

Supplementary Material

Effects of different temperature regimes on flower development, microsporogenesis and fertility in bolting garlic (*Allium sativum*)

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Table S1. Effect of temperature regime on flower stem parameters in fertile garlic genotype F87

Plants were grown under controlled temperatures in a phytotron (Fig. 1c). Control plants were kept in a 30%-shaded screenhouse under ambient conditions (Fig. 1a, b). Means \pm s.e. ($n = 8$). Statistical significance was calculated using a Tukey HSD test comparing all pairs of means ($P < 0.05$). Means in columns followed by the same letter do not significantly differ

Treatment	Average daily temperature, (ADT), °C	Spathe opening (DAP) ^A	Flower stem height (cm) ^B	Flower stem diameter (mm) ^C	Spathe diameter (cm) ^D
1	Net house	187 \pm 3 a	93 \pm 5 a	2.3 \pm 0.2 a	2.6 \pm 0.1 a
2	13 \rightarrow 19 (b)	190 \pm 2 a	98 \pm 5 a	2.7 \pm 0.3 a	2.3 \pm 0.1 ab
3	13 \rightarrow 25 (b)	172 \pm 3 bc	88 \pm 6 a	2.8 \pm 0.3 a	2.2 \pm 0.1 ab
4	13 \rightarrow 31 (b)	180 \pm 3 ab	84 \pm 6 a	2.3 \pm 0.3 a	2.0 \pm 0.1 b
5	19	166 \pm 3 c	86 \pm 8 a	1.8 \pm 0.3 a	2.1 \pm 0.2 ab
6	19 \rightarrow 25 (b)	153 \pm 2 d	87 \pm 5 a	2.3 \pm 0.3 a	2.1 \pm 0.1 ab
7	19 \rightarrow 31 (b)	152 \pm 3 d	80 \pm 7 a	2.2 \pm 0.3 a	1.9 \pm 0.2 b

8	19 → 25 (s)	174 ± 3 bc	80 ± 7 a	1.8 ± 0.3 a	2.0 ± 0.2 ab
9	19 → 31 (s)	171 ± 3 bc	86 ± 6 a	1.5 ± 0.3 a	2.0 ± 1.1 b

Stage of plant transfer: b – bolting; s – spathe break.

^A Expressed as days after planting (DAP).

^B Measured at spathe opening from ground level to the inflorescence.

^C Measured at 10 cm below the inflorescence.

^D Measured at the widest part of the unbroken spathe.

Table S2. Effect of temperature regime on flower stem parameters in the male-sterile garlic genotype MS96

Plants were grown under controlled temperature in the phytotron (Fig. 1c). Control plants were kept in a 30%-shaded screenhouse under ambient conditions (Fig. 1a, b). Means \pm s.e. ($n = 8$). Statistical significance was calculated using a Tukey HSD test comparing all pairs of means ($P < 0.05$). Means in columns followed by the same letter do not significantly differ

Treatment	Average daily temperature, (ADT), °C	Spathe opening (DAP) ^A	Flower stem height (cm) ^B	Flower stem diameter (mm) ^C	Spathe diameter (cm) ^D
1	Net house	181 \pm 1 b	120 \pm 3 a	3.2 \pm 0.1 a	2.6 \pm 0.1 a
2	13 \rightarrow 19 (b)	192 \pm 1 a	99 \pm 4 b	2.0 \pm 0.2 b	2.2 \pm 0.1 bc
3	13 \rightarrow 25 (b)	174 \pm 1 c	86 \pm 4 bc	1.8 \pm 0.2 b	2.0 \pm 0.1 bc
4	13 \rightarrow 31 (b)	171 \pm 1 cd	80 \pm 4 c	1.9 \pm 0.2 b	1.1 \pm 0.1 d
5	19	165 \pm 1 e	95 \pm 4 bc	2.1 \pm 0.2 b	2.3 \pm 0.1 bc
6	19 \rightarrow 25 (b)	155 \pm 1 f	81 \pm 4 c	1.7 \pm 0.2 b	2.1 \pm 0.1 bc
7	19 \rightarrow 31 (b)	148 \pm 1 g	85 \pm 4 bc	2.2 \pm 0.2 b	2.0 \pm 0.1 c
8	19 \rightarrow 25 (s)	169 \pm 1 cde	92 \pm 4 bc	1.8 \pm 0.2 b	2.3 \pm 0.1 ab
9	19 \rightarrow 31 (s)	167 \pm 1 de	90 \pm 4 bc	1.8 \pm 0.2 b	2.3 \pm 0.1 bc

Stage of plant transfer: b – bolting; s – spathe break.

^A Expressed as days after planting (DAP).

^B Measured at spathe opening from ground level to the inflorescence.

^C Measured at 10 cm below the inflorescence.

^D Measured at the widest part of the unbroken spathe.