

technology (aside, in few cases, from voluntary agencies who have been subsidizing the small farmers). The reasons for this should be obvious. An integrated system of drip irrigation is uneconomic to introduce on plots smaller than 20 dunums; and the initial capital investment, although not extremely high, is beyond the saving capacity of small farmers. The latter, thus, find themselves initially even more dependent than before in their contractual relationship with their landlords/commission agents. Only the intervention of external crediting institutions could have helped to break this cycle of dependency.

In the absence of any state loans for agricultural developments in the Western Valley, Zbeidat farmers were able to secure a loan from one of three foreign voluntary agencies for the initial investment in drip equipment. But that step was only adopted after two years of reluctance on the part of many farmers who had to give up their shares in the water supply in favour of the centralized "drip" mechanism.

The breakthrough came when two pioneering farmers, convinced of the advantages of the switch, contributed their plots for a pilot experiment in the new technology. In October, 1976 Abdullah Muhammad Hasan, who owned nine and one-half dunums in Zbeidat and sharecropped 20 dunums from the property of Jamil Abdul Fattah (Abu Anwar), installed drip pipelines on three dunums of the land he sharecropped with Abu Anwar on an experimental basis. The Voluntary Agency, the landlord, and Abdullah shared the costs of the pilot project which amounted to IL.18,000 in then current prices (\$600, sterling 300).<sup>\*</sup> Another farmer, Salameh Abu Dabbus, volunteered to crop 10 dunums of his 23.6 dunums land under drip irrigation the next year. The result was dramatic: a five-fold increase in yield of tomatoes, from one and one-half tons in open-furrow fields to 8 tons per dunum under drip irrigation (Hasan, 1980:Inter.).

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<sup>\*</sup>1980 exchange rates of pound sterling to the U.S. dollar.