

Source	Df	Sum of Squares	Mean Square	F	Sig.
Hormone types (HT)	1	0	0	0	0.95 <sup>ns</sup>
Hormone concentration (HC)	2	2.38	1.19	1.52	0.23 <sup>ns</sup>
Marcotting postion (MP)	2	106.15	53.07	67.7	0.00*
HT*HC	1	1.03	1.03	1.31	0.26 <sup>ns</sup>
HT*MP	2	0.03	0.02	0.02	0.98 <sup>ns</sup>
HC*MP	4	2.04	0.51	0.65	0.63 <sup>ns</sup>
HT*HC*MP	2	0.98	0.49	0.62	0.54 <sup>ns</sup>
Error	75	58.79	0.78		
Total	89	171.4			

**Appendix 1:** ANOVA Table for Root length.

\*=significant ( $p < 0.05$ ).

Ns = not significant different.

Source	Sum of Squares	df	Mean Square	F	Sig.
Hormone types (HT)	0.001	1	0.001	0.003	0.955 <sup>ns</sup>
Hormone concentration (HC)	0.392	2	0.196	1.148	0.323 <sup>ns</sup>
Marcotting postion (MP)	6.646	2	3.323	19.455	0.00*
HT*HC	0.027	1	0.027	0.156	0.694 <sup>ns</sup>
HT * MP	0.235	2	0.117	0.687	0.506 <sup>ns</sup>
HC * MP	0.135	4	0.034	0.198	0.939 <sup>ns</sup>
HT * HC * MP	0.208	2	0.104	0.609	0.547 <sup>ns</sup>
Error	12.81	75	0.171		
Total	973.241	90			

**Appendix 2:** ANOVA Table for Root collar diameter.

\*=significant ( $p < 0.05$ ), Ns = not significant different.

Source	Sum of Squares	df	Mean Square	F	Sig.
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Hormone types (HT)	2.628	1	2.628	2.014	0.16 <sup>ns</sup>
Hormone concentration (HC)	0.077	2	0.039	0.03	0.971 <sup>ns</sup>
Marcotting postion (MP)	254.117	2	127.058	97.381	0.00*
HT * HC	0.234	1	0.234	0.18	0.673 <sup>ns</sup>
HT * MP	0.34	2	0.17	0.13	0.878 <sup>ns</sup>
HC * MP	0.842	4	0.21	0.161	0.957 <sup>ns</sup>
HT * HC * MP	0.156	2	0.078	0.06	0.942 <sup>ns</sup>
Error	97.856	75	1.305		
Total	10596.3	90			

**Appendix 3:** ANOVA Table for Root number.

\*=significant (p<0.05).

Ns = not significant different.

Source	Sum of Squares	df	Mean Square	F	Sig.
Hormone types (HT)	0	1	0	0.002	0.968 <sup>ns</sup>
Hormone concentration (HC)	0.204	2	0.102	0.441	0.645 <sup>ns</sup>
Marcotting postion (MP)	78.258	2	39.129	169.149	0.00*
HT * HC	0.059	1	0.059	0.254	0.616 <sup>ns</sup>
HT * MP	0.005	2	0.002	0.01	0.99 <sup>ns</sup>
HC * MP	0.549	4	0.137	0.594	0.668 <sup>ns</sup>
HT * HC * MP	0.049	2	0.024	0.105	0.9 <sup>ns</sup>
Error	17.35	75	0.231		
Total	1255.7	90			

**Appendix 4:** ANOVA Table for Biomass assessment.

\*=significant (p<0.05).

Ns = not significant different.