

Table S1

Interaction effect of irrigation regimes and bio-regulators on yield attributes of chia

Treatments	Number of spikes per plant	Spike length (cm)	1000 seed weight (g)	Oil content (%)	Harvest index
Interaction effect of I and BRs					
I ₂₅ –Control	15.26 l	10.87 h	1.12 k	30.86 l	14.26h
I ₂₅ –KO	15.10 l	10.16 h	1.13 k	31.00 kl	14.33h
I ₂₅ –SA	20.72 h–j	17.13 d–f	1.14 g–k	31.65 h–j	11.48jk
I ₂₅ –PS	17.62 k	12.03 h	1.13 jk	31.38 jk	12.84i
I ₂₅ –SB	17.66 k	11.99 h	1.13 k	31.44 i–k	12.31ij
I ₂₅ –TU	21.98 g–i	17.77 c–f	1.14 h–k	31.80 g–h	10.48k
I ₂₅ –KN	22.34 f–h	17.95 c–e	1.14 i–k	31.62 i–h	10.78 k
I ₅₀ –Control	18.63 k	12.69 gh	1.16 g–k	31.51 h–j	19.33 b–d
I ₅₀ –KO	19.05 jk	12.15 h	1.17 e–i	31.53 ij	19.37 b–d
I ₅₀ –SA	21.84 g–i	18.66 b–e	1.17 e–g	32.00 h–j	19.45 b–d
I ₅₀ –PS	20.47 ij	15.40 fg	1.16 f–j	32.10 f–i	18.87 cd
I ₅₀ – SB	20.40 ij	16.32 ef	1.16 g–k	32.00 f–h	19.30 b–d
I ₅₀ – TU	22.96 d–g	19.28 a–d	1.17 e–h	32.23 e–g	18.37d–f
I ₅₀ – KN	23.86 b–f	19.47 a–d	1.17 e–i	32.28 d–g	18.50 de
I ₇₅ – Control	22.80 d–g	17.17 d–f	1.19 d–f	32.32 c–f	20.40 ab
I ₇₅ – KO	22.46 e–g	16.93 d–f	1.19 d–f	32.24 e–g	20.88 a
I ₇₅ – SA	23.36 c–g	20.40 a–c	1.21 a–d	32.69 a–d	20.38 ab
I ₇₅ –PS	23.41 c–g	18.84 a–e	1.19 c–f	32.52 b–e	19.81 a–c
I ₇₅ –SB	23.10 d–g	18.70 a–e	1.20 b–e	32.65 a–e	20.13 ab
I ₇₅ –TU	24.30 a–d	20.04 a–c	1.21 a–d	32.89 ab	19.93a–c
I ₇₅ – KN	25.05 a–c	20.98 ab	1.22 a–d	32.80 a–c	19.88 a–c
I ₁₀₀ – Control	24.10 b–e	19.57 a–d	1.22 ab	32.69 a–e	17.25 fg
I ₁₀₀ – KO	24.27 a–d	19.22 a–d	1.22 ab	32.70 a–e	17.30 fg
I ₁₀₀ – SA	24.98 a–c	21.49 a	1.23 ab	32.95 a–d	17.34 e–g
I ₁₀₀ – PS	24.44 a–d	19.63 a–d	1.23 ab	32.98 ab	17.28fg
I ₁₀₀ – SB	24.34 a–d	19.14 a–d	1.22 ab	32.96 ab	17.12g
I ₁₀₀ –TU	25.28 ab	20.81 ab	1.23 ab	33.07 a	17.18g
I ₁₀₀ – KN	25.89 a	21.14 ab	1.24 a	33.01 a	17.01g
P value	<.0001	<.0001	0.891	0.191	<.0001
Year					
2020–21	21.9a	17.11b	1.19a	31.77b	16.91b
2021–22	22.0a	17.52a	1.17b	32.64a	17.49a
P value	0.810	0.035	<.0001	<.0001	<.0001

KO, SA, PS, SB, TU, KN and no PBR denote Kaolin, salicylic acid, Potassium silicate, sodium benzoate, thiourea, potassium nitrate and control, respectively. Y, B, I denotes year, bio regulators and Irrigation respectively. I₂₅, I₅₀, I₇₅ and I₁₀₀ denotes irrigation regimes at 25, 50, 75 and 100 %

CPE respectively. Means followed by the same letter, (s) within a column are not significantly differed.

Table S2

Interaction effect of irrigation regimes and bio-regulators on fatty acid composition of chia oil

Interaction effect of irrigation regimes and bio-regulators on yield attributes of chia

Treatments/ Fatty acids	Palmitic acid (%)	Stearic acid (%)	Oleic acid (%)	Linoleic acid (%)	Linolenic acid (%)
Interaction effect					
I ₂₅ –Control	10.21a	6.838 a	9.43 a	22.28 m	51.22 n
I ₂₅ –KO	10.18ab	6.732 ab	9.28 a	22.38 m	51.41 mn
I ₂₅ –SA	9.94a–d	5.902 de	9.02 b	23.24 j	51.87 j–l
I ₂₅ –PS	9.89a–e	6.352 c	9.35 a	22.97 kl	51.42 mn
I ₂₅ –SB	9.86 a–f	6.478 bc	9.10 b	22.85 l	51.69 lm
I ₂₅ –TU	9.58 d–i	5.760 d–f	8.96 b	23.34 ij	52.13 h–k
I ₂₅ –KN	9.77a–g	5.668 d–f	8.98 b	23.27 ij	52.28 hi
I ₅₀ –Control	10.20a	5.960 d	9.35 a	23.01 kl	51.46 mn
I ₅₀ –KO	10.12ab	5.892 de	8.97	23.15 jk	51.76 k–m
I ₅₀ –SA	9.32 g–j	5.780 de	8.77 cd	23.62 h	52.51 f–h
I ₅₀ –PS	9.73 a–h	5.940 de	8.98 b	23.31 ij	52.01 i–l
I ₅₀ – SB	9.92 a–d	5.870 de	8.77 c	23.16 jk	52.25 h–j
I ₅₀ – TU	9.65 d–i	5.192 gh	8.63 c–f	23.58 hi	52.92 e
I ₅₀ – KN	9.65 d–i	4.922 h–k	8.69 c–e	23.91 g	52.81 e–g
I ₇₅ – Control	9.95a–d	5.460 fg	8.96 b	23.47 h	52.13 h–k
I ₇₅ – KO	9.69 b–i	5.640 ef	8.73 cd	23.67 h	52.24 h–j
I ₇₅ – SA	9.24 h–j	4.842 i–l	8.49 f–h	24.40 bc	52.91 e
I ₇₅ –PS	9.75 a–g	4.992 h–j	8.76 cd	24.05 fg	52.43 gh
I ₇₅ –SB	9.60 d–i	5.120 hi	8.60 d–f	23.90 g	52.76 e–g
I ₇₅ –TU	9.41 d–i	4.582 l–n	8.49 f–h	24.13 d–f	53.37 cd
I ₇₅ – KN	9.37 f–j	4.483 mn	8.36 hi	24.22 c–f	53.55 bc
I ₁₀₀ – Control	9.64 d–i	4.790 j–l	8.70 c–e	24.07 e–g	52.77 e–g
I ₁₀₀ – KO	9.40 e–j	5.202 gh	8.42 g–i	24.10 e–g	52.85 ef
I ₁₀₀ – SA	8.95 h–j	4.612 l–n	7.91 l	24.62 a	53.91 b
I ₁₀₀ – PS	9.22 ij	4.602 l–n	8.55 e–g	24.50 ab	53.14 de
I ₁₀₀ – SB	9.65 c–h	4.640 k–n	8.29 ij	24.34 b–d	53.04 de
I ₁₀₀ –TU	8.05 k	4.730 j–m	8.13 jk	24.27 c–e	54.79 a
I ₁₀₀ – KN	8.10 k	4.380 n	8.04 kl	24.63 a	54.85 a
P value	<.0001	<.0001	<.0001	<.0001	<.0001
Year					
2020–21	9.55a	5.39a	8.73b	23.62b	52.50b
2021–22	9.59a	5.41a	8.76a	23.70a	52.67a
P value	0.364	0.382	0.012	<.0001	<.0001

KO, SA, PS, SB, TU, KN and no PBR denote Kaolin, salicylic acid, Potassium silicate, sodium benzoate, thiourea, potassium nitrate and control, respectively. Y, B, I denotes year, bio regulators and Irrigation respectively. I25, I50, I75 and I100 denotes irrigation regimes at 25, 50, 75 and 100 % CPE respectively. Means followed by the same letter, (s) within a column are not significantly differed.