Technological solutions to sustainable agriculture in the EU

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The European Parliament adopted by 454 votes to 177, with 42 abstentions, a resolution on technological solutions for sustainable agriculture in the European Union.

Members recalled that the agriculture sector has always relied on new farm business models and practices that include new techniques and production methods to increase outputs and adapt to new and changing circumstances. They are convinced that innovation has the potential to contribute to achieving sustainable agriculture in the EU.

The resolution stated that EU societies are facing multiple challenges involving agriculture and must play their part and that the global population is estimated to reach 9.6 billion by 2050, meaning there will be around 2.4 billion more people than today. Moreover, on average at least one third of food produced is wasted. In this regard, Parliament stated that **innovation has the potential to contribute to achieving sustainable agriculture in the EU** given the need to control costs in order to safeguard incomes and to respond to the depletion and degradation of natural resources (soil, water, air and biodiversity). The Commission is urged to ensure that innovation is explicitly taken into account in forthcoming reviews and reforms of relevant legislation.

The main recommendation contained in the resolution are as follows:

Precision Farming (PF): emphasising that PF can reduce resource use by at least 15 %, Parliament encouraged the uptake of precision agriculture that provides new whole-farm management approaches, such as GPS/GNSS-technology-driven machinery and remotely piloted aircraft systems (RPASs or drones).

The Commission is called upon to:

- promote policies to stimulate the development and uptake of precision farming technologies for all farm types, irrespective of their size and production, whether crop and/or animal farming;
- work in partnership with the Member States to improve the performance and adaptability of **robotic** and other PF techniques in order for research funding to be used effectively in the interests of agriculture and horticulture.

Big data and informatics: emphasing that the collation and analysis of large integrated data sets has the potential to drive innovation in agriculture, Members called on the Commission and the Member States to **remove the barriers** to integrating complex and fragmented ICT systems, stimulating investment and covering training costs, and to make the necessary facilities more accessible to agriculture.

Soil, water and nutrient management: recognising soil degradation to be a major constraint in agricultural production, Parliament called for greater ambitions and efforts to **improve soil and water management practices**, particularly in light of climate change. Regretting that the efficiency of nutrient use in the EU is very low, Parliament stressed that action is needed to improve the efficiency of nitrogen (N), phosphorous (P) and potassium (K) use, in order to reduce their impact on the environment and improve food and energy production.

Genetic diversity: Members are of the opinion that monoculture and a lack of crop rotation is a major factor in the loss genetic diversity over the past century. They stated that all plant varieties and animal species, including landraces, their wild and semi-wild relatives, and old and pioneer varieties to be essential for maintaining genetic diversity.

Parliament insisted on the need for:

- **greater dialogue between genetic banks**, private and public plant research, breeders, end users and all other actors involved in the conservation and use of genetic resources;
- opening up the conservation of genetic resources to a **greater diversity of plant and animal species** and for the research funding in this area to result in technological improvements for agriculture and horticulture;
- **maintaining and using genetic resources** for long-term food security and to broaden the genetic base of modern plant and animal breeding programmes;
- the **implementation of the Nagoya Protocol** so that breeders are not deterred by the complexity and cost arising from using wild material to introduce new traits such as pest and disease resistance, nutritional quality and environmental resilience;
- maintaining and developing the performance of **local breeds**;
- supporting **suitable crop rotations** that remain profitable for farmers.

The Commission is called upon to put forward **proposals for the European strategy for the safeguarding of genetic diversity in agriculture** provided for in the EU Biodiversity Strategy for 2020.

Precision breeding: Members expressed their support for **continuous progress** in innovative plant and animal breeding through the application of safe and proven techniques aimed at increasing not only the range of pest- and disease-resistant traits in crops, but also the range of food raw materials with nutritional and health-beneficial characteristics on the market.

They also encouraged **open and transparent dialogue** among all stakeholders and the public on the responsible development of high-precision, innovative solutions for breeding programmes, including on its risks and benefits.

Plant protection products (PPPs): Parliament stressed the urgent need to review the implementation of the regulatory framework for PPPs and to develop a coherent, efficient, predictable, risk-based and scientifically robust assessment and approvals system. It considered it important to **reduce farmers dependence on pesticides** and develop PPPs which are cost-effective, safe to use and environment friendly.

DG Health and Food Safety (SANTE) is called upon to establish clear **criteria for defining low-risk active substances** for the development and use of low-risk pesticides. The Commission should come forward with an **action plan** and set up an expert group in order to work towards a more sustainable pest management system.

Skill development and knowledge transfer: Parliament recognised that the development of agri-related technologies requires a multitude of specialist skill sets and knowledge that are transdisciplinary in approach. Member States are called upon to work in partnership with industry, research institutions and other relevant stakeholders in the design of their next rural development programmes, with a view to identifying opportunities to support skill development and knowledge transfer in these areas including by means of training and apprenticeships for young farmers and new entrants.

Research and funding priorities: Parliament called on the Commission and the Member States to develop a long-term investment plan, assigning priority to a sectoral approach, with continuity of funding, for basic and applied research. The plan should include cost-effective solutions and be applicable to small-scale producers, rural areas and outermost and mountainous regions.

The Commission and the Member States should in particular:

- develop projects which focus on the development of more resource-efficient agricultural practices and crop varieties, including locally specialised varieties, aimed at the conservation and improvement of soil fertility and nutrient exchange;
- prioritise investment in the circular economy and climate-smart farming practices, with adequate funding incentives for research and uptake by farmers;
- develop innovative projects for producing non-food products (bio-economy, renewable energy, etc.) and services with a view to developing a more resource-efficient agriculture industry (better use of water, energy, food for crops and animals, etc.), and one which is more autonomous;
- do more to raise public awareness of the value of farming in the EU, and to develop **trans-European centres** for agricultural innovation that would demonstrate and enable appropriate access to innovative new technologies, sustainable agriculture, food security and sovereignty.

Lastly, Parliament considered it essential that **reasonable EU regulation**, oriented towards consumer safety and health and environmental protection, based on independent, peer-reviewed science, enables EU farm produce to be competitive and attractive on the internal and world markets.