Suitable okra (*Abelmoschus esculentus* L.) variety for crop rotation with red onion at Kalpitiya

B Regunathan[1*], K P D Siriwardane[2] and L C Wijethilake[3]

[1] *Research Agricultural Research Station, Kalpitiya,*

[2,3] *Regional Agricultural Research Centre, Makandura, Gonawila (NWP)*

Red onion is a popular crop in the sandy regosols of Kalpitiya. It is so popular that it is often grown continuously without any crop rotation. Liberal use of specific agrochemicals and fertilizers on red onions under daily irrigated farming situation can lead to environmental pollution which could be reduced best by changing the crop. Therefore, several vegetables crops were grown with minimal use of pesticides and chemical fertilizers and were evaluated at the Agricultural Research Station, Kalpitiya during 2003-2004. Among them okra was found to be more suitable for replacing red onion in small holdings (<0.25 ha) particularly when leaf twister disease and "acid" disease affect red onion during March-April-May.

The okra varieties Haritha, MI5, MI7 & L2 (Palvendi) were grown for times at fifteen days interval and the following valuable growth and yield data were recorded. The plant height, inter-node length, pod number, pod weight, leaf area, days to flowering, days to first pick, number of seed per pod, pod colour, percentage infection of yellow mosaic virus, pod yield (t/ha) and per day productivity were observed to vary among varieties.

In spite of its resistance to yellow vein mosaic virus Haritha gave lower pod yields than the other varieties of okra at Kalpitiya. It was shorter than the other varieties due to its reduced inter-nodal length (30.8 cm). However the pod set was observed at every node with erratic pod growth as the pod borer was not fully controlled by the restricted use of pesticides. The virus incidence was heavy in MI5, moderate in L2 and mild in MI7.

The environment was most favorable when okra was planted during the January and harvested for three months. The yields were moderate when it was planted earlier (December & early January). The overall mean yield of MI7 was the highest (31 t/ha) followed by L2 (29 t/ha), mI5, (24 t/ha) and Haritha (19 t/ha). The lower yield potential of Haritha was noticed at each planting.

As okra did not suffer from fungal diseases as red onions there was a change in the type of agro chemicals used (from fungicides to insecticides) which is expected to modify the ecosystem in favor of another crop of red onion to follow in May-June-July.

* Tel: 032 2260506