

# Enhancing innovation and economic development in future European farm management

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The Committee on Agriculture and Rural Development adopted the own-initiative report by Jan HUIJTEMA (ADLE, NL) on enhancing innovation and economic development in future European farm management.

Members recalled that the UNs Food and Agriculture Organisation (FAO) estimates that the expected rise in the worlds population to 9.1 billion by 2050 will in the business as usual scenario require a 60 % increase in food supply that should be safe and of high quality and a 24 % increase in crop yields in the developed countries by that date, whilst preserving resources for future generations and preventing food waste and losses, which currently account for over one third of global production;

The FAO also estimates that there will only be a 4.3% increase in arable land by 2050, which will require better management of natural resources to combat soil degradation among other issues.

Improving innovation and competitiveness: Members were convinced that economic development and sustainable production are not mutually exclusive and are achievable mainly through innovation, research and development, new governance and business models and improved agronomy. They stressed the need to support innovation in technology and governance by providing coherent and clear regulation with room for entrepreneurship. Innovation should be explicitly taken into account in forthcoming reviews and reforms of relevant legislation.

The report made a series of observations and recommendations:

- innovation has the potential to increase labour productivity and income by reducing production costs and making business more efficient. Members advocated making farming a more desirable occupation for young men and women, inter alia, by improving access to finance, technology and support programmes;
- more extensive use of ICT is key to making farming more environmentally sustainable and the sector more competitive. The Commission should come forward with solutions to stimulate the uptake of ICT-based management systems, real-time data monitoring, sensor technology and the use of detection systems for the optimisation of production systems or precision agriculture, which inter alia could mean adapting to changing production and market conditions leading to more efficient and optimal use of natural resources;
- the low level of awareness concerning the potential of Big Data and Internet of Things and the fragmentation of the related technology systems, which increase the barriers to uptake and slow down deployment. Moreover, there is the slow take up of GPS technologies. Members highlighted the importance of making these technologies meaningful to the farmers. They suggested that the Commission make available to some Member States smart tools designed to expedite the mapping of farmland;
- the uptake of precision agriculture should be encouraged: this provides new whole-farm management approaches, such as GPS/GNSS-technology driven machinery which, in combination with Remotely Piloted Aircraft Systems (RPASs or drones), can work arable land with centimetre precision;
- innovative solutions in animal husbandry that contribute to a higher level of animal health and welfare should be promoted;
- the untapped potential of technology and innovation for the development of new goods and products (relating to food and feed, machinery, biochemistry, biocontrol etc.) may have the potential to create employment along the whole agri-food value chain. The Commission should look into the possibilities of incentivising farmers to raise public awareness about the workings of the agri-food chain and new production methods;
- new information technologies provide ample opportunities to establish new value chains, which may include more direct contact between producers and consumers, with a stronger focus on innovative products, new services and more production differentiation, with the potential to provide new income streams for farmers as well as establishing a more transparent marketplace.

Prudently use natural resources and ensure biodiversity: Members considered that agricultural practices are dependent upon natural resources and this interplay should be optimised and production systems better understood to improve management systems. They called for the intrinsic productivity, fertility and resilience of agro-ecosystems in the medium and long term to be ensured and for a reduction in emissions. They emphasised the importance of improving production systems through better-adapted crops and rotation systems, stressing the potential for job creation not only in the food production sector but also in the tourism, bio-economy and green chemistry sectors.

Food waste: the report underlined the need to tackle food wastage, in particular systemic food wastage, since each year 100 million tonnes of food in Europe is wasted or thrown away, which amounts to approximately 30%-50% of the food produced in the EU. Greater cooperation is also needed in the food chain to reduce current levels of waste.

Soil degradation: depleted soil quality is compromising future production, necessitating a change in farming methods and systems. The report emphasised the possibility of processing animal manure into mineral concentrate that could be used to manufacture green fertiliser that could reduce and eventually replace the need for mineral fertilisers, given that its efficiency level is comparable to that of the latter. Members asked the Commission to revise the EU regulation on fertiliser and to remove legislative obstacles in the nitrates directive so as to enable and stimulate the development of mineral concentrate from animal manure.

Synergies with other areas: the report stresses the need for a simpler and more flexible legislative framework that is more geared towards national and local conditions and better suited to deliver synergies with other sectors by enhancing and promoting knowledge crossovers, integration of resource use and is better aligned with the circular economy in order to improve the visibility of existing systems for specific promotional labelling and encourage new innovations in the promotion of the diversity of European agricultural products.

The report underlined the importance of:

- resilient agriculture, adapting to climate change and changing weather conditions, and reducing emissions from the agricultural sector

- by encouraging productive, resource-efficient and circular systems;
- promoting innovation in water management and conservation, by means of innovative techniques and technology to reduce wasteful irrigation practices and to mitigate flooding;
- developing integrated plant protection management systems by supporting scientific research into non-chemical alternatives and low-risk measures;
- the continuous development of innovative breeding techniques.

The Commission was asked to provide a more ambitious overarching strategy with measurable outcomes in order to align and focus research and innovation vis-à-vis Common Agricultural Policy priorities.