PALMELIT
OIL PALM SEEDS – CIRAD INSIDE

Technical characteristics

PalmElit-Cirad® #S DExLM variety

PalmElit has been distributing PalmElit-CIRAD® DExLM germinated seeds for many years in Asia. The variety distributed is hardy and there is ample evidence that it is well suited to different environments. In addition, PalmElit always selects the most efficient planting material to best value the fertilization provided. The optimal yield will be obtained with reasoned fertilization (Cf: PalmElit Oil Palm Grower's Handbook).

The new product **PalmElit-CIRAD® #S DExLM** is a unique selection of the shortest planting material available for the planters.

	***Tenera* Deli x La Mé** **PalmElit-CIRAD® #S DExLM**		
	Average data in sandy soils [*1] **(Planting density: 143 palms/Ha)**		
	No water deficit	**Water deficit ~200 mm / year**	**Water deficit ~400 mm / year**
Tenera Hybrid	Yes		
Drought Tolerance	Tolerant		
Average yearly height increment in cm	**46 - 50 cm**	**44 - 48 cm**	**42 - 46 cm**
Bunch production (FFB) in adult age (> 7 years'old) in t / ha / year real conditions	30-32 t	25-27 t	18-20 t
Bunch production (FFB) in adult age[*2] (> 7 years'old) in t / ha / year (genetic trials)	31,5 t – 33,6 t	26,2 t – 28,3 t	18,9 t – 21 t
Average bunch weight in adult age	< 18 kg	< 18 kg	< 18 kg
Oil mill extraction rate (CPO OER)	> 26 %	> 25 %	> 24 %
Oil laboratory extraction rate (CPO O/B) [*2]	~30 %	~29 %	~28 %
Oil mill extraction rate (PKO)	2-3 %	2-3 %	2-3 %
Oil laboratory extraction rate(PKO) [*2]	2,5-3,5%	2,5-3,5%	2,5-3,5%
Effective oil production (CPO) en t / ha / year	7,8 t – 8,5 t	6,2 t – 6,8 t	4,3 t – 4,7 t
Total oil production (CPO + PKO) in t / ha / year	> 8,4 t	> 6,7 t	> 4,6 t
Iodine value (Wijs)	> 54	> 54	> 54
First harvest	2 years	2,5 years	3 years

These data come from PalmElit's experimentation fields for the non water deficit conditions and were evaluated for the 200 and 400 mm water deficit conditions. They can vary according the crop management.

[*1] One must understand than the genetic performance of any oil palm planting material is impacted by the environmental conditions: type of soils, climatic conditions. The most relevant is the water deficit (drought).
We give our results for average sandy soils where our variety can yield 31tons, **but in excellent conditions, the yield can be 45 tons**

[*2] The oil extraction rate can be given in laboratory data (oil to bunch) or estimated in the mill (OER, oil extraction rate) there is a 15% difference between the two forms.

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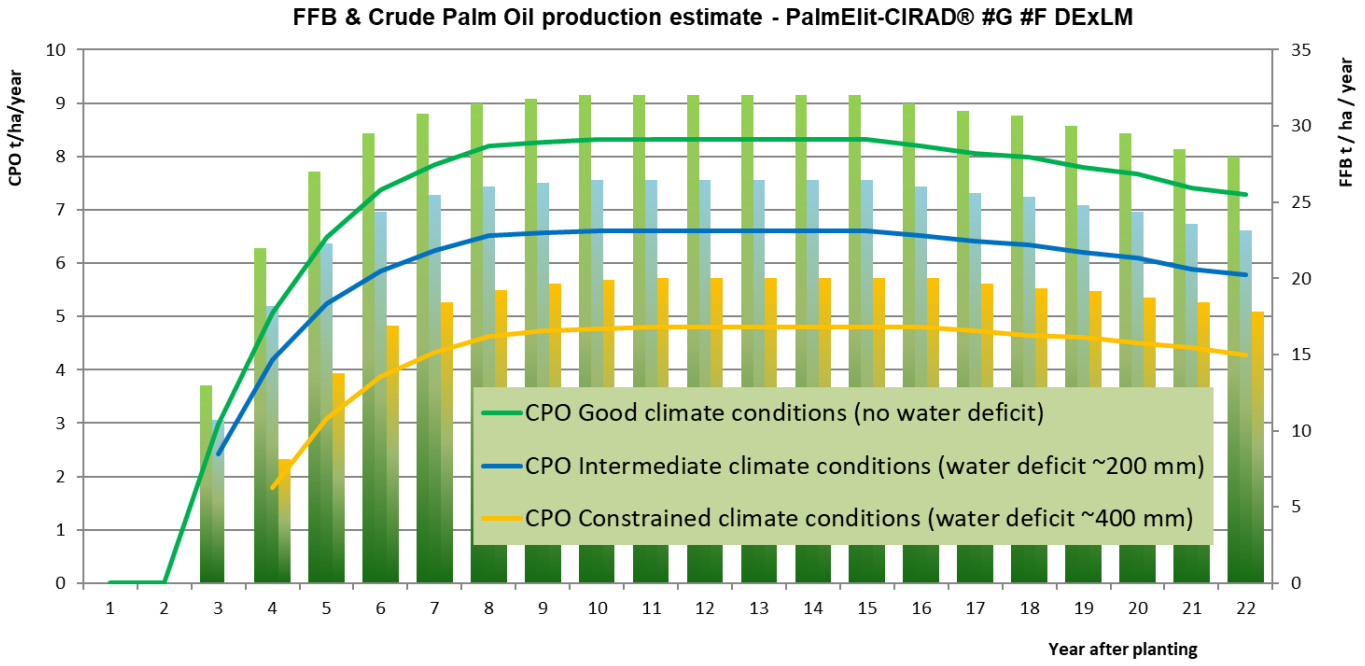
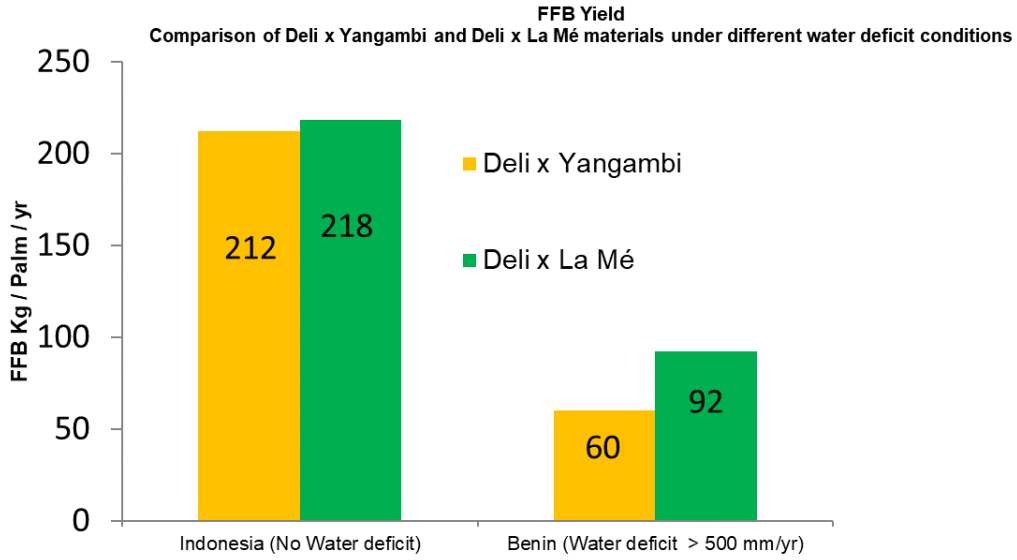
FFB & CPO yield estimations according the water deficit



We have observed the true potential of CIRAD® varieties in our trials in Indonesia, North Sumatera, under good climate (rainfall and sunlight) conditions, with sandy soils. It is represented by the green curve (CPO) and bars (FFB) in the following graphic which are field data.
As an indication we have estimated production with 200 mm (blue curve) and 400 mm (yellow curve) of water deficit, based on results from a network of plantations using CIRAD® varieties.

Drought Tolerance

PalmElit-Cirad® Deli x La Mé planting material produces a large number of bunches. This specific trait enables to maintain good production even in stress conditions such as drought. When compared with Deli x Yangambi, PalmElit-Cirad® Deli x La Mé produces 53% more with 550mm water deficit.



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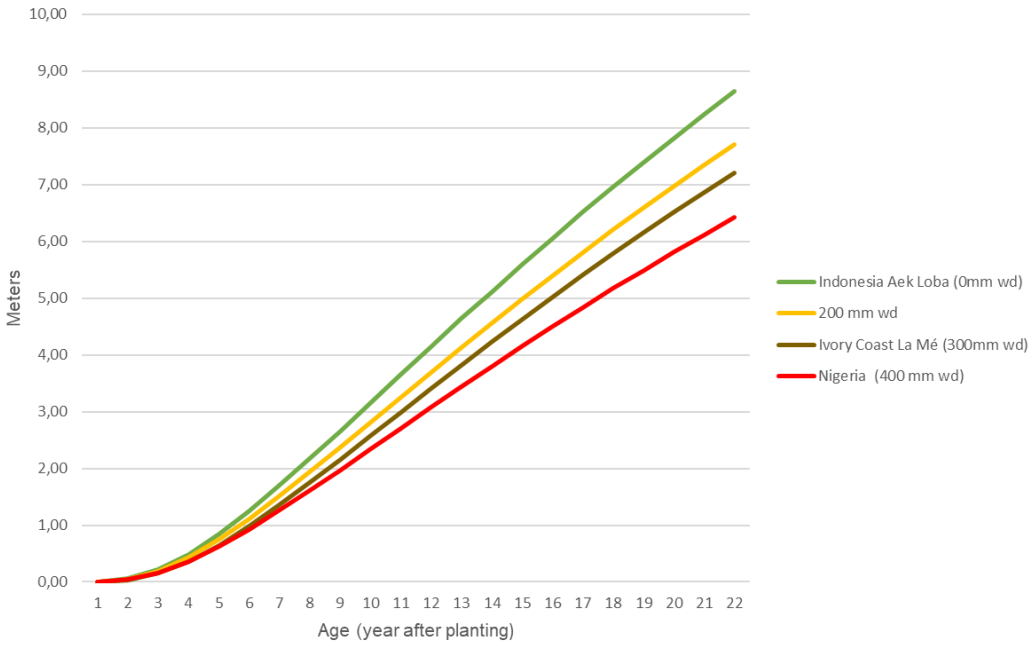
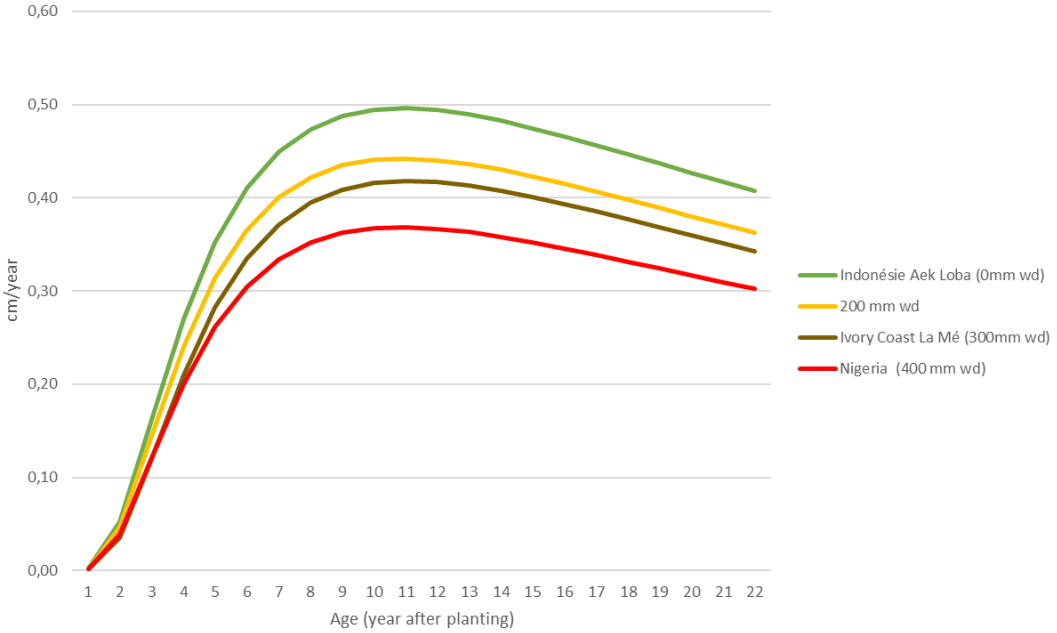
Vertical growth by age (stem height in meter) according the water deficit



Stem vertical growth in cm/year according the water deficit



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Oil composition (indicative values)

% carotene	0.077
Iodine value	55.3
% saturated fatty acids	47.4
% unsaturated fatty acids	52.6
% C14:0 myristic acid	0.7
% C16:0 palmitic acid	39.9
% C18:0 stearic acid	6.7
% C18:1 oleic acid	41.2
% C18:2 linoleic acid	11.4