

Innovations in Humanitarian Food Science and Technology

Role of Food Science and Technology in Humanitarian Response

20 June 2018

The Committee on World Food Security (CFS) has adopted in 2015 a Framework for Action for Food Security and Nutrition in Protracted Crisis. This first global consensus recognizes that building resilience can boost capacity to absorb shocks and long-term stresses. Given the severity of undernutrition during protracted crises, nutritional needs require a special focus especially for at risk populations, the vulnerable and marginalized groups.

FAO has called for a transformative change to agriculture and food systems to improve nutrition and ensure that food is produced, distributed and consumed in a sustainable manner that protects the right to adequate food for all. In this regard, one of its five strategic objectives is to Increase the resilience of livelihoods to threats and crises.

Effective policies and programs are needed to improve the quality and safety of widely-consumed foods to make them more healthy, affordable, accessible and appealing, especially to low-income countries to ensure that those who are the most vulnerable to crises (rural and urban poor) are better prepared and can respond in a timely, efficient and sustainable manner.

In the case of humanitarian feeding, providing safe, nutritious, good quality food in the right quantity at the right time in the right place is an enormous challenge which is likely to increase given uncertainties such as climate change and global political and economic instability.

International organizations such as the World Food Programme (WFP) of the United Nations and various non-government organizations (NGOs) focus on providing food in emergency situations, and others in collaboration with the UN Food and Agriculture Organization (FAO) on contributing to more resilient and sustainable food systems. There are clear opportunities for the humanitarian and food science/technology communities and the private sector to better collaborate with each other in this area.

A multi stakeholder group including UN agencies, NGOs, academia, research institutes, the private sector and government agencies has carried out a number of international workshops focused on the role of food science and technology in food security and humanitarian feeding. The key reported conclusions and recommendations from the group are as follows:

Conclusions:

- Transformative change will need to embrace innovation not just through agricultural productivity but across the whole food system. This will require an increased emphasis on food science and technologies that addresses local needs, creation of jobs and income generation, underpin food safety, sustainable food processing, packaging, shelf-life and nutritional and sensory properties.
- Such change must be seen in the framework of the 2030 Agenda for Sustainable development¹, build up on field experience and successful practices and strengthen local capacity.
- Successful implementation through multi stakeholder partnerships involving relevant UN agencies and NGOs, together with the research community and the private sector, is likely to result in tangible outcomes to the beneficiaries with significant positive health, economic, social and environmental impacts to the local communities.

It is recommended:

1. To increase awareness of the critical role and importance of food science and technology in humanitarian and emergency response among stakeholders and the challenges and opportunities of humanitarian and emergency response among food scientists and technologists. Environmental impacts (carbon, water and ecological footprints) should be a high concern too.
2. That policy makers, donors, governments, NGOs and other humanitarian stakeholders recognize that there needs to be a shift in investment policy from the current focus of rehabilitating and increasing agricultural productivity to addressing the whole food system. Such an approach, not only responds to immediate food security gaps during crises by supporting agri-food systems through food science and technology, but also addresses the underlying factors that drive emergencies, reduces food loss and waste, creates local employment and increases local resilience.
3. That adequate resources are allocated and investments are focused on innovation, education, information management and local capacity strengthening with respect to applying food science and technology to address humanitarian and emergency challenges and in finding context appropriate solutions.

¹ <https://sustainabledevelopment.un.org/post2015/transformingourworld>

This brief was prepared by the Humanitarian Food Science and Technology working group.

Prof. Jayashree Arcot, UNSW, Australia
Prof. Dominique Bounie, University of Lille, France
Prof. Martin Cole, CSIRO, Australia
Dr. Sridhar Dharmapuri, FAO, Thailand
Dr. Florence Egal, Independent Expert, Italy
Mr. Greg S. Garrett, GAIN, Switzerland
Dr. Pablo Juliano, CSIRO, Australia
Dr Carla Mejia, WFP, Thailand
Ms. Cathy Moir, CSIRO, Australia
Prof. Manny Noakes, CSIRO, Australia
Dr. Mike Nunn, ACIAR, Australia
Dr. Astrid Poelman, CSIRO, Australia
Mr. Shane Prigge, WFP, Italy
Mr. Jay Sellahewa, CSIRO and UNSW, Australia
Mr. Ousmane Seye, Aga Khan Foundation, Mali
Dr. Regine Stockmann, CSIRO, Australia
Dr. Dan Walker, ACIAR, Australia