

Table (3). Vegetative growth of globe artichoke as affected by foliar spray with some natural plant extracts during 2012 / 2013 and 2013 / 2014 seasons

Characters Treatments	Plant height (cm)		Leaf area/plant (m ²)		Dry weight of leaves/plant (gm)		Number of shoots/ plant	
	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014
Control (tap water)	58.5 e	51.4d	3.636e	3.190e	77.37c	60.44d	2.7d	2.6d
Garlic extract at 1ml/L	65.1 d	55.2d	3.806e	3.242e	79.48c	64.70d	3.1d	2.9cd
Garlic extract at 2ml/L	75.1 c	63.7c	4.279d	3.797d	86.92bc	73.32c	4.03c	3.2c
Garlic extract at 3ml/L	83.1 b	75.5ab	4.853b	4.384bc	95.73ab	82.03b	4.9ab	4.3ab
Moringa extract at 1ml/L	80.1 b	71.9b	4.643c	4.229c	91.14b	78.35bc	4.5bc	4.0b
Moringa extract at 2ml/L	87.4 a	79.0 a	5.019ab	4.519ab	102.54a	86.15ab	5.0ab	4.5a
Moringa extract at 3ml/L	88.6 a	79.9 a	5.092a	4.6177a	105.82a	92.41a	5.4a	4.7a

Means with the same letters are not significantly differed at 5% according to Duncan's multiple range test.

Table (4). Yield distribution of globe artichoke as affected by foliar spray with some natural plant extracts during 2012 / 2013 and 2013 / 2014 seasons

Characters Treatments	Early yield (ton/fed.)		Middle yield (ton/fed.)		Late yield (ton/fed.)		Total yield (ton/fed.)	
	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014
Control (tap water)	0.344d	0.337d	1.077e	0.989d	2.815f	2.581g	4.236f	3.908f
Garlic extract at 1ml/L	0.368d	0.396c	1.683d	1.421c	2.997e	2.693f	5.048e	4.510e
Garlic extract at 2ml/L	0.475c	0.414c	2.313c	2.047b	3.392d	2.837e	6.181d	5.298d
Garlic extract at 3ml/L	0.604a	0.529b	2.854ab	2.540a	3.681bc	3.155c	6.907c	5.957c
Moringa extract at 1ml/L	0.554b	0.504b	2.789b	2.472a	3.564c	2.981d	7.139bc	6.224bc
Moringa extract at 2ml/L	0.621a	0.583a	2.895ab	2.594a	3.814ab	3.295b	7.330ab	6.472ab
Moringa extract at 3ml/L	0.642a	0.610a	2.930a	2.659a	3.913a	3.426a	7.485a	6.695a

Means with the same letters are not significantly differed at 5% according to Duncan's multiple range test.

Table 5: Heads quality characteristics of globe artichoke as affected by foliar spray with some natural plant extracts during 2012 / 2013 and 2013 / 2014 seasons.

Characters Treatments	Head						Receptacle					
	Weight (g)		Length (cm)		Diameter (cm)		Fresh Weight (g)		dry matter (%)		TSS (%)	
	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014
Control (tap water)	121.99f	139.21e	8.0e	8.4d	6.21f	7.24f	40.1f	35.5f	15.97e	14.82e	9.05d	9.27c
Garlic extract at 1ml/L	147.10e	155.69d	8.9d	9.0d	6.64e	7.78ef	45.8e	38.9f	16.70d	15.49de	9.35cd	9.54bc
Garlic extract at 2ml/L	175.86d	184.81c	10.3c	10.7c	7.09d	8.34de	56.7d	47.4e	17.83c	16.25cd	9.58bc	9.75ab
Garlic extract at 3ml/L	210.96b	200.51b	11.7ab	11.6b	8.46b	9.51ab	67.5ab	60.6b	18.99b	17.58ab	9.88abc	9.98ab
Moringa extract at 1ml/L	191.62c	198.02b	11.0bc	11.2bc	7.85c	8.86cd	61.2c	51.4d	18.69b	17.13bc	9.67bc	9.87ab
Moringa extract at 2ml/L	223.55a	214.34a	11.8a	11.6b	8.09c	9.15bc	65.0bc	56.2c	19.17ab	17.96ab	10.11ab	10.06a
Moringa extract at 3ml/L	232.35a	220.44a	12.3a	12.5a	9.12a	9.96a	71.0a	64.7a	19.62a	18.56a	10.31a	10.15a

Means with the same letters are not significantly differed at 5% according to Duncan's multiple range test.

Table 6: Chemical composition of globe receptacles as affected by foliar spray with some natural plant extracts during 2012 / 2013 and 2013 / 2014 seasons.

	N (%)		P (%)		K (%)		Total carbohydrate (%)		Total sugars (%)		Total protein (%)	
	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014	2012/2013	2013/2014
Control (tap water)	1.29e	1.21d	0.162g	0.146e	2.32f	2.19e	1.13e	1.18d	4.15c	4.22f	8.06e	7.56d
Garlic extract at 1ml/L	1.39d	1.29d	0.174f	0.151e	2.45e	2.29e	1.18de	1.23d	4.34c	4.54e	8.69d	8.06d
Garlic extract at 2ml/L	1.54c	1.42c	0.191e	0.169d	2.65d	2.43d	1.28d	1.36c	4.82b	4.66de	9.63c	8.88c
Garlic extract at 3ml/L	1.67ab	1.52ab	0.233c	0.206b	3.01b	2.77b	1.54bc	1.61b	5.12ab	4.88bc	10.44ab	9.50ab
Moringa extract at 1ml/L	1.62bc	1.46bc	0.220d	0.191c	2.83c	2.61c	1.43c	1.46c	4.94b	4.79cd	10.13bc	9.13bc
Moringa extract at 2ml/L	1.66ab	1.49abc	0.246b	0.218ab	3.12ab	2.86ab	1.63ab	1.69ab	5.31a	5.03ab	10.38ab	9.31abc
Moringa extract at 3ml/L	1.73a	1.56a	0.265a	0.226a	3.20a	2.93a	1.69a	1.74a	5.46a	5.20a	10.81a	9.75a

Means with the same letters are not significantly differed at 5% according to Duncan's multiple range test.

