

Study of anatomical composition and hormonal content for date palm fruits *Lelwi* cultivar pollinated by four pollen cultivars

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Summary

The study was carried out in a private orchard in Al –Fayhaa –Basra region in the season 2012 for date palm cultivar *lelwi* that pollinated by four pollen varieties (Ghannamy Ahmer , Samasmy ,Khikri ,Ghannamy Akhdar) .

The study included anatomical characters for fruits during physiological stage (Khalal) , which represent thickness of epidermis, thickness of stone layer, thickness of outer mesocarp ,thickness of inner mesocarp (pith), thickness of tannins layer and diameter of pith cells. The anatomical study was supplemented by hormonal study included some plant hormones like (Auxins, Gibberellin, Cytokinin and Abscisic acid).

The anatomical sections of fruits that pollinated by samasmy pollen showed significant effect on thickness of epidermis, thickness of stone layer, thickness of tannins layer , diameter of pith cell and thickness of inner mesocarp ,where recorded (19, 112, 955, 161 μ m and 4.3mm) respectively. The results of hormonal study showed that fruits which pollinated by khikri pollen had significant increases on substance like Auxins, Gibberellin and substance like abscisic acid, where reached 281.10, 399.00, 531.22 microgram/kg fresh weight respectively.

Key word: anatomy, hormones, date palm