Effect on pea cultivars (*Pisum sativum L.* cv. Lincoln & Douce de provence)

The net impact of individual and combined stress on plant growth

Crop: Pea (Pisum sativum L.) cv. Lincoln & Douce de provence
Stress 1: Salt 75mM
Stress 2: PEG 6000 -0.5 MPa
Stage: Sowing

The table shows effect of salinity stress alone and in combination with PEG induced drought stress on the leaf growth and physiology of two pea cv. Lincoln & Douce de provence

Genotypes	Stress treatments	Plant response to stress (reduction over control %)					
		Type A parameters *		Type B parameters *		Type C parameters *	
		Leaf DW	Total LSA	Water content	Chlorophyll	Na+ (mmol/gDW) **	K+ (mmol/gDW) **
Lincoln	Salt (75 mM NaCl)	2.93 ↓	22.09 ↓	8.14 ↓	7.73 ↓	1.95	0.41
	Salt + drought	18.83 ↓	59.34 ↓	30.66 ↓	-66.30 ↑	0.87	0.49
Douce de provence	Salt (75 mM NaCl)	30.33 ↓	38.66 ↓	10.55 ↓	-21.48 ↑	1.4	0.71
	Salt + drought	48.42 ↓	67.38 ↓	51.83 ↓	-101.48 ↑	0.9	0.61

DW- dry weight, FW-fresh weight, LSA-leaf surface area
Control- Lincoln (Na+- 0.03, K+ - 0.95); Douce de provence (Na+- 0.05, K+ - 1.39)

For raw data – Click here (.xlsx file)
Reference- Attia H, Alamer KH, Ouhibi C, Oueslati S, Lachaal M. (2002) Interaction between salt stress and drought stress on some physiological parameters in two pea cultivars. *Int. J. Bot.* 16: 1-8.

Note: *Values presented in the table were calculated using the formula described below.*

$$\text{Reduction over control (\%)} = \frac{(\text{Value}_{Control} - \text{Value}_{Stress})}{\text{Value}_{Control}} \times 100$$

1) '↓'- indicates plant parameters affected by stress that lead to high susceptibility (higher the value more the damage).
2) '↑'- indicates plant parameters less/not affected by stress.

'' - For more information on parameters classification, please refer to 'methodology' tab.*
***- 'Values are presented as it is from the source article without subjecting to the calculation'.*

The inference from the study: Attia *et al.*, 2020 study was conducted to assess the effect of salinity alone and in combination with PEG stress on leaf physiology and growth of two pea cv. Lincoln and Douce de provence. Both the cultivars showed a higher reduction in leaf DW, leaf surface area, and water content under combined stress compared to salt stress alone. However, the cv. Douce de provence showed higher susceptibility to both salt and combined stress compared to cv. Lincoln. **Altogether study indicates the negative effect of combined salt and PEG stress on both the pea cv. Lincoln and Douce de provence.**