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MUSKMELON (*Cucumis melo*) PRODUCTION USING HYDROPONICS AND FERTIGATION AS AFFECTED BY CONTAINER DESIGN

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Muskmelon (*Cucumis melo* L.) is a popular fruit that is suitable for planting in intensive systems using hydroponics or fertigation in closed environments and is thus suited for urban agriculture. The experiment was aimed at evaluating the productivity of muskmelon using different hydroponic systems in addition to fertigation in polybags. Treatments comprised of closed circulating systems with the deep-flow technique (DFT) using three different designs of growth containers namely, i) the triangular, ii) double-U and iii) U-shaped PVC containers. The fourth used an open fertigation system with plants grown in polybags with coconut fiber (coco peat) as the growth medium. Electrical conductivity (EC) of nutrient solution in triangular containers was higher than in the other systems especially during reproductive growth. The EC of nutrients in the solution was lowest with the double-U shaped among the different types of containers. The double-U system was superior to other systems as it gave the highest fresh fruit weight. No significant difference in fresh fruit weight was observed between the fertigation method and triangular containers. On the other hand, fruit quality as measured by the TSS (Brix 16) was highest in the U-shaped system compared to the other systems. The N, P, K, Ca and Mg content of leaf tissue of plants in the U-shaped container was also the highest compared to the other systems. During vegetative stage, Leaf Area Index (LAI) of plants grown in polybags was significantly higher than in the other systems but this did not result in higher fruit weight. In conclusion, use of either the U or Double-U shaped container were recommended as they gave higher fruit yield and quality as a result of better aeration and cooler growing temperature.

Keywords: hydroponic, deep flow technique, muskmelon, total soluble solids

ROLE OF KNOWLEDGE MANAG
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The increase in population has resulted in
Therefore, agriculture has become one of
the purpose of food production and food
areas. Agricultural resources and man po
growth of agriculture. Besidesthese, the oth
and extension is information which can
production in agricultural field related to the
factor in agriculture, skilled and effective
agriculture by continually increasing and en
countries, applying knowledge manageme
technology (ICT) are still in the early stage.
and identify the potential of using ICT and
that was used for this study was observation
analyzed using SPSS software. Results sho
shortage of ICT tools, level of education
information and workers training are th
management and knowledge transfer (KT) in

Keywords: Peri-urban agriculture, Knowledg