The All-Party Parliamentary Group on Agriculture and Food for Development wishes to thank all those who presented to the group on their “Home Grown Nutrition” Seminar Series. A full list of participants can be found on the APPG Website.

www.appg-agdev.co.uk
Home Grown Nutrition

The All-Party Parliamentary Group (APPG) on Agriculture and Food for Development brings together Parliamentarians concerned with agriculture, nutrition and food security in the developing world. The Group promotes support for the developmental needs of the 450 million smallholder farmers who feed 2 billion people worldwide. It engenders progressive and informed debate within Westminster and beyond by bridging the gap between policy makers, agricultural development specialists and practitioners in the field.

The APPG was established in October 2008 in response to growing concerns over the heightened Food Crisis and a steady decline in the funding of agricultural development both by bilateral and multilateral organisations over nearly two decades. Chaired by Lord Cameron of Dillington, the APPG is a cross-party initiative drawing members from both Houses of the UK Parliament which brings together Parliamentarians concerned with both the technical, and social science, of agricultural development in poorer parts of the world. It uses its cross-party membership to raise the understanding of developmental needs of smallholder farmers and other stakeholders in developing countries and hence facilitates debate on the level of support given by the British Government and other major donors. In doing this, the APPG recognises the pivotal role that agricultural research outputs have in helping smallholder farmers to increase their productivity and in eliminating global poverty.

Why Nutrition?

The APPG supports the argument that debates on food security and agriculture should reflect all of the critical issues and most crucially the issue of nutrition. This approach responds to the unique vulnerability and support required by women and young children in the area of nutrition. Food security policies and interventions must fundamentally recognise and address the multiple drivers of hunger and malnutrition which extend beyond a simple focus on producing more food.

Nearly one billion people go to bed hungry every night and two million children die from malnutrition every year. In 2013 this is a global scandal and the APPG strongly supports recent international attempts to highlight this problem. It is estimated that 40% of all children under five in south Asia and sub-Saharan Africa are short (stunted) for their age. Stunting and wasting in the first 1,000 days after conception represents a blatant squandering of human potential. The symptoms associated with undernutrition are shocking and wide ranging; undernourished children are more likely to get sick, frequently resulting in death. Maternal and child undernutrition is the underlying cause of approximately 3 million child deaths a year.
Children who avoid stunting in the first two to three years of life have been shown to perform better in school and in later life. The prevention of stunting improves wage rates, earned income and employment rates, boosts own-enterprise start-ups, reduces poverty and adds to economic growth. Malnourished women are at a greater risk of giving birth to malnourished babies. Hence malnutrition has the ability to travel not just throughout a life cycle but also to jump across generations.

In addressing issues of food security, policy makers must recognise nutrition as an essential element to creating a sustainable food system in which people not only have enough food but they also have good, nutritious food. The relationship of agriculture and nutrition is complex and multifaceted but absolutely crucial to understand in order to create a sustainable food system. The promotion of efficient agriculture is one of the most effective tools to ensure economic, social and political well-being in Africa. Significantly, because most African farmers are female, agriculture can boost the economic and social status of women, empowering them to make decisions about their own lives and those of their families. Evidence also shows that farmer parents who move from subsistence to surplus tend to spend much of their cash on the education and healthcare of their children.

Efficient agriculture can also reduce the nutritional shortcomings of expectant and recent mothers whilst simultaneously boosting the physical health and cognitive well-being of their children. So agricultural investment returns not only healthy citizens, capable of achieving their full potential and less likely to require healthcare interventions later in life, but also an important increase in national overall productivity. What’s more, good agricultural practice adds resilience to individual livelihoods and fosters environmental sustainability. By turning subsistence agriculture into a vibrant, profitable and sustainable rural sector, countries can make progress towards virtually all the Millennium Development Goals. Smallholder farmers in Africa represent the largest economically productive business sector in the developing world, yet produce just one-sixth of the output of their colleagues in Europe or North America. Thus the latent potential of this sector is clear.

The United States’ Presidency of the G8 Summit in 2012 demonstrated excellent leadership on issues of agriculture, food and nutrition security. The US Presidency of the G8 was a platform to launch the “Feed the Future” Initiative, as well as the “New Alliance for Food and Nutrition”. Specifically to invest in agricultural development. The UK Government therefore has a significant opportunity to advance these discussions, and debates through its Presidency of the G8 in June 2013. This is in addition to the Prime Minister’s important role as Co-Chair of the United Nations High Level Panel on Post-2015 Development Goals. The APPG on Agriculture and Food for Development urges the UK Government to use these leadership positions to champion the role of agriculture in addressing and overcoming hunger, particularly with a focus on providing a more nutritious diet for the world’s poorest people.

The UK and specifically the Department for International Development must invest in agriculture with a “patient capital” approach. Investment in agriculture must be a long-term venture and will not be as easy to evidence as interventions in areas such as health and education. However if donors are to make interventions which are sustainable, have ownership by the recipients and ultimately create an independence from aid, investments in agriculture for home grown nutrition must be taken seriously.

**Pathways to improved nutrition**

Throughout the APPG’s meetings, briefings and evidence sessions on the role of agriculture in improving household nutrition, there have been certain distinct pathways to address ‘nutrition security’. These include: agriculture, nutritional supplements and wider-economy approaches (cash-transfers), the empowerment of women, access to healthcare as well as clean water and sanitation. In all of these cases the APPG wishes to stress the crucial importance of investing in smallholder farmers and putting them at the centre of the food and nutrition security paradigm. In doing this it is possible to make advances in home/nutrition gardens, empowerment of women (due to the majority of smallholders being women), and investments in other supporting activities such as health care, sanitation, water management programmes and crucially education. For sub-Saharan Africa and many other poor countries, agriculture and the economy are synonymous. Thus in generating income which can then be spent on drivers of improved nutrition, such as healthcare, education and foods to diversify one’s diet, agriculture will be the tool to achieve this for many people. Without significant, sustained and long-term investment in smallholder farmers, all of these pathways to improved nutrition will struggle to achieve any degree of sustainability.

The recent efforts to scale up work on addressing nutrition security are highly commendable and it is important to note that the Department for International Development is playing a role in taking these projects forward. The pathways outlined above must be complementary and all receive attention to ensure a positive operating environment for eliminating hunger and malnutrition. From the recent APPG seminar series on “Home Grown Nutrition” we wish to pick out some key messages on the pathways mentioned above. One of these pathways is that of nutritional supplements. Supplement-based strategies can seem sensible when populations do not have access to a well-balanced diet. Micronutrient sachets are lightweight, easy to store, and can be transported quickly in emergencies. They also have a long shelf life, even in hot conditions (up to 2 years). As a stop-gap, supplements can be life savers, but as a long-term strategy, they surely cannot replace food based models; particularly those that support nutrition-sensitive agricultural practices.

Few would argue about the benefits of supplements in emergencies, but reliable food systems can help to reduce the need for these and make communities more resilient and self-sufficient. A community that lives on the foods it can produce is a healthy community. One that lives on food from packages is a dependent community. The APPG agrees that both will be required, but we need to be clear about where one is superior to the other. When there is an emergency and people need food right away, supplementary nutrition is essential. But as a long-term strategy, the APPG believes everyone deserves to
eat real food, and with the right investment smallholder farmers can be the agents to produce this food for themselves and their communities.

There is also the wider-economy pathway to improved nutrition which is extremely important and is in line with the concept of “Home Grown Nutrition”. In calling for increased investment in smallholder farmers, the APPG also recognises that not all smallholders will necessarily stay in agriculture – this does not have to be seen to be a bad thing. This is why investments in healthcare, the empowerment of women, access to credit, access to land tenure and most importantly access to education, knowledge and information, are also fundamental to addressing nutrition insecurity.

In the Democratic Republic of Congo, research has shown that the biggest limiting factor on food and nutrition security is income. That has major implications for larger households, particularly their ability to provide their children with the nutrients they need to grow up healthy, do well at school and become economically and socially productive adults. There is also a stark contrast between the cost of a nutritious diet – that is, one that meets an individual’s requirements for energy, fat, protein and micronutrients – and a diet that meets energy requirements alone. A diet that provides sufficient energy for children is four times cheaper than a diet that provides the required nutrients for optimal growth and development of children. For those families surveyed, that nutritious diet remained out of reach.

Cash transfers, as a tool of addressing food and nutrition security, have been seen to have a major positive impact on households’ diet quality, providing nutritional equity to the very poorest families. Given that 75% of rural and 97% of urban households are net buyers of food, even in agricultural areas, the importance of reaching consumers with nutritional intervention cannot be over-stated. Food security policies here, as elsewhere, must be gender sensitive and address the multiple roles and challenges women face. Only by addressing these issues can donors help women to maximise their capacity to produce and provide for their children in a manner which guarantees their long-term development.

Empowering women is one of the critical factors in creating lasting food and nutrition security. Without the full participation from women and girls to address the challenges of malnutrition, undernutrition and hunger, efforts will be severely undermined. Given that 60-80% of smallholder farmers are women, increased investment and support in agriculture can have highly positive impacts on women’s empowerment. This, as already noted earlier, is through improved access to land tenure, credit, inputs and being able to sell their produce to market. Improved access to education and training for women and girls is also of critical importance for all aspects of creating an environment where women can make informed decisions on both what to grow to feed their family but also what decisions to make regarding what food to buy and where to get support. The Director of Gender, Equity and Rural Employment Division at the UN Food and Agriculture Organisation estimates that when women control the household income, there is a 20% greater chance of their children’s survival. Thus effective social protection programmes are critical to the empowerment of women, which through a range of intervention and support mechanisms will improve food and nutrition security at the household level.

The wider policy environment is extremely important when addressing the problem of household nutrition security. This is why water and sanitation programmes, as well as access to affordable and reliable healthcare, are crucial to underpin any specific interventions on addressing undernutrition. This sort of cross governmental coordination to ensure a coherent framework in which one can address nutrition security is a difficult process to achieve even in the most developed of government systems, thus to achieve this in difficult operating environments is certainly a daunting task. The APPG has heard of a process where this has been achieved from Dr. Terry Welfatwa in the Kenyan Ministry of Health. A “food and nutrition” policy has been launched in Kenya. Infant mortality rates have fallen and now only 16% of under 5s are said to be ‘underweight’. Schools feeding programmes have been very successful; parents, who are small farmers, grow the food for the school when previously the food was imported. Thus there is a real sense of ownership and community satisfaction with children eating their own home grown nutritious food. There is also a continuous weighing programme in the schools and mothers are given advice on nutrition, sanitation and health concerns. The Kenyan government now has a nutritional action plan which is comprised of a committee from all of the heads of ministries to discuss agriculture, nutrition and health; thus this is a joined-up priority of all ministries and departments. This appears an excellent model for the political ‘buy-in’ needed to take a wide ranging and comprehensive approach to addressing food, and particularly, nutrition insecurity.

These wider pathways to improved nutrition are absolutely essential to a successful approach to the topic. Without all of these pathways making progress there cannot be nutrition security to avert malnutrition, undernutrition, stunting and wider problems associated with poor nutrition. It is no surprise then that the APPG believe that agriculture can be the pivotal pathway to achieving nutrition security. Better coordination, cooperation and learning between the two agendas of agriculture and nutrition is required. Both nutrition and agricultural development require twin tracks: short-term alleviation and longer-term prevention. As indicated earlier, links in agricultural pathways should consider the role of nutrition, health and social protection, and should complement agricultural programmes, to ensure they reach the very poorest citizens.

It is important to commend the Department for International Development (DFID) on their leadership and support of the recent “Olympic Hunger Summit” and the upcoming ‘Nutrition for Growth’ event. The Department understand that links between agriculture and nutrition are complex and bidirectional and that a well-developed agriculture sector will deliver increased and diversified farm outputs and this may enhance food and nutrition security directly through increased access to and consumption of diverse foods, or indirectly through greater profits to farmers and national wealth.

DFID also state that there is a strong potential for well-developed and functioning agriculture sectors to play a critical role in enhancing
population health and specifically maternal and child health and nutritional status. Recent World Bank reports would also assert that agricultural interventions promoting increased production of fruit and vegetables—such as those involving home gardens—carry considerable potential effectively to address micronutrient deficiencies. The most recent World Bank Review identified a significant body of evidence documenting the success of home gardens in raising production, income, household consumption, and the intake of targeted fruit and vegetables by vulnerable population groups. Several programs also showed significant impacts on dietary and biochemical indicators of micronutrient deficiencies, and especially so when they included components designed to change behaviour through education and to empower women. We provide a case study on one of these projects later in this report.

The concept of “Home Grown Nutrition” is coherent with all of these “pathways” to improved nutrition raised above. What is clear is that investment in agriculture must be seen to play a central part in ending malnutrition, this means long-term and sustainable engagement with smallholder farmers, so that they can produce a harvest that leads to diversified diets. This could be through home gardens, increased income to purchase other foods for dietary diversification, or through increased access to other services. These approaches all stem from increased income from their livelihood, which is overwhelmingly agriculture for those who suffer from nutrition insecurity. No longer can international institutions, donors and other agencies overlook the critical importance of improved smallholder agriculture as a tool to reduce food and nutrition security, and thus investments in agriculture must increase and must be long term ventures.

The nature of “Home Grown Nutrition” implicitly means that agriculture must be seen as a catalytic tool in ending malnutrition, undernutrition and hunger. However this does not mean that agriculture on its own is the only way to address these challenges. As indicated above, developing all of the pathways to improved nutrition will be extremely important to meeting the needs of the almost one billion undernourished persons in the world today. The key here is to have an operating environment which takes the problem of nutrition insecurity seriously and is a cross ministry issue at country level, as well as being a cross sector issue for donors, civil society and implementing bodies. The APPG calls on the “Scaling-Up Nutrition Movement” (SUN) to ensure that member countries bring the relevant ministries together to work on addressing food and nutrition insecurity. A review of the SUN’s successes in bringing ministries together would be most timely in assessing whether this has had any practical impact in the initial phases of the movement.

The Evidence Base for Home Grown Nutrition

In certain of the presentations taken by the APPG concerning the role of agriculture in addressing nutritional development targets it was stated that while it is clear that certain specific agricultural interventions can enhance dietary intakes and improve nutrition outcomes, in most cases the putative links between investments in agricultural development and improved nutritional outcomes have a limited evidence base.

Academically rigorous, random-controlled trials concerning the link between agricultural investments and nutritional outcome will be difficult, expensive and require a very long time frame of perhaps decades. Such research would need to consider the full complex and diverse pathway of change from agricultural inputs, practices, value chains, food environment to nutrition outcomes.

Although the APPG fully supports the view that policy strategies should be underpinned by evidence, it is concerned that this could be used as an excuse to limit investments in agricultural developments especially for small-scale farmers until such evidence is available. In the view of the APPG, this would be a great disservice to the many poor and needy smallholder farmers in Africa who urgently need investments in an enabling environment, which includes training to allow smallholder farmers to grow their businesses and increase their production and variety of crops – both of which can lead to easier access to a diversified diet. Instead, the APPG suggests that all new agricultural development programmes should have integral monitoring and evaluation programmes that include improved nutrition outcomes as one of their parameters. In addition we also suggest that rather than limiting investment in agriculture, working hypotheses should be developed of “what works” concerning “Home Grown Nutrition” and the use of agriculture as a tool to address nutrition insecurity. Such working hypotheses could be improved as more data becomes available. If this approach is adopted it will mean that, whilst the donor community waits for more comprehensive data sets on nutrition sensitive agriculture, progress can be made in investing in ‘nutrition-sensitive’ agriculture which will have wide ranging benefits for nutrition security.

Case-Study

The APPG wishes to suggest that investment in nutrition sensitive agriculture must be increased, in tandem with increased investment in research and evaluation of such projects. The basis for such investments should be based on best practice examples that are already in the public domain. In this case the APPG has been struck by the success of the HarvestPlus Project on improving the vitamin A status of women and children through Orange-Fleshed Sweet Potatoes (OFSP). This was a project funded by the Bill and Melinda Gates Foundation and DFID (amongst others) and brought to the APPG’s attention by the Natural Resources Institute at the University of Greenwich. This short case study emphasises the role of biofortification in delivering “Home Grown Nutrition” and delivering nutritional interventions through agricultural means. Biofortification has three main advantages. Firstly, it is targeted to rural areas, where most of the poor live. Secondly, after an initial investment in developing biofortified crops, these crops can be adapted to other regions at a low additional cost. Thirdly, it is sustainable because it uses foods that people already eat habitually to deliver better nutrition. Furthermore, most biofortified seed can also be saved and shared freely with other farmers. By providing a regular “daily dose” of micronutrients, biofortification can help reduce hidden hunger as part of a larger strategy that addresses issues such as dietary diversification, supplementation and women’s empowerment.
It is estimated that over 50 million children could benefit by consumption of OFSP. The crop is widely consumed in many countries in sub-Saharan Africa, but traditional varieties are low in pro-vitamin A. OFSP varieties were developed using traditional breeding that resulted in roots which when approximately 125g was consumed would provide the daily requirement of vitamin. Breeding focused on maximising pro-vitamin A content, dry matter and disease resistance. The HarvestPlus reaching end users project had three main interventions: (a) introducing planting materials for orange-fleshed varieties; (b) supporting behaviour change for target groups and (c) market development. Despite a difference in colour, orange-fleshed varieties were widely appreciated by children and other consumers.

In the project, HarvestPlus disseminated OFSP to more than 24,000 households in specific locations in Mozambique and Uganda to see if they could provide more vitamin A through food. This was the first time that a biofortified crop, notably with a different colour, had been released on such a large scale. The project resulted in the following: 77% of project households in Mozambique adopted OFSP (compared with 9% in the control group), and 65% of project households in Uganda adopted OFSP (compared with 4% in the control group). The share of sweet potato cultivated area devoted to OFSP increased from 95% to 56% in Mozambique and from 1% to 44% in Uganda. The intake of OFSP among young children, older children, and women increased by two thirds or more in both countries when OFSP was available. As a result of the previous point, total vitamin A intakes among young children, older children, and women increased significantly in both countries. Notably for children aged 6–35 months, OFSP contributed 78% of their total vitamin A intake in Mozambique and 53% in Uganda. In Uganda, more vitamin A obtained from eating OFSP was associated with a lower likelihood of vitamin A deficiency among both children 5–7 years and women who had lower levels of vitamin A at the start of the project. Although this pilot project was implemented in small, focused areas, scaling up at the country level is feasible with the support of national policymakers and other stakeholders.

Projects, such as the OFSP project, appear to give a real incentive to donors and policymakers to invest in agriculture and its development – specifically in nutrition sensitive agriculture, biofortification could form part of this – but also in terms of information for farmers, extension services which are reliable and give farmers the right training, post-harvest storage, food safety and the prevention of mycotoxin contamination.

Recommendaions

It is abundantly clear from all of the APPG’s research, meetings and seminars that sustained long-term investment in agriculture for development is crucial to rural livelihoods and communities across the developing world. If this investment is sustained and sustainable, appropriate to the respective communities it can have truly transformational impacts both in terms of the rural economy and in terms of poverty, hunger and malnutrition alleviation.

Agriculture is the basis of many, if not all, pathways to improved nutrition. Whether one wishes to make interventions in nutrition security through home gardens, empowering women, increasing access to health care, access to reliable sanitation and water, access to education programmes, diversified diets or biofortification of crops, all of these interventions are influenced by the agricultural sector. This is not to mention the transformative role agriculture can play in improving household income and economic wellbeing as a whole, at both household and national level. What donors and multilateral bodies must understand is that for many developing countries agriculture and the economy are synonymous. So for the vast majority of poor people, increasing household income means increasing the amount of money these people can make through agriculture. Thus the operating environment that exists in these respective countries must take the problem of nutrition insecurity seriously and prioritise it as a cross ministry issue, ensuring national departments of agriculture, education, health and finance are full partners in this transforming agenda. Significantly this means investment in agriculture and smallholder farmers as the catalysts in creating food and nutrition security through “Home Grown Nutrition”.

The All-Party Group on Agriculture and Food for Development recommends that national governments, donors, multilateral institutions, NGOs and wider stakeholders:

- Invest in agriculture as a long term project, putting smallholder farmers at the centre of these programmes
- Include improved nutritional outcomes as one of the objectives for new agricultural investment programmes
- Ensure that at national level there is a coordinated effort across ministries to work on addressing the challenge of food and nutrition insecurity
- Encourage “Home Grown Nutrition” by investing in farmers’ education and training on the benefits of a diversified diet and where to access appropriate inputs
- Invest in long-term and comprehensive research, monitoring and evaluation programmes on the role that agriculture plays on nutrition
- Recognise that for interventions in agriculture it is not always as easy to provide evidence of impact as in other sectors, such as education and health
- Promote a policy environment which recognises agriculture as a key tool to ending hunger, food and nutrition insecurity