

Priorities and Strategies for Agricultural Research for Development by European Research Organizations: Highlights and Perspectives from Cirad (France)

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ABSTRACT

Current international strategies of the European universities and research organizations show the historical ties which have bound Europe with the countries from the South. The building of the European Research Area (from the last 20 years) takes this international specificity into account: European Union programmes foster co-operations between European and Southern research communities on development issues. Competitiveness between research teams is combined with an increased dialogue on complementary nature of know-how and research fields. This shift is facilitated by the huge challenges faced by the scientific community to address global issues. The creation in 1996 of the Global Forum on Agricultural Research results from the same dynamics.

In this perspective, all stakeholders involved in agricultural research for development (ARD) in Europe participate in the European Forum on Agricultural Research (EFARD) every two years. Nineteen priority themes were identified during the 2nd EFARD meeting, leading to the creation of research programmes and networks.

In Europe, Cirad is the main research organization entirely devoted to agriculture research for development. Its staff includes 1820 persons, out of which 50 % are scientists or executive managers. Its budget amounts to 170 M Euros. Its research agenda is implemented in more than 50 countries, either with the national research institutions in Africa, Latin America and Asia, or in the Cirad premises located in the French overseas territories in tropical areas, or in Montpellier (France) in the framework of Agropolis. The specific mission of Cirad provides European research with an openness towards Southern agriculture. It also gives the scientific communities from the South access to European research facilities and programmes.

Due to its commodity- based programmes, Cirad addresses the challenges of food safety and agriculture for sustainable development in the South by working in three main research fields: 1. sustainable agricultural production, 2. sustainable management of territories, renewable resources and environment, and 3. quality and safety of agricultural products.

AGRICULTURE RESEARCH IN EUROPE: BACKGROUND

Over the five centuries of European colonization, the links between Europe and the South were very strong. In the French society of today, these links have had very strong impacts economically, culturally, and scientifically. Scientists within the European scientific community have taken great interest in the issues of the Southern Hemisphere.

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Fig. 1. The map of European region

During the final years in that period, many European countries developed technical research institutes to support tropical production. Today these institutes have evolved, and some remain devoted to research for development in agriculture, like Cirad, or in other domains, like the French Institute on Research for Development (Ird). Many are unaware that Europe has tropics of its own (some are shown in the EU following map), and a number of countries, like Spain and Portugal, are investing to develop laboratories and research programmes in the European Mediterranean and tropical environments. They help to position tropical themes as policy priorities in Europe.

A host of unwelcome developments are stirring concern in the European society and its scientific community. Not least among them are the changes of the global climate, emerging infections such as the mad cow disease and other diseases originating from the tropics, and the failure of the Cancun negotiations. As Europe copes, the political organization of the continent is rapidly changing. In May 2004, a mere six months from this writing, the European Union will expand from a union of 15 states to a union of 25. Still more states are negotiating for entry in later years, as Europe undergoes a process that other parts of the world passed through centuries before.

Differences in social and economic development among the regions pose challenges to the cohesion of the European Union (EU). In this changing context, a host of questions remain to be answered with regard to the importance of agriculture research development (ARD) among all the issues that have to be dealt with as priorities by the EU. The EU total budget is 115 billion euros in the year 2004 – a relatively small amount

that accounted for no more than 1.1% of the national GDPs. Agriculture and regional policies received most of the funds within this budget: 49 billion euros were allocated to agriculture and 41 billion euros went to policy instruments to promote cohesion between the regions of Europe. By comparison, the money budgeted for the research and technological framework programme and for external policies instruments was quite small (4 billion and 7 billion euros, respectively). Clearly there is much of work to be done.

The reform of a common agricultural policy is a major issue in the construction of this new Europe of the future. Subsidies provided to the new entering states will change the social structure of the family-type farms into economic farms with a productivity increased and probably more migration from rural to urban areas (1). At the same time, concerns are growing on the impacts of subsidized agricultural exports on the economies of the developing countries. Some measures have already been taken to reduce the taxes levied on imported tropical agricultural products. This creates many questions about the policies to be adopted in Europe.

THE ARD IN EUROPE TODAY

A very diverse research institutes landscape

A good many research institutes in Europe are devoted to research for agricultural development in combination with other disciplines. Foremost examples include the Institute of Research for Development (IRD former "ORSTOM") in France, the Center for Development Research (ZEF), Bonn University, in Germany, and the Overseas Development Institute (ODI) in the UK.

Far fewer institutes, however, are devoted exclusively to agricultural research for development. The largest among them is Cirad of France, but a good deal of important research is also being done at the Natural Resource Institute (NRI) and Centre for Tropical Veterinary Medicines (CTVM) in the United Kingdom, the Institute of Agriculture Overseas (IAO) in Florence, Italy, and the University of Wageningen in the Netherlands.

From the 60's to the 70's, Europe built a series of huge research campuses to ensure the attainment of national food self-sufficiency. These very strong and well staffed centres (INRA, France, INIA, Spain, etc.) continue researching agriculture. Their priorities are shifting from productivity goals to food quality and natural resources management issues. Most are taking an increasing interest in the new global challenges encompassing development issues. They are increasingly considered major actors in European agricultural research for development. In the same way, many stakeholders from civil society such as the NGOs, professional organizations, private agrifood industries, and foundations are taking an increasing involvement as partners in agricultural research for development, as recently seen in Cancun.

A declining sector for the European Union science and development policies

The European Union 6th RTD Framework Programme (FP6) has been granted a five-year (2002-2006) budget of 17.5 billion euros with the purpose to integrate the national policies of the European countries into a unified policy for research and technological development. The 7 thematic priorities of the programme focus on issues such as food quality and food safety, or sustainable development, global change, and the ecosystem in which agricultural research for development questions can be incorporated. Among these priorities programmes, the questions regarding the impact of the reform of the common European policy on agriculture in developing countries are addressed, with the perspective of building up macroeconomic models. The participation of the third countries is fostered, but practically speaking, the access to this programme for the scientific community of the developing countries is very opaque. In the FP6 international cooperation programme, agricultural research for development receives less and less attention.

Most of the external policies at the national European level were negotiated in the late 1990's, a time

when agriculture was not very trendy. Newspapers and media devoted far more coverage to pesticides and nitrates pollution. Therefore, you will not see a strong reference to agriculture or agricultural research in the Cotonou's agreement signed between the EU and the African, Caribbean and Pacific countries (ACP) in 2001. The priorities focus on measures seeking improved rural development, urban food safety, better managed natural resources, and alleviation of poverty and inequities.

Europe, the main ARD investor

Despite this unequal treatment, Europe (national governments plus EU) provides more than half of all donor support for agricultural research for development world-wide. During the World Food Summit in 2002, Europe reported 500 million euros budgeted annually to ARD (2). One half is allocated by the government of France through the Cirad and IRD programmes, while another one third is invested to support the CGIAR programmes. This makes Europe the major CGIAR donor and a contributor to not far from half of the CGIAR budget.

A need to better coordinate ARD European initiatives

With so many changes in the 1990s, Europe needed to find a way to better coordinate its activities. The leaders in ARD realised that, due to the dispersion of its actions, their influence and their impact on

N°	European research area priorities in agricultural research for development (EFARD, Rome, May 2002)
1	Conservation, Management & Sustainable Utilization of Plant Genetic Resources for Food Security & Poverty Alleviation
2	Conservation, Management and Sustainable Utilization of Animal Genetic Resources for Food Security and Poverty Alleviation
3	Plant Genomics for Health using Rice as a Model Plant
4	Global initiative on Vector-born Livestock Diseases and Trypanosomiasis Control for Animal & Human Health
5	Integrated Land and Water Management for Sustainable Food Production in (Semi) Humid Tropical Ecosystems
6	Integrated Land and Water Management for Sust. Food Production in (Semi) Arid and Mediterranean Areas
7	Direct Sowing, Mulch-based Agriculture and Conservation Tillage (DMC) for Food Security, Poverty Alleviation and Conserving Natural Resources
8	Integrated Pest Management for Sustainable Agro-Ecosystems
9	Agro-Ecosystems and Human Interactions for Sustainable Agriculture in Peri-Urban and Coastal Areas
10	Sustainable Forestry and Agroforestry Management in (Sub)Tropical Areas, including Carbon Sequestration
11	European Network on Natural Resources Management Policy Research
12	Sustainable Animal Production Systems and Biodiversity Protection using Conventional and Non-Conventional Feed Resources
13	Local Innovation of Farmers for Valuing Indigenous Knowledge on Sustainable Natural Resources Management and Agro-Ecological Practices
14	Improved Food Safety and Quality of Tropical Food Supply Chains at the Smallholder Level in order to Improve Human Health and Enhance Trade Opportunities
15	Global Programs on Major Tropical Export/Cash Crops
16	Under-Utilized and Orphan Commodities (UOC) Network
17	Rural Innovation, Multi-Functionality, Post-Harvest Systems and Rural Small & Medium Enterprises
18	European Knowledge on ARD: Facilitating Access and Increased Use for Human Resource Development
19	Structuring the Components of the European Research Area for Agricultural Research for Development (ERA-ARD): Poles of Research, Platforms of Cooperation and Research Networks

development was not at the level of the investments. They responded jointly by establishing two initiatives, one at the government level and another at the stakeholders' level. The first, at the governmental level, was the European Initiative for Agricultural Research for Development (EIARD), a programme launched in 1995 to develop shared vision and common goals of ARD between European countries and European Commission and to better co-ordinate their implementation. The second, at the stakeholders' level, was the European Forum for Agricultural Research for Development (EFARD), a programme established in 1997 to associate private and public stakeholders in national forums and to set research area priorities. Europe has also been providing strong support at the global level through its ongoing participation in the Global Forum for Agriculture Research (GFAR) since 1996. These initiatives led to the adoption of European priorities for ARD during the 2nd EFARD meeting in Rome in 2002 (see following table).

HIGHLIGHTS AND PERSPECTIVES FROM CIRAD

Cirad of France, the Agriculture Research Centre for International Development, tackles the same challenges as the GFAR, CGIAR, and other major agricultural research for development stakeholders in the world: food security and safety, poverty, sustainability and the environment. The mandate of Cirad is to contribute to the sustainable development of the agriculture and agrifood systems of communities in the tropics and subtropics by applying life sciences and social sciences to the fields of agriculture, forestry, animal production, conservation, transformation, natural resource management, ecosystems, and societies.

In its overseas projects, Cirad works with scientific communities from national research institutions, as well as local community organizations, state authorities, private companies, and increasing numbers of NGOs. As to be expected of a research organization from France, most of Cirad's activities are focused in West and Central Africa, though much work is also underway in Southeast Asia, Latin America, and the Caribbean. The staffs of 1,850 working at the centre include 850 scientists, of whom some 350 are now stationed either in French overseas territories or in Southern countries

Cirad runs on a budget of 178 million euros – an amount equivalent to about half the CGIAR budget – of which 63% is provided on yearly base by the French government and the remainder comes from contracts with the private and public sector. Seven departments within the centre now undertake 26 research programmes, including several conducted in collaboration with JIRCAS in the areas of citrus diseases, multi-agent systems for water efficiency, African rice, and continental aquaculture. Cirad and JIRCAS are studying ways to optimize the benefits of each other's comparative advantages in their future work together.

Training, teaching, and international scientific exchanges have always made up an important part of Cirad's activities. Exchanges do include laboratory and field training for students in graduate courses, professional training for executive staff and development technicians, university teaching in developing countries, and training programs for partner organizations.

Since 2002, the centre is innovating the mechanisms of partnership by building research platforms or units in partnership in African and Asian countries. From a research project commonly decided and managed, the purpose of these platforms is

- To reach a critical mass of scientists and stakeholders;
- To have unique facilities based in the south;

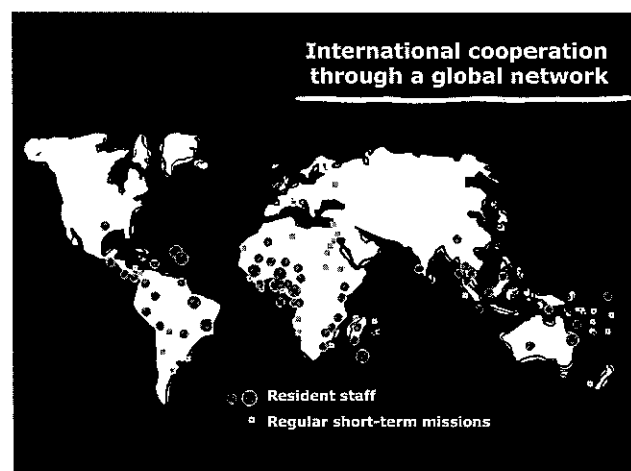


Fig. 2. Worldwide staffing by Cirad

- To align the goals of multiple stakeholders in training and research; and
- To establish a common system for monitoring and evaluation.

These platforms provide also provide an entrance gate for Cirad partners to institutions of higher education in France and the rest of Europe.

CONCLUSION

Agricultural research for development is becoming less specific. Its agenda is included in expanding international programs focusing on a global level, with local applications. The critical challenge to ARD in coming years will be to enlist greater participation of the scientific community from the South in global research programmes. For institutions such as Cirad, JIRCAS, and CGIAR, the niche will be to build bridges between the emerging scientific communities and the best of the research originating from the North. To achieve this goal, the scientific communities in the South require structuring that brings that science closer to the fields and to the needs. Platforms of excellence and critical mass must be created. And to ensure that demand is adequately reflected in the priorities and that partnerships are based on comparative advantages, consultation between all stakeholders must be encouraged at all geographical levels.

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Readers seeking more detailed information can visit the homepages of:

EIARD (www.eiard.org), EFARD (www.efard.org), GFAR (www.egfar.org),

CIRAD (www.cirad.fr), and, for European Union activities, (www.europa.eu.int),

the RTD Framework programme (http://europa.eu.int/comm/research/fp6/index_en.html),

and the budget (<http://www.europa.eu.int/scadplus/leg/en/s27000.htm#PERSPECTIVES>).