

COMPARATIVE COSTS OF LIFTING WATER FROM WELLS —A case study of banana cultivation

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IN recent years in the areas where irrigated crops depend upon wells for heavy irrigation a tendency to replace the bullock drawn water lifts by water pumps operated on oil engines or electric power is witnessed. It is proposed to study in the present paper comparative costs of lifting water from wells by different techniques. For this purpose data collected during the case studies of banana plantations in a village in Jalgaon District of Maharashtra State are used. The main object is to study comparative costs under the different techniques viz. (1) Bullock drawn water lift; (2) Water pump operated by an oil engine; and (3) electrically operated water pump and the reasons for preferring one technique to another.

In Jalgaon District particularly in Raver and Yawal Talukas, the cultivation of banana is widespread and the area under it, is continuously increasing in the last decade. The Taluka office records show that the acreage under this crop during 1950-51 was 3941 acres in Yawal and 4392 acres in Raver Taluka. In 1959-60 it had gone up to 5605 acres in Yawal Taluka and to 8441 acres in Raver Taluka. In the case of Raver Taluka the area has almost doubled during the last decade.

Banana cultivation requires heavy irrigation and all the water supply used for the cultivation of this crop is from wells, as there are no canals or any other source of water, available in this region. Hence, a number of wells have been sunk in this area to ensure sufficient water supply. The data collected at village Waghode-Budruk¹, in Raver Taluka, have been used. The data refer to the first survey of the village carried out in the year 1956-57 and the resurvey in 1962-63.

Village Waghode-Budruk witnessed rapid increase in the acreage under banana cultivation. The village records show that in 1934-35, only 129 acres of land in this village (4.8 per cent of the total cultivated land) was under banana. In 1956-57, however, this area had gone up to 555 acres (23.0 per cent of the total) and to 957 acres (41.8 per cent of the total) in 1961-62. As reported by the villagers,

¹ This village was first surveyed in 1956-57 and resurveyed during 1962-63 in the scheme of 'Continuous Village Surveys' in the Agro-Economic Research Unit located at the Institute by the Central Ministry of Food and Agriculture.