



Date Palm with Vitazyme application

Researchers: Zerhoun Messaoudi, Ph.D., Hakim Outghouliast, A. Touhami Ouazzani, and L. Ait Haddou

Research Institution: Department of Arboriculture—Viticulture, National School of Agriculture, Meknes, Morocco, and Laboratory of Botany, Biotechnology and Plant Protection, Faculty of Sciences, University of Ibn Tofail, Kenitra, Morocco

Location: Tafilalet Oases, Tinejdad, Errachidia, Morocco

Variety: Mejhoul date palm

Soil type: saline

Experimental design: Two products, Protifert LMW 6.3 and Vitazyme were evaluated in a completely randomized block design (three replications and three trees per treatment, or 27 total trees), on a date palm plantation to determine the effect of the products on yield and fruit quality parameters.

- 1 Control
- 2 Protifert LMW 6.3
- 3 Vitazyme

Fertilization: unknown

Vitazyme application: Three spray applications: after pollination in late April, and again in mid-July and mid-August of 2016; a 1.3 ml/liter of water dilution was used.

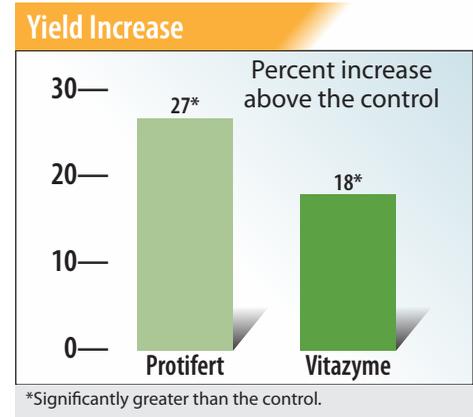
Protifert LMW 6.3 application: as with Vitazyme, three spray applications were made: after pollination in late April, and again in mid-July and mid-

August of 2016; a 4.0 ml/liter of water dilution was used. Protifert LMW 6.3 is a fertilizer containing 8% organic nitrogen, 25% organic carbon, and 39% total amino acids, of which 13% are free amino acids. It is made by Sicit 2000, an Italian company.

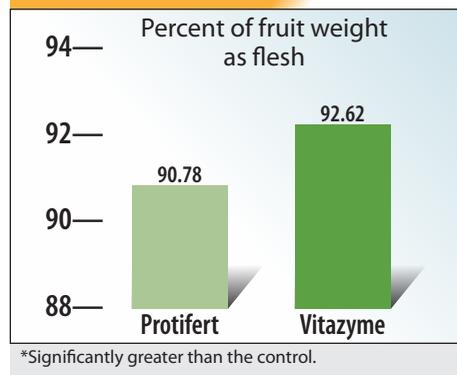
Quality results:

- Fruit length. Protifert produced somewhat longer fruit than Vitazyme and the control.
- Fruit width. Both Vitazyme and Protifert produced wider fruit.
- Fruit total size. Likewise, fruit size was enhanced by both Vitazyme and Protifert.

Yield results:



Percent Fruit Flesh



Fresh weight, seed weight, sugar content, and pulp/fruit ratios were also determined, with both Vitazyme and Protifert increasing these parameters, but data are not available.

Conclusions: This date palm study on an oasis in Morocco revealed that both products increased the yield and quality of dates, with yield increases above the control of 27% for Protifert LMW 6.3 and 18% for Vitazyme. This report is incomplete for all parameters, but significant increases occurred for all quality and yield parameters for both products. A comparison between the products is not legitimate because Protifert LMW 6.3 contains fertilizer elements, whereas Vitazyme is a true biostimulant containing no fertilizer elements. Nevertheless, Vitazyme performed nearly as well as the Protifert formulation, and is seen to be an excellent supplement for date palm production in North Africa.