Height (cm) of seedlings juçara in four types of substrates and 4 doses of fertilizer at 150 days after emergence .

UNIVERSIDADE ESTADUAL PAULISTA
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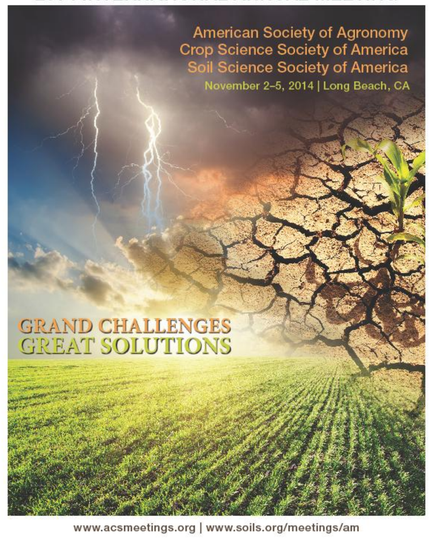
Campus de Registro

Seedlings of *Euterpe Edulis* Mart Production from Agroindustry Waste and Sewage Sludge Substrates



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INTRODUCTION

The search for alternatives to environmentally friendly disposal of sewage sludge has been one of the biggest challenges in wastewater treatment processes, and the use of these materials in the production of forest seedlings are emerging as a promising technique. This study evaluated the use of organic compounds produced from agro-industrial residues of peach palm and sewage sludge with different levels of fertilizer as a substrate for production of *Euterpe edulis* Mart seedlings, a kind of endangered Atlantic Forest; and compare seedling growth with substrates of sewage sludge and a commercial substrate.

MATERIAL AND METHODS

A completely randomized design (CRD) was used in a factorial 3 x 4, with 3 substrates of sewage sludge and residues from agriculture palm peach, 4 levels (0, 2.0, 4.0 and 6.0 g dm^{-3}) granular fertilizer and a commercial substrate. Were measured diameter, plant height, H / D, dry matter of shoots, root dry matter and macronutrients in the shoot.

CONCLUSION

The use of substrate composed sewage sludge + peach palm 1:1 v: v, resulted in the production of seedlings of *E. edulis* with best quality; Increased doses of granulated fertilizer resulted in significant effects on seedling quality, and use economically viable dose of 2.0 g L-1 of this fertilizer. The use of sewage sludge and bark of peach palm viability as a substrate in the production of seedlings of this species, representing an environmental safe alternative.

RESULTS

Height (cm) of seedlings of E. edulis in four types of substrates and 4 doses of fertilizer at 150 days after emergence.

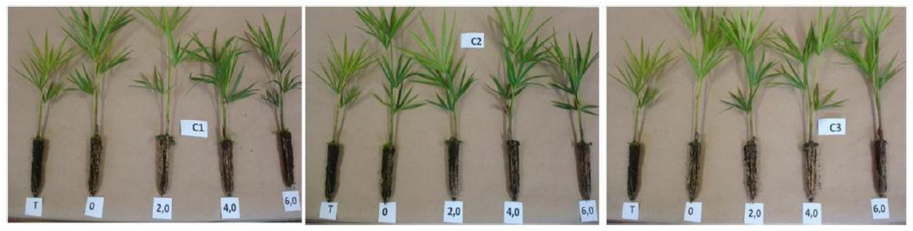
	Tempo (dias)								
	H			D			H/D		
	Substratos								
Fertiliz. ($g.dm^{-3}$)	SI	SII	SIII	SI	SII	SIII	SI	SII	SIII
0	20,4A	21,7A	21,0A	6,0	6,1	6,5	3,3A	3,5ª	3,2ª
2	16,5A	15,4A	18,1A	6,0	6,1	5,9	2,7B	2,5B	3,1ª
4	12,9B	18,1A	16,2A	6,1	6,5	5,8	2,1B	2,7ª	2,8ª
6	15,7A	17,5A	16,6A	5,6	6,3	5,4	2,0A	2,7B	3,1ª
S. Comerc.		12,7			5,2			2,5	
CV%		6,1			9,5			6,8	
Regressão	L*	L*	L*	ns	ns	L*	L*	Q*	Q*
F		*			ns			*	

Médias seguidas da mesma letra maiúscula na linha (comparando substratos) não diferem entre si pelo teste de Scott Knott (P<0,05). ns= não significativo;* significativo (P<0,05). L=Regressão linear; Q=Regressão Quadrática.

Dry matter of shoot (SDM), root dry matter (RDM) and Dickson Quality Index (DQI) seedlings of E. edulis at 150 days after emergence.

	Substratos								
Fertiliz. ($g.L^{-1}$)	SI	SII	SIII	SI	SII	SIII	SI	SII	SIII
	MSPA (g)			MSR (g)			IQD		
0	1,2A	1,1A	1,3A	0,8	0,8	0,9	0,4	0,4	0,5
2	1,2A	0,9B	1,1A	0,8	0,7	0,8	0,5	0,4	0,4
4	0,9B	1,2A	1,1A	0,6	0,7	0,9	0,4	0,4	0,5
6	0,8A	0,8A	0,8A	0,6	0,6	0,6	0,4	0,3	0,3
S Comerc.	0,6			0,4				0,3	
CV%		9,6			6,5			5,4	
Regressão	L*	Ns	L*	ns	L*	Ns	Q*	Ns	Ns
F		*			Ns			Ns	

Médias seguidas da mesma letra maiúscula na linha (comparando substratos) não diferem entre si pelo teste de Scott Knott (P<0,05). ns= não significativo;* significativo (P<0,05). L=Regressão linear; Q=Regressão Quadrática.



E.edulis seedlings produced with different substrates and fertilizer doses.

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