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Global Forum for Food and Agriculture

Communiqué 2019

"Agriculture Goes Digital – Smart Solutions for Future Farming"

I. Preamble

We, the agriculture ministers of 74 nations, have assembled here on 19 January 2019 for the 11th Berlin Agriculture Ministers' Conference on the occasion of the Global Forum for Food and Agriculture (GFFA) to discuss how digitalization[1] can strengthen the agricultural sector's economic viability, sustainability, resource conservation, resilience and consumer orientation.

Over the last 50 years, the world's population has doubled. During the same period, thanks to technological and organisational innovations as well as conducive agricultural and food policies, global agricultural production has tripled. However, there are still over 821 million people in the world who are suffering from hunger and over 2.5 billion people in total suffering from malnutrition. The global population is also predicted to rise to around 10 billion by the year 2050. At the same time, the natural resources to feed the growing population are limited and agriculture is being confronted by further challenges such as climate change, water scarcity, soil degradation and the loss of biodiversity.

Agricultural production must rise significantly while simultaneously increasing its sustainability, improving animal welfare, adapting better to local conditions and providing decent jobs and revenue along the supply chain. Agriculture must also use resources more efficiently and minimize food loss. Smart solutions are needed to reconcile conflicting goals and meet the current and future demand for safe and nutritious food and feed. Digitalization in agriculture will play an important role in achieving these goals, improving livelihoods and living conditions in rural areas, supporting farmers in their work as well as in transforming lives in rural areas substantially.

[1] Digitalization for agriculture brings together digital technologies, digital innovations, information and communications technologies and artificial intelligence.

We hereby jointly adopt the following resolutions with the aim of shaping and promoting the digitalization of agriculture. In this regard we are committed to the goals of the 2030 Agenda for Sustainable Development, in particular the goal of zero hunger, and also to the Paris Agreement on Climate Change.

II. Call for Action

We, the agriculture ministers assembled at GFFA 2019, aim to use the potential of digitalization to increase agricultural production and productivity, while improving sustainability, efficient use of resources, employment and entrepreneurial opportunities and living conditions, especially in rural areas. Our aim is for digital solutions to support environmentally sound and animal welfare-oriented production, increase the quality and safety of agricultural products, reduce production costs, improve the availability of information throughout the food system and facilitate trade.[2] To this end, farms should be integrated more closely into value chains and markets and the attractiveness of agriculture and rural areas increased. We will focus in particular on family farms, which make up around 90 percent of all agricultural enterprises worldwide and account for approximately 56 percent of agricultural production.

Therefore we intend to take action to achieve the following four objectives:

Identifying and using the potential of digitalization

Our goal is for digitalization to make agriculture more efficient and more sustainable, and to improve rural life. To this end we must provide impetus for the development of appropriate, site-adapted and scalable digital solutions in agriculture.

[2]At this 11th Berlin Agriculture Ministers' Conference on 19 January 2019, we acknowledge the report by the working group of FAO, ILRI, OIE and GASL on action taken to respond to the 10th Berlin Agriculture Ministers' Conference (annex) on the subject of "Shaping the future of livestock – sustainably, responsibly, efficiently".

Our aims are to:

1. create the conditions to encourage responsible investment in digital technologies for the development of a vibrant agricultural sector, in particular start-ups and Micro, Small and Medium Enterprises (MSMEs), in a market-oriented environment;
2. intensify research and development into digital technologies, as well as the training of digital skills and capacity building, in order to assist farmers and stakeholders in making agricultural production and the value chain more efficient and sustainable;;
3. exchange know-how and practical experiences relating to digitalization in agriculture with the objective of creating an innovative and entrepreneurial environment;
4. use digital technologies and processes, such as electronic phytosanitary certification data, to facilitate agri-food trade and regulatory cooperation;
5. improve geo-data and remote-sensing systems to enhance data quality and accessibility while ensuring privacy;
6. use digital solutions to strengthen animal health and animal welfare, foster prudent and responsible use of antimicrobial agents in animal husbandry and optimize the use of plant protection products, water and fertilizers;
7. use digitalization for better design and more efficient implementation of agricultural policies, in order to reduce bureaucracy in agriculture and thus lighten the burden on agricultural enterprises;
8. support digital solutions, including advisory services, in order to reduce risks to farmers and improve their resilience to crises, outbreaks of diseases, hazards and natural disasters; and
9. use digitalization to improve consumer guidance and information and reduce food loss and waste.

Establishing, expanding and protecting the access of farmers to digital technologies

At present, around half of the world's population uses the internet, but use of the internet is far lower in rural populations. It is our goal to improve access and thereby enable all farmers in particular youth, smallholders and women, to use digital technologies in accordance with their needs.

Our aims are to:

1. establish and accelerate the expansion of the digital infrastructure that farmers need;
2. leverage funds for digitalization and promote innovative financing instruments with the support of all relevant stakeholders, in particular governments, international organizations and the private sector;
3. support cooperatives and cooperative models in implementing digitalization in agriculture;
4. expand the range of basic and advanced training programs and extension services relating to digital skills and technologies that are available for farmers and to encourage the networking of digital extension and advisory services; and
5. ensure that digital solutions provide farmers with appropriate information and better market access, including to e-markets for food and agriculture.

Improving data use, ensuring data security and data sovereignty

It is our goal to ensure that the interests of agriculture are taken into account in the drawing up of international principles, guidelines and standards for the management of digital data (inter alia the collection, recording, storage, retrieval, handling, analysis, processing and use of data) and are integrated into the existing international networks and formats.

Our aims are to:

1. strive to ensure that international solutions are drawn up in collaboration with agricultural stakeholders in order to develop standards and to reduce the global differences in regulations on data collection, data security and data use;
2. enable farmers, along with academia, industry, policy makers and public authorities at national and international levels, to use digitally collected data effectively;
3. improve the interoperability of digital systems in order to enhance the possibilities for data exchange, data use and data analysis by farmers, academia, industry and policy makers;
4. ensure that farmers are not dependent on individual digital systems and that intellectual property rights and privacy rights of users relating to digital innovations and information are protected and respected;

5. enhance trust and transparency about data governance principles, including rules on authorization and oversight in data collection and data use, and promote data-use models that enable farmers, in compliance with national rules, to decide themselves on whether to pass on their operating, machine and business data;
6. provide public data through appropriate mechanisms and platforms in which such information is provided in standardized and practicable formats as open data in accordance with the FAIR principles (Findable - Accessible - Interoperable - Reusable);
7. promote digital solutions in order to strengthen the transparency, efficiency and integrity of the supply chains and to take effective steps against counterfeits, fraud and smuggling;
8. promote international digital data infrastructure in order to strengthen the cross-border fight against animal and plant pests and diseases and to rapidly exchange information on the current sanitary and phytosanitary situation; and
9. strive to establish digital methods at the World Organisation for Animal Health (OIE) in the framework of the renovation of its World Animal Health Information System (OIE-WAHIS) as an important component for exchanging information and for supporting veterinary services in designing their animal-disease control and eradication programs.

Managing structural changes in agriculture and rural areas

Currently, approximately 45 percent of the world population live in rural areas, and agriculture is a vital economic sector. It is our goal to ensure that rural areas remain vibrant, competitive and attractive places to live; agriculture plays a crucial role in this. To this end we intend, within our remit, to monitor and manage the changes in economic structures, social structures, socio-cultural traditions, work remits and work requirements that are expected to result from digitalization.

Our aims are to:

1. incorporate agricultural policy more closely into the development of rural and digital policies and to ensure that digitalization is part of the respective strategic agendas;
2. mobilize responsible private and public investment in the digitalization of agricultural and food value chains in rural areas in order to use digital technologies and to keep

and generate jobs, training and entrepreneurial opportunities, especially for youth and women;

3. enable farmers to have better links to regional, national and international markets on the basis of open, transparent and rule-based trade;
4. promote reliable and competitively priced connectivity throughout rural regions;
5. create a conducive context for start-ups and MSMEs and provide targeted support for them in order to provide greater impetus for digital innovations in rural areas;
6. improve public awareness of the digital opportunities and the needs of farmers in order to create acceptance and to enhance the attractiveness of the farming profession; and
7. improve the living conditions of people from rural areas in order to tackle depopulation-related issues that affect some of these areas.

III. Conclusion

We, the agriculture ministers:

1. underline the importance of digitalization for an efficient and sustainable agricultural sector, aim to reduce inequality resulting from the digital divide and enable all agricultural stakeholders to better participate in the digital transformation of policies, industry and society, and call for the establishment of digital infrastructure throughout rural areas;
2. regard the digitalization of agriculture as an opportunity to facilitate trade and to meet the challenges, in particular those arising from climate change, and the demands of the 2030 Agenda better than hitherto;
3. emphasize the need to implement the decision of the UN Climate Change Conference (COP23) on agriculture (Koronivia Joint Work on Agriculture)and underline the potential of digitalization in this regard;
4. recognise the need to build up appropriate databases and digital infrastructure, and some countries emphasise their need for assistance in this regard;
5. aim, with this GFFA, to initiate a global process under the auspices of the United Nations to create an international framework for digitalization in agriculture and:

- ask the FAO to draw up, in consultation with stakeholders including the World Bank, African Development Bank, IFAD, OECD, WTO, ITU, OIE and the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA) and based on this communiqué, a concept for considering the establishment of an international Digital Council for Food and Agriculture that will advise governments and other relevant actors, drive the exchange of ideas and experiences and consequently help everyone harness the opportunities presented by the digitalization;
- encourage the FAO, with the involvement of other stakeholders, to draw up a technology impact assessment of the opportunities and risks presented by digitalization for agriculture and rural areas[3] ;
- based on the outcome of the technology impact assessment, invite the FAO to develop a common methodology to assess and track the digital development situation in the agricultural sector at national level[4];

and we will discuss the results at the GFFA 2020;

6. will, with the involvement of international organisations, exchange thoughts and ideas on effective training programs and initiatives for farmers and for people in rural areas, especially women and youth, in order to promote and develop innovative environments, as well as to promote and expand strategies and programs for digital literacy;
7. regard strengthening international networks of farmers, public authorities, academia, the private sector, cooperatives and associations as a suitable means of pooling and disseminating knowledge and strategies relating to digitalization in the area of food and agriculture;
8. are aware of the importance of common definitions, standards and interfaces in respect of data and digital applications, data collection and storage, and intend to take measures to promote rules and voluntary agreements at national, regional and international level;
9. support measures to make public data - taking into consideration data privacy, data security and data sovereignty - available, accessible and usable;

[3,4] Subject to the availability of voluntary funds.

10. encourage the OIE, with the involvement of its member countries and in collaboration with its public and private partners, and taking into account existing systems operating at national and international level, to develop an animal data system that leverages the opportunities presented by digitalization for more efficient management of animal diseases;
11. aim to develop national strategies for digitalization in food and agriculture and to feed these into the respective national policies relating to rural areas and digitalization.