DEVELOPMENT OF AN AGROECOLOGICAL RESEARCH NETWORK FOR ORGANIC VEGETABLE PRODUCTION AND MARKETING

A. Summary

In the state of Rio de Janeiro, Brazil, a partnership was formed between seven institutions, including both governmental and non-governmental organizations, that had been acting previously and independently in favor of the agroecological movement. In the area of agroecology an inter-institutional project of this size is innovative in the country, especially when considering the involvement of public organs.

The general objectives of the project, entitled Rio Agroecology Network, are as follows:

- strengthening of agriculture in the region, in particular family agriculture, and thereby permitting greater sustainability and the consequent improvement of farmers’ incomes, besides contributing to both environmental preservation and the quality of rural life;
- increase in the supply of organically produced food of high nutritional value, without health risks to the consumer;
- training of technicians and farmers in agroecological cultivation systems;
- consolidation of a reference center for the generation of appropriate technologies and the dissemination of information on agroecology.

Proposed activities or actions include: rapid and participatory diagnostics in pre-selected focus areas, including rural communities within the state that have a recognized potential for agroecology; establishment of participatory experimentation within these focus areas; controlled production and distribution of agroecological inputs (e.g. biofertilizers, green manure seeds, copper or sulphur-lime mixtures) for experimental use; implantation of research units dedicated to the development of integrated agroecological production systems in representative areas within the state; revision/updating of technical regulatory norms for the certification of organic production, the training of technical inspectors and the certification of new farmers; study of the organic market in Rio de Janeiro, including, development of alternative commercialization projects and a marketing plan; dissemination of generated technologies through mini-courses, “field days”, varied publications and the utilization of the broader midia.

The development of vegetable crops production based on agroecological principles was chosen to be the first program of the Network, principally due to its importance in the state of Rio de Janeiro agriculture.

Area: Commodity chain
Region: Latin America & Caribe

Benefits, partners and project financial budget

Those that benefit from the project include the farmers of assisted regions that gain not only a possible increase in family income as result of a decrease in the dependence on external inputs, with an immediate reduction of production costs, but also a substantial improvement in life quality. These benefits extend even into future generations, reducing the rural exodus that continues to be one of Brazil’s most severe problems. In addition, the consumer population is also serviced through greater access to organic products which are offered in greater volume and diversity as the contingent of certified farmers increases. This fact could also directly and expressively influence current market prices, such that they become more accessible to the segments of the population with
low buying power. Finally, activities related to the technical training of professionals from the agricultural sciences will serve to promote agroecology beyond the borders of the state of Rio de Janeiro. Professional training courses will benefit from program publications that will provide scientific support for the agroecological movement in Brazil.

The partner entities involved in the **Rio Agroecology Network** are as follows:

- Empresa Brasileira de Pesquisa Agropecuária (Embrapa), represented by the Centro Nacional de Pesquisa de Agrobiologia (Embrapa Agrobiologia);
- Universidade Federal Rural do Rio de Janeiro (UFRRJ);
- Empresa de Pesquisa Agropecuária do Estado do Rio de Janeiro (Pesagro-Rio), represented by the Estações Experimentais de Itaguai (Seropédica) e Nova Friburgo;
- Empresa Estadual de Assistência Técnica e Extensão Rural (Emater-Rio);
- Assessoria e Serviços a Projetos em Agricultura Alternativa (AS-PTA);
- Associação de Agricultores Biológicos do Estado do Rio de Janeiro (ABIO);
- Alimentos Naturais Ltda. (Agrinatura).

The first three institutions are public and co-inhabit the campus at km. 47 along the Rodovia (highway) BR – 465, county of Seropédica/RJ. ABIO, founded in 1984 and based in Niterói/RJ, is an association of organic farmers, the oldest in Brazil, that is dedicated to the certification, technical support and commercialization of production at the state level. AS-PTA is a renowned NGO with great experience on assisting community projects in sustainable agriculture throughout Brazil. At its center in the city of Rio de Janeiro, it provides open public access to a rich library of materials related to agroecology. Agrinatura is a private enterprise that acts in the processing, distribution and sales of organic food in the state.

The **Rio Agroecology Network** project was elaborated by the seven partner groups in 1997, with financing approved in mid-1998 for the estimated initial period of two years. The resources, in the realm of R$ 230,000.00 (two hundred and thirty thousand reais) that correspond to approximately US$ 130,000.00 (one hundred and thirty thousand dollars), originated from a contract established between FINEP (Financiadora de Estudos e Projetos) and FAPERJ (Fundação de Amparo à Pesquisa do Estado do Rio de Janeiro) as part of the RECOPE-RJ program (Redes Cooperativas de Pesquisa do Estado do Rio de Janeiro).

The entities that make up the Network promised to provide labor (researchers, extension workers, technical and administrative support), installation areas (experimental stations, greenhouses, laboratories etc.), vehicles, equipment and miscellaneous consumption goods. These resources are estimated to total nearly R$ 750,000.00 (seven hundred and fifty thousand reais) or approximately US$ 430,000.00 (four hundred and thirty thousand dollars) through the end of the year 2000, when the first stage of the project will be closed.

### C- Expected results, estimated impacts, and the diffusion of information

The results of the **Rio Agroecology Network**’s activities are by nature rather variable. The most relevant and significant impacts from the project, as intended by its creators, stem from the identification and multiplication of organic farmers in the state and the consequent increase in the market supply of organic products. This is an opportune moment to clarify that Rio de Janeiro, while geographically small, represents the second largest food market in South America.

It is clear that the proposed recruitment of agroecological farmers depends fundamentally on all of the activities of the Network, as well as on their efficient interaction. Certain indicators and criteria for estimating project progress and the completion of proposed goals were pre-established. These indicators include, for example: farmer certifications carried out during each period; number of
published technical reports, technical-scientific papers, informative pamphlets etc.; number of participants at events such as seminars, workshops, intensive courses, and visitor exchanges; volume of certified organic products, degree of product diversification and respective commercial standards.

Special concern is geared towards the focus communities, as well as towards the diverse centers of the ABIO member-farmers. These areas receive extra attention in order to assure feedback to farmers as to the results of respective diagnostics, participatory experiments and experiments carried out within the SIPAs (Sistemas Integrados de Produção Agroecológica – Integrated Systems of Agroecological Production).

**Formulation of the project, organizational structure and contributions from partners**

The organizational structure of the **Rio Agroecology Network**, laid out below, indicates how the project was conceived, which are the privileged areas for grouping the various activities and how these have been carried out.

The organizational structure of the Network is as follows:

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<th>Group I – Social Economy</th>
<th>Group II – Technological Development</th>
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<td>Team 1 – Participatory diagnostics</td>
<td>Team 4 – Integrated systems of agroecological production</td>
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<td>Team 2 – Market research</td>
<td>Team 5 – Participatory field research and the validation of technologies</td>
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<td>Team 3 – Dissemination of technology</td>
<td>Team 6 – Production of agroecological inputs</td>
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<td>Team 7 – Certification of organic farmers</td>
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The program strategy is based upon the effective participation of farmers in the research process and development of extension technologies which is a basic condition for the diffusion of the agroecology approach. The specifics of each agroecosystem limit the use of a technological “package” for all environments and social-economic contexts. To implement this strategy the network, as already mentioned, established focus areas where technicians and farmer-researchers jointly test hypotheses and solidify the use of agroecological practices that can contribute to solve
farmer’s problems. Such cultural practices tend to spread naturally throughout the region, optimizing the Network’s activities.

Although all the Network’s partner institutions are represented in the Technical Support Council as well as within the groups and sub-groups, they also have some of their own well-defined and specific functions. EMATER-RIO, for example, is responsible for the initiation of participatory experimentation in the different focus areas, selecting farmers and providing logistic support for the implementation of field trials. The institutions based at km. 47 (EMBRAPA/Agrobiologia, UFRRJ, and Estação Experimental de Itaguaí/PESAGRO-RIO) share responsibility for SIPA-Seropédica, an agroecological farm of approximately 60 hectares where studies on organic crop management and livestock integration are carried out. AS-PTA is in charge of event organization and the planning of training courses and technical meetings in rural communities. In addition, it coordinates the edition of an informative tri-monthly pamphlet (“Tá na Rede”) as well as other publications. The Estação Experimental de Nova Friburgo (PESAGRO-RIO) houses the SIPA-Serra located in São Lourenço, district of Salinas, performing systemic research in the mountain region, the primary growing area of vegetable crops in the state of Rio de Janeiro.

ABIO attends to all questions related to the assignment of farmer’s credentials and the certification of organic products. ABIO is also dedicated to the revision of the “Technical Norms” as well as the training of professionals, with the intention of providing technical support for organic production in the state. In addition to these activities, ABIO coordinates ecological farmers’ fairs in the cities of Rio de Janeiro, Niterói, and Nova Friburgo, and links member-farmers with businesses and associations that provide organic products through diverse commercialization channels (residences, hospitals, grocery, stores, vegetable markets, and supermarkets). PESAGRO-RIO is also responsible for market research with cooperation from Agrinatura.

EMBRAPA/Agrobiologia, as the leader institution of the Network, commands all the administrative and accounting activities being responsible for the application of financial resources in accordance with the deliberations of the Technical Support Council. Finally, it is worth adding that the implantation of the Network has greatly enriched the UFRRJ’s graduate program in Agroecology, primarily through access to a physical space exclusively designated to agroecological research, SIPA-Seropédica, where M.Sc. and D.Sc. theses are carried out.

E. Conclusion

In conclusion it can be said that the Rio Agroecology Network is satisfactorily completing its objectives and programmed goals.

For example, the number of organic farmers jumped from less than twenty to nearly 150 in one year. In addition, 16 agronomic and social-economic theses on agroecology are presently being conducted and five others have been successfully completed. Organic labeled food carrying the ABIO certification logo have already reached several supermarkets in the city of Rio de Janeiro, and there is still a strong growing demand for organic food in the state.

It must be understood that these seven partner organizations are sacred to the functioning of the Network and that this partnership was formed before the receipt of financial support through the FINEP/FAPERJ accord.

However, profound impacts in terms of the supply of organic food to the whole population cannot be expected in only two years. Nonetheless great potential was created, leaving for the future the
job of realizing the medium term objectives previously outlined, a task which depends on the continued support of the financial agencies.