

Time and rate effect of magnesium application by foliar spray on soybean

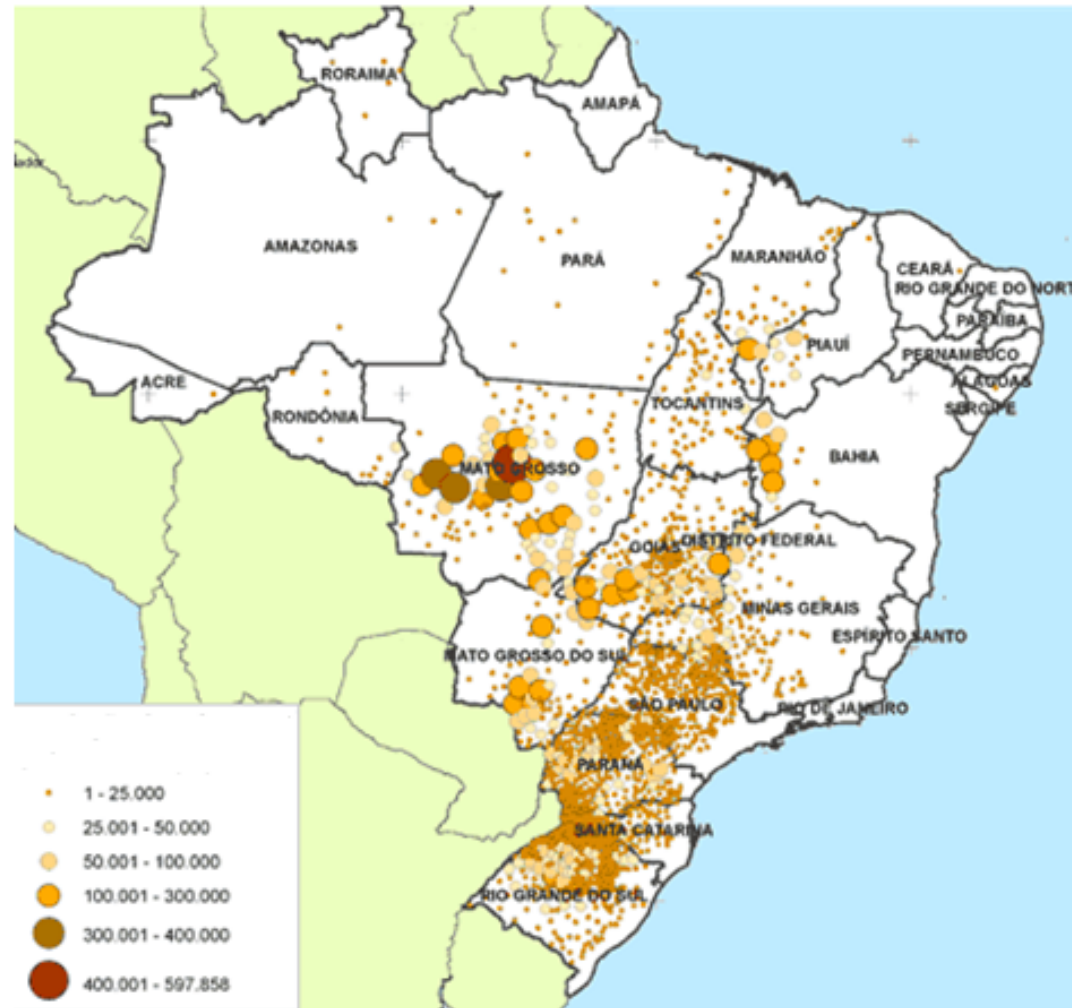
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Introduction

- 29,3 million ha;
- production - 86,6 million t;

Source : CONAB



Source : IBGE

Methods

Site: Uberlândia - MG: 19° 12' 23" S
47° 59' 43" W
930 m altitude

- Genetic Material: AN 5909 RG (premature - 100 days);
- Soil type: Oxysol (85 % clay)
- Fonte: Mg Sulfate

Relation in soil

Ca : Mg : K

14 : 3,2 : 1

Methods

Treatments	Mg Rate (g ha ⁻¹)	Time
1 (control)	-	-
2	25	V4
3	50	V4
4	100	V4
5	250	V4
6	500	V4
7	1000	V4
8	25	R1
9	50	R1
10	100	R1
11	250	R1
12	500	R1
13	1000	R1
14	25	R5.1
15	50	R5.1
16	100	R5.1
17	250	R5.1
18	500	R5.1
19	1000	R5.1

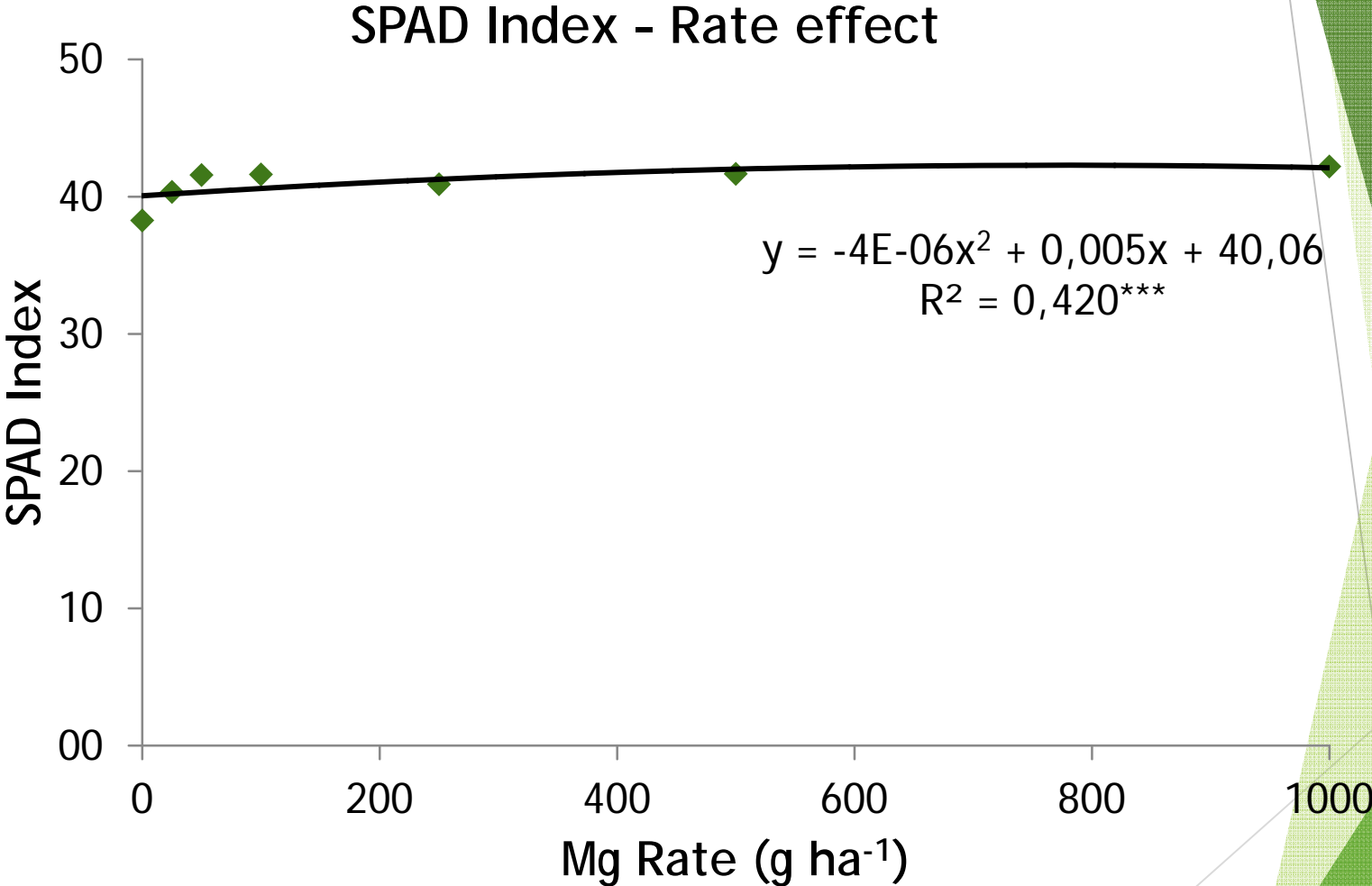
Methods

Parameters Analyzed

- SPAD Index (chlorophyll leaf)
- Mass of 100 grains
- Productivity (sc ha^{-1})



Results and Discussion



Results and Discussion

SPAD index at different time application

Time	SPAD Index
V4	40,4 b
R1	40,9 ab
R5.1	41,5 a
DMS	1,0

Source: Vitti et al, 2014

(Tukey 10%)

Results and Discussion

Mass of 100 grains at different time application

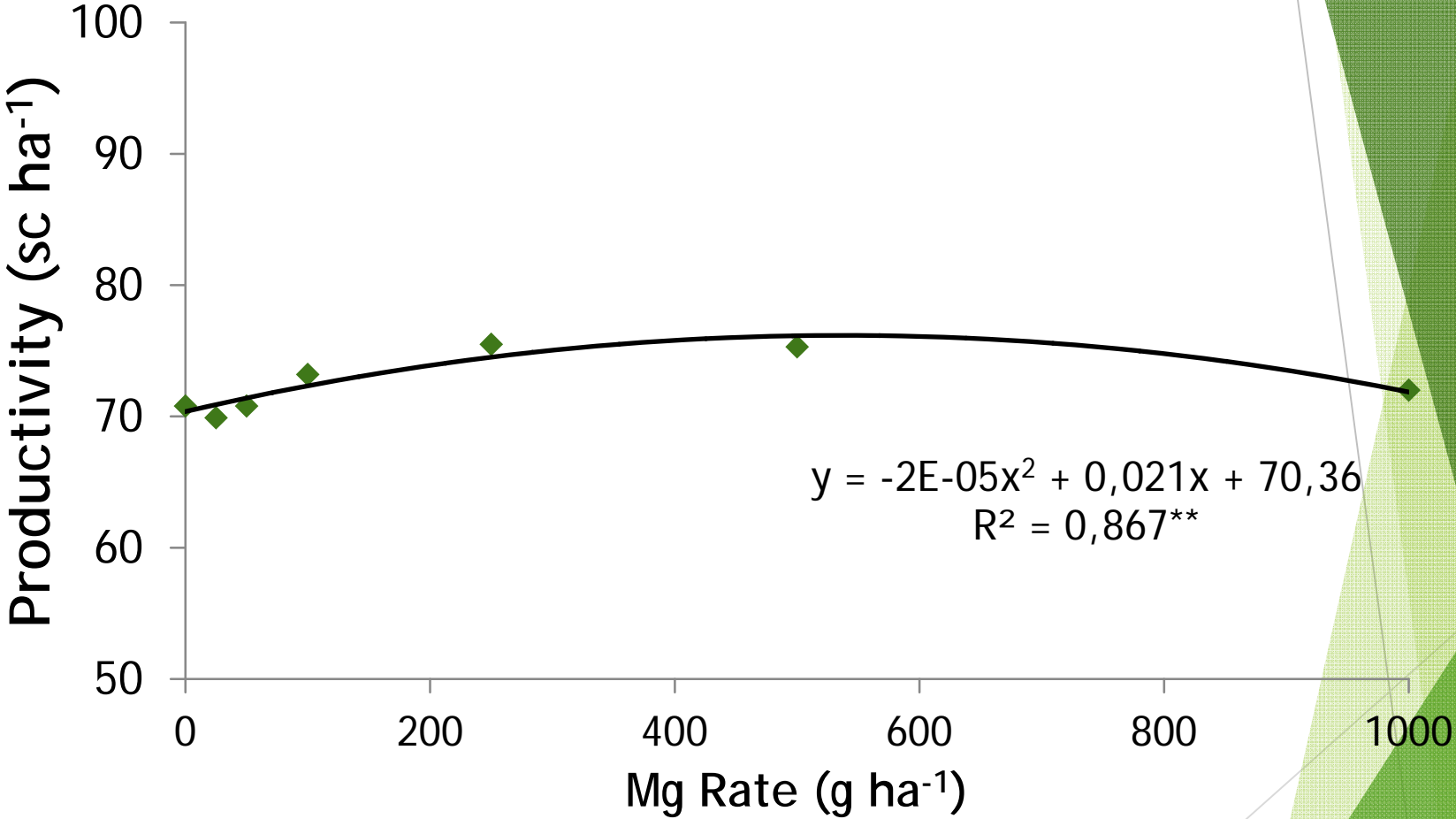
Time	Mass of 100 grains (g)
V4	14,9 b
R1	15,1 ab
R5.1	15,2 a
DMS	0,3

Source: Vitti et al, 2014

(Tukey 10%)

Results and Discussion

Productivity (sc ha⁻¹) - Rate effect



SC = 60 Kg

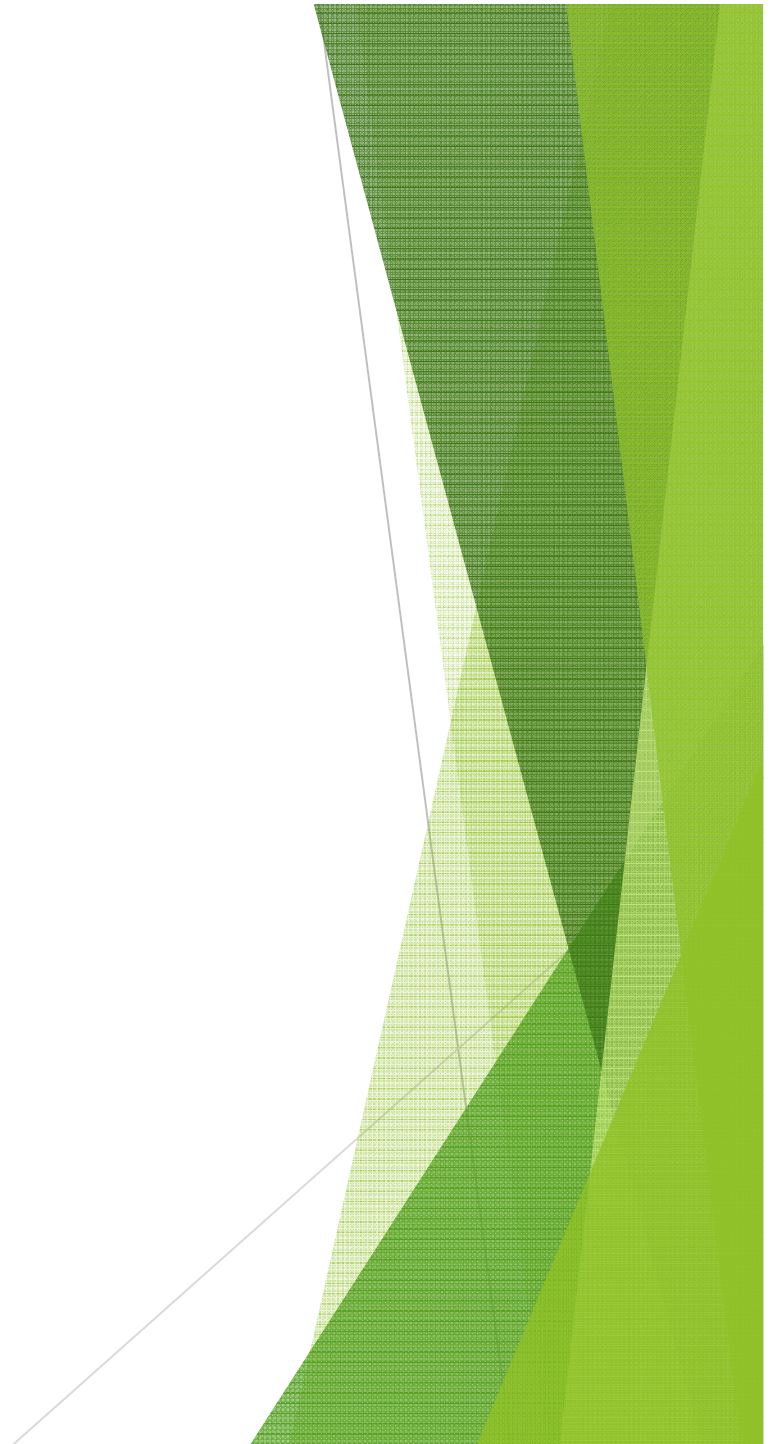
Conclusions

The use of magnesium sulfate by foliar spray:

- ✓ Increased the content of chlorophyll in the leaf (Tukey 1%) with higher values when applied to R5.1 regarding V4 (Tukey 10%);
- ✓ Produced higher grain yield when applied to R5.1 regarding to V4;
- ✓ Increased productivity of soybean regardless of application time (Tukey 5%) with optimum rate of 525 g ha⁻¹.

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Thank you!



Grupo de Apoio à Pesquisa e Extensão

