

<p>Visit of Representative(s) of Dow Dupont</p>	<p>9 February AGRI Cabinet</p>
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Scene Setter

- [Art. 4.1 (b) - privacy]
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- [Art. 4.1 (b) - privacy] the purpose of the meeting is to
 - share views about innovative products and services that can address challenges in agriculture;
 - explore ways in which the new DowDuPont Agriculture Division can be more responsive to the needs of European stakeholders, including the Commission and other EU institutions;
 - hear CAB Hogan's views, on key areas such as crop protection, agricultural biotechnology (GM) and new plant breeding approaches (e.g. gene editing) as well as digital agriculture.
- AGRI deals with the above named issues from a research and innovation perspective while DG SANTE (Plant protection products, GM approval), GROW (patents) and CONNECT (Digital transformation) are responsible for the related policies.
- Through its Horizon 2020 activities, AGRI is supporting research and testing of new technologies and approaches that aim at accelerating a move towards more sustainable farming. This implies that solutions are not an end in itself but embedded in to a socio-economic context and are coherent with policy objectives. A main vehicle to ensure end-user driven research is the multi-actor approach present in most AGRI funded projects.

[Art. 4.1 (b) - privacy]

First key messages

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On biotechnology and new breeding techniques

- Biotechnologies and new breeding techniques are an area of fast technological development. Biotechnologies are widely present in current agriculture and are used to produce vaccines, develop diagnostic tools, propagate plants or breed crops and animals through Marker Assisted Selection.
- As we increase our understanding of the genetic make-up of plants and animals, molecular tools are increasingly adopted to increase speed and efficiency of breeding.
- "Modern" biotechnologies include: Genetic Modified Organisms (GMOs) and New (Plant) Breeding Techniques (NBTs).
- GMOs are controversial in the EU. Only one GM maize is authorised for cultivation while more than 60 GMOs are authorised for import, food and feed uses.
- EU citizen acceptance for biotechnologies has so far been low for agri-food applications as compared to other applications such as in medicine.

- The Commission recognises the concerns of EU consumers as regards genetically modified (GM) food and takes into account the varying acceptance of GMOs in the EU Member States: The EU has adopted legislation which gives Member States the right to opt out from cultivation of GMOs in part or all of their territory (Directive 2015/412). Currently 19 Member States have chosen to opt-out from the cultivation of GMOs.
- A new generation of molecular breeding methods is emerging and New Breeding Techniques (NBTs) – in particular gene editing – promise to change plant and animal breeding in radical ways. Potentially, any kind of change in the genome may become feasible. Unlike GMOs it is difficult or not possible to recognise plants obtained using NBTs.
- Discussions on NBTs are not limited to the technology but also address the access to the technology (Intellectual Property) and its governance as well as implications for plant breeding, genetic resource management, agriculture, the food chain, as well as society at large.
- DG SANTE held end of September 2017 a high-level conference on "Modern biotechnologies in agriculture" to launch a broad reflection and public debate with stakeholders on innovative technologies and their application in the agri-food sector.
- The regulatory status of NBTs is under discussion. EU Commission (DG SANTE) is currently awaiting a decision of

the EU Court of Justice to establish whether these technologies should be considered as GMOs (and thereby be regulated under the current biotechnology Directive) or whether they should not be regulated. A ruling of the Court is expected in spring 2018.

- Where organisms fall under the scope of the GMO legislation, all the corresponding provisions are applicable, including specific labelling and traceability requirements. The breeding industry is concerned that regulation of the NBT techniques as GM techniques would prevent the development and use of these innovative breeding methods in Europe.

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LTT on breeding and modern biotechnologies

- European farming is highly productive. At the same time it is also facing manifold challenges and has to move towards more sustainable ways of production and the delivery of both private and public goods.
- To meet these challenges the agricultural sector needs to continue being dynamic, expand its knowledge base and innovate constantly

- European agriculture is a highly diverse and driven by decisions taken at the level of more than 12 million farms. Any kind of solutions/technologies developed will need to be adapted to a site-specific context.
- Farmers need to have in place a toolbox which can be used according to their individual needs. Plant breeding and plant varieties with specific traits and adapted to specific environments are part of the wider toolbox.
- Molecular breeding tools are developing at rapid pace. "Gene editing" ("CRISPR/CAS9" is the most recent gene editing technology) is considered to be the most "revolutionary" as it allows in principle quick, precise and inexpensive modification of the genetic code (subject to access by the patent holders).
- Its broader use in breeding practices will require further research into the specific gene functions as well as into the impact of genetic changes on overall plant performance and non-target organisms.
- NBTs – as any other technology - should be looked at taking into account the agronomic context for innovations along with its implications for the whole chain from the seed markets, farming systems, food chain and consumption.

Second key messages (defensive points)

- *How does AGRI think about modern biotechnologies? Should NBTs be regarded as GMOs?*

DG AGRI supports the continued deployment of innovations to meet the changing needs of European farmers and consumers. We are looking in particular for innovations which will help farming become more sustainable, divers and resilient to the impact of expected climatic changes.

Farmers need to have in place a toolbox which can be used according to their individual needs. New plant breeding approaches and technologies as well as new plant varieties are obviously part of the wider toolbox.

The merits of NBTs – as any other technology - should be assessed taking into account the agronomic context for innovations along with its implications for the whole chain from the seed markets, farming systems, food chain and – very importantly consumer acceptance.

The conference on "Modern biotechnologies in agriculture" held in September 2017 was a first step to engage in a broader dialogue with stakeholders. Discussions on NBTs and gene editing are very timely. They will allow better assessing

- the potential benefits vis-a-vis current breeding tools
- its impact on property rights in the biological domain
- impact on biodiversity and the management of genetic resources
- safety and environmental concerns
- possibilities to regulate and trace its use in agriculture and the food chain
- the ethical dimension and societal acceptance

As to the classification of NBTs as GMOs or not: The Commission is currently awaiting the European Court decision to further establish the regulatory framework for NBTs.

- *Will the European breeding industry lose its leading position if it is not allowed to use NBTs?*

The European breeding sector is very dynamic and – despite on-going concentrations – still characterised by a large number of SMEs. Smaller companies have specialised quite successfully in specific crops and cater for regional and European markets.

Commission is in touch with the breeding industry to discuss the impact of NBTs on their breeding activities and business models. We still need to better understand to which conditions SMEs would have access and benefit from these new technologies. In any case, through our research activities we are making sure that breeding tools are developed and tested for their potential uptake.

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