B-88 Optimum furrowed basin length for chilli grown in Rhodustalfs

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Adoption of various basin lengths for furrowed basin method is a common feature in the dry zone. When the basin is small water application efficienty is high, however it needs higher bund length for a unit land area. This deprives an area, which is otherwise utilized by crop (plants). Also, farmers have to work more to construct longer bunds. Larger basins, in contrast, are easy to construct but water application efficiency is poor. Thus, this study was carried out to determine the optimum furrowed basin length for chilli grown in Rhodustalfs.

Land was ploughed and furrowed basins made with a common width of 3 m and 4 different lengths as the treatments. The lengths were 3,6,9 and 12 m. The design was Randomized Complete Block with 3 replicates. Seedlings raised in a nursery were transplanted and managed according to the recommendations of the Department of Agriculture. Using a Parshall flume and a stop watch, a predetermined water amount adequate to irrigate the crop was released at 55% water application efficiency.

Compared to the 3 m long basin, number of planting points were increased by 11, 15 and 20% in 6, 9 and 12m long basins respectively. Dry chilli yield did not record significant difference ($p=0.05$) or follow a pattern similar to the plant number. Compared to the 3 m basins, mean yield was increased by 13 and 7.5% in 6 and 9 m long basins respectively. A 9% yield (mean) decline was recorded in the 12 m basin compared to the 3 m basins.

Therefore the optimum furrowed basin length for chilli grown in Rhodustalfs would fall between 6 and 9 m when the width is 3 m.