

6. MONOGRAPHS OF THE NATIONAL AGRICULTURAL RESEARCH SYSTEMS OF WEST ASIA

CYPRUS

IRAQ

JORDAN

LEBANON

SYRIA

THE NATIONAL AGRICULTURAL RESEARCH SYSTEM OF CYPRUS¹

There is only one institution in the NARS of Cyprus that carries out agricultural research (AR): the Agricultural Research Institute (ARI); it is presented in this monograph.

1. ORGANIZATION AND RESOURCES

ARI is organized in six sections (field crops, horticulture, plant protection, soils and water use, animal production and agricultural economics), and has a central chemistry laboratory providing analytical backup services, and also pursuing work on pesticide residue analysis. Two new sections are being established: biotechnology, and information and statistics.

At present, ARI employs 40 scientists, 67 technicians and a permanent labor force of 70 persons. ARI has given great emphasis to training its scientific staff to the highest possible level; as a result, all scientific staff received PhD or MS training in universities all over the world (22 PhD, 18 MS). The scientists are specialized in different disciplines, as this Institute covers all agricultural activities. In some cases, only one specialist covers the activities of related disciplines, because of the lack of staff. Most of the technicians (graduates of secondary schools) have also received short training (3–12 months) in foreign institutions.

ARI has an experimental farm near its headquarters and three farms in areas where specific crops are grown, but most of its work is carried out in farmers' fields. ARI has a library with the necessary books. It also subscribes to a limited number of scientific journals, but has access to abstracts of all major scientific journals.

The budget of ARI is prepared by the Director, in consultation with the heads of the sections, and is approved by the Council of Ministers and subsequently submitted to the Parliament for approval. The 1996 annual budget of ARI amounted to 2.7 million Cypriot pounds (£) (around US\$ 5.4 million), provided by the Government, with only £ 25,000 (US\$ 50,000) from other sources, mainly international agricultural research agencies and other donors. ARI's national budget amounted to around 0.54% of the Agricultural Gross Domestic Product (AGDP estimated at £ 0.5 billion or US\$ 1 billion in 1996).

2. RESEARCH POLICY AND PRIORITIES

2.1 Research Policy

The policies on AR are formulated by the Council of Ministers, based on the suggestion of the Ministry of Agriculture, Natural Resources and Environment (MANRE). The Minister acts on the suggestions made by the Director of ARI and the Permanent Secretary of the Ministry. The views of the scientists of the Department of Agriculture (Extension and Development Programs) are taken into consideration in preparing research policies through contacts among leading scientists and the Directors of the two Programs.

The opinion of farmers in formulating AR policies is taken into consideration through direct contacts with research scientists, through the Extension Program of the Department of Agriculture, and through farmers' unions.

2.2 Research Priorities

ARI undertakes applied and adaptive research on a wide range of activities in plant and livestock production. The main priorities are to use the limited natural resources efficiently and to promote cash crops for export. In the rainfed areas, the aim is to increase production through genetic improvement of crops and improved management by better utilization of the available water from the limited rainfall. Crops in this category include annuals (cereals, dryland food legumes, forage crops) and trees (almonds, olives, wine grapes, etc.). Efficient use of the limited irrigation water is a priority for cash crops and crops for export (citrus, potatoes, table grapes, etc.).

¹ By Dr Andreas Hadjichristodoulou, Director (1997), Agricultural Research Institute.

Sustainability of natural resources and their protection from pollution receive high priority in all research programs. The efficient use of treated effluent also receives high priority as it provides water for irrigation and also eliminates pollution by sewage or industrial wastewater.

In livestock production, emphasis is given to the use of local feeding stuffs and by-products for products consumed locally. Efficient feeding, management and selection of breeds are high priorities in this program. The possibility of growing new crops also receives special attention. Aromatic and medicinal plants, requiring limited amounts of water for irrigation, are among the new activities of ARI. There is high demand in the world market at relatively high prices for products of aromatic plants.

Major research programs are: breeding of cereals and food legumes for dry lands, forage and pasture crops, agronomic practices and mechanization of field crops, tropical and subtropical fruit trees, deciduous fruit trees, viticulture, protected cultivation of vegetables, floriculture, plant genetic resources, entomology, plant pathology, weed control, soil fertility, water use and irrigation, use of sewage wastewater for irrigation, animal nutrition and management, animal breeding, agro-economic studies, and pesticide residues.

3. LINKAGES

The linkages of research leaders with high-level decision makers follows government procedures through proper channels, which are established as follows: research scientists - Head of Section - Director of the Institute - Permanent Secretary and Minister of MANRE - Minister of Finance - Council of Ministers and Parliament.

Normally, most of the decisions on AR are taken at the level of the Director of the Institute and MANRE. Access of research scientists and research leaders to the Director of the Institute is easy and frequent.

As ARI is the only NARS institution, links exist between Heads of Sections, dealing with research on different disciplines of crop and livestock production. These links are strong because all the sections operate under the same roof and under the same Director.

Development agencies and extension services on agriculture belong to MANRE. Most of these activities are under the Department of Agriculture.

Coordination of the activities of ARI and the Department of Agriculture is done through the Permanent Secretary of MANRE, where the two programs (development and extension) belong. Linkages of ARI with farmers exist either directly between researchers, leaders and the Director with farmers and their unions, or through the extension services of the Department of Agriculture.

Through these two channels the ideas of farmers and extension services are considered in identifying problems for research and the results are promoted for application. As most of the trials are done in farmers' fields, the farmer participates and is aware of the progress at the same time as the researcher.

Linkages of ARI with external sources of knowledge are strong; researchers have developed strong links with universities and institutions in other countries, known to be leaders on specific projects.

Results and plant material (seeds, etc.) of improved crops developed by ARI are provided freely to all interested individuals and institutions.

ARI cooperates closely with International Centers of the CGIAR systems (ICARDA, CIMMYT, IPGRI, CIAT, IITA, etc.) and FAO. It also participates in many European or Near East and North Africa regional projects operated by the International Centers.

4. SYNOPSIS OF ARI'S PRESENT AND FUTURE

ARI, being the only institution on AR in a small country, has certain advantages, but it also faces some constraints connected with this situation.

ARI, which was established soon after independence of Cyprus after 80 years of British rule, was staffed by enthusiastic and devoted young scientists and was organized in an efficient way with the help of FAO. Many of these scientists are still working at the Institute; some have already retired. Especially during the first years, the Government gave great support to ARI, as agriculture was one of the strongest sectors of the economy. Furthermore, training opportunities were good and most of the staff received the highest available training. Technical staff also received training in foreign countries. As a result of all these positive achievements, the young Institute has not shown any signs of inexperience. During its first 30 years of life, it has managed to be respected by local people for

the solutions provided to major agricultural problems and by foreign scientists for the high level of scientific research work published frequently in international scientific journals.

Naturally, the majority of the staff employed during the first decade of the life of ARI reached retirement age, which is 60 years. Furthermore, most of the experienced staff will retire by the year 2005. At present, the relative importance of the agricultural sector in the GNP is much smaller than it was in the 1960s, and the Government does not allow the recruitment of new staff, even after the retirement of old staff. This will create a shortage of trained scientific and technical staff. In exceptional cases only, new staff has been employed recently.

The future of ARI lies in its capacity to restructure its organization and research programs to face present and future challenges. Some research programs, initiated in the 1960s, have accomplished their targets; in some cases, almost completely. Thus, activities in these areas should be reduced drastically and research activities initiated in other areas, creating more significant gains for the agricultural sector of the economy. Very limited work on new crops, like aromatic and medicinal plants, is under way. Contrary to presently grown crops, which are supported by subsidies, aromatics command high prices in the world market and thus require no substantial government support.

The Director and the staff of ARI, realizing the need for change, are already taking the necessary steps in the formulation of the correct research plans which would retain or even improve the role of ARI in the coming 30–50 years.

ARI's capacity, as mentioned above, is rated very high, but its future depends on recruitment and training of new staff. Inter-institutional comparison is not applicable in Cyprus, as there is only one institute carrying out AR.

Main Acronyms

ARI: Agricultural Research Institute. **MANRE:** Ministry of Agriculture, Natural Resources and Environment.