

Table (2): Effect of different concentrations and frequencies of application of chitosan on some growth aspects in the spring growth cycle and leaf pigments of Succary mango trees during 2015 and 2016 seasons.

Treatment	Shoot length (cm)		No. of leaves /shoot		Leaf area (cm) ²		Chlorophyll a (mg/100g F.W)		Chlorophyll b (mg/100g F.W)		Total chlorophylls (mg/100g F.W)		Total carotenoids (mg/100g F.W)	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Control	15.0	16.3	12.0	13.0	77.0	78.1	3.1	3.3	1.0	0.9	4.1	4.2	0.9	1.0
Chitosan at 0.25% once	16.1	17.4	14.0	15.0	79.0	80.2	4.0	4.1	1.4	1.3	5.4	5.4	1.2	1.4
Chitosan at 0.25% twice	17.6	18.6	16.0	17.0	81.3	82.5	4.9	5.1	1.8	1.9	6.7	7.0	1.5	1.7
Chitosan at 0.25% thrice	17.7	18.8	16.0	17.6	81.6	82.8	5.0	5.2	1.9	2.0	6.9	7.2	1.6	1.8
Chitosan at 0.50% once	19.0	20.0	18.0	19.0	84.9	86.0	6.1	6.8	2.2	2.4	8.3	9.2	2.0	2.2
Chitosan at 0.50% twice	20.2	21.9	19.0	21.0	88.0	89.1	7.3	7.9	2.7	2.8	10.0	10.7	2.4	2.6
Chitosan at 0.50% thrice	20.3	22.2	19.0	21.0	88.3	89.5	7.4	8.0	2.8	2.9	10.2	10.9	2.5	2.7
Chitosan at 1.0 % once	19.3	20.1	18.3	19.3	85.0	86.1	6.2	6.9	2.3	2.5	8.5	9.4	2.1	2.3
Chitosan at 1.0 % twice	20.6	22.0	19.3	21.3	88.3	89.4	7.4	8.0	2.8	2.9	10.2	10.9	2.5	2.7
Chitosan at 0.1 % thrice	20.8	22.3	19.4	21.6	88.6	89.7	7.5	8.1	2.9	3.0	10.4	11.1	2.6	2.8
New L.S.D at 5%	1.0	0.8	1.0	1.0	1.0	1.1	0.4	0.6	0.2	0.3	0.5	0.4	0.2	0.3

Table (3): Effect of different concentrations and frequencies of application of chitosan on the leaf chemical composition of Succary mango trees during 2015 and 2016 seasons.

Treatment	Leaf N %		Leaf P %		Leaf K %		Leaf Mg %		Leaf Mn (ppm)		Leaf Fe (ppm)		Leaf Zn (ppm)	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Control	1.60	1.59	0.112	0.120	1.11	1.15	0.59	0.64	49.1	48.9	50.3	51.0	49.1	50.0
Chitosan at 0.25% once	1.68	1.70	0.152	0.160	1.17	1.21	0.64	0.71	51.0	50.9	51.9	52.6	51.1	52.0
Chitosan at 0.25% twice	1.78	1.81	0.194	0.202	1.23	1.28	0.69	0.76	52.7	53.0	54.5	55.3	53.2	54.1
Chitosan at 0.25% thrice	1.80	1.82	0.196	0.204	1.24	1.29	0.70	0.77	53.0	53.1	55.0	55.4	53.3	54.2
Chitosan at 0.50% once	1.91	1.95	0.241	0.250	1.33	1.41	0.76	0.81	55.0	55.9	58.0	58.7	56.0	57.0
Chitosan at 0.50% twice	2.01	2.04	0.280	0.289	1.41	1.50	0.81	0.86	57.1	58.0	60.0	61.0	58.3	59.4
Chitosan at 0.50% thrice	2.02	2.05	0.282	0.290	1.42	1.51	0.82	0.87	57.2	58.3	60.3	61.3	58.4	59.6
Chitosan at 1.0 % once	1.93	1.96	0.243	0.251	1.34	1.42	0.77	0.82	55.1	56.0	58.3	59.0	56.3	57.1
Chitosan at 1.0 %twice	2.03	2.05	0.281	0.290	1.42	1.51	0.82	0.87	57.2	58.1	60.3	61.2	58.4	59.5
Chitosan at 0.1 %thrice	2.04	2.06	0.283	0.292	1.44	1.53	0.83	0.88	57.3	58.6	60.4	61.4	58.8	59.7
New L.S.D at 5%	0.06	0.04	0.021	0.031	0.03	0.04	0.03	0.02	1.4	1.6	1.3	1.0	1.2	1.3

Table (4): Effect of different concentrations and frequencies of application of chitosan on the percentages of fruit retention, yield and some physical characteristics of Succary mango trees during 2015 and 2016 seasons.

Treatment	Fruit retention %		No. of fruits/tree		Yield/tree (kg.)		Fruit weight (g.)		Fruit height (cm)		Fruit diameter (cm)		Pulp %	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Control	0.8	0.9	199.0	201.0	30.8	31.5	155.0	156.9	7.6	7.7	5.6	5.5	61.9	62.1
Chitosan at 0.25% once	1.0	1.2	215.0	218.0	34.8	36.0	162.0	165.0	8.0	8.1	6.0	5.9	63.0	63.9
Chitosan at 0.25% twice	1.3	1.6	229.0	232.0	40.3	41.3	176.0	178.0	8.5	8.6	6.5	6.6	64.5	65.4
Chitosan at 0.25% thrice	1.4	1.7	230.0	233.0	40.8	41.9	177.6	180.0	8.6	8.7	6.6	6.7	64.7	65.8
Chitosan at 0.50% once	1.7	2.0	243.0	247.0	45.7	47.2	188.0	191.0	9.0	9.1	7.1	7.2	67.3	69.0
Chitosan at 0.50% twice	2.0	2.3	256.0	260.0	51.5	51.7	201.0	199.0	9.4	9.5	7.6	7.7	69.9	71.9
Chitosan at 0.50% thrice	2.1	2.4	257.0	261.0	51.9	52.2	202.0	200.0	9.5	9.6	7.7	7.8	70.2	72.0
Chitosan at 1.0 % once	1.8	2.1	244.0	248.0	46.1	47.5	189.0	191.5	9.1	9.2	7.2	7.3	67.4	69.0
Chitosan at 1.0 %twice	2.1	2.4	257.0	261.0	51.9	52.2	202.0	200.0	9.5	9.6	7.7	7.8	70.0	72.0
Chitosan at 0.1 %thrice	2.2	2.5	259.0	262.0	52.6	52.7	203.0	201.0	9.6	9.7	7.8	7.9	70.4	72.3
New L.S.D at 5%	0.2	0.3	11.0	13.0	0.8	0.9	4.9	4.6	0.2	0.3	0.2	0.3	0.7	0.8

Table (5): Effect of different concentrations and frequencies of application of chitosan on some physical and chemical characteristics of the fruit of Succary mango trees during 2015 and 2016 seasons.

Treatment	Edible/non-edible portions of fruit		T.S.S. %		Total sugars %		Reducing sugars %		Total acidity %		Vitamin C (mg/100 g pulp)		Total fibre %	
	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
Control	1.62	1.64	14.8	15.0	8.9	9.0	3.0	2.9	0.390	0.385	41.3	42.0	0.95	1.00
Chitosan at 0.25% once	1.70	1.77	15.1	15.4	9.3	9.4	3.4	3.3	0.361	0.356	43.0	43.8	0.88	0.91
Chitosan at 0.25% twice	1.82	1.89	15.5	15.9	9.7	9.8	3.7	3.7	0.329	0.324	45.0	45.8	0.81	0.83
Chitosan at 0.25% thrice	1.83	1.92	15.6	16.0	9.8	9.9	3.8	3.8	0.328	0.322	45.3	46.1	0.80	0.80
Chitosan at 0.50% once	2.06	2.23	15.9	16.3	10.9	11.0	4.2	4.1	0.301	0.294	48.0	48.7	0.71	0.69
Chitosan at 0.50% twice	2.32	2.56	16.6	16.7	11.4	11.6	4.5	4.4	0.285	0.279	50.0	51.0	0.59	0.57
Chitosan at 0.50% thrice	2.36	2.57	16.7	16.8	11.5	11.7	4.6	4.5	0.283	0.277	50.3	51.3	0.57	0.55
Chitosan at 1.0 % once	2.07	2.26	16.0	16.4	11.0	11.0	4.3	4.2	0.299	0.293	48.1	49.0	0.70	0.68
Chitosan at 1.0 %twice	2.33	2.57	16.7	16.8	11.5	11.7	4.6	4.5	0.283	0.277	50.2	51.3	0.58	0.56
Chitosan at 0.1 %thrice	2.38	2.61	16.8	16.9	11.6	11.8	4.7	4.6	0.280	0.275	50.5	49.3	0.56	0.54
New L.S.D at 5%	0.08	0.06	0.2	0.3	0.2	0.2	0.2	0.2	0.014	0.014	1.1	1.2	0.03	0.04