

Technical Services<sup>(33)</sup> show that, out of 3.7 million acres under canal command, the soil over 1.7 million acres is non-saline or slightly saline (average salt content in the top 3 feet of soil is less than 0.25 percent); in 1.0 million acres the soil is moderately saline (salt content less than 0.4 percent); while in 1.0 million acres the soil contains more than 0.4 percent salt, and cultivation is unprofitable or impossible. About 2.4 million acres are actually cultivated in the three right bank Districts of Larkana, Jacobabad, and Dadu, at a cropping intensity close to 100 percent. The cultivated area is just about equal to the area of non-saline to moderately saline land. According to WAPDA, the problem of drainage and leaching to reduce the soil salinity in the rice-growing part of the region can probably best be solved by constructing shallow surface drains. In the areas of perennial canal irrigation, deep drains may also be necessary. As pointed out in Chapter 2, continuation of rice culture in these permeable soils is highly unpromising and other crops which do not require standing water should be substituted for rice.

The other major region of waterlogging and salinity in the Former Sind is the Lower Sind Plain and the Indus Delta. Together these form a large triangle with its apex at Hyderabad and its base along the high tide line. The area is under the command of the new Ghulam Mohammed Barrage canal system, and is still being developed, largely for rice cultivation, with non-perennial irrigation. The southeastern and southwestern corners of the triangle, containing about 1.5 million acres, are near sea level, and hence the pre-irrigation water table tends to stand within eight to fifteen feet of the surface. The south central part is higher, but is nevertheless a vast expanse of saline waste. Throughout the southern part of the triangle, salt efflorescence tends to form everywhere on uncropped land. Although the level of ground water fluctuates from season to season, permanent swamps and marshes lie in many depressions, and the entire southern two thirds of the triangle, making up a total of about 2.3 million acres, is mapped as saline. About 1.1 million acres in the northern third of the triangle contain coarse-textured and more permeable soils, and high soil salinity and waterlogging are less common here. Out of 2 million acres which will be under command of the Ghulam Mohammed canal systems, Hunting Technical Services has mapped 35.4 percent, or

---

(33) Sukkur-Gudu-Ghulam Mohammed Drainage and Salinity Control Project Report No. 9; Hunting Technical Services-Sir M. MacDonald and Partners; London 1961.