HALOGEN GREENS

AGRIVITALITY



RESEARCH REPORT 2026

Magtasium™ Preliminary Trial Results: Kikuyu

Reviewed by

Prof. Wayne F. Truter | AgriVitality CC
PhD, MSc.Agric, BSc.Agric
MGSSA, IAEA, LRS, Pri. Sci. Nat
Agricultural and Environmental Science Specialist
SACNASP registration: 000148
wayne.truter@fplri.org | +27 83 470 3964

Research Support:

Life AgriScience
APPLIED RESEARCH SERVICES

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RESEARCH, TECHNOLOGY & INNOVATION INSTITUTE

REPORT 06 | REVISION 07

HALOGEN GREENS
ELEVATING CROP PROTECTION, NATURALLY

1 Cor 3:6-7 (KJV)

GAUTENG:
Lawrence Road, Poortview AH, Roodepoort
WESTERN CAPE:
Unit 1, 7 Firgrove Way, Firgrove Industrial Estate, Somerset West
CANADA:
Serenity Lane, Fredericton, New Brunswick
Contact Number: +27 (0)87 474 6149
E-Mail address: info@halogengreens.com

Magtasium™ kikuyu pot trial

Magtasium™ is a liquid, Group-3, Bio-Stimulant. Both Magtasium™ programmes produced greener leaves and more cut grass than the fertiliser-only programme in this greenhouse pot trial.

1. What was tested

The aim was to test Magtasium™ as a Bio-Stimulant through leaf readings, canopy height and grass mass from two cuts. Weekly leaf spray and weekly drench programmes received no added NPK plus trace fertiliser. The comparison group received fertiliser without Magtasium™, with a reported feeding-water **EC of 0.87**.

2. What the trials showed

What was measured	Magtasium™ programme	Fertiliser-only comparison	% increase / decrease
Mass from two cuts with leaf spray	460 g per pot	392 g per pot	+17.3%
Mass from two cuts with drench	440 g per pot	392 g per pot	+12.2%
Average leaf reading	18.40 SPAD with leaf spray; 17.98 with drench	15.20 SPAD	Spray: +21.1% Drench: +18.3%
Final canopy height	24.6 cm under both programmes	21.3 cm	+15.5%

SPAD is a meter reading linked to leaf chlorophyll. The programmes used different nutrient inputs, and all plants could use nutrients already in the growing medium. The results compare complete programmes; they do not show how much fertiliser can be removed.

3. What this means for your farm

The benefit went beyond appearance: both methods also produced more cut grass under the tested conditions. Leaf spraying is the strongest starting point for a measured kikuyu evaluation.

Test weekly leaf spraying alongside your existing feeding programme, keeping a matching untreated group. Use the same cutting dates and weigh each cut. Investigate any fertiliser reduction separately after the added-product benefit is clear.

Trial context and treatment programme

The 2026 greenhouse pot trial assessed kikuyu leaf greenness, canopy height and the mass of two recorded forage cuts. T1 and T2 received Magtasium™ without added NPK plus trace fertigation; T3 received the designated fertiliser programme without Magtasium™.

Code	Magtasium™ application	NPK plus trace
T1	Weekly foliar application at 20 mL/L	No
T2	Weekly drench application at 7 mL/L	No
T3	No Magtasium™	Yes

Measurements and interpretation

SPAD is a non-destructive index of relative leaf greenness. It does not directly measure photosynthetic rate or nutrient uptake. Height measurements are affected by cutting and canopy recovery, so recorded harvested mass provides a separate production measurement.

The reported feeding-programme EC was 0.87 for designated fertilised treatments. Product-only plants retained access to nutrients present in the growing medium. The comparison concerns complete programmes with different nutrient sources; it does not isolate nutrient-independent stimulation or quantify fertiliser replacement.

The results are descriptive. Statistical significance cannot be independently assessed from the available material. Invalid #REF! legend entries in the source charts are excluded from biological interpretation. The stated application rates are volumes per litre of application water; hectare rates require spray or drench volume and planting-density records.

2026 trial results

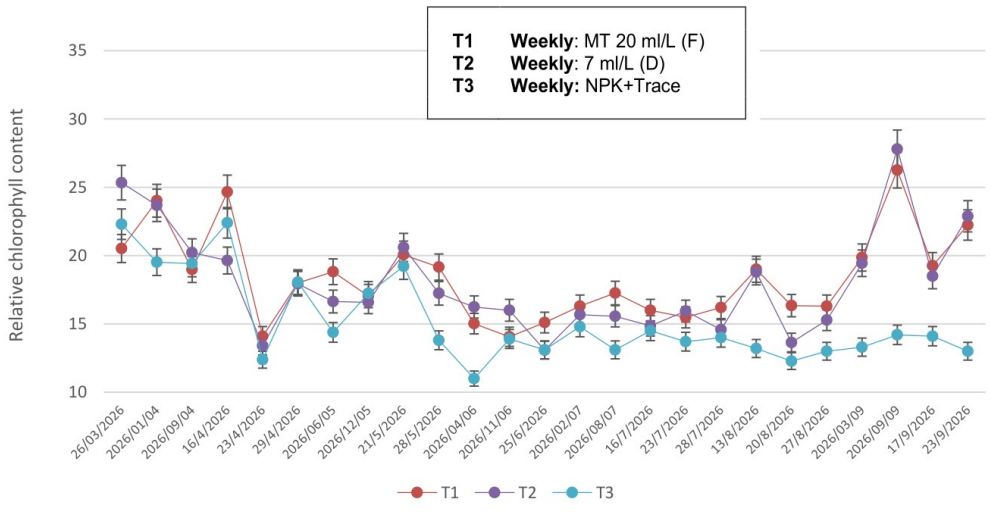

Figure 3.9.1: Relative chlorophyll content (SPAD) of Kikuyu

The valid T1 and T2 series had descriptive mean SPAD values of 18.40 and 17.98, compared with 15.20 in T3. Final readings were 22.24, 22.88 and 13.00. The unfertilised Magtasium™ programmes maintained greater greenness than the fertilised-only comparator in the recorded kikuyu dataset. Invalid #REF! legend entries are excluded from biological interpretation.

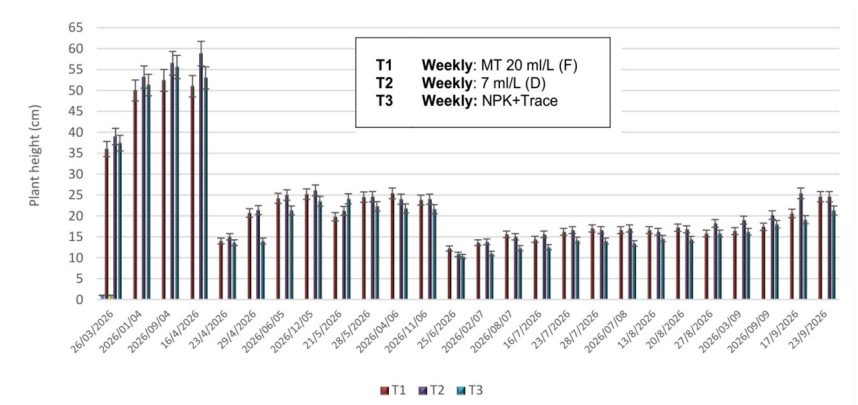

Figure 3.9.2: Plant height (cm) of kikuyu

Peak height was 52.4 cm in T1, 58.8 in T2 and 55.6 in T3. Final heights were 24.6 cm in both product-only programmes and 21.3 cm in the fertilised-only comparator. The product-only programmes supported canopy recovery after the observed height reductions. Because management events affect height, the harvested biomass panel provides the more direct production endpoint.

2026 trial results

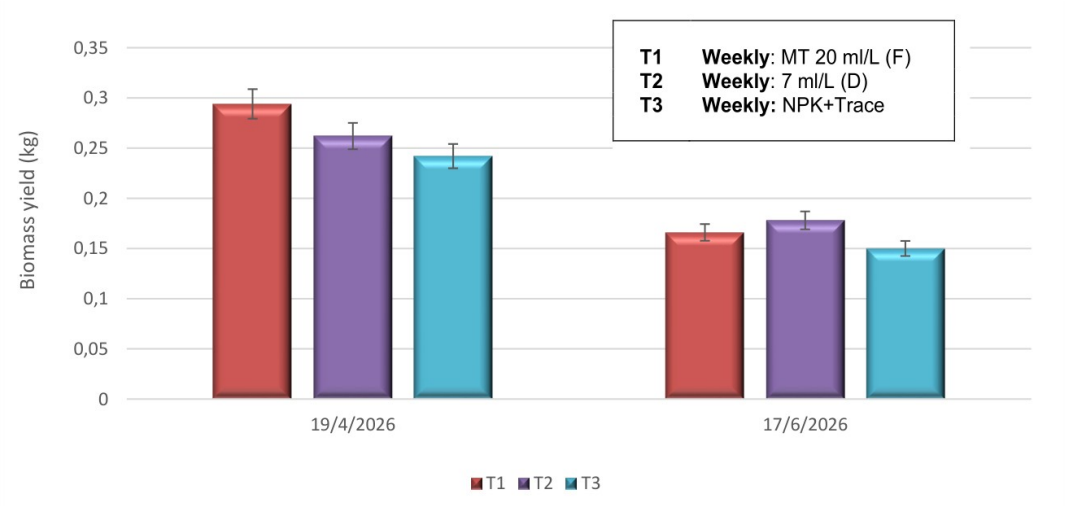

Figure 3.9.3: Biomass yield (kg/pot) of kikuyu

The sum of the two recorded cuts was 0.460 kg/pot in T1, 0.440 in T2 and 0.392 in T3. T1 and T2 were 17.3% and 12.2% above the fertilised-only comparator. The favourable recorded biomass response supports Magtasium™-associated performance in the unfertilised kikuyu programmes. The comparison combines different nutrient sources and does not isolate a nutrient-independent mechanism.

Kikuyu growth performance conclusion

Kikuyu showed favourable greenness and recorded forage production in the product-only programmes. The sum of two cuts was 17.3% higher under foliar application and 12.2% higher under drench application than under the fertilised-only comparator. These findings support Magtasium™-associated forage performance under the tested conditions. Because nutrient sources differed among programmes, the observations describe comparative programme performance rather than a quantified nutrient-independent effect.

Kikuyu trial photographs

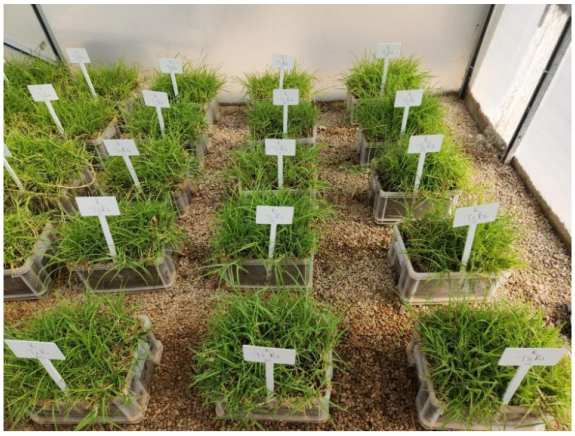

Figure A: Randomised block design of kikuyu trial



Figure B: Common visual effects of different treatments

CORPORATE IDENTITY

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SPECIALIZATION

Group 3 Bio Stimulant
(Trials Underway for Registration)

STATUS

- Pending Worldwide Patent
- Conducting Trials

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CONTACT INFORMATION

+ (27) 87 474 6149

www.halogengreens.com

info@halogengreens.com

- Roodepoort, Gauteng, South Africa (H/O)
- Tarlton, Gauteng, South Africa
- Somerset-West, Western Cape, South Africa
- Fredericton, New Brunswick, Canada

