

WHEAT RESPONSE TO SUPPLEMENTAL IRRIGATION AND FERTILIZER APPLICATION ON SAILABA FIELDS IN LORALAI (BALUCHISTAN)

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ABSTRACT

Experiments were carried out during Rabi 1986 to study the effect of supplemental irrigation and fertilizer application on wheat yield (CV. Local white and Pavan) on sailaba fields in Loralai area. These preliminary data show that the yield of both cultivars increased significantly when both inputs were applied together. In these trials low doses of nitrogen and phosphorus were applied which has given encouraging results. However, more field trials involving higher fertilizer doses and different improved wheat cultivars under conjunctive water use are suggested.

KEY WORDS: SAILABA FIELDS, SUPPLEMENTAL IRRIGATION, CONJUNCTIVE WATER USE, LOCAL WHITE, PAVAN.

INTRODUCTION

Baluchistan is the largest province of Pakistan constituting 44 percent of the total area of the country. Like other provinces agriculture is the main stay of the economy of Baluchistan. The province falls under arid climatic zone with considerably varied and erratic rainfall. The agriculture is therefore, dependent upon various irrigation sources which are: 'sailaba' irrigation, karezes, well/tubewell and springs. Sailaba fields constitute 33 percent of the cultivated area (Census of agriculture, 1980) and are extensively used for growing upland crops particularly wheat, barley, corn, mash and mung beans whereas the water from the perennial source is utilized for irrigating orchards and vegetables. In case of 'sailaba' irrigation, flood water is ponded in the fields for soaking the rootzone, either directly (Bandat sailaba) or by diverting water through some specific nullahs

province. Fertilizer application to this crop is meagre and as a result, the province have not been able to attain self sufficiency in wheat production. Against the total requirement of 0.516 million tons annually, so far only 0.240 to 0.260 million tons are being produced, the yield of wheat on sailaba fields can be increased many folds by fertilizer application and utilizing water from some perennial sources for supplemental irrigation during the periods of inadequate flood frequency. Nevertheless, field experiments are required to study the response of fertilizer application to wheat crop under conjunctive water use. Therefore, preliminary experiments were carried out during Rabi 1986 to study the effect of supplemental irrigation and fertilizer application on wheat yield on sailaba fields in Loralai area.

MATERIALS AND METHODS

The experiments were carried out in Loralai area at two different locations viz Dirgai Kudezai and Lori Daman. The physical and chemical properties of the soils are given in table 1.

Table 1. Physical and chemical properties of the experimental sites

| | DIRGAI KUDEZAI | LORI DAMAN |
|-----------------------|-------------------|---------------|
| Textural class % Sand | 43.8 | 44.1 |