The Palestinian
Agricultural
Relief Committee

1988
Annual Report
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Introduction
The Palestinian Agricultural Relief Committee (PARC) is a group of agriculturalists who are working to promote the development of Palestinian agriculture in the West Bank and Gaza Strip. The committee was formed in 1983 as a response to the absence of a Palestinian agricultural advisory and extension service in the occupied territories. The Israeli authorities have systematically neglected the agricultural department which they inherited from Jordan, cutting budgets and closing premises. Since 1983 PARC has worked to develop an alternative extension system, which has concentrated on the largest and most needy agricultural sector - the small peasant farmers.

The importance of such a service had become clear by the end of the 1970s when a "green revolution" swept through the West Bank and Gaza. A wide range of capital-intensive technologies for high-yield vegetable production were adopted by local farmers. While the technology itself was - by and large - successfully adopted, there was no corresponding development of input, credit or marketing support. As exports from the West Bank and Gaza were strictly regulated by both Israel and Jordan, there was no increase in market size to absorb this increase in production. The result, in bad years, was over-production,
a drop in prices, and large losses for many farmers. The small farmers, with no credit support, were the hardest hit.

These experiences made it clear that a comprehensive approach to agricultural development was needed, which went beyond simply introducing new technology.

Since its creation, PARC has developed its work in a variety of sectors with the aim of promoting Palestinian agricultural development. These now include:

* agricultural advisory services
* technical assistance
* agricultural input supplies
* household economy
* research and development
* publications
* emergency relief
* marketing

This report describes activities carried out by PARC during 1988, the first year of the Palestinian uprising. The year saw a dramatic expansion in the scale and scope of PARC's work in response to unprecedented demand for PARC's services from the agricultural community. This new demand was largely a result of the crisis which the agricultural sector experienced. The combination of sieges and curfews, the disruption of transport of inputs and products, severe export restrictions, and
restrictions on cash inflow into the West Bank and Gaza led to new problems in obtaining inputs, tending and harvesting, and selling crops. At the same time, there was renewed interest in agriculture as many stopped working as labourers in Israel and returned to their land. Despite the difficulties of carrying out systematic and structured work in the chaotic and unpredictable environment of the uprising, PARC has attempted to respond creatively to the challenges posed by this new situation.

**Advisory Service**

The backbone of PARC's work is the agricultural advisory service. PARC now offers 16 full-time engineers in the West Bank and 3 in the Gaza Strip, who conduct regular visits to agricultural communities offering advice on a wide range of agricultural matters. In addition to the full-time engineers PARC membership provides a wide network of agriculturalists who make extension visits in their free time as volunteers.

The basis of PARC's strategy is to encourage the formation of agricultural committees in the communities visited by its engineers. Occasional visits to individual farmers would not allow PARC to make much impact on the agricultural sector as a whole. PARC believes
that encouraging farmers to co-operate together in the planning and marketing of agricultural produce is necessary if agricultural development is to be successful.

In 1988 PARC worked closely with 55 such committees, distributed by region as follows:

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hebron</td>
<td>5</td>
</tr>
<tr>
<td>Bethlehem</td>
<td>22</td>
</tr>
<tr>
<td>Jerusalem</td>
<td>5</td>
</tr>
<tr>
<td>Jericho</td>
<td>11</td>
</tr>
<tr>
<td>Ramallah</td>
<td>8</td>
</tr>
<tr>
<td>Nablus</td>
<td>4</td>
</tr>
</tbody>
</table>

During the year PARC engineers visited an additional 150 villages where strong agricultural committees had not yet been formed.

In addition to its activities in crop production, in 1988 PARC initiated an animal production unit. The team offers advice on livestock and poultry husbandry, and in 1988 made 40 advisory visits. Realizing that there is great demand for its services, the unit plans to expand its activities in the coming year. At present the only other services available to most poultry and livestock farmers are provided by private veterinarians, whose fees are prohibitive for most farmers.

In the coming year PARC aims to give more attention to its advisory service by increas-
ing the intensity of extension visits, and by organizing a training program for its engineers.

**Publications**

PARC disseminates written information to farmers in the form of a regular agricultural newspaper and information pamphlets on specific topics. The newspaper, "The Agricultural Mirror", reviews local agricultural issues and provides advice to farmers; in 1988 five issues of 5,000 copies each were printed and distributed. The newspaper is the only regular agricultural publication in the West Bank and Gaza.

In addition, information pamphlets were produced and distributed on the following subjects:

* pruning olive trees
* the fertilization of soil
* rabbit husbandry
* a guide to food preservation
* poultry for meat production
* recognising disease and age in animals
* planting winter crops
* planting summer crops
* egg hatcheries
* care of grape vines
* care of the olive tree
* care of fig trees
* maintenance of rainfed cisterns
* goat and sheep husbandry
* cereal production
Supplies

Through its work with farming communities, PARC has come to perceive the need for a service which supplies a range of agricultural inputs to farmers at a reasonable price and quality, together with advice on their use. PARC restricts its activities in this field to supplying high-quality seedlings, and promoting the use of selected new seed varieties, as the logistic task of helping to supply other inputs is beyond the capacity of the committee. A separate agricultural company has now been formed which performs this function in coordination with PARC.

PARC runs a nursery, producing vegetable and nursery seedlings which are supplied to farmers at low cost. In 1988 PARC distributed the following quantities of seedlings:

* 6,000 tree seedlings
* 650,000 tomato seedlings
* 150,000 cabbage & cauliflower seedlings
* 50,000 lettuce seedlings

The demand for these seedlings greatly exceeded the nursery's production. Accordingly, an expansion of the service is planned for the coming year to meet this demand.

The project is financially self-supporting, the income from sale covering the production costs and the salaries of those working in the nursery.
High Quality Low Cost Seedlings
In addition to seedlings, in 1988 PARC promoted the cultivation of fodder crops by offering seeds to farmers at a subsidized price. Purchase of fodder, most of it from Israel, is a substantial expense for livestock and poultry farmers. The promotion of local fodder production would reduce animal production costs and thus economic dependence on imports.

Marketing

In response to specific crises, in 1988 PARC engaged in "popular marketing" experiments, through which farmers' committees sold their produce directly to consumers without any middlemen.

Water Melons

The watermelon harvest in the Jordan Valley began around May 1st, yet no exports were allowed to Jordan until May 15th, while any export to Israel was banned for the whole month. In addition, during the second week of May transport of produce from the Valley to the rest of the West Bank was forbidden.

The result was a huge watermelon surplus: the price of the crop dropped dramatically, and a large proportion of the year's crop was left to rot in the fields.

PARC responded by organizing trucks to deliver melons directly from the farmers to
consumer cooperatives in the highlands, selling the water melons at low cost while still allowing the farmers to make a profit. A total of 500 tons of melons were sold in this way.

Plums
In July, Beit Ummar, Halhoul and Kufr Rai, the three main plum-growing villages, were forbidden from exporting their produce to either Jordan or Israel, which created another local surplus. This time PARC organized direct marketing of plums from farmers' committees to household economy cooperatives, who used the produce to make preserves.

PARC also organized marketing of Jews' Mallow, olive oil, camomile and onions in the same way.

These experiences proved the potential of "popular marketing" as an alternative to the existing system of middlemen and commission agents. Organizing a large-scale marketing system, however, is beyond the scope of PARC's work. A local company now exists which aims to develop such a system.

**Household Economy**
Before the uprising PARC had promoted "household economy" (production for local consumption) as one part of its strategy for agricultural development. In 1987 PARC conducted a survey in three villages, which collected
information on existing attitudes to household economy and its potential for development. The results suggested widespread interest in increasing levels of local production for local consumption. Pilot projects for the promotion of such activities were being planned when the uprising erupted.

Within a few months, household economy became increasingly popular. This was partly because communities found themselves under prolonged siege by the army. Access to locally produced meat, milk and dairy produce was needed under these conditions. Secondly, as the uprising heralded a period of economic hardship for the country, cheaper ways of obtaining food became more attractive. Finally, one of the calls of the uprising was to be as self-reliant as possible, only buying Israeli produce when necessary; household economy was one way of promoting self-reliance.

PARC began pilot projects in 9 villages in the West Bank. In each village a local women's "household economy" committee was formed to coordinate the work. PARC offered the committees subsidized seeds and seedlings to encourage vegetable production and agriculturalists to provide advice and training on cultivation techniques. Seed packets were prepared and distributed, not only in the 9 villages, but throughout the West Bank. A
Goats for Dairy Produce
total of 250,000 packets of seeds, each containing several vegetable varieties, were distributed in this way.

The local committees in the 9 villages were also asked to nominate 10 of the most needy families in the village. These were often without a breadwinner since many wage earners have been arrested or injured and are thus unable to support their families for prolonged periods. These needy families were offered either a goat for dairy production or a rabbit and poultry production unit. Those who chose goats were to return the first kid of the goat to the committee for distribution to another needy family.

In addition lectures were held and demonstrations given concerning techniques of food storage and preservation, following immediate and widespread demand for this kind of technical assistance. Such lectures and demonstrations were held throughout the country.

During 1988 PARC conducted more than 500 extension visits to villages, towns and camps in the West Bank, in addition to 250 lectures on aspects of household economy, and 85 demonstrations of food processing techniques. These visits have led to the formation of 78 women's agricultural committees which promote small-scale food production and food processing in their village. As the food processing
Chicks for
Meat and Eggs
activities developed, some of the committees decided to begin marketing their products, and set up small scale women's cooperatives. By the end of 1988, six such cooperatives had been formed. PARC plans to continue to promote the formation of such cooperatives through the women's agricultural committees.

In 1989 PARC plans to expand the animal production component of its household economy program to include 50 localities in the West Bank and another 50 in the Gaza Strip.

Research and Development

In 1988 PARC conducted a range of research and development projects, which aimed primarily to provide information to be used through PARC's advisory programme.

Soil Research

In 1987 PARC completed its soil research project which comprised a survey of the chemical composition of soil from more than 1,000 sites in the Jordan Valley. In 1988 the results of the tests were given to farmers in the southern Valley together with advice on crop selection and soil management. PARC found that many farmers were applying inappropriate fertilizers containing elements which were abundant in the soil itself, their analysis allowed the farmers to save money on fertilizers. Other farmers assumed that their
soil was saline when, in fact, it had low concentrations of salt: on the basis of these research findings, advice could be offered on appropriate crop selection.

Olive Research

The PARC olive research project is now in its third year. The study aimed to identify the main diseases affecting olive production, to study appropriate fertilization practices, and to investigate the performance of different olive tree varieties under different environmental conditions. A nationwide survey of the impact of disease on olive yields is now being completed, and field trials have been started investigating the effect of different fertilization levels on yield, and the performance of different varieties.

Field Trials

Experimental field trials were made of species not normally cultivated in particular areas. Strawberries were tried in the Jordan Valley for example, however, the crop died during a two-week curfew when the field could not be irrigated. The trials will be resumed next season. Cabbages and lettuce trials carried out in several parts of the West Bank highlands. The results were successful in the warmer areas, but not in the cooler parts of the highlands where yields were low.
Nylon Mesh Tunnels Prevent Pests
Natural Pest Control

PARC is currently conducting experiments into several natural forms of pest control. One technique which had previously been investigated was the cultivation of tomatoes under a nylon mesh tunnel. The mesh prevented disease-carrying insects from reaching the tomato seedlings, and thus avoided the need for spraying with insecticides. The field trials were successful, and had the added bonus that the shade from the mesh allowed earlier sowing and harvest when the crop was scarce and the prices high. The technique has been widely adopted in the Jordan Valley and is currently being tried in the northern West Bank. PARC provided technical assistance to farmers who adopted the technique this year, covering a total of 700 dunams.

This year PARC has conducted experiments on three types of natural pesticides:

* The first is produced by extracting juice from stinging nettles, which is sprayed on the crops to prevent pest attack.

* The second consists of a boiled extract from local herbs, which forms a waxy layer over ripening fruits and thus protects them against insect attack.

* The third is a natural fungicide produced from the whey of local cheese.

The results of these experiments are not yet
complete, however PARC is optimistic that techniques of this kind can reduce production costs while doing less damage to the environment.

The Timing of Sowing

PARC has also used its experimental plots to investigate the effect of time of sowing on the yield of various vegetables, so that more accurate advice can be given to farmers.

Household Economy

The results of the household economy survey were published in an interim report, and distributed and discussed during a seminar in Ramallah which was attended by a wide variety of Palestinian institutions.

Agriculture during the Uprising

PARC published a report on the problems faced by Palestinian agriculture as a result of the uprising. The report was widely distributed and drew attention to the sanctions which the Israeli authorities were taking against Palestinian farmers.

Marketing

PARC also published two studies concerning issues of marketing in the West Bank and Gaza. The first discussed problems inherent in the existing system of middlemen and commission agents, especially for the small farmers; the second described PARC's experiences in popular marketing.
Miscellaneous Projects

Pest Control Projects

The committee organized a series of pest control projects in the Ramallah and Bethlehem areas, during which volunteers from those villages organized the spraying of olive and fig trees as a preventative pest control measure. There was great demand for the organization of these projects from the agricultural community.

Olive Fertilization

PARC promoted the fertilization of olive trees in 15 villages during 1988, by helping to coordinate the supply of fertilizer and providing advice on soil management.

The Rabbit Project

PARC opened a new rabbit farm in 1988 which aims to produce 1000 rabbits per year for distribution at low cost. The aim of the project is to encourage small-scale rabbit cultivation by offering high-quality rabbits for meat production. So far, PARC has been unable to keep up with the local demand for such rabbits.

Storm Relief

In the winter of 1987 a hailstorm severely damaged Palestinian agriculture in the Jordan Valley. PARC quickly produced a detailed report on the scope of the damage, and called
for immediate assistance to help farmers replant crops before the season was lost. Several agencies responded positively, and PARC helped to coordinate the distribution of seeds and fertilizers to 280 farmers who used them to replant their fields. The project gave priority to small farmers who were in most need of assistance.

Emergency Food Relief

In the first year of the uprising hundreds of thousands of people, particularly in the refugee camps, were placed under continuous curfew for periods of several weeks during which they were denied access to food supplies. There was a wave of solidarity for these camps throughout the farming committee, and, in December 1987, PARC began organizing food donation from farmers which was transported to the besieged communities and smuggled inside. PARC continued to coordinate this operation over a period of four months, after which this function was taken over by local committees. Produce valued at more than 20,000 JD was transported to camps under curfew during this four-month period.

The Future

Partially as a result of the conditions created by the Palestinian uprising, 1988 saw a dramatic expansion in the scope and scale of
PARC's work in the West Bank, while work began for the first time in the Gaza Strip. Despite this increase PARC is unable to answer all the requests for extension visits and technical assistance from the farming community.

In the coming year PARC plans to continue the range of activities which were carried out in 1988, while consolidating the systems which have evolved in response to the needs of the local community.

In this respect the training of PARC extension personnel is considered a priority for the committee as is the consolidation of the administrative structure of the group.

With the continuing absence of any other organized Palestinian agricultural extension system, the coming years present the challenge of building a viable, long-term network of agriculturalists who can continue to work to promote agricultural development for the Palestinians of the West Bank and Gaza Strip.
Beginning Work in Gaza