



Effect on potato cultivars (*Solanum tuberosum* cv. Darwina, Desiree, Elles, Mentor)

The net impact of individual and combined stress on plant growth

Crop: Potato (*Solanum tuberosum* cv. Darwina, Desiree, Elles, Mentor)
 Stress 1: Drought
 Stress 2: *Globodera pallida* (26 juveniles/g soil)
 Stage of plant: Sowing

The table shows the effect of nematode and drought alone and in combination on the growth and yield of potato plants.

	Treatment	Plant response to stress**		
		Type A parameters*		
		Tuber weight (% of control)	Harvest Index (% of control)	Dry matter content (% of control)
Darwina	Globodera pallida	63.00	95.00	103
	Drought + Globodera pallida Simultaneous stress	48.00	93.00	110
Desiree	Globodera pallida	83.00	101.00	109
	Drought + Globodera pallida Simultaneous stress	48.00	89.00	105
Elles	Globodera pallida	89.00	97.00	105
	Drought + Globodera pallida Simultaneous stress	59.00	92.00	99
Mentor	Globodera pallida	77.00	101.00	107
	Drought + Globodera pallida Simultaneous stress	34.00	103.00	109

Reference - Haverkort AJ, Boerma M, Velema R, van de Waart M (1992) The influence of drought and cyst nematodes on potato growth. 4. Effects on crop growth under field conditions of four cultivars differing in tolerance. Netherlands Journal of Plant Pathology 98: 179–191.

Note:

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

*** - Values are presented as it is from the source article without subjecting to the calculation.*

Inference from the study: Haverkroft et.al. 1992 studied the interaction of nematode and drought in four potato cultivars; Darwina, Desiree, Elles, Mentor. Plants were subjected to single and simultaneous. Tuber weight and harvest index reduced more under combined stress conditions. Dry matter content increased under combined stress treatment compared to control treatment. **Overall, this stress combination is detrimental to all potato cultivars.**