

An overview of the OECD Co-operative Research Program: Sustainable Agricultural and Food Systems

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History and Purpose

- Co-operative Research Programme was **founded in 1978** to:
 - help achieve globally agreed policy objectives by facilitating international co-operation among research scientists and institutions.
 - place a policy emphasis on all the activities it funds. CRP supports policy makers in promoting the sustainable use of natural resources in food, agriculture, forestry and fisheries.
 - focus on global issues such as food security, climate change and the inter-connectedness of economies through trade and scientific co-operation.

Our programme



https://issuu.com/oecd.publishing/docs/crp_brochure_2022_update_3a_final/6



Sustainability, food security and nutrition

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Our key outcomes

Building resilience in the food system

Our path to impact

Managing
natural
capital

Strengthening resilience
in the face of multiple risks
in a connected world

Transformational
technologies
and innovation

Triple dimensions prism

(social, economic, environmental)

Our context: **Globalisation and Climate Change**

Managing Natural Capital

Central Theme 1:

Managing natural capital

... helps to ensure the availability and the quality of natural resources.

- **Land.** Healthy functioning landscapes deliver a range of services to society. As agriculture is often the dominant land user, maintaining these services depends on sustainable agricultural practices.
- **Soil, water and biodiversity.** Agricultural production depends on soils, which provide the foundation for productivity. Agriculture is also a major user of water and biodiversity. Modern management practices coupled with climate change and other human activities pose threats that must be managed.
- **Aquaculture and fisheries.** Marine and fresh-water ecosystems are important sources of food and bio-energy products, yet many are already under pressure.
- **Forests.** Forests provide wood biomass, carbon sequestration, water retention and biodiversity, and they protect land. Yet forest degradation and deforestation continue at an alarming pace.
- **Integrated agricultural production systems.** A diversity of efficient, productive and environmentally sustainable agricultural systems will be needed to manage natural capital while meeting future food security challenges.

In the photo below, preliminary data is being collected to characterise the spatial distribution of soil properties in an experimental plot (Institute for Sustainable Agriculture). From a 2016 fellowship: *Now you see it and now you don't: developing multidimensional models of soil salinity and water status.*



Strengthening Resilience

Central Theme 2:

Strengthening resilience in the face of multiple risks in a connected world

... through research helps to anticipate, pre-empt and cope with potential and real impacts on agricultural systems and food security.

- **Invasive species and biosecurity.** To ensure biosecurity and also enhance trade opportunities, it is crucial to understand the global spread of pests and diseases, and to ensure their early detection and assessment.
- **Food safety.** Food-borne diseases take a major toll on public health. Technology to ensure food safety, nutrition, and sustainable consumption and processing is essential.
- **Emerging diseases.** Pre-emptive science can help to deal effectively with pathogens such as SARS, avian influenza or Ebola. With the growing global reliance on a small suite of crop and livestock species, it is also essential in combatting new diseases that threaten agricultural productivity and crop health.
- **Antimicrobial resistance.** The emergence and spread of antimicrobial-resistant pathogens raises serious concerns for public health. To preserve the efficacy of antimicrobials, information gaps must be filled and alternative management strategies developed.
- **Climate risks to Production.** Climate change and variability pose threats to farming enterprises, particularly subsistence or marginal agriculture. Existing and new technologies for crop or livestock improvement offer opportunities to adapt to and mitigate these threats through profitable, sustainable and resilient farming systems.
- **Risk assessment.** By refining and applying easily accessible risk assessment tools, governments and managers of agricultural systems can anticipate, avoid and react to risks related to biosecurity, climate or market access, thereby minimising their negative impact.



Transformational Technologies and Innovation

Central Theme 3:

Transformational technologies and innovation

... make it possible to achieve a step change.

- **Digital technologies** employing GPS, spatial mapping, equipment guidance and robotics minimises inputs while boosting crop growth rates in economically, socially and environmentally responsible ways.
- **Advanced breeding tools/Genetic and genomic technologies** directly address issues of agricultural productivity, food security, human nutrition and health while reducing stress on natural capital and contributing to green growth.
- **Novel waste reduction technologies** reduce post-harvest and post-purchase losses, representing the “low hanging fruit” for food supply and food security.
- **Biofuels, bio-products and bioprocesses** make important contributions to dealing with climate change, but their production on an industrial scale requires innovation to ensure whole-of-supply-chain integrity and sustainability.
- **Innovations in social science, economics and education** facilitate the translation of scientific knowledge into policy changes, while encouraging wider adoption of sustainable practices by farmers and consumers alike.

Photos taken during a 2014 fellowship in Italy on Soft Kernel Durum Wheat: Sustainable Local and Global Food Security



Participating Countries

28 of the 34 OECD Members



Australia



Estonia



Italy



Norway



Austria



Finland



Japan



Slovak Republic



Belgium



France



Korea



Spain



Canada



Germany



Latvia



Sweden



Chile



Hungary



Lithuania



Switzerland



Czech Republic



Ireland



Netherlands



United Kingdom



Denmark



Israel



New Zealand



United States

“Opt-in” Programme for countries



Program management

- **Science Advisory Body**
 - Comprised of six scientists from around the world
 - Evaluates proposals, ensures science quality,
 - Makes recommendations on fellowships and workshops for support
 - 2 members oversee each Theme
- **Governing Body**
 - Composed of a representative from each participating country,
 - Defines the general orientation and strategic direction
 - Gives final approval on investments based on SAB recommendations
- **National Correspondents**
 - Contacts/ advisors in each participating country

Selection Process

- The Scientific Advisory Body (SAB)
 - Six scientists and research administrators
 - Examines all applications for scientific quality
 - Recommends the conferences and fellowships for sponsorship
- The Governing Body
 - One from each CRP Member country
 - Final approval of sponsorships according to SAB's recommendations and policy relevance of the applications

CRP

What do we do?

CRP Fellowship Awards

- Individual researchers:
 - To undertake their own research project
 - In collaboration with host researcher(s) and laboratory
 - In different CRP member country
- To strengthen the international exchange of ideas and increase international mobility and co-operation
- To foster long term collaboration between the institutes of the Fellow and of the Host

Requirements

- Travel between 24 OECD members (airfares/living expenses)
- Require a PhD or equivalent and long-term position (*i.e. at least 4 years experience Postdoc*)
- No Age limit, but seek a balance of early career and senior Fellows
- Duration: 6-26 weeks

International Conferences

- International conferences, workshops, symposia, congresses, etc.
- On an issue related to one of the CRP Research Themes
- Of relevance to the OECD's policy priorities
- Current and future research, scientific developments and opportunities
- Informing policy makers, industry and academia (organised by, for example, research institutions, international associations, etc.)
- To be held in a CRP participating country

Requirements

- Support for keynote speaker involvement
- Seek wide coverage of speakers from OECD CRP countries
- Support for publication of a product

Selection criteria

- Relevance (CRP and Policy)
- Excellence
- Multi-disciplinarity
- Feasibility
- Dissemination
- Impact
- Internationalization

Outputs and Outcomes are important!

Workshops, Conferences

- **Publication of proceedings** of sponsored workshops or conferences – special journal editions, books
- **Policy document** from each conference outlining relevance to OECD's Policy Agenda
- Evaluation **Questionnaires** on the Conference

Fellowships

- **Report** on substantive outputs as a result of the Fellowships.
- **Reports and Publications** received from Fellows after end of Fellowships
- Evaluation **Questionnaires** on the Fellowship

Funding Amounts

- Average of about 23,000€ per conference
- Ranging from 11,500€ to 40,000€
- Fellowship awards range from 5,565€ to 15,165€

Fellowship and Conference Sponsorship

2010-2022

Fellowships:

- 357 fellows
- from 205 research institutes
- at 229 host institutes
- in 23 countries

Conferences:

- 104 CRP-sponsored conferences and workshops
- in 26 countries
- 990 keynote speakers funded
- from 41 countries

CRP support for this Workshop

- 13 Speakers
- 7 countries
- Gender balance of speakers

Call for Applications

- **Sustainable and resilient productivity growth and food security and nutrition**
- **Climate change mitigation**, reducing emissions from agriculture and food systems, carbon sequestration in agriculture, forestry and land use
- **Halting and reversing forest loss and land degradation**
- **Reducing the negative environmental impacts of livestock production** and practices harmful to animal health and welfare
- **Biodiversity**, enhancing **ecosystem services**
- Improving **soil health** and **water** and **air quality**
- **Innovations** in the transfer and development of agricultural knowledge, including **Indigenous and traditional knowledge**
- **Fisheries and aquaculture productivity, sustainability and resilience**

Call for Applications

The Call for Applications for Funding generally is open from the beginning of April until September

CALL OPEN NOW!

**Travel fellows and conference applications:
10 September 2023 midnight (Paris time, CET)**

<https://www.oecd.org/agriculture/crp/applications/#d.en.504909>

Talk to me, if you have questions!

Co-operative Research Program: Sustainable Agricultural and Food Systems

Thank you!

www.oecd.org/agriculture/crp

