

Opinion Piece

PUSH AGRICULTURE AND FOOD SYSTEMS INTO THE STRATOSPHERE OF INNOVATION

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I think we can all agree that ending hunger and malnutrition are defining challenges of our lifetime. In his 1963 speech to the United Nations General Assembly, the late US president John F. Kennedy expressed two ambitions for that decade: to commit to a manned moon mission and to end world hunger. Just four years later, Apollo 11 landed on the moon. More than fifty years later there are still 1 billion people living in extreme poverty and at least 2 billion suffering from malnutrition. While progress has been made, what is keeping agriculture and food systems from the type of innovation and result that has been realized over the last decades in space travel, telecommunications, transport, and others?

One component could be the fact that agriculture and food systems, while described as a 'sector', actually touch on almost every aspect of our lives and are impacted by decisions and events in almost every sector – from energy, to water, to climate change, to health, infrastructure, technology, transport, and so on. One of the main obstacles to progress has been our approach. We need to stop approaching food and nutrition security in a silo and fully embrace the inter-linkages in order to facilitate the multi-dimensional actions and innovations required.

The United Nations Committee on World Food Security (CFS) and the World Economic Forum's New Vision for Agriculture have embraced these inter-linkages, while also realizing that the best way to innovate is to bring together ideas from the range of sectors and stakeholders actively looking at how to end hunger and malnutrition. While some fear the diversity of views could be a minefield of polarizing debates, in fact the best solutions have been found when we can combine and build on ideas and options from across the spectrum. We've seen this with the adoption and uptake of *the CFS Voluntary Guidelines on the Governance of Tenure of Land, Fisheries and Forests (VGGTs)*, and *Principles for Responsible Investment in Agriculture and Food Systems (RAI)* and with the growing success of the multi-stakeholder *WEF Grow Africa and Grow Asia* initiatives. Each of these initiatives has been successful because of the diverse ideas and perspectives that contributed to their development.

So how can we ensure that multi-stakeholder ideas and initiatives translate into actions that finally end hunger and malnutrition? To feed the projected population of 9.7 billion people in 2050, an estimated investment of \$83 billion per year is required. To achieve the upcoming Sustainable Development Goals, we'll need to bridge an investment gap of \$2.5 trillion. And while growth in agriculture is up to four times more effective at reducing poverty than growth in other sectors, it is consistently on the low end of the spectrum in terms of investment in research and development – less than one tenth of what is spent in R&D on pharmaceuticals is spent on food systems. The opportunities available for achieving growth are exponential, if we are willing to invest in time, resources and collaboration.

If we look at the success stories of other sectors, and some of the leading innovators in agriculture that have taken an idea and truly transformed the status quo, we are presented with a few key lessons:

Looking outward: Naval gazing on single issues or sectors, or equating national interest to domestically focussed policies is a barrier to developing the type of system wide solutions we need to address food security and nutrition. When we look at examples like Apple or Google and what has contributed to their success, it has been an ability to look outwards, to take on ideas developed in other contexts – be it for the music industry, or learning from a method practiced by indigenous peoples. This openness and curiosity into other sectors and other perspectives helped them to completely transform their industries.

Accessibility: Smallholders and family farmers account for more than 95 percent of agricultural holdings and feed up to 80 percent of the population – which means they have to be part of any solution aimed at achieving food security and nutrition. Great ideas that are either too complicated or too costly, won't reach the masses. At the same time it is often from the 'masses' that the best ideas are born. Just by looking at the rise of social media, user derived content, or the sharing economy one can see that success in the future will not come from above but from those that are out in the fields working together. For example, as a result of California's recent drought crisis, farmers have developed an 'AirBnB' of water, where farmers with surplus are selling to municipal, industrial, conservation or other agricultural users.

So how can we foster more of the kinds of behaviour that can transform food systems among diverse stakeholders? The answer is largely based on 'network innovation' and being open to all options. As we saw with the development of the VGGTs and RAI, there is a huge divergence of opinion about what the right solution is – whether it's agroecological practices or sustainable intensification – and the answer that we've found is it's got to be both. There are futurists predicting that agriculture in the coming decades will depend on farmer's ability to use new technologies and farm like the Jetsons. While at the same time there is growing demand from consumers in developed markets for 'old style farming' and food with a story, because people like the image that goes along with that. What we've seen work best is a combination of many options. For example, CFS stakeholders have worked together to test the use of drones and mobile technology in delineating land areas. You have indigenous communities who are still making decisions through customary practices, but who are also using the crowd-sourcing app [Open Tenure](#), to facilitate tracking of land use details. This is the way of the future – not 'either or', but 'and plus'.

As the Crawford Fund's 2015 conference begins this week with the aim of discussing how profitability and sustainability are inextricably linked, it is my conviction that we should take on the lessons learned in other sectors to truly push agriculture and food systems into the stratosphere of innovation in order to make hunger and malnutrition history within our lifetime.