

**EFFECT OF DIFFERENT SOURCES OF WATER ON GROWTH
AND YIELD OF OKRA (*Abelmoschus esculentus*).**



By

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ABSTRACT

Water covers 70 percentage of our earth, however fresh water the stuff we drink, bathe in, and irrigate our farm with this incredibly. Only 3 percentage Fresh water available in the earth two third of that in frozen glaciers. Water scarcity problem is the number one problem in the world. More than 75% population living region of this world experiencing water scarcity problems in their day-to-day life. (Reason for scarcity problem is ground water pumping.) Fresh ground water used for agricultural activities causes the water scarcity problems further. (Pumping and using ground water to the irrigation to take another way to use other sources such as lagoon, pond and wastewater that will reduce the ground water pumping.)

The present study was carried out to determine the effect of lagoon water, well water and NWSDB supply water ^{for} irrigation on growth and yield performances of okra.

The experiment was conducted at home garden in Akkaraipattu located in Amara district Eastern province of Sri Lanka. For this study the experimental design was randomise complete block design of three treatment and three replications were cultivated. The treatments applied were T1 well water irrigation to okra, T2 NWSDB supply water irrigation to okra and T3 lagoon water irrigation to okra the field observation was recorded by measuring growth and yield performances of okra.

The growth parameter such as plant height, root length, diameter of stem, leave per plant, fresh weight of shoot and yield parameters such as number of flowers per plant, number of pods per plant, number of seeds per fruit, fruit length and yield (cm) were measured. (And all the data of experiments were statistically analysed using SPSS software.)

The result of this present study shared height increased in lagoon saline water compared with well water and supply water but there are no significant differences.

There are no significant differences (T1, T2 and T3) in number of leave per plant were observed with other parameters such as yield and growth. Statistical analysis showed there is no significant differences in the growth and yield parameter of okra. Okra irrigated with lagoon water not affect the optimum yield. Therefore lagoon water can also be used for irrigation with suitable management when facing scarcity of water.

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