Table 3. Yield and TSS content of carrot as affected by S and Mg application.

Treatments	Fresh yield/plant, g	Projected fresh yield, t/ha	TSS content, °Brix
S_0Mg_0#	22.9	5.6	9.1
$S_{11}Mg_{5.5}$	41.8	10.1	9.5
$S_{22}Mg_{11}$	46.3	11.3	9.7
$S_{33}Mg_{16.5}$	49.9	12.1	10.3
$S_{44}Mg_{22}$	56.1	13.6	10.7
$S_{55}Mg_{27.5}$	44.4	10.8	11.1
$S_{66}Mg_{33}$	36.3	8.8	11.0
CD (at 5 %)	4.7	1.2	0.2

values in subscripts are applied rates of S and Mg in kg/ha.

of plant development. The current experiment showed that yield of both the crops declined with any further increase of S and Mg rates beyond 44 kg/ha of S and 22 kg/ha of Mg. This could be due to the antagonistic relations between K and Mg. In the literature, the antagonistic effect of K on Mg is widely reported. Potassium induced Mg deficiency in Arabica coffee was reported by Rao (1968) at leaf K levels of 2.48%, Mg levels of 0.21%, and at a K:Mg ratio of 11.8. Reports of antagonistic effects of Mg on K are few. However, Mg-induced K deficiency was observed in coffee by Rao (1968) at 0.4% leaf Mg and 1.2% leaf K level under field conditions with continuous use of dolomite as an amendment along with concurrent foliar sprays of magnesium sulfate. Probably such antagonism was significant in this study at application rates of more than 22 kg/ha of Mg, which reduced K uptake and caused losses in yield. Similar antagonism between Mg and K was found in mature tea experiments at Annamallais, South India (Verma, 1993).

The results of this research clearly show that S and Mg were deficient in the carrot and turmeric crops at this location. However, over application of these nutrients can result in yield declines, demanding that careful attention be paid to the effect of soil test S and Mg levels when determining fertilizer additions. BC

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