HALOGEN GREENS



RESEARCH REPORT 2026

Magtasium™ Preliminary Trial Results: Spinach

Reviewed by

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REPORT 08 | REVISION 07

HALOGEN GREENS
ELEVATING CROP PROTECTION, NATURALLY

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Magtasium™ spinach pot trial

Magtasium™ is a liquid, Group-3, Bio-Stimulant. In these greenhouse pots, its elevated-calcium version produced about 57% more leaves and plants about 19% taller under the SP7.5 programme than untreated spinach.

1. What was tested

The aim was to test Magtasium™ as a Bio-Stimulant by measuring leaf greenness, height, leaf number and dry plant mass against untreated plants. Product Y is Magtasium™ with elevated calcium. SP7.5 means a leaf spray of 7.5 mL per litre of water, twice a week. Feeding-water EC was 0.87 throughout the trial, as confirmed by Halogen Greens. EC describes dissolved salts in the feeding water. SP0 is the untreated group.

2. What the trials showed

What was measured	SP7.5 programme	Untreated SP0	Result compared with SP0
Final leaf number	About 36	About 23	About 56.5% more leaves
Final height	About 25 cm	About 21 cm	About 19.0% taller
Final leaf reading	About 45 SPAD	About 48 SPAD	About 93.8% of the untreated reading

All values and percentages are approximate because they were read from charts. SPAD is a meter reading linked to chlorophyll, the green material leaves use to capture sunlight. SP7.5 reached about 93.8% of the untreated SPAD reading; this is a proportion, not a SPAD increase.

3. What this means for your farm

SP7.5 is the most promising tested programme for encouraging leaf development. More leaves and taller plants give the farmer a clear reason to evaluate this programme in spinach.

Start with a small trial alongside your usual feeding programme. Apply SP7.5 to one group and keep a matching group without Magtasium™. Harvest both on the same dates and weigh the usable leaves. This will show whether the extra leaf development produces more spinach to sell.

The final SPAD reading was slightly lower than in untreated plants, and dry plant mass did not show a consistent increase. The strongest finding is better leaf development.

Treatment programme and source interpretation

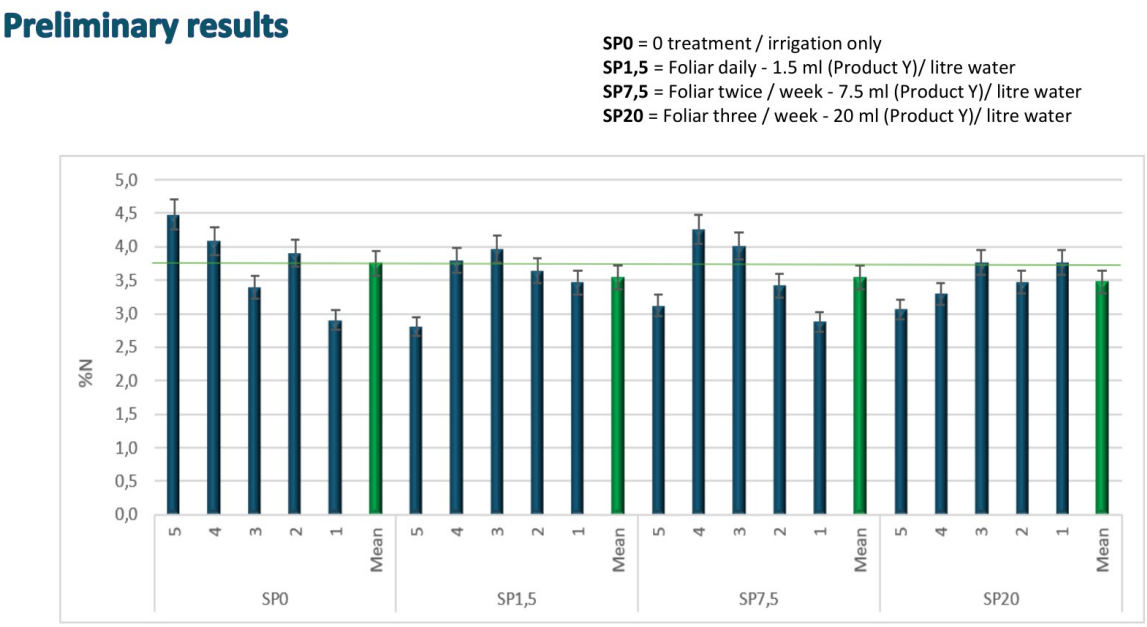
Code	Product	Foliar programme
SP0	No Magtasium™	Untreated irrigation control
SP1.5	Elevated-calcium Magtasium™ (Product Y)	1.5 mL/L daily
SP7.5	Elevated-calcium Magtasium™ (Product Y)	7.5 mL/L twice per week
SP20	Elevated-calcium Magtasium™ (Product Y)	20 mL/L three times per week

The source charts show observations from April to June. The dry-matter chart uses separate February, April and May date labels and labels the vertical axis “Dry matter (g) /pot”. The final treatment description on that chart repeats SP1.5 while describing the 20 mL/L programme. These original labels are retained in the source panel; the corrected treatment identity above follows the other spinach panels.

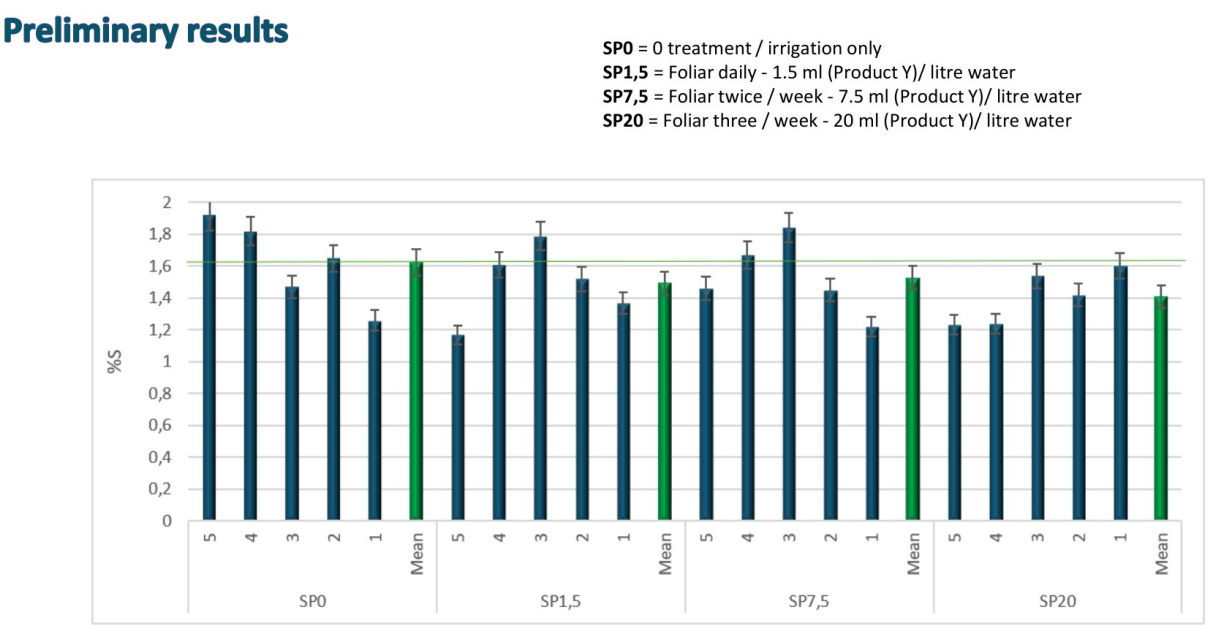
No gram-to-kilogram conversion is imposed on the dry-matter chart because its printed unit and small decimal values require confirmation from the raw data. The summary uses relative chart patterns. The source does not provide a complete raw-data table or a statistical test for the displayed responses.

The following source panels retain leaf nutrient charts, the nitrogen-sulphur explanatory panel, and all four spinach response graphs. The crop-status tables for other species are outside this spinach report.

Spinach source results



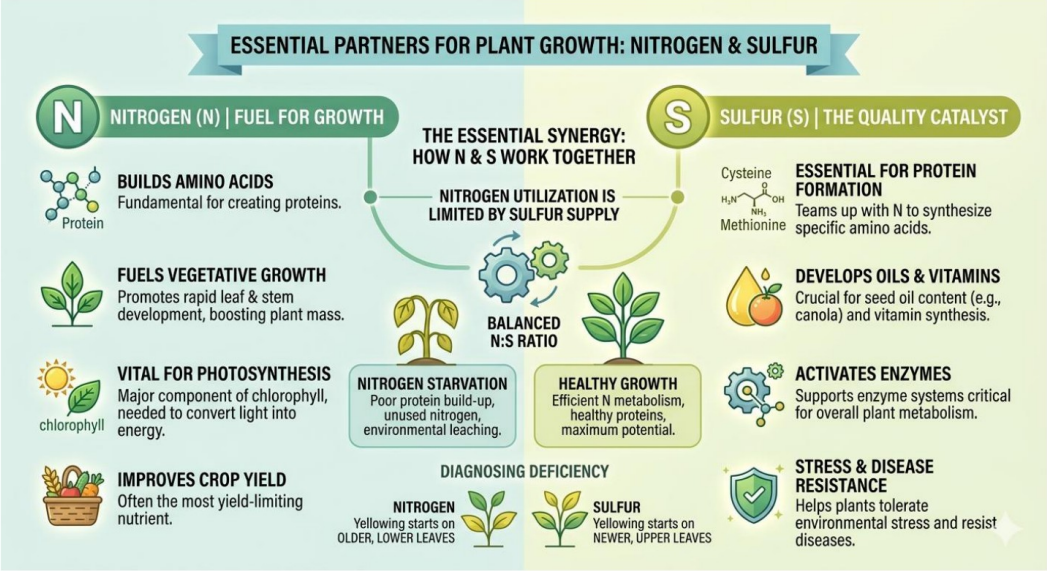
Source page 12: Leaf nitrogen concentration.



Source page 13: Leaf sulphur concentration.

Spinach source results

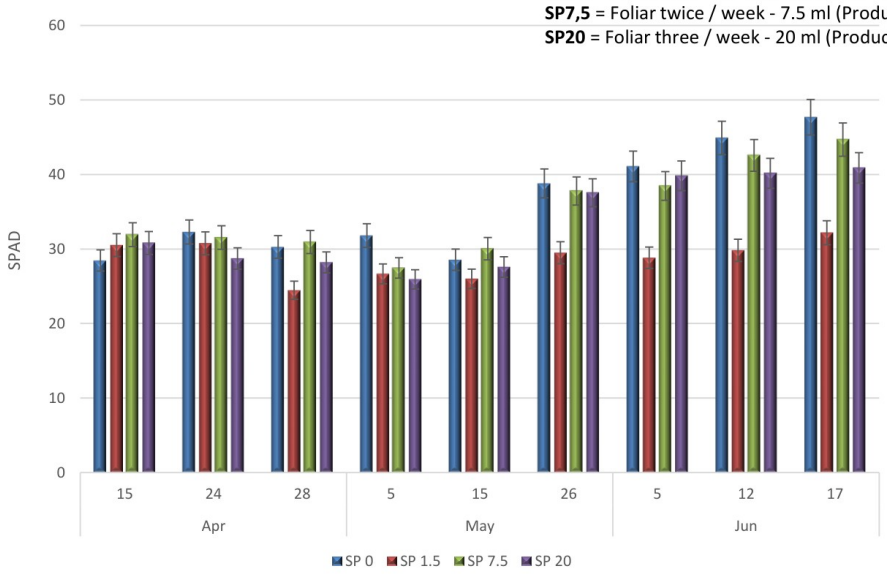
Preliminary results



Source page 14: Source explanation of nitrogen and sulphur.

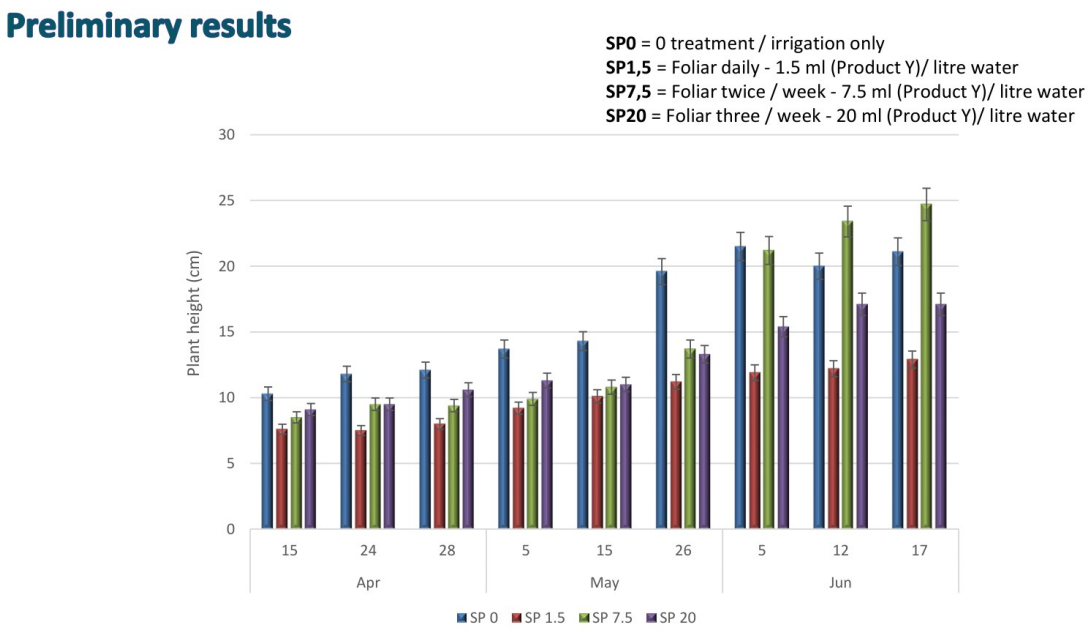
Preliminary results

SP0 = 0 treatment / irrigation only
SP1,5 = Foliar daily - 1.5 ml (Product Y)/ litre water
SP7,5 = Foliar twice / week - 7.5 ml (Product Y)/ litre water
SP20 = Foliar three / week - 20 ml (Product Y)/ litre water

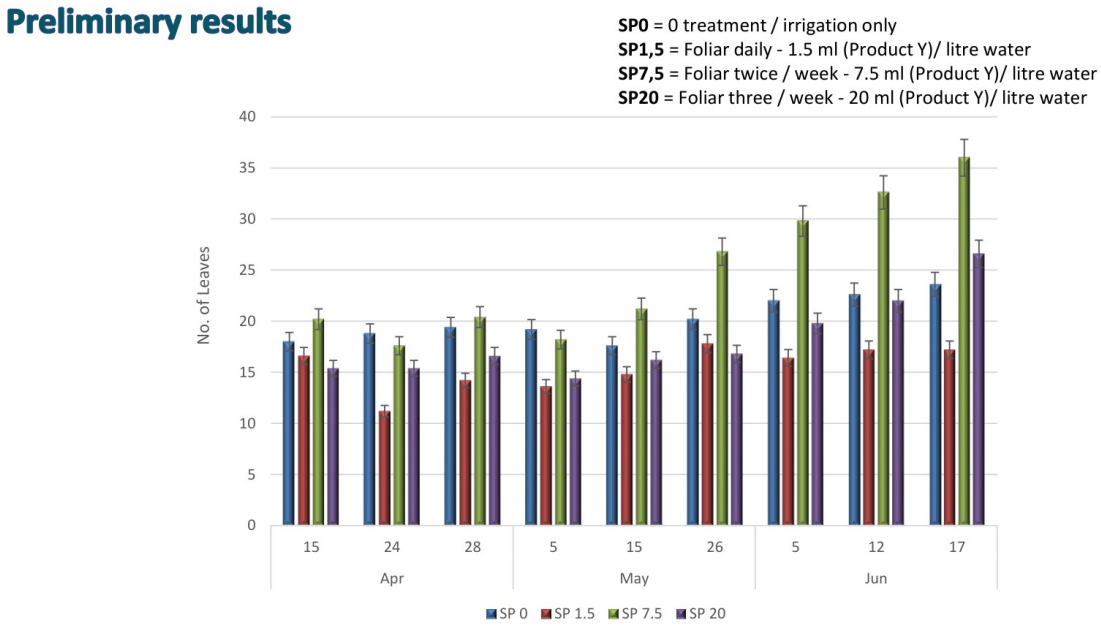


Source page 15: Relative leaf chlorophyll SPAD.

Spinach source results



Source page 16: Plant height.

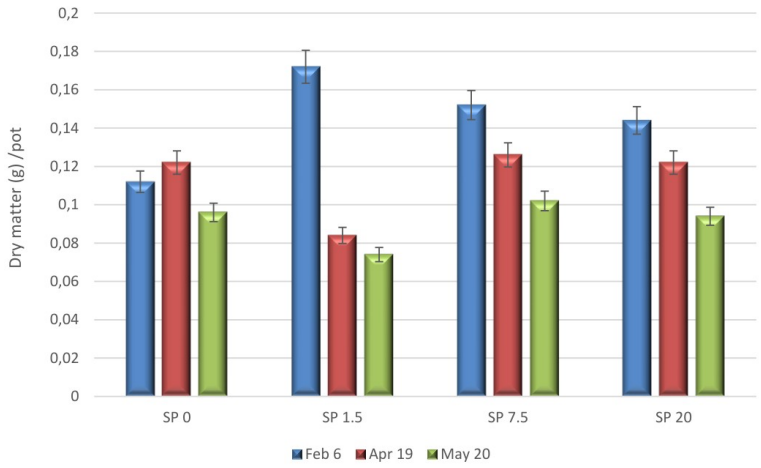


Source page 17: Leaf number.

Spinach source results

Preliminary results

SP0 = 0 treatment / irrigation only
SP1,5 = Foliar daily - 1.5 ml (Product Y)/ litre water
SP7,5 = Foliar twice / week - 7.5 ml (Product Y)/ litre water
SP1,5 = Foliar three / week - 20 ml (Product Y)/ litre water



Source page 18: Dry matter.

CORPORATE IDENTITY

HALOGEN GREENS
ELEVATING CROP PROTECTION, NATURALLY

SPECIALIZATION

Group 3 Bio Stimulant
(Trials Underway for Registration)

STATUS

- Pending Worldwide Patent
- Conducting Trials

Page 9

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