

GROWTH AND IONIC COMPOSITION OF TOMATO VARIETIES AS EFFECTED BY SALINITY LEVELS AND SUPPLEMENTAL POTASSIUM

Muhammad Yasin¹

ABSTRACT

Effect of soil salinity on growth and ionic composition of three tomato varieties (Monprecus, Pant Bahr and Roma) were investigated with and without addition of K (300 mg kg⁻¹ soil) in greenhouse. Plant height and dry matter yield of tomato varieties reduced with increased salinity level. Reduction of dry matter yield was 17.6, 32 and 2 percent over control in Monprecus, Pant Bahr and Roma varieties. Sodium concentration in leaf tissues was increased and K decreased in salinized plants. Roma had relatively more Na (277 mM Kg⁻¹) than Monprecus (235 mM Kg⁻¹) and Pant Bahr (208 mM Kg⁻¹) varieties. Application of K enhanced growth, dry matter yield and K concentration in tomato plants and consequently reduced Na/K ratios. Pant Bahr had lower Na/K ratio than Monprecus and Roma indicating that it was more tolerant to salts. Improvement in yield by K application under saline conditions was 65, 57 and 41 percent in Monprecus, Pant Bahr and Roma varieties, respectively.