat stress, impaired feed quality (e.g. mycotoxins) and the emergence of exotic infectious diseases in new areas combined with a changed epidemiology of domestic diseases. The emergence of what were previously exotic livestock diseases in Europe has had a significant and costly effect on EU agriculture.

It is reasonable to expect that continued climate change will increase the risk of outbreaks of pests and diseases, with effects on plant, livestock and, at worst, human health. Consideration should be given to how society should respond to such threats.

Providing a growing world population with food and water is a major challenge, which is compounded by the problems caused by a changing climate⁴. It is clear that society, local and global, and individual farmers will benefit from adapting to climate change in an appropriate manner, with regard both to timing and to means. Appropriate adaptation can reduce the negative effects of climate change and open up new opportunities regarding the attractiveness and competitiveness of rural areas and agriculture.

² Council document 8526/09 ADD 5 (SEC(2009) 417).

³ Council document 8526/09 (COM(2009) 147 final).

⁴ Swedish Commission on Climate Change and Development.

Rural areas, including farmers, as well as other parts of the economy, may be expected to adapt to climate change by modifying behaviour in order to optimise the relationship between the level of risk and the returns made by the enterprise. Therefore, adjustments are believed to be largely autonomous, even in the absence of policy measures. However, there is a need to encourage long-term sustainable development, for instance concerning water and soil resources. In this connection, it is especially important to pool experiences and further develop existing cooperation.

There are many important aspects of climate change, and the role of agriculture should not be underestimated. The Presidency would like to invite the Ministers to share their views on the issues below.

Questions to be discussed by the Member States

1. Climate change is of great concern for the future competitiveness of EU agriculture and this challenge is being dealt with at all levels. While the framework is set at EU level, implementation will need to be carried out at farm level.

What should be the role of the EU regarding mitigation and adaptation in agriculture, and, in particular, what should be the key areas of cooperation?

2. An instrument in handling climate change in the agricultural sector is rural development programmes. While climate change is already one of the Community priorities for the current programming period, the health check review provided additional funds that can be targeted on climate-relevant actions.

How are these opportunities best utilised and are there any early lessons to be learned?

3. One of many consequences of the changing climate is the increased presence of pathogens and diseases. This is likely to be a main concern for crop, livestock and, at worst, human health. The economic consequences for the sector may be substantial.

How could we further develop our common policy and strategies to best meet the challenges of a changed pattern of dissemination of pathogens and diseases?