

of high steps along the parallel fault line intersecting the Rift Valley.

The eastern slopes fall in the rain shadow area, hence the rainfall decreases sharply from west to east. The north-eastern foothills are not noticeably arid, with a rainfall of over 250 mm in most years, which makes certain types of farming reasonably economical. A prominent example is found in the Tubas hills in the north which constitute a major grain and sheep production area. But rainfall decreases to less than 200 mm towards the south, which renders land fit merely for occasional grazing by goat and sheep flocks.

The Rift Valley lies along the eastern border of Palestine and it is a part of the great Syrian-East African Rift caused by uplifting and folding movements by the rock crust. The Jordan river passes through the middle of the Valley, connecting Lake Keneret and the Dead Sea. It was established during the British Mandate as the international borderline separating Trans-Jordan and Palestine.

The West Bank side of the Rift is a narrow strip 15 - 32 kilometers wide and 75 kilometers long. It drops in latitude from 270 meters below sea level in the north to 390 meters at the Dead Sea near Jericho. The Valley bottom is mostly covered with lissan marl deposited in the ancient Jordan Lake with many deep crevices and canyons.

#### Soil

Despite its small size the West Bank contains a wide variety of soils. In the upper hills of Hebron, Jerusalem, Ramallah and Nablus,

where surface rocks are of limestone origin, the dominant type of soil is the Mediterranean "terra rossa". Due to the high solubility of calcium, terra rosa contains only 5 percent or less of calcium, whereas it contains 50 percent of silica and 10 - 15 percent each of aluminium and iron.<sup>1</sup> This kind of soil is well suited for farming. But due to its marked vulnerability to erosion and the very long time it takes to generate (on the average, 1000 years to form one centimeter), cultivation on hills with a terra rosa soil requires elaborate protective precautions. This includes the construction of expensive retaining walls and the growing of deep-rooted trees rather than field crops and vegetables.

In areas with soft chalk rocks, "rendzina" soil is formed through weathering processes. This is noticeably different from the terra rossa soil, since it has a higher calcium content and a more friable structure, but it is inferior in fertility. In general, though, it is deeper than terra rossa and less affected by runoff. As such, the rendzina soil can support a wider variety of cropping patterns. This kind of soil is dominant in the western foothills of Jenin, Tulkarm and Ramallah.

Soils in the Jordan Valley are different from both previous types. Due to an extensive marl cover, the soil there is characterized by high salinity (gradually increasing southward) and a clearly alkaline pH. Salinity is made worse by the high salt content of shallow tube wells drilled by Palestinian farmers prior to occupation. But in those cases where it was possible to wash

1. E Orni and E Efrat, Geography of Israel, (Jerusalem: Israel Universities Press, 1973), p 57.