

Effect of GA3 on yield and fruit characteristics of Sakkoty date palm under Aswan conditions

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ABSTRACT

Different GA3 concentrations (0, 50, 100 and 150 ppm) were sprayed on Sakkoty date palm cultivar to study their effect on yield and fruit characteristics. Bunch weight was increased with 100 ppm in both seasons. GA3 applications at the higher concentrations to pollinated fruits, 50 days after full bloom, increased average fruit weight, flesh weight, fruit length, fruit diameter and fruit moisture content percentage in both seasons. GA3 applications at the different concentrations caused a slight reduction regarding total soluble solids percentage, reducing sugars percentage and total sugars percentage and increase of total acidity percentage during the two seasons.

It could be concluded that GA3 at concentrations 100 and 150 p.p.m. gave the highest yield with best quality and fruit characteristics.

Key Word: *Date palm, fruit characteristics, GA3, Phoenix dactylifera, quality, yield.*

Introduction

Certain chemicals, extractable from plant tissues, cause significant deviations in growth and development when applied in relatively minute quantities to whole plants. These are the natural or endogenous growth regulators. At present, five groups of substances are generally recognized: auxins, gibberellins,

cytokinins, abscisic acid, and ethylene. Also, there are various natural growth inhibitors.

No plant process stands isolated from all the other processes; it may be a system, but it also forms part of the overall system of plant growth and development. Plant growth regulators may be defined as substances capable of controlling key points in a living plant