B-72: Effect of fixed irrigation intervals on yield of B'onion (*Allium cepa* L.) grown in Rhodustalfs

H Don Sumanaratne
(*Regional Agricultural Research Centre, Angunakolapallasse*)

Farmers in the dry zone adopt fixed irrigation interval ranging from 1 to 4 days for B'onions grown in *Rhodustalfs*. Hence an experiment was carried out at Field Crop Research and Development Institute, Maha Illuppallama to evaluate the effect of the fixed irrigation intervals on yield of B'onion bulbs.

B' onion seedlings (Rampur red) were planted in 12 drainage type lysimeters and equally irrigated for 10 days. From the 11^{th} day onward fixed intervals (1, 2, 3 and 4 days) were adopted. Design was completely randomized block with 3 replicates. Irrigation rate was adjusted weekly for each treatment based on (1) pan evaporation data (2) gravimetric moisture content and (3) metric potential values obtained from barometer type tensiometers.

There was a significant positive response by closer irrigation intervals for the bulb yield and it had been contributed by both high water retention and greater dry matter content of the bulb. Moisture retention showed linear relationship ($Y = -0.47 + 0.758^{*} X$, $r = 0.99^{*}$) with the bulb yields obtained in 4 treatments, while dry matter showed a cuvilinear relationship ($Y = -2.30 + 13.615^{*} \ln X$, $r = 0.95$)*.

*significant at p - 0.05.