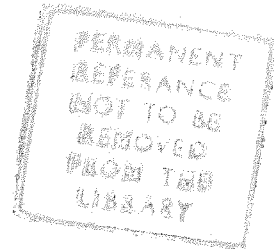


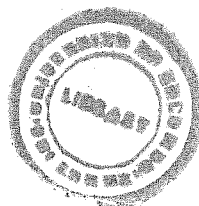
STUDIES ON THE QUALITY OF  
IRRIGATION WATERS IN KALAWEWA AREA



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ABSTRACT

The development of irrigated agriculture could bring about many changes to the environment. Some of the modifications benefit human population, while others threaten the environmental quality. One of the key factors considered in irrigation is water quality which affects the crop yield, land quality and the health condition of the farming community. Nevertheless, there are basic quality requirements that will have to be met in agriculture in order to obtain the maximum productivity with least or no adverse impacts on the environment.

There are very common problems associated with poor quality waters such as sodium hazard, black alkali formation of soil, accumulation of other toxic substances in soil which make the irrigated soil unproductive. However, there are soil, water and crop management practices that can be adopted in conjunction with poor quality water to minimize adverse impacts.

The text presents the results of a study aimed to collect the data on the chemical quality of irrigation waters against which future evaluation could be measured and also to assess the problems that could be resulted from irrigated agriculture in the System 'H' (Kalawewa area) of Mahaweli Development Project. The study extended over a period of two years from February, 1979 to January, 1981 and covered reservoirs, distribution canals, drainage canals from which the samples were collected on a monthly basis.

As the System 'H' area happened to be the first system to be developed under Mahaweli Ganga (river) diversion scheme, experiences gained in this study will be of crucial importance for the future development of schemes too. Therefore, if the problems associated with irrigated agriculture are identified early, any adverse impacts could be prevented or minimized by adopting appropriate technology.