



منظمة الأغذية
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للأمم المتحدة

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粮食及
农业组织

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Organización
de las
Naciones
Unidas
para la
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y la
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REVIEW OF THE ACTIVITIES OF THE EUROPEAN SYSTEM OF COOPERATIVE RESEARCH NETWORKS IN AGRICULTURE (ESCORENA)

I. RETAINED NETWORKS WITH SUPPORT POTENTIAL

A. CROP PRODUCTION

Dry fruits (previously Nuts)

1. This is an interregional network of countries of Europe and the Near East covered by FAO Regional Offices REU/RNE and co-sponsored by CIHEAM. The network is coordinated by F. Vargas of the *Institut de Recerca i Tecnologia Agroalimentàries* (IRTA, Spain) and focuses on problems of developing dry fruits in appropriate agro-ecological production zones. The network was established in 1990 with five working groups (almond, pistachio, walnut, pecan and hazelnut). Two new working groups were added in 1995 (1) chestnut and (2) genetic resources and economics. In 2001, the working group on pecans was merged with that on walnuts for financial reasons.
2. The proposal is to maintain five working groups (almond, pistachio, walnut, hazelnut and chestnut); the topics of genetic improvement and economics apply to the different sectors of activity and do not therefore need to be dealt with by specific working groups.
3. On the strategic level, two topics need to feature as priority areas:
 - a) genetic improvement, relevant to all countries;
 - b) the study of fruit quality, in terms of organoleptic characteristics and industrial applications, and of food safety with the prevention of contamination by aflatoxins.

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4. The network regularly publishes the *Nucis Newsletter* and inventories food varieties (so far almond and chestnut, with hazelnut planned for 2004).
5. Four international conferences are scheduled for 2004 and 2005: Spain 2004, Italy 2004, Iran 2005 and Tunisia 2005.

Rice

6. This network is also interregional (REU/RNE) and is coordinated by J. Ferre (University of Turin, Italy). It works closely with the FAO Plant Production and Protection Division and produces scientific information of strong interest to the Asian regions, where rice is the principal cereal. Its outstanding contribution in the fields of biotechnology and agronomy fully justifies support for its activities.
7. The network will be heavily involved in all FAO activities planned for 2004 (Year of Rice), organizing study days in February and a conference in September.
8. It has five disciplinary working groups: biotechnology, genetic improvement, agronomy, technology and economics, and marketing. These working groups focus mainly on Mediterranean varieties and work in close collaboration, especially for biotechnology, with other international agricultural research centres and regions with a Mediterranean climate (California, Australia). The network publishes a regular newsletter *Medoryzae*.
9. Two priority areas need to be developed:
 - a) quality in relation to genetic origin of crop;
 - b) cropping conditions to improve yields that are still low in Europe.

Flax

10. There is renewed interest in flax. As with other fibre crops, its hypoallergenic quality is in increasing demand. Its richness in Omega 3 oil and unsaturated fatty acids is of high dietary interest to food and feed. Finally, cosmetics provide a good added-value outlet.
11. The network is coordinated by R. Koslowski (Institute of Natural Fibres in Poznan, Poland). It has six working groups: genetics, extraction processes, economics, quality, non-textile applications, and biology and biotechnology. All the scientific and technical areas covered by the network, from plant genetics to use in food and cosmetics, are studied at the Institute of Natural Fibres and affiliated centres.
12. The network is extremely active in developing flax, particularly in the countries of the former Yugoslavia (conference in Bosnia in 2004). The *Euroflax Newsletter* is published regularly and has a wide readership. There are also plans to issue a reference document on quality standards for flax and flax products.

Sunflower

13. The importance of sunflower no longer needs to be demonstrated given its geographical cover in Europe. Production is two-stranded: (i) oil with high nutritional quality and (ii) oilcake for consumption as such (ruminants) or after dehulling (monogastrics) and with an outstanding composition of amino-acids.
14. The network is coordinated by D. Skoric (Institute of Field and Vegetable Crops, Novi Sad, Serbia and Montenegro), and operates six working groups: experimentation on cultivars, evaluation of wild species, identification and study of cytoplasmic male sterility, biotechnology, genetic study of physiological, biochemical and agronomic traits, and sunflower diseases.

15. Besides organizing international conferences, the other main activity is the biannual publication of the international journal *Helia* which contains scientific articles that have been scrutinized by review committees.

16. The network's scope extends well beyond Europe and the Mediterranean to include several members from Argentina, Australia and North America. Genetic aspects will continue to receive attention for production characteristics and resistance to disease.

Olives

17. This economic sector is important in all Mediterranean countries. Olive plantations are expanding in Europe (France) and in the Middle East (Egypt, Syria). Consumption of olive oil is increasing in Europe on account of its nutritional properties. However, development of the olive sector requires assorted collaborative research: production (fertilization, pest control, genetic improvement); technology (harvesting conditions and oil extraction); and the environment (biological treatment of vegetable waters). Finally, there are also problems of quality (labelling and diversification).

18. After several years of inactivity, the network is to be reactivated at the request of Spain's National Institute of Agricultural and Food Research (INIA) and representatives of several countries meeting in Lecce in November 2002 for the annual seminar of the International Olive Oil Council (IOOC). Researchers from leading centres in Spain, Italy, Morocco and Tunisia and the visiting scientist discussed key sectoral issues and proposed fields of collaborative research, underlining the importance of the gene bank set up 25 years ago in Andalusia for the exchange of germplasm to improve the quality of table olives and olive oil.

19. The restructuring of the network, the selection of priority areas and the formulation of a programme of activity should take place at an upcoming symposium to be held, in collaboration with the Association of Agricultural Research Institutions in the Near East and North Africa (AARINENA), in February 2004, in Sfax, Tunisia.

Pastures and fodder crops

20. This interregional network (REU/RNE) is co-sponsored with CIHEAM and is coordinated by J. Troxler (Swiss Federal Agricultural Research Station, Changins, Switzerland). The research centre is very active and has accumulated a wealth of scientific knowledge on pastures and genetic resources, with an extensive collection of fodder seeds. It also has wide experience in the effective transfer of technology for development. These factors, and the need to upgrade agriculture in mountain areas and Mediterranean regions, justify reactivating the network and identifying activities for support by one or more projects.

21. The network has three working groups: mountain pastures, lowland grasslands and Mediterranean forage resources. Two of these are particularly active (mountain pastures and Mediterranean forage resources) and are more relevant to the problems of transition and developing countries.

22. It is therefore proposed to focus activity on two strategic topics:

- a) mountain pastures, with research extended to the Carpathian and Sudeten mountains. Knowledge gained in Switzerland, in particular, could serve to develop these two mountain regions;
- b) free range pasture in Mediterranean regions characterized by a climatic pattern of long drought and short periods of rainfall.

23. The network publishes a regular newsletter *Herba*, whose future is increasingly tied to that of the Network on Sheep and Goats.

B. ANIMAL PRODUCTION

Sheep and Goats

24. This is an interregional network (REU/RNE) co-sponsored by CIHEAM. It is probably the largest network in terms of number of participants meeting at least once a year.
25. Interest in supporting its activities stems from the economic and social importance of the many family sheep and goat farms that exist in Europe and the Mediterranean countries. A further consideration is the need to diversify and optimize sheep and goat production.
26. The network is coordinated by P. Morand-Fehr (National Institute of Agricultural Research, Paris, France) and has three working groups: nutrition and feeding systems; production systems; and genetic resources and breeding. It also examines subtopics relating to enhanced production of milk and meat from sheep and goats.
27. The network often publishes articles in the *Cahiers Méditerranéens* (CIHEAM) and organizes frequent seminars and conferences. It also participates actively in the annual meetings of the European Association for Animal Production.
28. The proposal is to centre the network's activities on two priority areas:
- a) quality of sheep and goat products as determined by animal genetics and feed; a research project under the European Union programme should be submitted in 2004;
 - b) nutrition of sheep and goats in the Mediterranean area in order to compile raw material composition tables and determine feeding methodology based on pasture conditions. Publication of a reference work is planned for 2005-2006.

Buffalo

29. Raising buffalo is generally a family occupation that can substantially increase small-farmer income. Buffalo milk is valued and can be processed into a variety of products with high added value. Quality of meat is another reason for promoting buffalo production in Europe and the Mediterranean.
30. Although buffalo production has only been properly developed in Italy, the network coordinated from Rome plays a lead role and is operative in the Mediterranean countries and particularly in Asia and South America. For these reasons, the network should be reactivated. It is coordinated by A. Borghese (Institute of Animal Husbandry, Rome, Italy) and has four working groups: genetics, nutrition, food production and livestock systems.
31. It regularly publishes the *Buffalo Newsletter*. It also organizes seminars and conferences (a national Italian conference and an international conference in 2003).
32. The proposal is:
- a) to develop genetic research as a priority in order to enhance buffalo populations in the countries concerned;
 - b) to intensify research into the physiology of reproduction to overcome specific problems (short heat periods difficult to detect and unseasonal in occurrence);
 - c) to extend artificial insemination using selected seed from the sperm bank established under the network.
33. The network has also undertaken to publish a reference work in 2004 collating all scientific data acquired over the past 10 years.

C. ENVIRONMENT

*RAMIRAN*¹

34. ESCORENA includes an environmental research network "RAMIRAN", which is specialized in the recycling of agricultural waste. Environmental problems from livestock production and cropping are becoming increasingly severe in Europe and are a priority concern of all governments. Procedures need to be developed to reduce pollution and eliminate the accumulation of materials harmful to human health and quality of life.

35. The network is coordinated by J. Martinez (Institute of Research for Agricultural and Environmental Engineering, CEMAGREF, France) and has five working groups: (i) gas emissions; (ii) solid wastes; (iii) heavy metals; (iv) hygiene; and (v) other wastes. It has many, mostly European, participants. Its research is multidisciplinary and generates applications that can be immediately deployed in development projects in all developed, developing and transition countries.

36. The network regularly publishes its *Ramiran Newsletter*. A specific Web site is under construction. In the more immediate future, it has agreed to submit two research projects to the European Union's Sixth Framework Programme for Research and Technological Development, and to establish a specialized scientific journal and publish a glossary of specialized terminology resulting from the three years of activity.

¹ Recycling of agricultural, municipal and industrial residues and agriculture (RAMIRAN).