

Original data-Fv/Fm on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.7543	0.7511	0.7554	0.7536	0.0013	a
	0.75	0.7605	0.7392	0.7572	0.7523	0.0066	a
	1.5	0.7599	0.7468	0.7358	0.7475	0.0070	a
	3	0.7452	0.7310	0.7512	0.7425	0.0060	ab
	6	0.7235	0.7348	0.7243	0.7275	0.0036	b
Zhangza 5	CK	0.7755	0.7857	0.8295	0.7969	0.0165	a
	0.75	0.7852	0.7842	0.7639	0.7777	0.0069	a
	1.5	0.7425	0.7687	0.7951	0.7687	0.0152	ab
	3	0.7565	0.7255	0.7587	0.7469	0.0107	ab
	6	0.6815	0.7016	0.7863	0.7231	0.0321	b
Zhangza 10	CK	0.7478	0.8000	0.3915	0.6464	0.1284	a
	0.75	0.5768	0.5625	0.7260	0.6218	0.0523	a
	1.5	0.5064	0.5761	0.7767	0.6197	0.0810	a
	3	0.4188	0.5915	0.6473	0.5525	0.0688	a
	6	0.5368	0.4509	0.5268	0.5048	0.0271	a
Jingu 21	CK	0.7095	0.6602	0.7174	0.6957	0.0179	a
	0.75	0.4097	0.4638	0.4352	0.4362	0.0156	b
	1.5	0.4167	0.3932	0.4271	0.4124	0.0100	bc
	3	0.4113	0.3366	0.3885	0.3788	0.0221	c
	6	0.2744	0.2454	0.3199	0.2799	0.0217	d

Original data-Fv/Fm on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.7481	0.7874	0.7760	0.7705	0.0117	a
	0.75	0.7692	0.7692	0.7692	0.7692	0.0000	a
	1.5	0.7724	0.7672	0.7680	0.7692	0.0016	a
	3	0.7442	0.8033	0.7500	0.7658	0.0188	a
	6	0.7328	0.7458	0.7250	0.7345	0.0061	b
Zhangza 5	CK	0.8244	0.8261	0.8080	0.8195	0.0058	a
	0.75	0.8047	0.8151	0.8045	0.8081	0.0035	a
	1.5	0.8018	0.7719	0.8214	0.7984	0.0144	a
	3	0.7368	0.8106	0.8348	0.7941	0.0295	a
	6	0.7805	0.7843	0.7805	0.7818	0.0013	a
Zhangza 10	CK	0.8160	0.8376	0.8333	0.8290	0.0066	a
	0.75	0.7841	0.8016	0.8110	0.7989	0.0079	ab

	1.5	0.7603	0.7500	0.8284	0.7796	0.0246	bc
	3	0.7658	0.7365	0.7447	0.7490	0.0087	cd
	6	0.7230	0.7200	0.7310	0.7247	0.0033	d

Original data- Fv/Fo on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	3.4545	3.6667	4.8636	3.9949	0.1611	a
	0.75	3.6552	3.6333	3.2353	3.5079	0.2885	ab
	1.5	2.8830	3.3226	3.8800	3.3619	0.4386	ab
	3	3.1071	2.6436	3.1446	2.9651	0.4815	b
	6	2.1398	2.3516	3.6786	2.7233	0.1365	b
Zhangza 5	CK	2.9697	3.7037	3.4643	3.3792	0.2161	a
	0.75	3.3333	3.3333	3.3333	3.3333	0.0000	a
	1.5	3.3929	3.2963	3.3103	3.3332	0.0301	a
	3	2.9091	4.0833	3.0000	3.3308	0.3772	a
	6	2.7419	2.9333	2.6364	2.7705	0.0869	a
Zhangza 10	CK	2.9655	4.0000	0.6433	2.5363	0.9925	a
	0.75	1.0258	1.3592	3.4783	1.9544	0.7680	a
	1.5	1.3632	1.2855	2.6500	1.7662	0.4425	a
	3	0.7204	1.4479	1.8354	1.3346	0.3268	a
	6	1.1589	0.8211	1.1135	1.0312	0.1059	a
Jingu 21	CK	2.4419	1.9425	2.5392	2.3079	0.1848	a
	0.75	0.6941	0.8649	0.7707	0.7766	0.0494	b
	1.5	0.7143	0.6481	0.7457	0.7027	0.0287	b
	3	0.6985	0.5074	0.6353	0.6137	0.0562	bc
	6	0.3781	0.3252	0.4704	0.3912	0.0424	c

Original data- Fv/Fo on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	4.4348	5.1579	5.0000	4.8642	0.2195	a
	0.75	3.6316	4.0400	4.2917	3.9877	0.1923	ab
	1.5	3.1724	3.0000	4.8261	3.6662	0.5821	bc
	3	3.2706	2.7955	2.9167	2.9942	0.1425	cd
	6	2.6100	2.5714	2.7174	2.6329	0.0437	d
Zhangza 5	CK	4.6957	4.7500	4.2083	4.5513	0.1722	a
	0.75	4.1200	4.4091	4.1154	4.2148	0.0971	a
	1.5	2.8000	4.2800	5.0526	4.0442	0.6609	a

	3	4.0455	3.3846	4.6000	4.0100	0.3513	a
	6	3.5556	3.6364	3.5556	3.5825	0.0269	a
Zhangza 10	CK	3.0694	3.0183	3.0876	3.0584	0.0207	a
	0.75	3.1752	2.8346	3.1189	3.0429	0.1054	a
	1.5	3.1643	2.9490	2.7852	2.9662	0.1098	a
	3	2.9242	2.7179	3.0200	2.8874	0.0891	ab
	6	2.6167	2.7711	2.6271	2.6716	0.0498	b

Original data- Y(II) on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.0510	0.0450	0.0380	0.0447	0.0065	a
	0.75	0.0320	0.0340	0.0270	0.0310	0.0036	b
	1.5	0.0240	0.0230	0.0250	0.0240	0.0010	c
	3	0.0220	0.0200	0.0220	0.0213	0.0012	c
	6	0.0100	0.0100	0.0090	0.0097	0.0006	d
Zhangza 5	CK	0.0420	0.0590	0.0500	0.0503	0.0049	a
	0.75	0.0450	0.0430	0.0370	0.0417	0.0024	a
	1.5	0.0280	0.0270	0.0280	0.0277	0.0003	b
	3	0.0180	0.0260	0.0230	0.0223	0.0023	bc
	6	0.0170	0.0150	0.0160	0.0160	0.0006	c
Zhangza 10	CK	0.0390	0.0440	0.0350	0.0393	0.0026	a
	0.75	0.0230	0.0280	0.0200	0.0237	0.0023	b
	1.5	0.0130	0.0130	0.0150	0.0137	0.0007	c
	3	0.0110	0.0100	0.0130	0.0113	0.0009	cd
	6	0.0090	0.0060	0.0070	0.0073	0.0009	d
Jingu 21	CK	0.0290	0.0260	0.0460	0.0337	0.0062	a
	0.75	0.0170	0.0220	0.0220	0.0203	0.0017	b
	1.5	0.0150	0.0170	0.0160	0.0160	0.0006	bc
	3	0.0120	0.0140	0.0090	0.0117	0.0015	bc
	6	0.0060	0.0050	0.0080	0.0063	0.0009	c

Original data- Y(II) on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.0320	0.0320	0.0330	0.0323	0.0003	a
	0.75	0.0260	0.0290	0.0260	0.0270	0.0010	b
	1.5	0.0210	0.0240	0.0240	0.0230	0.0010	c
	3	0.0180	0.0160	0.0150	0.0163	0.0009	d

	6	0.0100	0.0090	0.0060	0.0083	0.0012	e
Zhangza 5	CK	0.3420	0.3450	0.4110	0.3660	0.0225	a
	0.75	0.2150	0.2650	0.2730	0.2510	0.0181	b
	1.5	0.2360	0.2060	0.2070	0.2163	0.0098	bc
	3	0.2040	0.1430	0.2320	0.1930	0.0263	c
	6	0.0880	0.1100	0.1360	0.1113	0.0139	d
Zhangza 10	CK	0.0590	0.0580	0.0640	0.0603	0.0019	a
	0.75	0.0220	0.0270	0.0260	0.0250	0.0015	b
	1.5	0.0160	0.0160	0.0170	0.0163	0.0003	c
	3	0.0040	0.0040	0.0040	0.0040	0.0000	d
	6	0.0030	0.0030	0.0030	0.0030	0.0000	d

Original data –ETR(II) on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	12.40	12.40	12.70	12.5000	0.1000	a
	0.75	10.00	11.10	9.90	10.3333	0.3844	b
	1.5	7.90	9.10	9.00	8.6667	0.3844	c
	3	6.80	6.40	5.90	6.3667	0.2603	d
	6	3.80	3.40	2.30	3.1667	0.4485	e
Zhangza 5	CK	16.20	23.00	19.30	19.5000	1.9655	a
	0.75	17.30	16.70	14.30	16.1000	1.0066	b
	1.5	10.90	10.50	10.70	10.7000	0.1155	c
	3	7.10	10.10	8.70	8.6333	0.8667	cd
	6	6.30	6.00	6.00	6.1000	0.1000	d
Zhangza 10	CK	15.20	16.70	13.50	15.1333	0.9244	a
	0.75	8.70	10.70	7.60	9.0000	0.9074	b
	1.5	5.10	5.10	5.60	5.2667	0.1667	c
	3	4.30	3.90	4.90	4.3667	0.2906	cd
	6	3.30	2.20	2.80	2.7667	0.3180	d
Jingu 21	CK	11.30	9.90	17.60	12.9333	2.3681	a
	0.75	6.60	8.30	8.40	7.7667	0.5840	b
	1.5	5.80	6.50	6.00	6.1000	0.2082	bc
	3	4.60	5.50	3.20	4.4333	0.6692	bc
	6	2.30	2.10	2.90	2.4333	0.2404	c

Original data- ETR(II) on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
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Zhangza 3	CK	19.80	17.30	14.60	17.2333	1.5015	a
	0.75	12.40	13.00	10.30	11.9000	0.8185	b
	1.5	9.00	9.10	9.50	9.2000	0.1528	c
	3	8.30	7.40	8.40	8.0333	0.3180	c
	6	3.90	3.90	3.20	3.6667	0.2333	d
Zhangza 5	CK	18.80	19.00	22.60	20.1333	1.2347	a
	0.75	11.80	14.60	15.00	13.8000	0.9165	b
	1.5	13.00	11.30	11.40	11.9000	0.5508	bc
	3	11.20	7.90	12.80	10.6333	1.4426	c
	6	4.90	6.10	7.50	6.1667	0.7513	d
Zhangza 10	CK	22.70	22.30	24.50	23.1667	0.6766	a
	0.75	8.30	10.40	10.00	9.5667	0.6438	b
	1.5	6.30	6.10	6.60	6.3333	0.1453	c
	3	1.70	1.70	1.70	1.7000	0.0000	d
	6	1.20	1.20	1.30	1.2333	0.0333	d

Original data -Y(NO) on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at <i>P</i> =0.05 level
Zhangza 3	CK	0.3620	0.4130	0.3940	0.3897	0.0149	a
	0.75	0.3430	0.3070	0.2960	0.3153	0.0142	b
	1.5	0.2780	0.2780	0.3770	0.3110	0.0330	b
	3	0.2930	0.3080	0.3040	0.3017	0.0045	b
	6	0.3720	0.4440	0.3790	0.3983	0.0229	a
Zhangza 5	CK	0.2920	0.4130	0.3060	0.3370	0.0382	a
	0.75	0.3590	0.3400	0.3100	0.3363	0.0143	a
	1.5	0.3070	0.3110	0.3390	0.3190	0.0101	a
	3	0.3210	0.3120	0.2990	0.3107	0.0064	a
	6	0.3070	0.3300	0.3000	0.3123	0.0091	a
Zhangza 10	CK	0.3240	0.3680	0.3700	0.3540	0.0150	a
	0.75	0.2800	0.3310	0.2580	0.2897	0.0216	ab
	1.5	0.2980	0.2660	0.2480	0.2707	0.0146	b
	3	0.3280	0.2820	0.2670	0.2923	0.0184	ab
	6	0.3620	0.3430	0.2470	0.3173	0.0356	ab
Jingu 21	CK	0.3690	0.2920	0.3210	0.3273	0.0225	a
	0.75	0.4480	0.3530	0.2220	0.3410	0.0655	a
	1.5	0.4430	0.2470	0.3740	0.3547	0.0574	a
	3	0.5030	0.3990	0.3330	0.4117	0.0495	a
	6	0.3640	0.4260	0.4070	0.3990	0.0183	a

Original data- Y(NO) on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.4340	0.5050	0.4840	0.4743	0.0211	a
	0.75	0.3370	0.3120	0.3700	0.3397	0.0168	b
	1.5	0.3030	0.3490	0.3240	0.3253	0.0133	b
	3	0.4110	0.3290	0.3670	0.3690	0.0237	b
	6	0.4570	0.3790	0.3600	0.3987	0.0297	ab
Zhangza 5	CK	0.3230	0.4370	0.3950	0.3850	0.0436	a
	0.75	0.6370	0.6780	0.6530	0.6560	0.0069	b
	1.5	0.6910	0.6580	0.7090	0.6860	0.0168	bc
	3	0.7720	0.7770	0.7820	0.7770	0.0208	bc
	6	0.6460	0.7620	0.6860	0.6980	0.0230	c
Zhangza 10	CK	0.3150	0.3000	0.2730	0.2960	0.0123	b
	0.75	0.2860	0.2830	0.2720	0.2803	0.0043	c
	1.5	0.2750	0.2800	0.2660	0.2737	0.0041	c
	3	0.3520	0.3640	0.3520	0.3560	0.0040	a
	6	0.3710	0.3660	0.3580	0.3650	0.0038	a

Original data -Y(NPQ) on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.6280	0.5770	0.5970	0.6007	0.0148	ab
	0.75	0.6060	0.6480	0.6660	0.6400	0.0178	ab
	1.5	0.7000	0.7020	0.6010	0.6677	0.0333	a
	3	0.6750	0.6580	0.6600	0.6643	0.0054	a
	6	0.6040	0.5330	0.5960	0.5777	0.0225	b
Zhangza 5	CK	0.5990	0.6010	0.6400	0.6133	0.0133	a
	0.75	0.6630	0.5440	0.6570	0.6213	0.0387	a
	1.5	0.6650	0.6430	0.6720	0.6600	0.0087	a
	3	0.6610	0.6620	0.6780	0.6670	0.0055	a
	6	0.6760	0.6740	0.6450	0.6650	0.0100	a
Zhangza 10	CK	0.3350	0.2180	0.1940	0.2490	0.0153	b
	0.75	0.1270	0.1160	0.1400	0.1277	0.0212	a
	1.5	0.1400	0.1130	0.0820	0.1117	0.0141	a
	3	0.1500	0.0950	0.0820	0.1090	0.0187	a
	6	0.0940	0.0770	0.0180	0.0630	0.0348	a
Jingu 21	CK	0.6020	0.6820	0.6330	0.6390	0.0233	a
	0.75	0.5400	0.6330	0.7690	0.6473	0.0665	a

	1.5	0.5420	0.7360	0.6100	0.6293	0.0568	a
	3	0.4910	0.5960	0.6590	0.5820	0.0490	a
	6	0.6190	0.5520	0.5710	0.5807	0.0199	a

Original data -Y(NPQ) on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.5340	0.4630	0.4830	0.4933	0.0211	b
	0.75	0.6370	0.6590	0.6040	0.6333	0.0160	a
	1.5	0.6760	0.6270	0.6520	0.6517	0.0141	a
	3	0.5710	0.6550	0.6180	0.6147	0.0243	a
	6	0.5330	0.6120	0.6340	0.5930	0.0307	a
Zhangza 5	CK	0.6370	0.5880	0.5950	0.6067	0.0333	c
	0.75	0.7110	0.6630	0.7350	0.7030	0.0119	b
	1.5	0.6890	0.7210	0.7370	0.7157	0.0149	b
	3	0.6490	0.6900	0.7130	0.6840	0.0029	a
	6	0.6270	0.6470	0.7400	0.6713	0.0340	b
Zhangza 10	CK	0.6810	0.6960	0.7230	0.7000	0.0123	a
	0.75	0.7090	0.7040	0.7170	0.7100	0.0038	a
	1.5	0.7110	0.7140	0.7250	0.7167	0.0043	a
	3	0.6070	0.6070	0.6160	0.6100	0.0030	b
	6	0.5890	0.5780	0.5840	0.5837	0.0032	c

Original data -qp on 7d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at P =0.05 level
Zhangza 3	CK	0.0800	0.1200	0.1010	0.1003	0.0116	a
	0.75	0.0910	0.0790	0.0750	0.0817	0.0048	a
	1.5	0.0570	0.0540	0.0570	0.0560	0.0010	b
	3	0.0360	0.0540	0.0490	0.0463	0.0054	bc
	6	0.0360	0.0330	0.0320	0.0337	0.0012	c
Zhangza 5	CK	0.6280	0.6110	0.6530	0.6307	0.0122	a
	0.75	0.5680	0.6060	0.6360	0.6033	0.0197	a
	1.5	0.6320	0.5780	0.5440	0.5847	0.0256	a
	3	0.5640	0.4600	0.6410	0.5550	0.0524	a
	6	0.3630	0.4990	0.4550	0.4390	0.0401	b
Zhangza 10	CK	0.0770	0.0540	0.0970	0.0760	0.0124	a
	0.75	0.0510	0.0640	0.0680	0.0610	0.0051	ab
	1.5	0.0450	0.0330	0.0400	0.0393	0.0035	bc

	3	0.0380	0.0430	0.0190	0.0333	0.0073	c
	6	0.0220	0.0150	0.0200	0.0190	0.0021	c
Jingu 21	CK	0.1070	0.1120	0.1210	0.1133	0.0041	a
	0.75	0.0430	0.0550	0.0520	0.0500	0.0036	b
	1.5	0.0290	0.0270	0.0300	0.0287	0.0009	c
	3	0.0090	0.0090	0.0080	0.0087	0.0003	d
	6	0.0060	0.0060	0.0060	0.0060	0.0000	d

Original data- qp on 15d

	SEY(L ai ha ⁻¹)	n1	n2	n3	mean value	SE	significantly different at <i>P</i> =0.05 level
Zhangza 3	CK	0.1020	0.0770	0.0620	0.0803	0.0117	a
	0.75	0.0580	0.0580	0.0470	0.0543	0.0037	b
	1.5	0.0310	0.0380	0.0420	0.0370	0.0032	b
	3	0.0380	0.0340	0.0350	0.0357	0.0012	b
	6	0.0170	0.0170	0.0130	0.0157	0.0013	c
Zhangza 5	CK	0.0540	0.0510	0.0520	0.0523	0.0009	a
	0.75	0.0510	0.0530	0.0460	0.0500	0.0021	a
	1.5	0.0400	0.0440	0.0440	0.0427	0.0013	b
	3	0.0320	0.0280	0.0290	0.0297	0.0012	c
	6	0.0180	0.0170	0.0120	0.0157	0.0019	d
Zhangza 10	CK	0.0770	0.0860	0.0640	0.0757	0.0064	a
	0.75	0.0460	0.0570	0.0390	0.0473	0.0052	b
	1.5	0.0250	0.0270	0.0270	0.0263	0.0007	c
	3	0.0250	0.0230	0.0260	0.0247	0.0009	c
	6	0.0170	0.0100	0.0160	0.0143	0.0022	c