Effect on poplar *Poplar (Populus trichocarpa)* clones

The net impact of individual and combined stress on plant growth

The table shows the effect of K deficiency and Ozone stress individually and in combination on the growth of poplar tree species clones - No.93-968 and No.53-242

Clones	Stress treatments	Plant response to stress					
		Type A parameters*					Type B parameter*
		Height (cm)	Basal diameter (cm)	Root dry weight (g)	Shoot dry weight (g)	Total dry weight (g)	Stomatal conductance (mmol/cm²/s)
Populus trichocarpa clone- No. 93-968	High K	191.2	1.22	4.17	61	65.2	333
	Ozone	171.5	0.97	2.47	37.3	40.3	252
	No K	164.8	0.98	2.02	41.3	43.3	308
	No K + Ozone	157.8	0.95	2.22	37.9	40.1	253
Hybrid poplar, *P. trichocarpa* x *deltoides* clone No. 53-242	High K	209.6	1.34	20.3	133.5	153.8	422
	Ozone	196.2	1.16	7.7	85.8	93.5	372
	No K	195.2	1.22	21	112.3	133.2	377
	No K + Ozone	187.2	1.13	9.8	85.4	95.1	320

For raw data – Click here (.xlsx file)
For clone data- click here (pdf file)
Reference- Lee KJ, Kim TY (2009) Interaction between potassium and ozone in biomass production and resistance to ozone of potted-cuttings of *Populus trichocarpa* and *P. trichocarpa x deltoides*. Forest Science and Technology. 5(1):1-9.

Note: Values are presented as it is from the source article without subjecting to the calculation.

'*' - For more information on parameter classification, please refer to the 'methodology' tab.

The inference from the study: Lee & Kim, 2009 study conducted to understand the combined effect of potassium and ozone stress on the growth and resistance to ozone of poplar. Results showed reduced plant height and the basal diameter under combined no K and ozone stress compared to other treatments whereas, root growth was more affected under no K treatment in

both the clones. However, the shoot and total dry weight were drastically affected under ozone alone and in combination with no K compared to high K treatment in both the clones.