

Teagasc's Role in Reducing Hunger and Under Nutrition in Underdeveloped Countries

Statement made by Professor Gerry Boyle, Director of Teagasc, to the Joint Committee on Foreign Affairs and Trade and Defence on Wednesday 14th February 2018

Over the coming decades global agriculture will be challenged by declining natural resources, the impacts of climate change and the absolute requirement to produce a secure, safe and sustainable supply of food, biomass and fibres for a growing population. In particular, the challenge of food security and sustainability will impact on countries and regions of the world least able to cope.

As a result, the issue of global food security and sustainability now feature prominently on the international policy agenda, and indeed, on the national agenda. The latter is reflected in:

- Priority placed on the eradication of hunger and under nutrition in Ireland's current policy for International Development
- Agri-food business initiatives on food security and sustainability supported by the Department of Agriculture, Food and the Marine and the Department of Foreign Affairs and Trade (DFAT), through the establishment of the African Agri-Food Development Fund (AADF).
- The inclusion of a strategy for "the internationalisation of Irish agri-food expertise" in the implementation of the Food Harvest 2020 strategy and the establishment of Sustainable Food Systems Ireland (SFSI).

In recent years, Teagasc also has emphasised the need to consider the long-term future of Irish agriculture within the context of the global challenges of food security and climate change. The organisation's Statement of Strategy now describes global food security as one of the key-drivers of the national policy context, and has developed a clear policy and strategy governing its international development role.

As the national body responsible for agricultural research and knowledge transfer in Ireland, Teagasc has a responsibility to support the national effort aimed at strengthening agricultural development and reducing hunger and under nutrition in underdeveloped countries. In line with the 'whole-of-government' approach which underlines Ireland's national policy for international development, our engagement is fully aligned with the work of Irish Aid.

In this regard, DFAT and Teagasc signed an MoU in February 2015 on cooperation in agriculture for development which aimed "to draw on Teagasc expertise in agricultural development to support Ireland's objectives of reducing hunger and under nutrition in developing countries".

Following a review of the MoU in early 2017, the partners entered into a new partnership agreement in May 2017. The new arrangement continues to bring together the respective resources, strengths and capacities of the two organisations to better address global agriculture challenges and opportunities.

These initiatives reflect the growing recognition that as food deficits in Africa continue to grow with its share of the world's population, Africa's agricultural performance will increasingly affect global food supply and demand conditions and hence the long-term trajectory of world food prices.

Agricultural productivity growth must constitute the heart of Africa's economic transformation, and investing in Africa's economic growth is in Ireland's and the wider developed world's interests. Over the past 15 years, African governments that have effectively promoted farm productivity growth under the Comprehensive Africa Agriculture Development Programme (CAADP) have enjoyed faster rates of poverty reduction, higher rates of labour productivity in the non-farm segments of the economy, and a more rapid exit of the labour force out of farming. Because the economies of most African countries still depend largely on the performance of agriculture, public investments in agricultural productivity growth will be an important component of an effective employment strategy, particularly in regard to youth, who now comprise roughly 60 per cent of Africa's labour force.

The role of agricultural research and innovation in tackling these interlinked challenges has been highlighted by numerous international organisations and reports. There is a broad consensus that large-scale public and private investments in research and development are required today to develop and disseminate the technologies and information that producers need to increase their returns through systems that improve efficiency and reduce waste and pollution. Nor does the challenge end with research alone. Reaching smallholders is a major challenge in countries where extension services have been severely weakened or eliminated due to low investment in agriculture or reforms of public institutions, so the need for investment and rebuilding in extension is also a priority.

We believe that a sustainable approach to developing mutual Ireland-African interests will require greater support for the development of public institutions to nurture the next generation of educators, farm extension workers, research scientists, entrepreneurs, and policy makers. These professionals will collectively shape the enabling environment for local and international private investment in the agri-food industry and hence influence the pace of economic transformation.

African agri-food systems of the future will require upgraded and expanded skill sets relative to what local education and training systems are currently producing. Developing the skills and jobs to move the continent towards a productive twenty-first century agriculture will require transforming the content and approach of African agricultural education, research, extension, and policy analysis institutions.

This means investing directly in long-term capacity building of African universities, agricultural training colleges, vocational schools, national agriculture research organizations, extension systems, and policy analysis institutes.

In line with this, the Teagasc development strategy is focused on development of local capacity in research and knowledge transfer. Typically, Teagasc's commitment aims to leverage its own expertise in agricultural research and knowledge transfer to maximum effectiveness, by combining its expertise with other complementary actors. This commitment can take the form of staff time (short-term only) or the provision of training or

placements. Because of resource constraints, Teagasc will not commit to long-term placements of its staff or to making financial contributions. The organisation is also committed to using its Postgraduate Fellowships Programme (the Walsh Fellowships Programme) to support the training of African graduates to Masters and PhD level.

In the short period since reengaging in this area of work, Teagasc has, based on its internationally recognised expertise in agricultural research and knowledge transfer, established itself as a key player in the Irish context. The organisation played a lead role in establishing the Irish Forum for International Agriculture Development (IFIAD) and is looked to as a partner by many of our large NGOs. The organisation has built very strong bonds with Irish Aid and is now regularly included as a destination for visiting delegations from Irish Aid partner countries.

Teagasc has also quickly established formal relationships with counterparts in many of the Irish Aid partner countries and in non-partner countries. It has built excellent relationships with a number of the CG Research Programmes (the global research partnership for a food-secure future) and with other international bodies. Many developing countries view the Teagasc integrated model of knowledge creation and dissemination as being the one to emulate for their own countries and the Teagasc Advisory Service, in particular, is viewed internationally as being unique and excellent in terms of its core activities and this expertise is increasingly being sought out.

Teagasc is now firmly committed, within its resource constraints and its mission of supporting Irish agri-food as its primary task, to building on the experience and involvement under the second Irish Aid MoU. The signing of this second MoU is a further indication of our strong commitment to the importance of international agricultural development in the organisation's long-term strategic development.

ANNEX

The following are some examples of our overseas agricultural development activities to date set out under the agreed areas of collaboration in the Teagasc-DFAT MoU:

Capacity building relationships with national agricultural research and knowledge transfer institutions in Irish Aid Key Partner Countries and in other Partner Countries.

Mozambique

Teagasc signed a comprehensive MoU with the Mozambique Institute of Agricultural Research (IIAM) in 2014 and followed up with an exploratory visit in July 2015. We subsequently submitted a brief report to IIAM, with recommendations for activity which Teagasc could assist in delivering. During 2016, we also engaged with Irish Aid in the development of a new bilateral aid programme for Mozambique. Further contact was made with IIAM in 2016 with specific proposals for an institutional capacity building programme. Two Teagasc experts are preparing to visit later this month to begin work on this programme.

Kenya

Teagasc signed an MoU with the Kenyan Agriculture & Livestock Research Organisation (KALRO) in February 2015. Activities delivered on to date include six month capacity building in Teagasc Oak Park for two KALRO staff members on potato breeding and knowledge transfer and a visit to Teagasc by the Director and Deputy Director of KALRO. Teagasc is funding a KALRO staff member under our Walsh Fellowships Programme to undertake a PhD in the area of potato breeding. Teagasc is a member of collaboration, led by IFDC (International Fertilizer Development Center), which has secured funding from the Embassy in Nairobi to undertake a project on potato value chain capacity building activity (PCB). We are also commencing a new project to support KALRO develop a new milk products development and training plant.

Ethiopia

A collaborative project between Teagasc, Wageningen University and the Irish NGO, Vita, studying seed potato systems in the Chenchu Wereda in Ethiopia is reaching its final stages. Three local Ethiopian PhD students have worked at the crop, farm and community level to identify and solve constraints to production and develop further seed potato interventions. The three PhD students have now completed their research programmes. With the support of the Irish Aid Programme, Teagasc undertook a programme of capacity building for staff of the Ethiopian Institute of Agricultural Research (EIAR). Three EIAR staff members spent time in Teagasc Moorepark during 2016 centres learning new research techniques in animal production research. We also funded a staff member from Arbor Minch University to undertake the Masters Programme in Agricultural Innovation Support Extension at UCD.

Vietnam

In September 2016, the Teagasc Director and Director of Research visited Vietnam on the invitation of the Embassy. Following the visit, a team from IPSARD (Institute for Policy and Strategy for Agriculture & Rural Development) spent three days in Teagasc Athenry learning

about our economic modelling capacity and identifying areas where Teagasc could provide support. We followed up with a visit by two Teagasc experts to IPSARD in December 2017. This collaborative work is continuing.

Eritrea:

A memorandum of understanding was signed between Teagasc and the Eritrean National Agricultural Research Institute (NARI) in 2012 under which Teagasc agreed to work with NARI in supporting development of the Eritrean dairy and potato industries.

Dairy Project

Teagasc is providing support through a community dairy model that can be replicated across Eritrea. It introduced a dairy model based on sustainable 'home grown' forage using cow breeds which are suitable to this system and adaptable to the climatic conditions of the area. The project has two interlinked components: (i) a pilot model dairy farm where dairy farming best practice will be demonstrated at NARI and (ii) support to selected dairy farmers with the aim of transferring the technology from the research station to the wider community and providing a dairy research focus for the centre. Teagasc is also working with NARI and Vita to promote food security at national and regional levels through access to a reliable source of potato tubers (seed), which, in turn, would help improve household incomes of beneficiary farmers. The focus of the project is on developing a scale model of a seed potato system, seed multiplication, tissue culture development and up-skilling of research and extension staff. The seed for the project was supplied by IPM.

Partnership Programme 2017-2021

Following exchange visits between the Director of Teagasc and the Eritrean Minister of Agriculture, a five-year partnership agreement (PA), involving Teagasc, Vita and Gorta SHA, was signed in July 2016 which sets the framework for enhanced partnership in the 2017-21 period. Expanding on successful pilot work on potato and dairy value chains, as well as household energy and water provision, the Programme will integrate smallholder farmer development with institutional technical assistance and will cover three broad areas:

- Food Security and Climate Resilience for Smallholders
- Development of Agri-Business and Value Chains
- Institutional Partnership with the Ministry of Agriculture focused on Extension and Research applying the Teagasc model.