EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

http://www.cost.eu/fa

What is FA?

Food and Agriculture

FA covers all aspects of research in the field of agricultural and food sciences in its widest sense. The primary aim of the Domain is to encourage networking in any research field linked to these activities as well as the related demands and needs.

In Detail

- **The biological functions of organisms.** To better understand how organisms relevant to agriculture, food and nutrition function, the Domain welcomes proposals where fundamental science is an essential component of the topic. This includes: biological science, animal science, veterinary science, plant science, microbiological science, soil science, genetics and breeding, agricultural system science or any other fundamental discipline related to food, agriculture and fisheries. Biotechnology - the use of the most recent techniques and applications that spring from their use - is also addressed.

- **Human nutrition and the food chain** covers the entire food chain leading to non-processed, semi-processed and processed foods. It also encompasses food and feed quality, food safety, functional foods, nutritional and consumer issues. It includes all the processes and techniques used in food technology that are needed to bring food to the consumer's fork.

- **Agriculture as a human activity.** The Domain addresses socio-economic aspects of food and agriculture and other relevant concerns, such as the relationships between agriculture, rural economy and rural development. Societal issues concerned with animal health (disease prevention in animals and people) and animal welfare are also included.

- **Agriculture and environment.** This relationship is also addressed by the Domain. It includes issues such as sustainability, natural resources and conservation, biodiversity and genetic resources, biosafety, bioremediation, and bioenergy. Proposals may also address changes in European agriculture under the influence of major issues such as reform of the Common Agricultural Policy, global warming, world trade patterns and energy scarcity.

  Since food and agriculture involve so many scientific disciplines, it is anticipated that successful proposals will vary widely in nature from closely focused topics of a fundamental nature using the most innovative and up-to-date techniques (such as tools for genomics, proteomics and metabolomics) to multidisciplinary projects that take a more holistic approach (such as new farming systems for producing quality food).

The Domain naturally encompasses a very wide number of subjects, and relates to a large number of areas of human activity. It actively seeks innovative and interesting proposals even if they may not at first fit into a traditional category of research in food and agriculture.

COST strives for a bottom-up approach to science networking.

For more information, visit www.cost.eu

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Current COST Actions within the FA Domain:

- FA0801 Critical Success Factors for Fish Larval Production in European Aquaculture: a Multidisciplinary Network (LARVANET)
- FA0802 Feed for Health
- FA0803 Prevention of Honeybee Colony Losses (COLOSS)
- FA0804 Molecular Farming: Plants as a Production Platform for High Value Proteins
- FA0805 Goat-Parasite Interactions: from Knowledge to Control (CAPARA)
- FA0806 Plant Virus Control Employing RNA-Based Vaccines: a Novel Non-Transgenic Strategy
- FA0807 Integrated Management of Phytoplasma Epidemics in Different Crop Systems
- FA0901 Putting Halophytes to Work: From Genes to Ecosystems
- FA0902 Understanding and Combating Porcine Reproductive and Respiratory Syndrome in Europe
- FA0903 Harnessing Plant Reproduction for Crop Improvement
- FA0904 Eco-sustainable Food Packaging Based on Polymer Nanomaterials
- FA0905 Mineral-improved Crop Production for Healthy Food and Feed
- FA0906 UV-B radiation: A Specific Regulator of Plant Growth and Food Quality in a Changing Climate (UV4growth)
- FA0907 Yeast flavour production - New Biocatalysts and Novel Molecular Mechanisms – BIOFLAVOUR
- FA1001 Application of Innovative Fundamental Food-structure-property Relationships to the Design of Foods for Health, Wellness and Pleasure
- FA1002 Farm Animal Proteomics
- FA1003 East-West Collaboration for Grapevine Diversity Exploration and Mobilization of Adaptive Traits for Breeding
- FA1004 Conservation Physiology Of Marine Fishes
- FA1005 Improving health properties of food by sharing our knowledge on the digestive process (INFOGEST)
- FA1006 Plant Metabolic Engineering For High Value Products
- FA1101 Omics Technologies for Crop Improvement, Traceability, Determination of Authenticity, Adulteration and Origin in Saffron
- FA1102 Optimising and Standardising Non-Destructive Imaging and Spectroscopic Methods to Improve the Determination of Body Composition and Meat Quality in Farm Animals. Acronym: FAIM
- FA1103 Endophytes in Biotechnology and Agriculture
- FA1104 Sustainable production of high-quality cherries for the European market
- FA1105 Towards a sustainable and productive EU organic greenhouse horticulture
- FA1106 An integrated systems approach to determine the developmental mechanisms controlling fleshy fruit quality in tomato and grapevine
- FA1201 Epigenetics and Periconception Environment - Periconception environment as an epigenomic lever for optimising food production and health in livestock
- FA1202 A European Network For Mitigating Bacterial Colonisation and Persistence On Foods and Food Processing Environments
- FA1203 Sustainable management of Ambrosia artemisiifolia in Europe (SMARTER)
- FA1204 Vegetable Grafting to Improve Yield and Fruit Quality under Biotic and Abiotic Stress Conditions
- FA1205 Assessing and improving the quality of aquatic animal gametes to enhance aquatic resources - The need to harmonize and standardize evolving methodologies, and improve transfer from academia to industry
- TD0801 Statistical Challenges on the 1000€ Genome Sequences in Plants
- TD1107 Biochar as option for sustainable resource management
- TD1203 Food waste valorisation for sustainable chemicals, materials & fuels (EUBis)

Success Stories

COST Action 863 increased the competiveness of European berry production systems. This industry can now ensure sustainable cropping with high-quality, safe and improved health benefits.

Developing tools to control stress tolerance in plants is essential for coping with the growing negative effects of climate change. **COST Action FA0605** has established an International Network of Plant Abiotic Stress (INPAS) between systems biology, whole-plant physiology, agronomy and crop breeding specialists, stimulating collaboration between experts working in various fields of stress biology.

How to join a COST Action

Scientists interested in joining an ongoing COST Action should contact the Action Chair and the COST National Coordinator in their member country (www.cost.eu/cnc).

To propose a new Action, visit: www.cost.eu/opencall. COST assesses new proposals two times a year.

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