

Table S1 Response of the number of leaves (NL), plant height (PH) and stem diameter (SD) of tomato to inoculating PGPR and low temperature.

Time (d)	Source of variation	NL	PH	SD
40	PGPR	0.00***	3394.57***	245.79***
	LT	utt	utt	utt
	PGPR*LT	utt	utt	utt
47	PGPR	80.92***	443.20***	23.02**
	LT	3.57	86.87***	2.05
	PGPR*LT	0.28	1.75	0.00
54	PGPR	80.95***	93.59***	19.23**
	LT	137.88***	249.15***	0.00
	PGPR*LT	0.58	6.86*	0.97
61	PGPR	11.81**	82.69***	1.62
	LT	43.02***	176.07***	17.18**
	PGPR*LT	0.10	2.12	2.03
68	PGPR	2.86	50.16***	4.27
	LT	9.26**	117.37***	16.69**
	PGPR*LT	0.11	3.61	6.30*
75	PGPR	0.39	2.59	6.16*
	LT	5.78*	12.99**	8.60*
	PGPR*LT	0.39	0.48	0.60
82	PGPR	0.31	85.42***	0.62
	LT	11.36**	47.02***	0.94
	PGPR*LT	3.87	8.89*	0.37
89	PGPR	1.68	16.25**	0.78
	LT	18.43***	5.14	1.05
	PGPR*LT	1.68	7.68*	0.02

Note: “\*”, “\*\*\*”, “\*\* \* \*\*” and “utt” stand for “P < 0.05, P<0.01, P<0.001 and unable to test”, respectively, the same as below.

Table S2 Response of the SPAD and Fv/Fm of tomato leaves to inoculating PGPR and low temperature

Time (d)	Source of variation	SPAD			Fv/Fm
		1st leaves	2nd leaves	3rd leaves	
40	PGPR	793.50 <sup>***</sup>	99.84 <sup>***</sup>	361.00 <sup>***</sup>	34.57 <sup>***</sup>
	LT	utt	utt	utt	utt
	PGPR*LT	utt	utt	utt	utt
47	PGPR	28.79 <sup>**</sup>	112.60 <sup>***</sup>	182.41 <sup>***</sup>	21.39 <sup>**</sup>
	LT	0.92	99.42 <sup>***</sup>	230.41 <sup>***</sup>	463.12 <sup>***</sup>
	PGPR*LT	0.00	0.21	0.01	34.32 <sup>***</sup>
54	PGPR	101.45 <sup>***</sup>	51.08 <sup>***</sup>	12.33 <sup>**</sup>	14.02 <sup>**</sup>
	LT	9.05 <sup>*</sup>	9.90 <sup>*</sup>	61.72 <sup>***</sup>	171.19 <sup>***</sup>
	PGPR*LT	7.55 <sup>*</sup>	1.10	0.23	12.27 <sup>**</sup>
61	PGPR	14.59 <sup>**</sup>	8.97 <sup>*</sup>	14.43 <sup>**</sup>	4.00
	LT	32.60 <sup>***</sup>	50.08 <sup>***</sup>	108.98 <sup>***</sup>	4.00
	PGPR*LT	0.19	6.09 <sup>*</sup>	0.13	4.00
68	PGPR	17.44 <sup>**</sup>	36.93 <sup>***</sup>	114.02 <sup>***</sup>	
	LT	17.96 <sup>**</sup>	43.76 <sup>***</sup>	0.00	
	PGPR*LT	6.10 <sup>*</sup>	20.60 <sup>**</sup>	8.38 <sup>*</sup>	
75	PGPR	26.14 <sup>**</sup>	0.02	10.08 <sup>*</sup>	
	LT	49.09 <sup>***</sup>	18.40 <sup>**</sup>	11.97 <sup>**</sup>	
	PGPR*LT	0.10	5.36 <sup>*</sup>	0.01	
82	PGPR	5.82 <sup>*</sup>	60.17 <sup>***</sup>	0.78	
	LT	0.18	8.17 <sup>*</sup>	1.44	
	PGPR*LT	0.00	5.72 <sup>*</sup>	0.04	
87	PGPR	14.92 <sup>**</sup>	0.31	3.14	
	LT	8.98 <sup>*</sup>	0.57	4.16	
	PGPR*LT	1.44	1.98	0.06	

Table S3 Cox proportional hazards model was used to determine the likelihood of the tomato plants reaching a particular developmental stage under different treatments

Spike	Treatment	S0	S1	S2	S3
1st	CK	1	1	1	1
	B	4.607** (1.586-13.38)	1.937 (0.655-5.731)	1.623 (0.46-5.73)	1.119 (0.402-3.116)
	CK+LT	0.175*** (0.061-0.501)	<1***	0.156* (0.037-0.665)	0.171** (0.049-0.591)
	B+LT	1.662 (0.597-4.63)	0.729 (0.241-2.21)	1.371 (0.343-5.484)	0.374 (0.119-1.175)
	CK	1	1	1	1
2nd	B	3.753* (1.252-11.253)	1.142 (0.396-3.296)	0.395 (0.116-1.342)	1.822 (0.635-5.226)
	CK+LT	0.204** (0.071-0.587)	<1***	0.178* (0.053-0.596)	0.424 (0.146-1.234)
	B+LT	0.912 (0.324-2.565)	0.574 (0.199-1.658)	0.156* (0.046-0.532)	0.777 (0.281-2.146)
	CK	1	1	1	1
3rd	B	1.34 (0.486-3.697)	0.738 (0.265-2.058)	0.666 (0.226-1.959)	
	CK+LT	<1***	0.244* (0.077-0.772)	0.272* (0.085-0.87)	
	B+LT	0.769 (0.265-2.234)	0.718 (0.26-1.985)	1.387 (0.502-3.832)	
	CK	1	1	1	

Note: The Hazard Ratio (HR) of the control was set to 1 and compared with the other treatments; HR > 1 indicated an increased likelihood of development and HR < 1 indicated a decreased likelihood of development. For example, the HR of treatment “B” was 4.607 times higher than that of “CK” at the budding stage of the 1st spike, which means that treatment “B” was 4.607 times more likely to reach the budding stage of the 1st spike than “CK”. Values in parentheses are the confidence intervals for the hazard ratio. When the Cox regression coefficients of the treatment and control did not converge, Kaplan-Meier survival curves were used to compare the developmental probability of them, while “<1” stated that the developmental probability of the treatment was less than that of the control, in contrast to “>1” which stated that the developmental probability of the treatment was greater than that of the control. For example, at the initial flowering stage of the 1st spike, the data for the “CK+LT” treatment is “<1”, so tomato plants in “CK+LT” is less likely to reach the initial flowering stage of the 1st spike than those grown in “CK”.

Table S4 Different processing TOPSIS analysis decision matrix and score ranking

Treat ment	Nitrate nitrogen	Vitamin C	Lycopen e	Total soluble sugars	Soluble solids	Titratabl e acids	Sugar to acid ratio	$D^+$	$D^-$	$C_i$	Rank
CK	0.5908	0.5024	0.6133	0.4627	0.4398	0.4869	0.4361	0.207	2	5	2
B	0.4291	0.4994	0.5427	0.5997	0.5324	0.5162	0.5352	0.178	3	3	1
CK+L								0.311	0.148	0.323	
T	0.4	0.4989	0.4176	0.4521	0.5556	0.5036	0.5245	1	6	2	4
B+LT	0.5539	0.4993	0.3936	0.471	0.463	0.4929	0.4982	0.277	7	5	3
Max	0.5908	0.5024	0.6133	0.5997	0.5556	0.5162	0.5352				
Min	0.4	0.4989	0.3936	0.4521	0.4398	0.4869	0.4361				

Note:  $C_i$  values range from 0-1, with higher values representing higher overall tomato fruit quality scores.

Figure S1

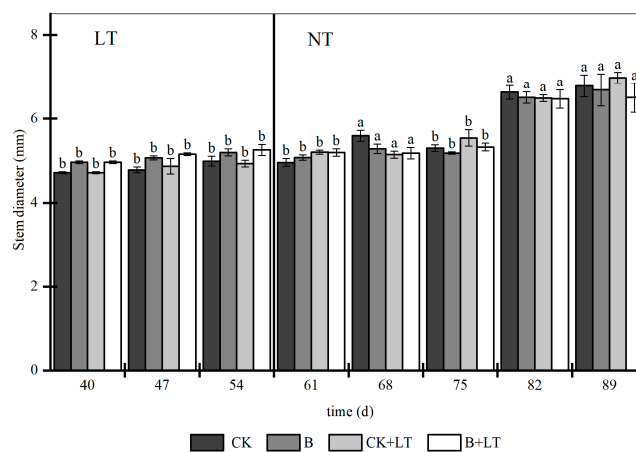


Figure S1 Effects of *B. methylotrophicus* inoculation on the stem diameter of tomato. LT represents the period of low temperature treatment and NT denotes the period of normal temperature cultivation. The data are expressed as the mean  $\pm$  standard error of three independent biological replicates. The different letters on the bars indicate the significant differences between treatments at the P<0.05 level on the same days using LSD's multiple range test.

**Figure S2**

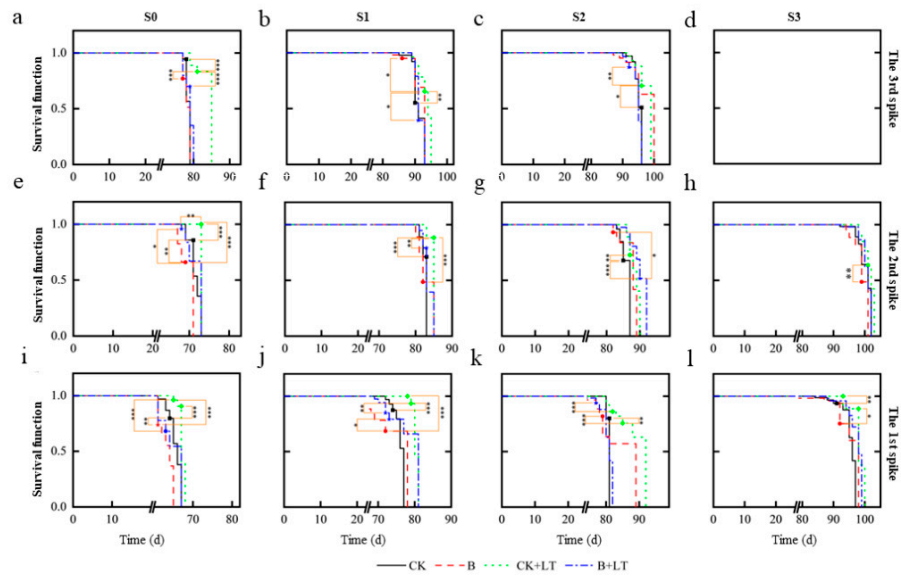


Figure S2 Time it takes for tomatoes to reach each flowering stage under different treatments, with that flowering stage completed when the survival function is 0.