

## **Influence of Planting Date Upon Growth and Objective Component of Two Carrot Cultivars Grown in Riyadh Region of Saudi Arabia**

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**Abstract.** The demand of fresh vegetables, such as carrot have been increased in Saudi Arabia in recent years. Thus, field studies were undertaken to investigate the effect of planting dates, 14th October and 4th November on the growth and the objective component of two carrot cultivars (Chantenay and Nantes). The experiments were conducted during 1992/93 and 1994/95 seasons at Deirab Agricultural and Research Experimental Station, near Riyadh. Treatments were replicated four times and arranged in split-plot design. In general, the results showed that planting dates did not affect the leaf number, shoot length, carotenoids, total sugar and non reducing sugar for both seasons. However, the later planting date (4th Nov.) significantly reduce the total yield. Shoot fresh weight was also affected by the difference in planting dates. Analysis of variance showed no significant difference on the growth and yield between the two cultivars tested. No significant interaction was observed between cultivars and planting dates on the carrot growth and objective component.

### **Introduction**

Carrot (*Daucus carota*) L. is one of the popular vegetables in many countries and had very important nutritional value. The total carrot production in Saudi Arabia has increased from 18084 tons in 1988 to 23881 tons in 1992 [1]. Almost 65% of the total production in Saudi Arabia is produced in Riyadh region. Carrot is a cool season crop, the optimum temperature range is 16-18°C. Temperature higher than 28 °C was reported to reduce top growth and also the root becomes strong flavored [2, pp. 320-334]. Changes in environmental condition including the day and night temperature associated with planting date can affect carrot yield and its quality. Monthly mean of climatic data recorded during the two growing seasons is presented in Table 1. Carrot growth and root development were best at root temperature of 23 -28 °C and day / night temperature of 18/13°C [3]. Quagliotti [4] reported an increase in carrot vegetative growth at 20 and 26°C but the ultimate plant size was smaller than that at 14°C. The root : top ratio is