



## SCIENCE DAYS of the UN Food Systems Summit

INPUT PAPER from FACCE-JPI, the Joint Programming Initiative on Agriculture, Food Security and Climate Change

The food systems of the future should build on an integration and synthesis of scientific evidence related to a systems approach. The Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE-JPI) is contributing to this transformation through a focus on agricultural production that ensures food security and is environmentally sustainable. Our approach involves co-design of research and cross-European collaboration in tackling the common challenges, cooperation with other initiatives and synthesis of the knowledge emanating from funded research. We suggest that the following three aspects related to the role of production in food systems should be prioritised by researchers, funders, policy-makers and other stakeholders\*.

\* FACCE-JPI's input is based on our revised Strategic Research Agenda 2020 and a workshop held on June 25, 2021 as a side event to the Summit's science days.



## 1

Food and feed from crops, livestock and alternative protein production must be environmentally sustainable as well as socio-economically viable for farmers and other actors in food systems. **Crop and livestock production** should contribute to **climate neutrality** and **restoration of ecosystems** and **biodiversity**, aims that are in agreement with Action Track 3 of the UNFSS “Boost Nature-Positive Production”. These goals can be met through **agro-ecological approaches** that integrate application of novel technological and innovative transdisciplinary approaches as well as **local knowledge**. Research and Innovation activities should be combined with **co-creation approaches** such as living labs, a strategy aimed at the development of new, ready-to-adopt agro-ecological practices and novel business models.

## 2

The trade-offs and synergies between the various dimensions of food production must be taken into account from local to global scales. To promote this awareness and to ensure that **trade-offs** are **minimised** and **synergies** are **exploited**, we suggest that **modelling** of different scenarios and **synthesis** of research findings can be developed and communicated to policy-makers and other stakeholders **in regular science-policy dialogues**. Specifically, in this context, **FACCE-JPI’s MACSUR Knowledge Hub** has contributed to a **common vision** of modelling and to the **sharing** of models; continued as a Science-Policy Knowledge Forum, MACSUR is now building a **platform for science-policy interface**. It will be important to reach out also to policy-makers beyond agriculture with the aim of establishing **a coherent policy landscape** that reflects the complexity and impact of food systems on policy areas like health, climate and environment, trade and economy, transport, energy and science.

## 3

As part of a systems approach to changing mind-sets, attitudes and behaviours, agricultural production systems need to be designed to **encourage consumption** that is **both sustainable and healthier**. **In line with Action Tracks 1 and 2** of the Summit, “Ensure access to safe and nutritious food for all” and “Shift to sustainable consumption patterns”, respectively, we support the development of **nutrition-sensitive food production** that is no longer simply focused on yield, which properly considers the **nutrient density** of agricultural produce, and takes into account the importance of **healthy soils and biodiversity** for food and nutrition security.

In its Strategic Research Agendas published in 2012 and 2020, which have been implemented in **more than 140 funded projects** in the last decade, FACCE-JPI has promoted a vision for European agricultural production that is **nature-positive, nutritious** and **resilient** in the face of climate change and other shocks. Through a focus on **knowledge synthesis** and **impact**, a **co-creation** approach to translating effective agricultural practices into the field and **closer communication with policy-makers** – supported by **impact measurement** – the initiative is now committed to **providing the scientific insights required for transformation of food systems** and progress on the Sustainable Development Goals.