

AN ECONOMIC EVALUATION OF A TUBE WELL BASED

SETTLEMENT SCHEME IN SRI LANKA

By

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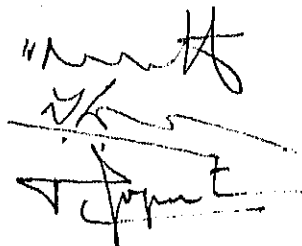
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## ABSTRACT

This study investigated the impact of tubewell irrigation development on land use intensity, employment and farm incomes in the 0.8 and 2 ha farms of the Mulankavil settlement scheme. In addition to the above, choice of pumping techniques and the returns to investment on tubewells were also investigated.

From the study it was shown that the cropping patterns on both farm sizes were similar; the most popular crops being chillies, brinjals cabbage and bananas. The land use intensity was 77 and 69 percent in the 0.8 and 2 ha farms respectively, which is sub-optimal. The average labour use in 0.8 and 2 ha farms were 492 and 311 mandays per ha in which the former was at the expected level. The settlers on 0.8ha farms earned an average farm business income of Rs.16909 per ha. In the 2 ha farms it was only Rs.10,838, which was well below the expected.

From the production function it was revealed that the ratio of Marginal Value Product for land was 0.22 in 0.8 ha farms whereas it was 1.49 for 2 ha farms. This indicates that land was over used in 0.8 ha farms and under used in 2 ha farms.

The ratios were 1.04 and 0.92 for labour and water in 0.8 ha farms but 2.23 and 1.54 in 2 ha farms. This revealed that labour and water were used efficiently in 0.8 ha farms and under used in 2 ha farms. Capital was over used in both cases with the ratio of 0.89 and 0.72.

From the Present Social Cost analysis it was indicated that the deep tube wells with submersible pumps had an acceptable cost of Rs.6,878 and deep tube wells with suction pumps cost Rs.8,422, whereas hand-dug-hand-drilled and hand-drilled tube wells with suction pumps cost more than Rs.13,203.

The financial rates of return to investment on the tube well scheme with the existing cropping system was 18% with a BC ratio at 1.30. The economic rates of return were 14% with the BC ratio at 1.13.