Plant breeding: what options to increase quality and yields

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The European Parliament adopted by 442 votes to 143 with 41 abstentions, a resolution on plant breeding: what options to increase quality and yields? It aimed to launch a thorough debate and inquiry concerning the whole situation with regard to plant-breeding in European and global agriculture.

It noted that population growth would place extreme demands on agriculture, and the FAO estimated that the food supply would need to increase by 70 % over the next 30-40 years. The main problem remained of how populations in different parts of the world would be able to feed themselves, as the cultivable land area declined due to inappropriate land use, including poor agricultural practices, and to climate change. Members noted that opportunities to increase the area under cultivation were extremely limited, given that in many parts of the world it is thought to be quite unrealistic to bring new agricultural land into use. The FAO estimated that it would be possible to achieve approximately 10 % of an increase in agricultural production by cultivating new farmland, which meant that around 90 % would have to be achieved by increasing the yields from existing farmland.

Parliament stressed that, in order to respond to forthcoming challenges, it was exceptionally important to have an effective and competitive plant-breeding sector.

Members advocated:

- the importance of **developing varieties** that can cope with the conditions we expect to encounter in the future;
- the need for crops that absorb nitrogen and phosphorus effectively and which are more tolerant of drought and heavier precipitation, more resistant to pests and can withstand changes in temperature;
- the development of perennial crops;
- the use of new plant-breeding techniques (concern is expressed at the Commission’s delay in assessing new breeding techniques and the Commission is called upon, as a matter of urgency, to clarify their regulatory status);
- the importance of guaranteeing access to genetic resources as the basis for plant breeding;
- that the European plant-breeding market must be further improved in the interest of healthy competition;
- the role of publicly funded independent scientific research carried out in the long term public interest as regards long term food security;
- that fundamental plant-breeding research in the EU should be funded by the EU and its Member States.

The Commission was urged to:

- use the Horizon 2020 Framework Programme for Research and Innovation to fund applied research that supports the development of new, innovative planting-breeding techniques such as accelerated breeding;
- allocate financial resources and create a coherent structure for plant-breeding research and practice within research programmes and other suitable policy instruments, so that European diversity can be preserved and developed;
- elaborate an overall strategy on agricultural inputs, especially in relation to plant breeding;

- provide a policy framework that supports the agricultural input sector as one of the key areas for the development of agricultural productivity and sustainability

Parliament noted the estimates put forward by the FAO that the diversity of cultivated crops declined by 75 % during the 20th century and that **a third of today's diversity could disappear by 2050.** It stresses the vital need to preserve the vast majority of local and regional varieties in situ and on-farm, in order to increase genetic and cultural diversity both within strains and breeds and in terms of their absolute number.

The resolution also noted the length of the protection of variety rights in respect of those plants that require an extended development period prior to the commercialisation stage was **not sufficient to encourage commercial investment in their research and development.** While Parliament understood it was both costly and time-consuming to develop new improved varieties, it stressed that this was needed in order to maintain Europe's competitiveness in this area. It suggested that **such costs could be compensated for by extending the length of plant variety protection rights after a proper impact assessment.**