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Local innovation and wider development in Tunisia: Gafsa regional radio

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The Indigenous Soil and Water Conservation (ISWC) project in Tunisia is coordinated by a team from the Institut des Régions Arides (Arid Zones Institute), a research organisation working in central and southern Tunisia. Here there are regional radio stations in the cities of Gafsa, Tataouine and Gabès. The project selected Gafsa for two reasons. First, two-thirds of the innovators identified live in the zones covered by this station and second, the new programme “Agriculture and Innovation” could replace a programme on “Agricultural Extension”.

The new 2-hour programme went out on the same day and at the same time as the old one and the presenter of the earlier programme (El Aych Hdai) took over responsibility for the new one, which helped to maintain the link with listeners. A sociologist from the Arid Zones Institute worked with him.

Bringing stakeholders together

When “Agriculture and Innovation” started in March 1999, it was itself an innovation. It was the first time that a radio programme in Tunisia systematically invited farmers to present their knowledge and experience. Usually it was researchers and technical advisors who passed on information and recommendations to farmers. Agricultural extension in Tunisia meant

teaching and training farmers, not listening to and learning from them. The radio programme not only invites farmers to present their innovations. It also involves researchers, training specialists and development agents in debates about the innovations. Sometimes, these stakeholders in development sit together in the studio, but specialists can also call in by phone. This means that innovators do not need to travel long distances to the radio station to share their ideas with others. Several radio programmes were presented in this way from a distance. Sometimes, innovations from different regions were presented in the same broadcast. Innovators and listeners with telephones can take part in the debate from anywhere in the region. To stimulate the participation of as many listeners as possible, the contents of each programme is announced in the weekly magazine of the National Union of Agriculture and Fisheries. The Arid Zones Institute also makes sure that all regional Departments of Agriculture in central and southern Tunisia know what will be in the next programme and invites staff to take part.

In its first year, 100 farmers (85 men and 15 women) presented a wide range of innovations, including economising on water use in cropping, soil fertility management, fruit-tree husbandry (grafting fruit trees on the root system of a shrub which indicates good soil fertility and soil humidity), small

livestock rearing, breed improvement, and bee and poultry keeping.

Prizes for good listeners

To encourage the listeners to follow the programme closely and to get some feedback, a system of prizes was introduced. Once every two weeks, a prize of 50 Tunisian dinars (about US\$ 45) is awarded to a listener who has responded by mail to a question posed by the presenters. The questions are usually about the innovators and innovations. Sometimes, listeners are invited to report on new innovations. This has proved a good way of identifying additional innovative farmers, both men and women. The prizes are provided by the project and by research and development institutions and local organisations.

Letters to the radio

After each broadcast, the radio station receives 20-30 letters from listeners, mostly from rural areas and especially from women (90%). In the case of the older, usually illiterate women, the letters have been written for them by their school-going children or by younger women in the village. The letters include:

- answers to the presenters' questions about the innovations discussed;
- information from listeners about new innovations, often asking if they can be described on the radio. Innovations

identified in this way include techniques for planting cactus and fig trees, local remedies for diseases of fowl and small livestock, and managing rainfed vineyards to produce table wine;

- requests for more details about specific innovations, because the listeners want to try them out;
 - descriptions of how listeners tried out innovations presented on the radio; these include hatching chicken eggs in piles of dry manure, grafting prunes and peaches on the roots of jujubier (*Zizyphus lotus*), planting olive trees on cactus paddles, and drip-irrigation using plastic bottles;
 - suggestions of new topics for the radio programme, such as pruning fruit trees, growing early crops under glass, artificial insemination, milk production, and keeping poultry and rabbits;
 - congratulations and encouragement to the presenters;
 - proposals of field visits or interviews.
- Some listeners have suggested starting a parallel TV programme to show the best innovations.

Impact of extension by radio

A survey was made to evaluate the impact of the radio programme. The mail received was analysed for content. The men and women who had presented their innovations on the radio were visited to find out whether they had continued to develop their innovations and whether other farmers or extension agents had visited them. The listeners who had received prizes were visited. Farmers in villages along the Gabès-Gafsa and Gafsa-Maknassy-Mazouna roads were interviewed at random in places where farmers frequently meet, such as shops, reforestation sites and local extension-service offices. The programme had four major types of impact.

Provided incentives for innovators to continue innovating

For most of the men and women farmers who had presented their innovations on the regional radio, the experience had been an important social incentive. After the broadcast, several innovators continued to develop their innovations or started to develop new ones. For example:

- Mr Béchir Nasri, an innovator in Médénine Region (Nasr et al. 1999), invented a new system for pumping water from cisterns and a new technique for conserving wax honeycombs in beehives; he is now working on a technique to filter sediment from runoff water in order to avoid deposition in cisterns;
- Mr Khlifa Dadi, an innovator in Mareth Region (Chahbani & Nasr 1999), developed new irrigation techniques which economise on the use of water. These are adaptations of an innovation he saw during a visit to another innovator featured on the radio;
- Mrs Mbirika Chokri and Mrs Naziha El-Fahem (Chahbani & Nasr 1999) have

increased their production efforts since they were on the radio. Mrs Naziha produces chicks and supplies them to about 10 other women who want to raise poultry using a micro-credit scheme developed by a project in Mazouna as a result of her radio presentation.

Encouraged visits to innovators

Since speaking on the radio, most innovators have been visited by other farmers and agricultural technicians. During his presentation, one innovator who distills cosmetic plants made an appeal to other farmers to grow these plants on a contract basis. A few days later, he was visited by a group of farmers. This visit was organised by the Presidential Pilot Project on Agricultural Extension based in Gafsa, which records all broadcasts of "Agriculture and Innovation" for use in their extension workshops. A few months later, when the farmer was interviewed on radio again, he mentioned that he had already signed production contracts with 20 farmers. Four innovators (including one woman) were visited by the Director of the Gafsa Regional Department of Agriculture. These visits were incentives to both the innovators and the extension agents, and indicate that new relationships are developing between farmers, development workers, research scientists and policymakers.

Adoption and adaptation by listeners

Analysis of the survey results and of the letters to the radio station showed that several listeners had adopted and, in many cases, adapted the innovations presented on the radio. For example, more than 50 men and women farmers were trying out the bottle-method of drip irrigation, and 5 women were hatching eggs in manure.

Changed attitudes

The radio broadcasts have also started to influence the attitudes of researchers and development agents. When the ISWC programme started in Tunisia in August 1997, the approach of seeking out local innovations as stimuli for rural development was strongly criticised and some research and extension staff even ridiculed it. After the first innovators had been identified and particularly since the radio programme started, it is evident that there is growing positive interest in this new approach.

Mass media and innovation

Listeners request that the regional radio programme be continued and extended to other regional stations and to national radio. This can be done only when development agencies and, in particular, farmers' organisations accept responsibility for and "ownership" of these radio programmes by making contact between local innovators and the radio station, encouraging farmers to listen to the programme, and so on. It is important that other mass media (the press and TV) also be used systematically to convey the message that men and women farmers are taking initiatives in developing useful technologies and improving their livelihoods. ■

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Urban Agriculture Magazine

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Growing cities and populations are one of the big challenges of the future. The importance of Urban Agriculture (UA) in sustainable urban development is growing. The Resource Centre on Urban Agriculture and Forestry (RUAF-) Programme was developed to fill this information gap. The Urban Agriculture Magazine (UA-Magazine) is one of the ways the RUAF project intends to facilitate the flow of information and discussion on the actual and potential roles of intra-urban and peri-urban agriculture. The first issue of the UA-Magazine gives an overview of UA concepts and cases, and discusses UA as a mechanism applied by disadvantaged families to secure their livelihood under adverse conditions. The UA Magazine is published on the RUAF web-site and in hardcopy form. The RUAF web-site also provides reviews of recent publications, databases of institutes and persons and an bibliographic database.