



Project BIOLOGICAL PRODUCTS TRIAL

Producer J. du Plessis
 Locality Sweizer-Reneke
 Variety DP1240
 Layout 6 treatments in planter buckets replicated 6 times.
 Plant date 2022/10/15

Treatments

Date	Treatments	Dosage
15-Oct-22	AOP1	1 liter / 60 kg seed
15-Oct-22	AOP2	2 liter / 60kg seed
15-Oct-22	Control	50ml H2O /1.2 kg seed
15-Oct-22	Fractal	10 ml/liter H ₂ O on 1.2 kg seed
15-Oct-22	Mobiostim	5ml + 50 ml H ₂ O on 1.2 kg seed
15-Oct-22	Summer Bucket	28 gram each (Sch + Rodt) / 1.2 kg seed.



Dates	Post planting
01-Dec-22	Seedling samples
08-Dec-22	Seedling weights
8 Dec + 2 March 2023	Root weights
8 Dec + 2 March 2023	Root lengths
8 Dec + 2 March 2023	Root photographs
15-Jun-23	Plant heights
15-Jun-23	Boll counts
15-Jun-23	Seedcotton yields
18-Jul-23	Fibre quality samples

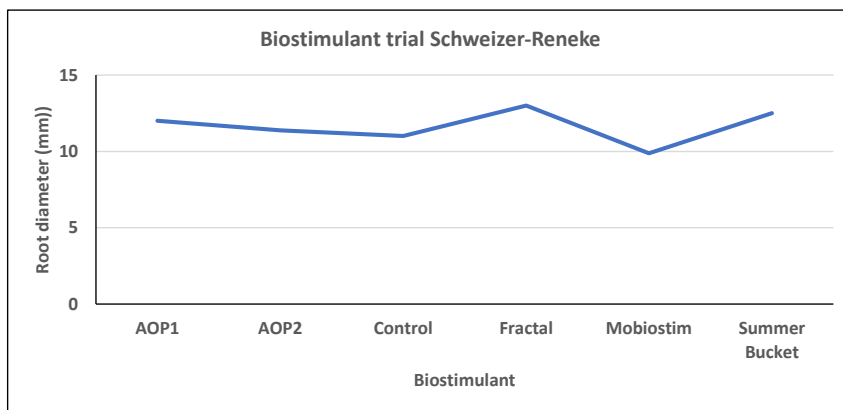


Figure 1. Root diameter, Biostimulant trial, Schweizer-Reneke, 2022/2023.

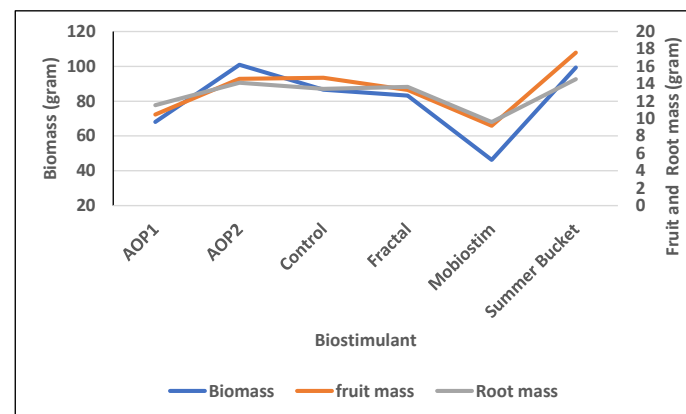


Figure 2. Biomass, fruit mass and root mass (g) of roots sampled

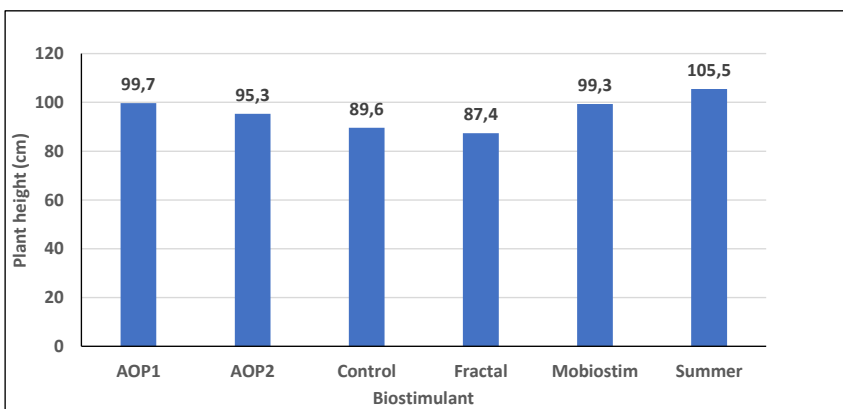


Figure 3. Plant height (cm), Biostimulant trial, Schweizer-Reneke, 2022/2023

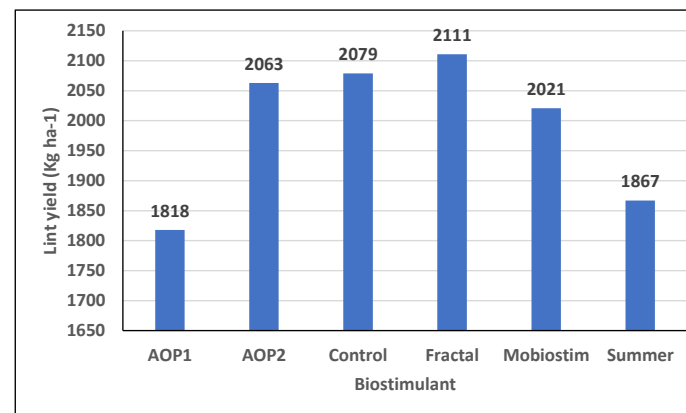


Figure 4. Lint yield (kg/ha) per treatment



Results: Fibre Quality

Tabel 1. Seed Cotton Yield (kg ha⁻¹), fibre %, and lint yield (kg ha⁻¹) at Schweizer-Reneke, 2022/2023.

Treatments	Seed Cotton Yield (kg/ha)	Fibre % (GOT)	Lint yield (kg/ha)
AOP1	4857	37.4 a	1818
AOP2	5407	38.1 ab	2063
Control	5345	39.0 a	2079
Fractal	5345	39.5 a	2111
Mobiostim	5291	38.2 ab	2021
Summer Bucket	5436	34.1 c	1867
LSD	1028,2	1,53	357,7
CV	6,7	2,5	4,9

Tabel 2. Micronaire, fibre Length (mm) and fibre strength (g/tex) at Schweizer-Reneke, 2022/2023.

Treatments	Quality parameters		
	Micronaire	Length (mm)	Strength (g/tex)
AOP1	3,3	29,3	27,5
AOP2	3,6	28,4	28,2
Control	3,5	29,2	27,9
Fractal	3,7	28,6	28,1
Mobiostim	3,2	28,3	26,5
Summer bucket	3	28,6	25,4
LSD	0,44	0,73	1,98
CV	3,6	1,7	4,2

Conclusions

Fiber percentage was higher in the Fractal treatment (39,5%) but not significantly different from the control.

- 1 Only fibre % differed significantly, with the highest fibre % of 38.1 with the Fractal application, and the lowest fibre % with Summer Bucket.
- 2 Micronaires of only AOP2, Control and Fractal were acceptable.
- 3 The highest lint yield of 2111 kg ha⁻¹ was obtained when Fractal was applied.
- 4 The Control treatment, with a lint yield of 2 079 kg/ha (9% above the base price @ R34/kg), gave a gross income of R77 047,74, which is only R468.18/ha less than the Fractalgrow treatment
- 5 Fractal is available for free for future research.