

LAND SUITABILITY — KEY TO OPTIMUM WATER UTILIZATION IN BALUCHISTAN

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ABSTRACT

Known water resources of Baluchistan are extremely inadequate in comparison with its geographic extent. Major part of the province is exclusively dependent upon the limited meteoric moisture precipitating over the territory. It is imperative that this meagre but precious resource be utilized for agriculture in the most beneficial manner. Suitability of the land on which water is used is the critical determinant of the attainable level of agricultural production. Land suitability appraisal takes into consideration the vitally important physical, biological and economic components of land such as soil, climate, geology, geomorphology, hydrology, drainage, vegetation and crops. In Baluchistan, these attributes generally show wide variations over short distances as is evident in any intermontane valley. Based upon anticipated land and water interaction translated into economic terms, it is suggested that for maximum benefit, topmost priority for water allocation be given to level, well drained areas of deep, loamy/silty soils without salinity, sodicity or coarse fragments, and having permeable subsoils. If properly managed, this type of land, constituting, on the average, about thirty percent of the culturable areas in the valleys, would permit a well diversified and highly productive arable use ensuring highest returns per unit of water.

GENERAL

Baluchistan is the largest federating unit of Pakistan. It extends over 347 190 sq. km. constituting nearly forty-four per cent of the country's land area (Survey of Pakistan, 1985). Almost three-fifth of the province is occupied by mountains and sandy deserts. The remainder comprising intermontane valleys and plains is the area that can be utilized for various kinds of agricultural production ranging from cereals, fruits and vegetables to livestock. Nearly one-half of this area is unsuitable for irrigated agriculture due to stoniness, limited soil thickness, and un-

clusively dependent upon the limited meteoric moisture precipitating over its own territory. Barring an L-shaped corridor extending southward from Zhob to a little below Loralai and then continuing westward upto Chamman (Fig. 1), the province has an arid climate with mean annual precipitation generally considerably less than 200 mm (Ahmad, 1951). The scanty rainfall due to its highly erratic character and low atmospheric humidity drastically reducing its effectiveness, does not contribute substantially towards consumptive use requirement; crop production is, of necessity, dependent upon irrigation.

