THE EFFECT OF POTASSIUM NITRATE AND PLASTIC CAP ON QUALITY AND QUANTITY OF EARLY (PRECOCITY) AND TOTAL YIELD OF WATERMELON (*Citrulus vulgaris*) 'CHARLESTON GRAY'

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The effect of potassium nitrate (KNO_3) on seed germination of watermelon ('Charleston Gray') was studied. Seeds were soaked in solutions, at 0.1, 0.2 and 0.3 mol as well as 0.0 (distilled water) concentrations of KNO_3 for periods of 1, 2 and 4 days at 10°C which considered being the minimum required temperature for germination of watermelon seeds. Soaking increased the percentage of seed germination in 15°C but the duration of soaking did not show any significant difference. Concentrations of KNO_3 had significant effect and the highest germination percentage was related to the 0,3 mol concentration - The effects of soaking watermelon seed in KNO_3 with mentioned concentrations for two days, drying and storing the seed for one month, planting in three different dates (Feb-20/March 16 and Apri19) on early and total yield was investigated in the field. Different dates of planting had significant effect on early yield and it's sugar content. The highest mean for early yield was obtained from both planting dates (Feb.20 and April.9). Different concentrations of KNO_3 showed very significant effect on yield, average weight of fruit and sugar content of early crop. The highest yield was obtained from 0.1 and 0.3 concentrations, and the best result for average weight and sugar index was 0.3 concentration. Therefore the result of this experiment has suggested the use of 0 3 mol concentration on KNO_3 for producing early crop. Neither the time of planting, nor the concentration of KNO_3 had any significant effect on total yield. The effects of soaking watermelon seeds for two days at mentioned concentrations and planting the dried seed at the different dates (Feb.20 March16), plus having plastic cap on seedlings during ear1y stage of growth was investigated on early crop yield. Ear1y planting had significant effect only on sugar content.

SIMPLIFIED TECHNIQUE FOR SCHEDULING SPRINKLE IRRIGATION ON VEGETABLE CROPS IN BRAZIL

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Irrigation scheduling is one of the man factors affecting plant growth, production and quality. Vegetable crops are very sensitive to either water deficit or excess. Several irrigation scheduling and management techniques are available but vegetable growers in general find them expensive, cumbersome, time consuming and do not perceive any advantage by employing such. A practical scheduling methodology based on evapotranspiration and irrigation frequency tables for any specific crop, which takes into

account basic crop, soil and climate information is presented. Irrigation management at the beginning and at the end of crop growing season is also of concern in this work.