



## SUMMARY TRIAL REPORT

# Water savings and biomass production increase of *Phoenix dactylifera* (Palm tree) with the use of TerraCottem<sup>®</sup> Universal

The study done in 1991 was aimed at evaluating the effects of TerraCottem<sup>®</sup> Universal on irrigation frequency and (pre)nursery biomass production of *Phoenix dactylifera* (palm tree).



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### Conakry, Guinea

1540 palm trees were included in the nursery trial. Their standard peat and fertiliser was the control substrate. Three different application rates of TerraCottem<sup>®</sup> were tested and premixed with peat:

- 6 kg / m<sup>3</sup>
- 10 kg / m<sup>3</sup>
- 20 kg / m<sup>3</sup>

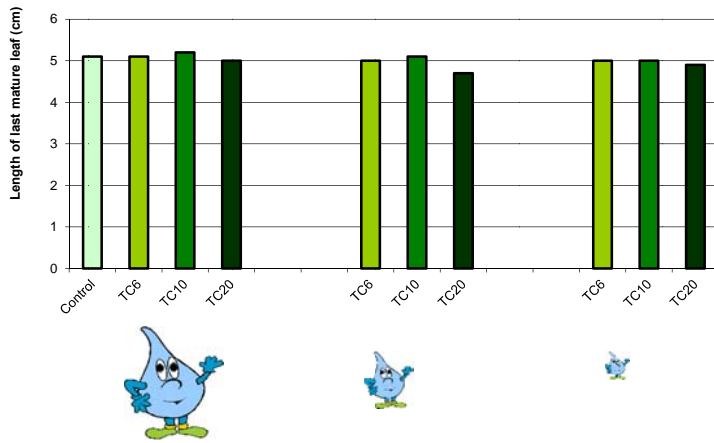
Three irrigation regimes were used:

- 1 time every day (1/1)
- 1 time every 2 days (1/2)
- 1 time every 4 days (1/4)

The experiment started on September 17th, 1991 and ended August 23th, 1992.

## 1. Prenursery Biomass Production

<i>Length of the last mature leaf (cm)</i>			
<b>Watering Regime</b>	<b>1/1</b>	<b>1/2</b>	<b>1/4</b>
<i>Control</i>	5.1		
<i>TC 6 (6g/l soil)</i>	5.1	5.0	5.0
<i>TC 10 (10g/l soil)</i>	5.2	5.1	5.0
<i>TC 20 (20g/l soil)</i>	5.0	4.7	4.9

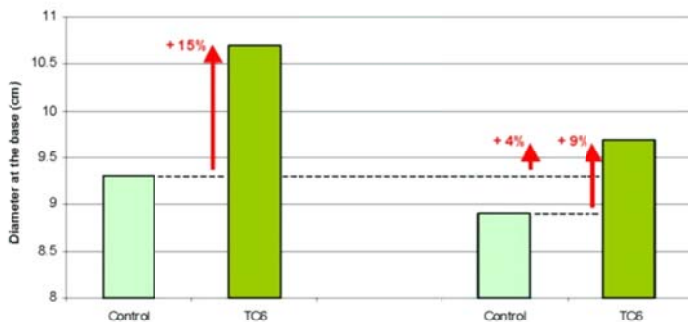


The application of the TerraCottem® Universal soil conditioner in a palm tree prenursery allows watering frequency and water consumption to be reduced by 300%, while maintaining the same seedling quality.



## 2. Nursery Biomass Production

Diameter at the base (cm)			
	Full irrigation	Extra Yield	
Control	9.30		
TC 6 (6g/l soil)	10.70	+ 15%	
	Half Irrigation	Extra Yield	
	8.90		
	9.70	+ 4% in comparison to full irrigation	
		+ 9% in comparison to half irrigation	



The application of TerraCottem® Universal significantly increases biomass production and tree quality with normal irrigation. Even with a reduction of 50% in irrigation, biomass production and plant quality are enhanced.



### CONCLUSIONS:

TerraCottem® Universal quantity: 6 kg/ m<sup>3</sup> of soil

Water consumption:	- 50%
Fertilizer consumption:	- 100%
Labour:	- 50%
Irrigation maintenance:	- 50%
Production:	+ 4% (with only half of the irrigation amount)