

22/23 Harvest

Results

Effect of different doses of **SE Mag**, applied on the **soil surface**, on soil and corn plant parameters



São Jorge do Ivaí | PR
Partnership: Farmer's Consultoria



Objective

Performance

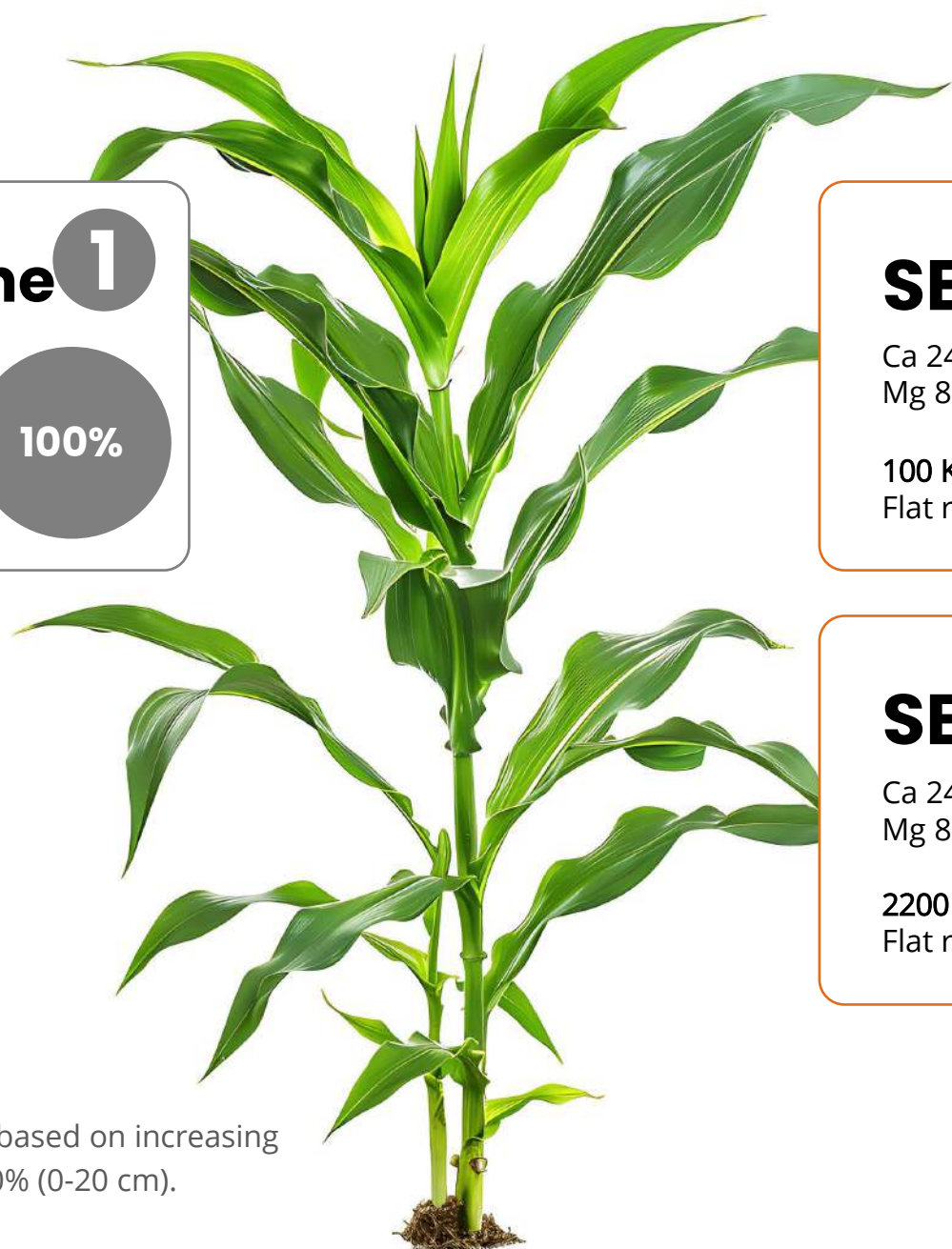
To evaluate the effects of applying doses of **SE MAG** on soil profile development and corn productivity.



São Jorge do Ivaí | PR

Study parameters

Corn	Hybrid AG 9035
Application	Broadcast on the soil surface
Harvest	August 2023
Experimental plot	Plots of 43.2 m ² per treatment



Limestone

1

CaO 30%
MgO 20%

3600 Kg ha⁻¹

100%

SE Mag

2

Ca 24% (CaO 33.7%)
Mg 8% (MgO 13.27%)

100 Kg ha⁻¹
Flat rate

30%

SE Mag

4

Ca 24% (CaO 33.57%)
Mg 8% (MgO 13.27%)

3600 Kg ha⁻¹
Flat rate

100%

SE Mag

3

Ca 24% (CaO 33.57%)
Mg 8% (MgO 13.27%)

2200 Kg ha⁻¹
Flat rate

60%

SE Mag

5

Ca 24% (CaO 33.57%)
Mg 8% (MgO 13.27%)

5400 Kg ha⁻¹
Flat rate

150%

*Dose determination based on increasing base saturation to 100% (0-20 cm).



Methodology

Soil

Soil sampling was performed at different depths.

Plant

Corn plant height at the R1 stage: measurements were taken on 5 plants per plot, from the plant collar to the last leaf.

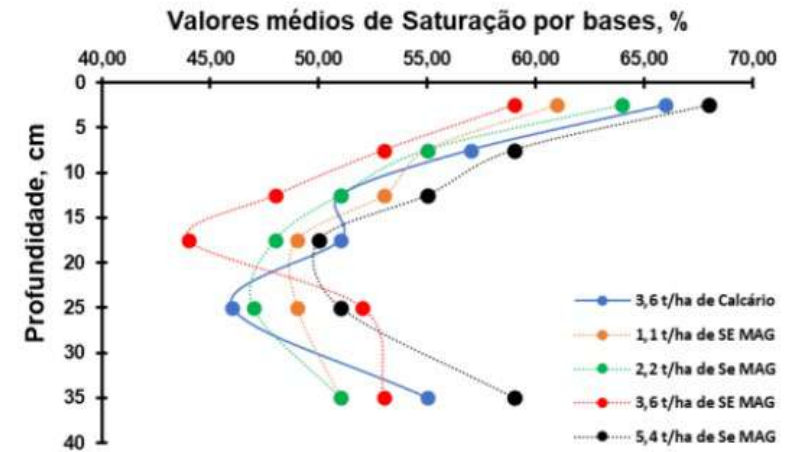
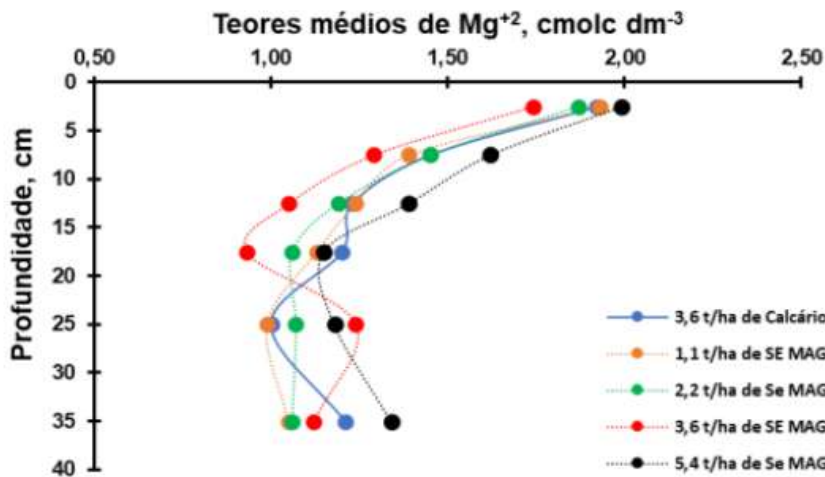
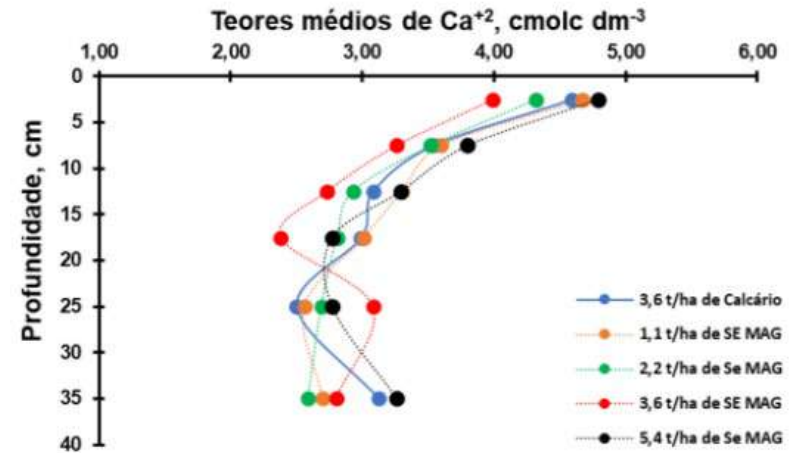
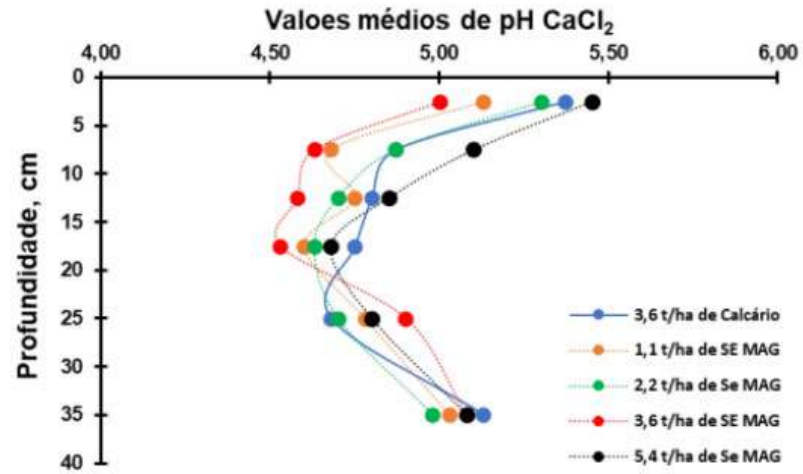
Thousand-grain weight and corn yield: Grains harvested from each plot (5.4 m²) and corrected to a standard moisture content of 14% and converted to grain yield (Kg ha⁻¹).

Results

Soil Performance

CHEMICAL PARAMETERS
At different depths.





Soil chemical analysis

Different depths

Thousand-grain weight (TGW)
•Productivity

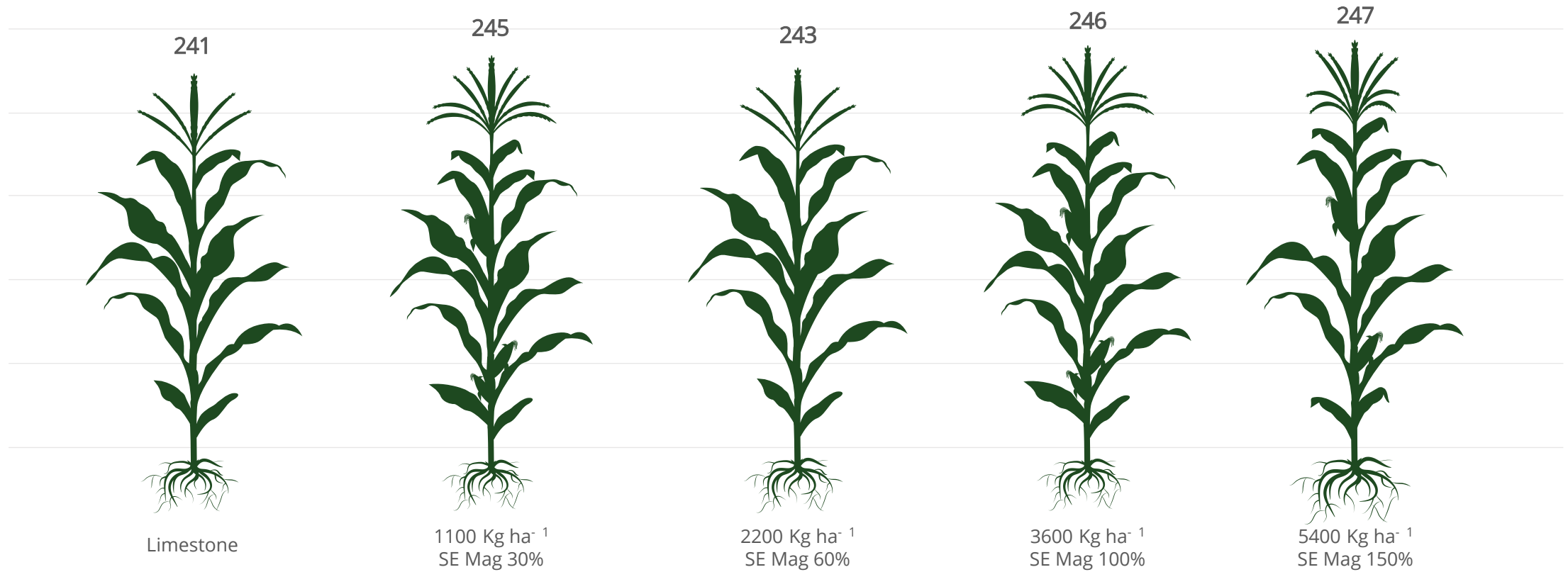
Results

Plant Performance

Plant height: R1 stage
Thousand-grain weight (TGW)
Productivity



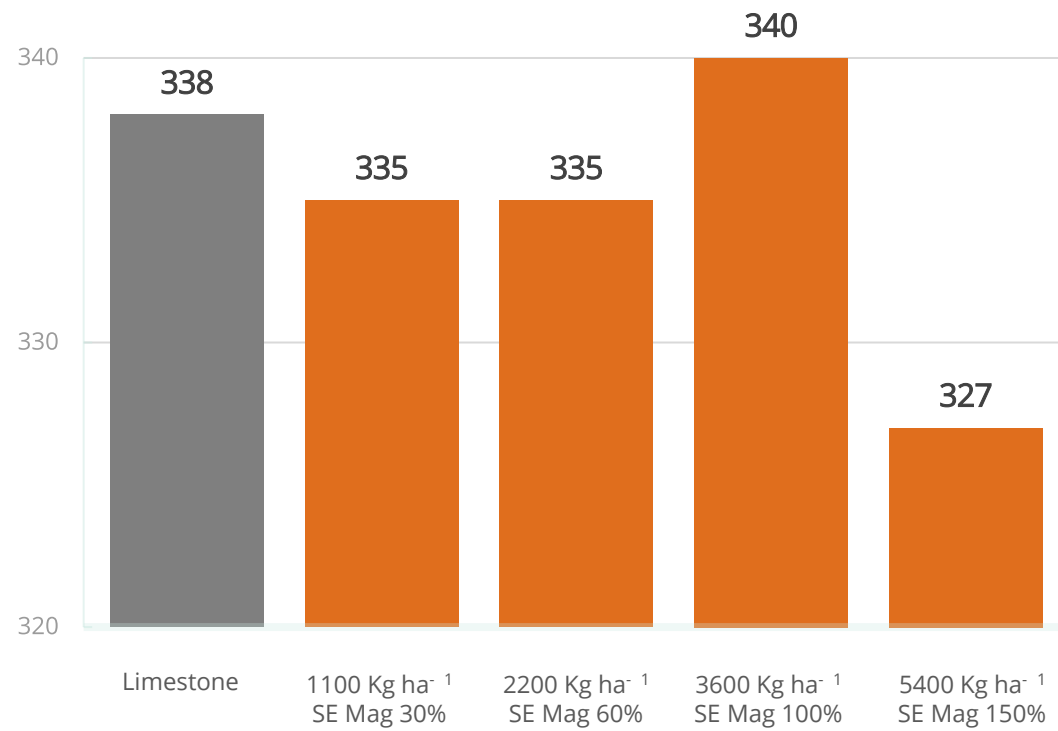
Height (cm)



Plant height

R1 stage

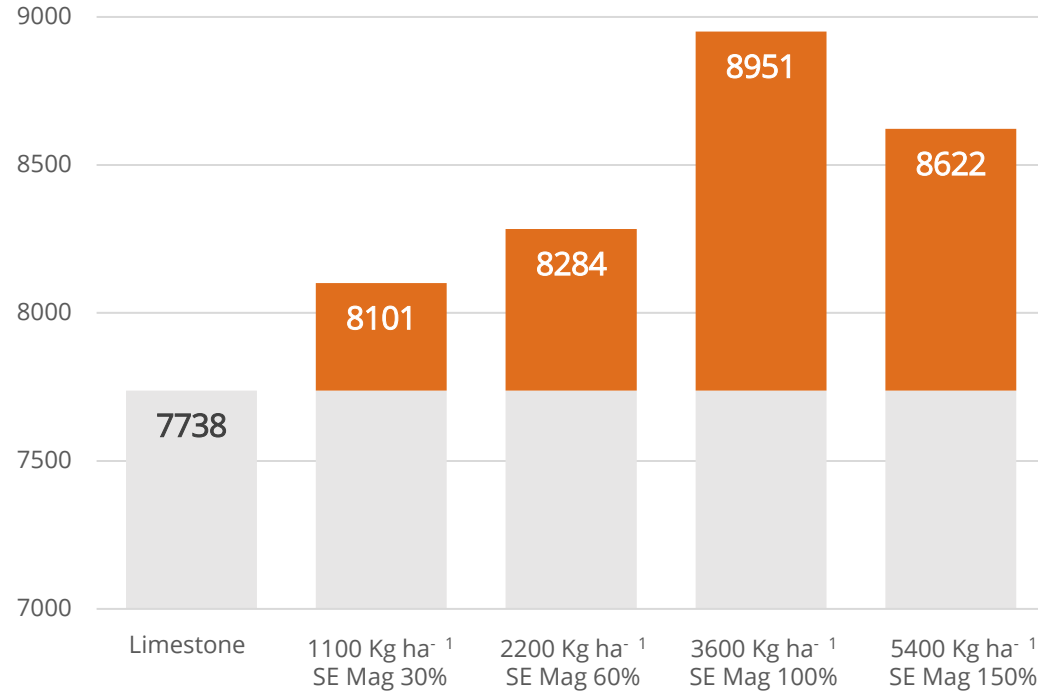
Thousand-grain weight (g)



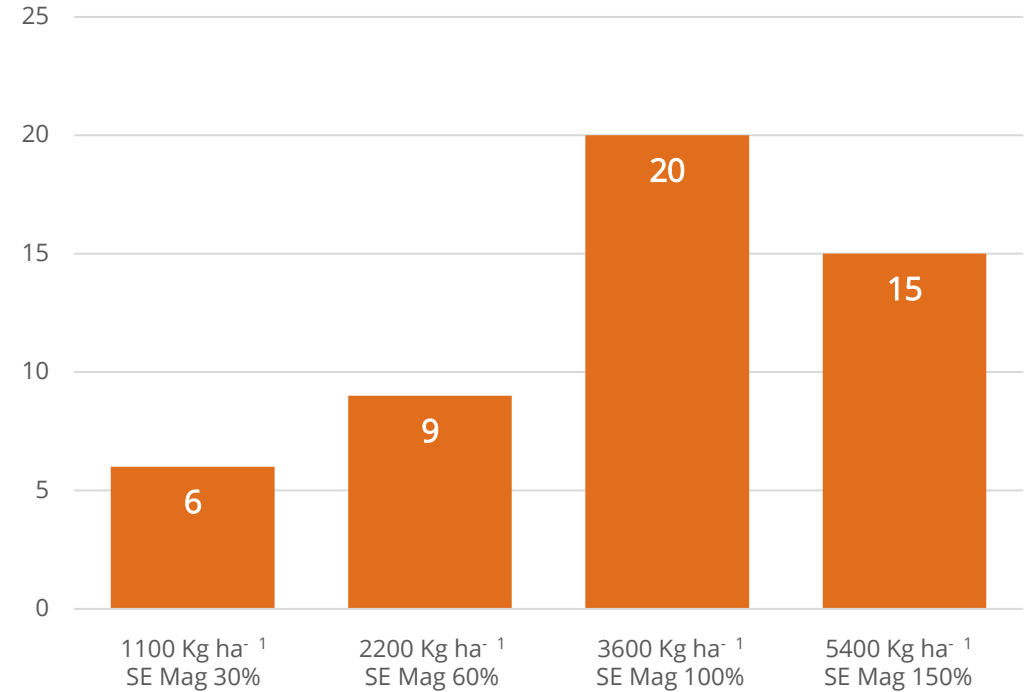
TGW

Thousand-grain weight

Productivity (Kg ha⁻¹)



Increase (Sacks ha⁻¹)



Area's productivity

Conclusions

Productivity

Plant productivity was higher in all doses with the application of **SE Mag**, with an increase of **6, 9, 20, and 15 sacks ha⁻¹ compared to limestone** (30%, 60%, 100%, and 150% of SE Mag).



Plant height

The application of different doses of **SE Mag** promoted increases in plant height compared to the application of limestone.

TGW

The 100% dose of **SE Mag** showed the highest TGW.

Soil chemistry

The main modifications promoted in soil chemistry were observed at the 150% dose of **SE Mag**, with increases in pH, Ca, Mg, and V% values (0-20 cm depth).

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