Boron in Soy

Study Details

Date: 2003 - 2004

Location: Punjab, India

Soil: Alluvial soil, loam, 0.24-0.30% organic content, 132-145 kg/ha total nitrogen, 14.2-13.4 kg/ha available phosphor, 178-190 kg/ha available potassium, pH = 8.2-8.3

Crop variety: Jundan 20

Fertilizers: Water soluble particles with B ≥10%, Zn ≥10%, 400 g/mu was spread in the soil when the maize seeds were sowed together with routine fertilization

Trial design: 3 treatments (0.75, 1.00, 1.25kg B/ha), 3 replications, randomized block design

Results

Applications of 0.75, 1.00 and 1.25 showed significant yield increase over the control. There was no significant effect between treatments

Source

Khurana, MPS, Arora, S. "Comparative efficiency of Borax and Granubor as Boron Fertilizers for Lentil and Soybean Grown on Alluvial Alkaline Soils." *Journal of Plant Nutrition*, 35:2145-2155 (2012).

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Effect of Boron Sources and Levels on Soybean Yield, Boron Content and Uptake

Treatment	Yield (kg ha^{-1})		Boron Content (μg g^{-1})		Boron uptake (g ha^{-1})		
	Seed	Straw	Seed	Straw	Seed	Straw	Total
Control	1220	4472	19.4	19.4	2.35	111.6	135.1
Borax (0.75 kg B ha^{-1})	1442	4871	25.6	24.7	37.0	161.5	198.6
Borax (1.0 kg B ha^{-1})	1491	5042	28.8	26.9	43.2	184.0	227.2
Borax (1.25 kg B ha^{-1})	1522	5052	31.0	32.9	47.3	195.0	242.3
Granubor® (0.75 kg B ha^{-1})	1437	4963	26.7	25.0	39.2	170.3	209.5
Granubor (1.0 kg B ha^{-1})	1524	5062	29.1	28.1	44.0	190.6	234.6
Granubor (1.25 kg B ha^{-1})	1526	5094	29.9	32.9	45.5	195.4	240.8
SEm±	41.18	82.49	1.47	1.85	3.05	11.26	14.29
LSD ($P < 0.05$)	103	294	2.5	1.79	4.3	12.3	12.6