

**SUPPLEMENTARY FILE**

**Article title:** Bio-priming with *Brevibacterium frigiditolerans* and Foliar Phytohormones Boost Plant Growth, Photosynthesis and Antioxidant Mechanism in Barley under Drought Stress

Table S1. Analysis of variance of data belong to investigated characteristics

Traits	Sum of square / F prob.						
	Genotype (G)	Irrigation (I)	G x I	Treatment (T)	G x T	I x T	G x I x T
Root fresh weight	0,000116/ns	3,100961/**	0,015610/ns	0,111997/ns	0,147566/ns	0,167747/ns	0,529511/ns
Shoot fresh weight	0,008157/*	0,009708/**	0,009459/ns	0,003942/ns	0,02043/ns	0,003215/ns	0,015924/ns
Root dry weight	0,008157/*	0,009707/ns	0,009458/ns	0,003942/ns	0,02043/ns	0,003214/ns	0,015924/ns
Shoot dry weight	0,000030/ns	0,035325/**	0,003132/ns	0,003623/ns	0,005225/ns	0,005972/ns	0,011463/ns
Root length	20,25/*	272,60/ns	55,13/ns	313,00/ns	434,41/ns	671,63/ns	570,88/ns
Plant height	303,34/**	829,35/**	17,10/ns	513,72/**	89,94/ns	117,43/ns	238,13/ns
Total chlorophyll content	10,40/ns	267,33/**	93,10/*	733,77/**	77,49/ns	254,12/ns	193,28/ns
Superoxide dismutase	82974230/**	1684248/*	27435184/ns	16095387/**	14706013/ns	32322323/ns	32357629/ns
Ascorbate peroxidase	290,53/**	197,55/**	142,15/ns	905,59/**	982,66/**	1496,75/**	1528,42/**
Catalase	15229/**	1133/**	2970/ns	3791/**	3564/ns	10641/ns	11512/ns
Malondealdehyt	2245/**	1812/**	3594/**	2761/**	18611/**	18552/**	2245/**
Total soluble protein	0,463761/**	6,844480/**	0,07693/ns	3,685016/**	3,363300/**	9,409764/**	12,79433/**

(G: Genotype, I: Irrigation level, T: Treatment, ns: No significant difference, \*: p<0.05, \*\*: p<0.01)

Table S2. Interactions of experimental factors on total chlorophyll content

Treatment	G x I x T						G x T		I x T			
	Zeynel ağa			Tarm-92			Zeynel ağa	Tarm-92	%75 FC	%50 FC	%25 FC	
	%75 FC	%50 FC	%25 FC	%75 FC	%50 FC	%25 FC						
Control	28,3	31,3	26,2	29,6	25,7	28,9	28,6	28,1	29,0	28,5	27,6	
PGPB	34,3	32,4	32,3	35,2	24,4	35,1	33,0	34,9	34,8	33,4	33,7	
SA	30,4	36,8	30,1	37,6	32,9	32,4	32,4	34,3	34,0	34,8	31,3	
GA	31,7	30,5	26,4	29,4	32,8	26,3	29,5	29,5	30,6	31,7	26,3	
PGPB+SA	33,7	34,5	29,6	40,3	35,5	29,1	32,6	35,0	37,0	35,0	29,4	
PGPB+GA	32,5	29,6	27,7	34,9	29,4	28,6	29,9	30,9	33,7	29,5	28,1	
SA+GA	37,2	36,7	34,4	37,6	29,0	34,6	36,1	33,8	37,4	32,9	34,5	
PGPB+SA+GA	31,3	29,9	31,2	32,8	29,1	30,7	30,8	30,9	32,1	29,5	30,9	
	G x I											
	32,4 AB	32,7 AB	29,7 C	34,7 A	31,1 BC	30,7 BC						

(PGPB: Plant growth promoting bacteris, SA: Salicylic acid, GA: Gibberellic acid, G: Genotype, I: Irrigation level, T: Treatment, FC: Fielel capacity)

Table S3. Interactions of experimental factors on ascorbate peroxidase

Treatment	G x I x T						G x T		I x T			
	Zeynel ağa			Tarm-92			Zeynel ağa	Tarm-92	%75 FC	%50 FC	%25 FC	
	%75 FC	%50 FC	%25 FC	%75 FC	%50 FC	%25 FC						
Control	0,00 t	0,61 rs	1,05 l-r	1,24 j-p	1,41 i-m	1,49 h-l	0,54 h	1,38 f	0,62 k	1,01 h-j	1,27 f-h	
PGPB	0,00 t	1,23 j-p	0,85 o-s	3,82 d	3,56 d	44,1 a	0,69 h	17,16 a	1,91 d	2,40 c	22,48 a	
SA	0,00 t	0,89 n-s	2,02 fg	1,10 k-q	0,62 rs	1,31 j-o	0,97 g	1,01 g	0,55 k	0,76 jk	1,67 de	
GA	0,00 t	0,00 t	1,58 g-j	1,95 f-h	5,97 b	1,07 l-r	0,54 h	3,00 b	0,98 h-j	2,99 b	1,32 fg	
PGPB+SA	0,88 o-s	3,60 d	1,44 i-l	1,49 h-l	2,19 ef	1,51 h-l	1,97 d	1,73 e	1,19 f-h	2,90 b	1,48 ef	
PGPB+GA	0,95 m-s	1,36 j-n	0,52 s	2,64 e	0,82 p-s	2,11 f	0,94 g	1,86 de	1,80 d	1,09 g-1	1,32 fg	
SA+GA	2,12 f	0,00 t	1,17 j-q	1,55 g-k	1,59 g-j	0,88 o-s	1,10 g	1,34 f	1,84 d	0,80 i-j	1,03 g-j	
PGPB+SA+GA	0,74 q-s	0,61 rs	0,53 s	1,61 g-j	4,42 c	1,88 f-1	0,63 h	2,64 c	1,18 f-h	2,52 c	1,20 f-h	
	G x I											
	0,59	1,04	1,15	1,93	2,57	6,79						

(PGPB: Plant growth promoting bacteris, SA: Salicylic acid, GA: Gibberellic acid, G: Genotype, I: Irrigation level, T: Treatment, FC: Fielel capacity)

Table S4. Interactions of experimental factors on malondealdehyde

Treatment	G x I x T						G x T		I x T		
	Zeynel ağa			Tarm-92			Zeynel ağa	Tarm-92	%75 FC	%50 FC	%25 FC
	%75 FC	%50 FC	%25 FC	%75	%50 FC	%25 FC					
Control	18,10 d-1	16,30 e-1	79,00 a	17,40 e-1	15,00 e-1	35,50 c-h	37,80 ab	22,63 b-d	17,75 e-h	15,65 e-h	57,25 a
PGPB	14,10 g-1	43,00 b-e	20,90 d-1	0,00 1	17,60 e-1	18,00 e-1	26,00 b-d	11,87 d	7,05 gh	30,30 b-f	19,45 e-h
SA	18,20 d-1	18,50 d-1	65,10 ab	0,00 1	42,20 b-e	20,60 d-1	33,93 a-c	20,93 b-d	9,10 gh	30,35 b-f	42,85 a-d
GA	19,80 d-1	18,80 d-1	26,6 c-1	17,30 e-1	16,40 e-1	15,60 e-1	21,73 b-d	16,43 d	18,55 e-h	17,60 e-h	21,10 e-h
PGPB+SA	15,40 e-1	46,10 b-e	68,30 ab	0,00 1	15,30 e-1	18,00 e-1	43,27 a	11,10 d	7,70 gh	30,70 b-f	43,15 a-c
PGPB+GA	14,60 g-1	41,40 b-e	19,90 d-1	11,60 hi	17,30 e-1	13,80 g-1	25,30 bc	14,23 d	13,10 f-h	29,35 b-f	16,85 e-h
SA+GA	0,00 1	17,30 e-1	23,10 c-1	12,20 hi	79,70 a	24,20 c-1	13,47 d	38,70 ab	6,10 h	48,50 ab	23,65 e-h
PGPB+SA+GA	14,10 g-1	0,00 1	52,50 a-c	0,00 1	14,00 g-1	14,00 g-1	22,20 b-d	9,33 d	7,05 gh	7,00 gh	33,25 b-f
	G x I										
	14,29 CD	25,18 B	44,43 A	7,31 D	27,19 B	19,96 C					

(PGPB: Plant growth promoting bacteris, SA: Salicylic acid, GA: Gibberellic acid, G: Genotype, I: Irrigation level, T: Treatment, FC: Fielc capacity)

Table S5. Interactions of experimental factors on total soluble protein

Treatment	G x I x T						G x T			I x T		
	Zeynel ağa			Tarm-92			Zeynel ağa	Tarm-92	%75 FC	%50 FC	%25 FC	
	%75 FC	%50 FC	%25 FC	%75	%50 FC	%25 FC						
Control	0,000 q	0,000 q	0,727 d-j	0,030 pq	0,261 m-q	0,544 g-n	0,242 f	0,278 ef	0,015 k	0,131 k	0,636 f-h	
PGPB	0,000 q	1,039 c-f	0,548 g-m	0,073 n-q	0,741 e-l	0,934 c-j	0,529 cd	0,583 cd	0,037 k	0,981 b-e	0,741 e-h	
SA	0,000 q	0,571 f-m	1,318 b-d	0,188 m-q	1,705 b	1,145 c-e	0,630 c	1,013 a	0,094 k	1,138 a-d	1,231 ab	
GA	0,211 m-q	0,746 e-l	0,212 m-q	0,371 k-q	0,314 l-q	2,364 a	0,390 d-f	1,016 a	0,291 i-k	0,530 h-j	1,288 a	
PGPB+SA	0,000 q	0,956 c-ı	1,197 c-e	1,131 c-e	0,202 m-q	0,494 ı-p	0,718 bc	0,609 cd	0,566 g-ı	0,579 g-ı	0,846 d-g	
PGPB+GA	1,082 c-e	1,168 c-e	0,517 h-o	0,316 l-q	0,793 e-k	0,385 h-q	0,922 ab	0,498 c-f	0,699 e-h	0,981 b-e	0,451 h-j	
SA+GA	0,746 e-l	0,000 q	0,802 e-k	0,265 m-q	0,466 j-q	0,983 c-h	0,516 c-e	0,571 cd	0,506 h-j	0,233 jk	0,893 c-f	
PGPB+SA+GA	0,055 o-q	0,999 c-g	0,793 e-k	0,917 c-j	1,383 b-c	0,555 gm	0,616 cd	0,952 a	0,486 h-j	1,191 a-c	0,674 f-h	
	G x I											
	0,262	0,685	0,709	0,411	0,733	0,926						

(PGPB: Plant growth promoting bacteris, SA: Salicylic acid, GA: Gibberellic acid, G: Genotype, I: Irrigation level, T: Treatment, FC: Fielc capacity)