

Table 2. The free AA accumulation of tender leaves at different stages under treatments in August.

	1d ( $\mu\text{g/g FW}$ )			7d ( $\mu\text{g/g FW}$ )			14d ( $\mu\text{g/g FW}$ )		
	Control	M S	H S	Control	M S	H S	Control	M S	H S
<b>P-Ser</b>	67.82a $\pm$ 3.93	66.92a $\pm$ 5.71	56.71a $\pm$ 5.49	57.95ab $\pm$ 4.28	60.47a $\pm$ 1.33	48.08b $\pm$ 0.17	73.62a $\pm$ 7.54	52.72b $\pm$ 2.11	55.00ab $\pm$ 6.80
<b>PEA</b>	25.84a $\pm$ 2.21	27.89a $\pm$ 2.62	23.13a $\pm$ 1.68	27.04b $\pm$ 1.13	33.34b $\pm$ 0.63	48.46a $\pm$ 3.83	21.89c $\pm$ 0.41	27.95b $\pm$ 1.59	36.52a $\pm$ 2.25
<b>Asp</b>	351.99b $\pm$ 5.58	376.38ab $\pm$ 14.13	413.65a $\pm$ 2.11	277.75b $\pm$ 6.83	281.70ab $\pm$ 9.77	313.77a $\pm$ 6.54	212.35a $\pm$ 8.70	198.41a $\pm$ 5.28	200.66 a $\pm$ 11.87
<b>Thr</b>	60.24a $\pm$ 2.91	42.71b $\pm$ 2.06	38.37b $\pm$ 0.49	45.39a $\pm$ 1.13	32.76b $\pm$ 0.35	32.04b $\pm$ 0.76	39.01a $\pm$ 1.99	28.45b $\pm$ 0.57	24.71b $\pm$ 1.49
<b>Ser</b>	147.73a $\pm$ 2.81	94.17b $\pm$ 2.21	61.20c $\pm$ 0.47	97.79a $\pm$ 3.53	64.21b $\pm$ 2.99	54.84b $\pm$ 7.21	69.90b $\pm$ 4.31	63.14b $\pm$ 4.13	83.76a $\pm$ 2.18
<b>Pro</b>	62.46a $\pm$ 1.22	41.52b $\pm$ 1.97	30.55c $\pm$ 1.61	25.94a $\pm$ 1.05	18.46b $\pm$ 0.44	19.14b $\pm$ 2.37	14.93a $\pm$ 0.39	12.80a $\pm$ 0.92	17.34a $\pm$ 2.82
<b>Glu</b>	973.47a $\pm$ 35.82	1028.58a $\pm$ 28.84	960.64a $\pm$ 15.02	640.91a $\pm$ 7.27	595.25b $\pm$ 19.63	594.55b $\pm$ 8.82	519.63a $\pm$ 26.86	494.80ab $\pm$ 6.12	446.73b $\pm$ 9.92
<b>Gln</b>	1608.08a $\pm$ 103.81	1373.94ab $\pm$ 160.97	1038.67b $\pm$ 33.01	603.30a $\pm$ 48.09	439.52b $\pm$ 29.12	334.60b $\pm$ 19.75	285.09a $\pm$ 5.45	182.78b $\pm$ 0.62	133.92c $\pm$ 17.81
<b>Theanine</b>	1806.63a $\pm$ 79.28	1644.16ab $\pm$ 92.64	1398.79b $\pm$ 116.34	1213.52a $\pm$ 82.15	1159.57a $\pm$ 34.75	1072.30a $\pm$ 28.12	1141.50a $\pm$ 53.84	869.16 b $\pm$ 15.50	593.67c $\pm$ 114.54
<b><math>\alpha</math>-AAA</b>	56.64a $\pm$ 56.64	59.19a $\pm$ 1.00	53.39a $\pm$ 3.96	48.00a $\pm$ 2.56	29.79b $\pm$ 0.53	30.04b $\pm$ 2.13	42.95a $\pm$ 0.66	24.87b $\pm$ 0.47	23.01b $\pm$ 1.58
<b>Gly</b>	17.59a $\pm$ 0.93	14.86ab $\pm$ 0.70	12.86b $\pm$ 0.15	15.10a $\pm$ 0.32	12.11b $\pm$ 0.41	10.42b $\pm$ 0.91	15.57a $\pm$ 0.36	14.29b $\pm$ 0.15	13.94b $\pm$ 0.49
<b>Ala</b>	94.05a $\pm$ 3.22	90.91ab $\pm$ 2.50	82.96b $\pm$ 1.63	79.68a $\pm$ 0.60	59.18b $\pm$ 2.98	51.71c $\pm$ 1.93	55.00a $\pm$ 1.40	43.59c $\pm$ 1.62	50.11b $\pm$ 0.78
<b>Cit</b>	32.17b $\pm$ 0.27	35.27a $\pm$ 1.13	32.88b $\pm$ 0.26	30.30a $\pm$ 0.34	26.65ab $\pm$ 1.12	26.01b $\pm$ 1.63	28.86a $\pm$ 0.81	24.27b $\pm$ 0.43	25.00b $\pm$ 1.60
<b><math>\alpha</math>-ABA</b>	9.63a $\pm$ 0.28	9.56a $\pm$ 0.45	8.07b $\pm$ 0.09	6.75a $\pm$ 0.29	5.82b $\pm$ 0.17	5.24b $\pm$ 0.24	6.08a $\pm$ 0.17	4.18c $\pm$ 0.13	5.15b $\pm$ 0.32
<b>Val</b>	25.92a $\pm$ 1.18	18.04b $\pm$ 0.33	16.47b $\pm$ 0.24	14.46a $\pm$ 0.77	13.05a $\pm$ 0.66	13.92a $\pm$ 1.56	13.48 a $\pm$ 0.28	12.81a $\pm$ 0.98	17.07a $\pm$ 2.52
<b>Cys</b>	22.13a $\pm$ 0.30	15.82b $\pm$ 1.24	15.92b $\pm$ 0.09	16.00a $\pm$ 1.52	11.65ab $\pm$ 1.49	9.44b $\pm$ 1.20	13.17a $\pm$ 1.95	9.42a $\pm$ 0.62	12.33a $\pm$ 0.68
<b>Ile</b>	13.45a $\pm$ 1.10	4.96b $\pm$ 0.35	4.64b $\pm$ 0.89	3.07a $\pm$ 0.15	3.69a $\pm$ 1.43	5.86a $\pm$ 1.31	2.96c $\pm$ 0.20	5.84b $\pm$ 0.74	14.87a $\pm$ 2.61
<b>Leu</b>	10.17a $\pm$ 0.52	5.83b $\pm$ 0.30	5.46b $\pm$ 0.74	4.33a $\pm$ 0.23	4.90a $\pm$ 1.27	6.80a $\pm$ 1.10	4.51b $\pm$ 0.18	6.33ab $\pm$ 1.01	12.18a $\pm$ 3.09
<b>Tyr</b>	12.52a $\pm$ 0.87	9.64b $\pm$ 0.28	8.50b $\pm$ 0.19	8.60a $\pm$ 0.19	7.47a $\pm$ 0.66	9.97a $\pm$ 1.22	7.25a $\pm$ 0.19	6.67a $\pm$ 0.56	7.16a $\pm$ 0.63
<b>Phe</b>	7.24a $\pm$ 0.62	7.13a $\pm$ 0.47	5.43a $\pm$ 0.19	4.34a $\pm$ 0.10	4.35a $\pm$ 0.45	5.59a $\pm$ 0.91	3.50a $\pm$ 0.26	4.40a $\pm$ 0.16	5.31a $\pm$ 1.48
<b><math>\beta</math>-Ala</b>	1.70a $\pm$ 0.01	1.68a $\pm$ 0.23	1.36a $\pm$ 0.06	1.68a $\pm$ 0.03	1.11b $\pm$ 0.01	1.06b $\pm$ 0.04	1.96a $\pm$ 0.06	1.81a $\pm$ 0.07	2.38a $\pm$ 0.27

<b>β-AiBA</b>	5.71a ± 0.04	5.64a ± 0.02	5.07b ± 0.14	5.53a ± 0.08	4.92b ± 0.11	4.43c ± 0.19	4.61a ± 0.08	4.35a ± 0.09	4.28a ± 0.21
<b>γ-ABA</b>	48.48 ± 6.98	48.45 ± 2.21	53.76 ± 7.42	26.54 ± 0.53	19.36 ± 2.44	20.16 ± 2.73	22.88 ± 4.65	17.85 ± 3.51	21.35 ± 1.93
<b>Trp</b>	151.12 ± 58.44	116.59 ± 4.16	99.26 ± 26.68	41.44 ± 5.62	46.74 ± 6.47	92.83 ± 31.32	81.03 ± 23.79	141.10 ± 40.52	90.21 ± 11.55
<b>Orn</b>	25.89a ± 2.71	20.95ab ± 0.48	15.36b ± 0.65	23.17a ± 1.50	16.63b ± 1.05	12.37c ± 1.01	23.37a ± 0.59	20.29a ± 1.10	7.82b ± 3.03
<b>His</b>	23.70 ± 0.70	21.34 ± 2.13	18.34 ± 0.73	12.75 ± 0.15	12.64 ± 1.89	14.64 ± 2.08	10.31 ± 0.28	7.34 ± 0.31	16.31 ± 5.66
<b>Arg</b>	521.81 ± 37.21	665.00 ± 109.81	559.97 ± 82.86	293.26b ± 13.45	541.74a ± 25.96	565.00a ± 42.59	133.37ab ± 12.48	71.36b ± 12.83	221.62a ± 51.13
<b>Total</b>	6253.03a ± 138.55	5921.12ab ± 377.90	5053.19b ± 279.84	3617.55 ± 139.77	3514.08 ± 80.66	3458.89 ± 130.12	2847.09a ± 73.24	2363.99b ± 77.96	2134.65b ± 130.88

Letters (a, b, c) show significant differences and grouping information comparing different treatments according to one-way ANOVA and Fisher's LSD test at the 5% level. P-Ser, o-Phosphoserine; PEA, o-Phosphoethanolamine; Asp, Aspartate; Thr, Threonine; Pro, Proline; Glu, Glutamic acid; Gln, Glutamine; α-AAA, α-amino adipic acid; Gly, Glycine; Ala, Alanine; Cit, Citrulline; α-ABA, α-Aminobutyric acid; Val, Valine; Cys, cysteine; Ile, Isoleucine; Leu, Leucine; Tyr, Tyrosine; Phe, Phenylalanine; β-Ala, β-Alanine; β-AiBA, β-Aminoisobutyric acid; γ-ABA, γ-Aminobutyric acid; Trp, Tryptophan; Orn, Ornithine; His, Histidine; Arg, Arginine.