Table (VI-7)

Some indicators of technological change

	West Bank		Jordan	Israel
	1968	1978	1977	1977
Area under cultivation (000 donums)	2045	2000	3900	4250
Number of tractors (total)	120	1673	4074	22850
- per 10,000 donums	0.6	8.4	10.4	53.8
Fertilizer use (total in tons)	4000	11600	24000	278000
- kilograms/donum	2.0	5.8	6.2	65.4
Area covered with plastic (donums)	None	7500	8000	31044
Area under drip irrigation (donums)	None	8775	491	190000
Value of purchased inputs - In IL mill at 1969 prices	30.9	55.6	n.a.	1645.3

Sources: 1. Judea and Samaria Agriculture 1978, op cit, p 13.

2. Statistical Abstract of Israel 1980, op cit, p 356.

3. Agricultural Statistics Quarterly (Jerusalem: Central Bureau of Statistics) Vol XI, 1979-1980, No 3, p 39.

4. Agricultural Statistical Yearbook, op cit, p 66, 77

5. Interview with Director of Agricultural Economics Department, Amman, October 20, 1981.

Despite a noticeable expansion in fertilizer and tractor use, the data in the previous table reveals that the West Bank lags behind Jordan in the use of tractors and fertilizer, while Israel is far ahead of both of them in all aspects of technological change. Likewise, it is noted that the ratio of purchased inputs in the West Bank is only about 17% of total agricultural income as compared to 30% in Jordan and 52% in Israel. In view of the reasonable technological ability of West Bank farmers, this pronounced lag in the use of technological innovations is explained mainly on the basis of the broader issues of reduced profitability

inadequate source of credit, and depressive institutional policies.

Notwithstanding obvious weaknesses in productivity levels and the process of technological change in the West Bank, the researcher does not believe that this necessitates an indiscriminate thrust towards modern technological change in its agriculture. Any such process should be based on a localized evaluation of the political and social - in addition to the economic - ramifications of each individual form of technology. It may be safe to suppose that intensive patterns of agriculture, mostly irrigated, need to maintain a sustained access to modern technology. But the situation is much more complex and difficult to judge in the case of peasant types of farming. This will be explored at greater length in the chapters on the economics of rainfed agriculture.

Significance of rainfed farming

The division of land with respect to the source of water reveals that the area fed by rainwater constitutes about 95% of all cultivated land, whereas the area under irrigation is estimated at about 85,000 donums, which amounts to 5% of all actively cultivated land estimated at 1,608,700 donums.[1]

Surprisingly, the ratio of irrigated land is considerably lower than in most countries in the Middle East, though as outlined earlier, the West Bank is more humid than most of them. The crucial difference lies in the political circumstances of the West Bank which appear to have deprived local citizens of opportunities to exploit available water resources.

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1. Administered Territories Statistics Quarterly 1980, op cit, p 95.