

18 – SELECTIVITY OF REKLEMEL™ (Fluazaindolizine) TO *Trichoderma harzianum* UNDER LABORATORY CONDITIONS.

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INTRODUCTION

The integration of chemical and biological tools in the phytosanitary management of different crops reinforces the sustainability of the production system, however this practice is only possible when the selectivity levels of these products are known. Rekleme™ is a new chemical nematicide, effective in controlling phytonematodes and its selectivity to *Trichoderma harzianum* was tested in this study.

MATERIALS AND METHODS

The trial was conducted at Corteva in Mogi Mirim/SP in CRD and 6 replicates, each Petri dish being a replicate. Eleven treatments were tested (Table 1):

Table 1. Treatment list, Mogi Mirim, SP, Season 19/20.

Trt. n.	Description	Concentration (g a. i./L or Kg)	Form.	Rate (ppm a. i.)
1	Untreated	–	–	–
2				5
3	Rekleme™			50
4	(Fluazaindolizine)	500	SC	250
5				1000
6	Fluensulfone			5
7		480	EC	50
8	Fluopyram			5
9		498	SC	50
10	Cadusafos	200	CS	50
11	<i>Bacillus licheniformis</i> + <i>Bacillus subtilis</i>	400	WS	50

The highest concentrations of the treatments were added in PDA medium, and after that, serial dilutions were made to obtain the concentrations of the other treatments. Subsequently, with the medium still liquid, 10 mL/plate was poured.

After solidification, discs of mycelium of the fungus were inoculated in the center of each plate. Mycelial growth was evaluated at the time of contact between the edges of the colony and the edge of the control plate (3 days after inoculation).

The diameter (Ø) of the colony was measured in two directions, determining the average Ø, finally, the Percentage of Growth Reduction (PGR) was calculated, being:

$$PGR = 100 - \left(\frac{\text{Average } \varnothing \text{ Treatments} \times 100}{\text{Average } \varnothing \text{ Untreated}} \right)$$

The results were submitted to ANOVA and Tukey's test 5 %.

RESULTS AND CONCLUSIONS

The selectivity shown by the different treatments are in the order of most to least selective: Fluensulfone and Rekleme™ at 5 ppm (<2% g); Rekleme™ and Fluensulfone 10 ppm and Cadusaphos 50 ppm (<20% f); Fluopyram at 5 ppm (33% e); Rekleme™ at 250 ppm (55% d); *B. licheniformis* + *B. subtilis* at 50 ppm (67% c); Rekleme™ at 1000 ppm (78% b). Fluopyram at 50 ppm (90% a) had the highest PGR.

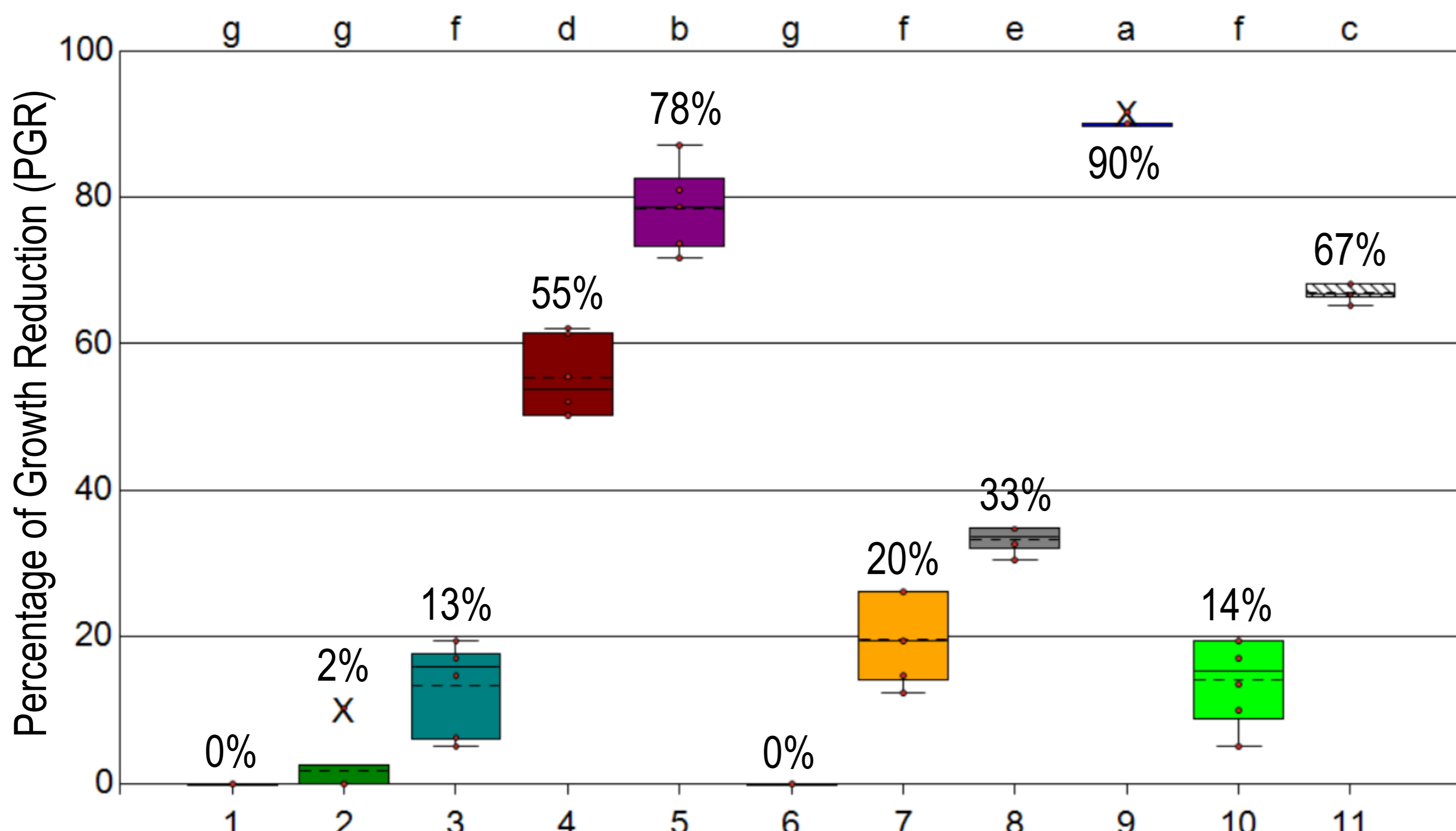
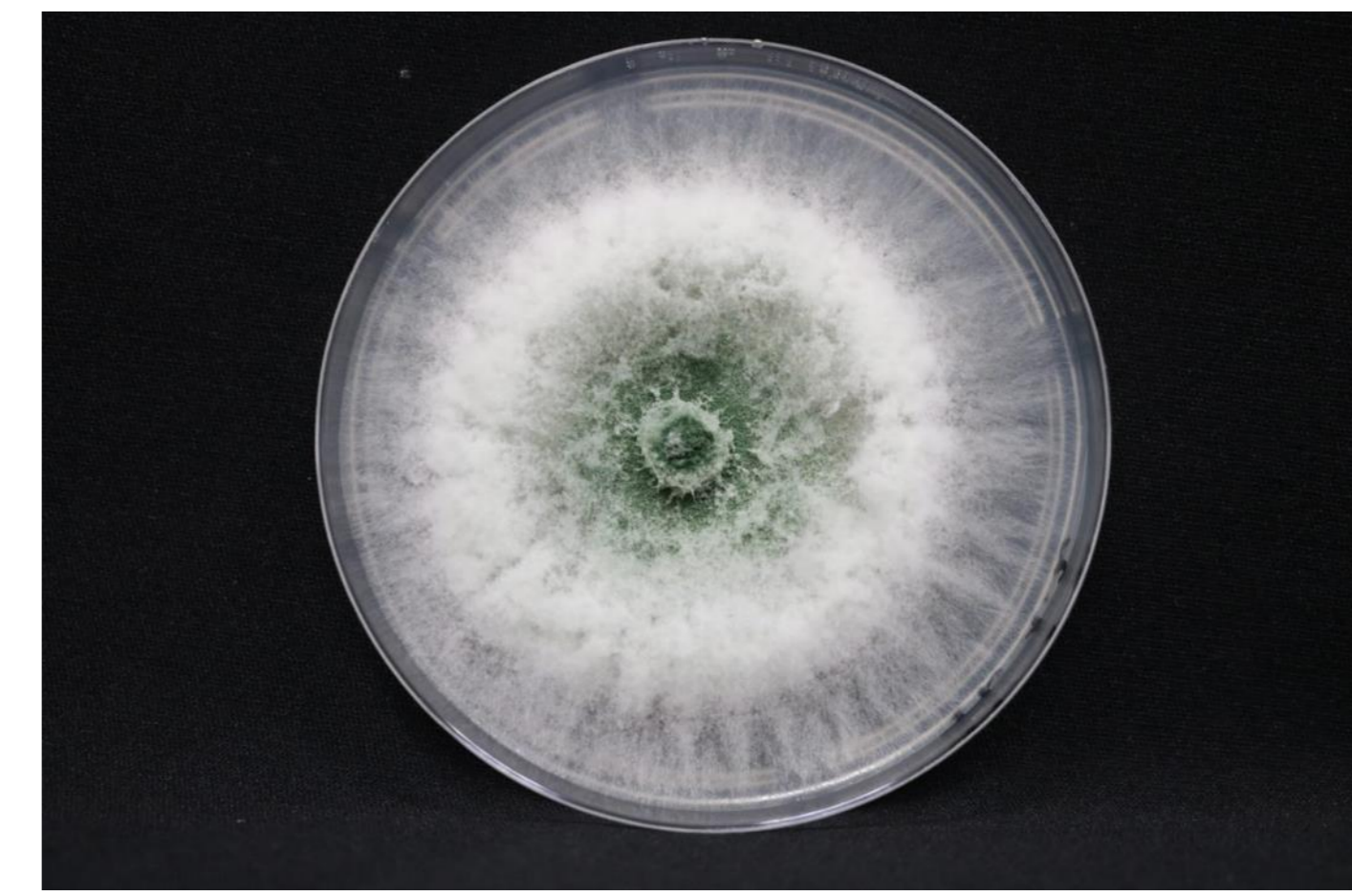
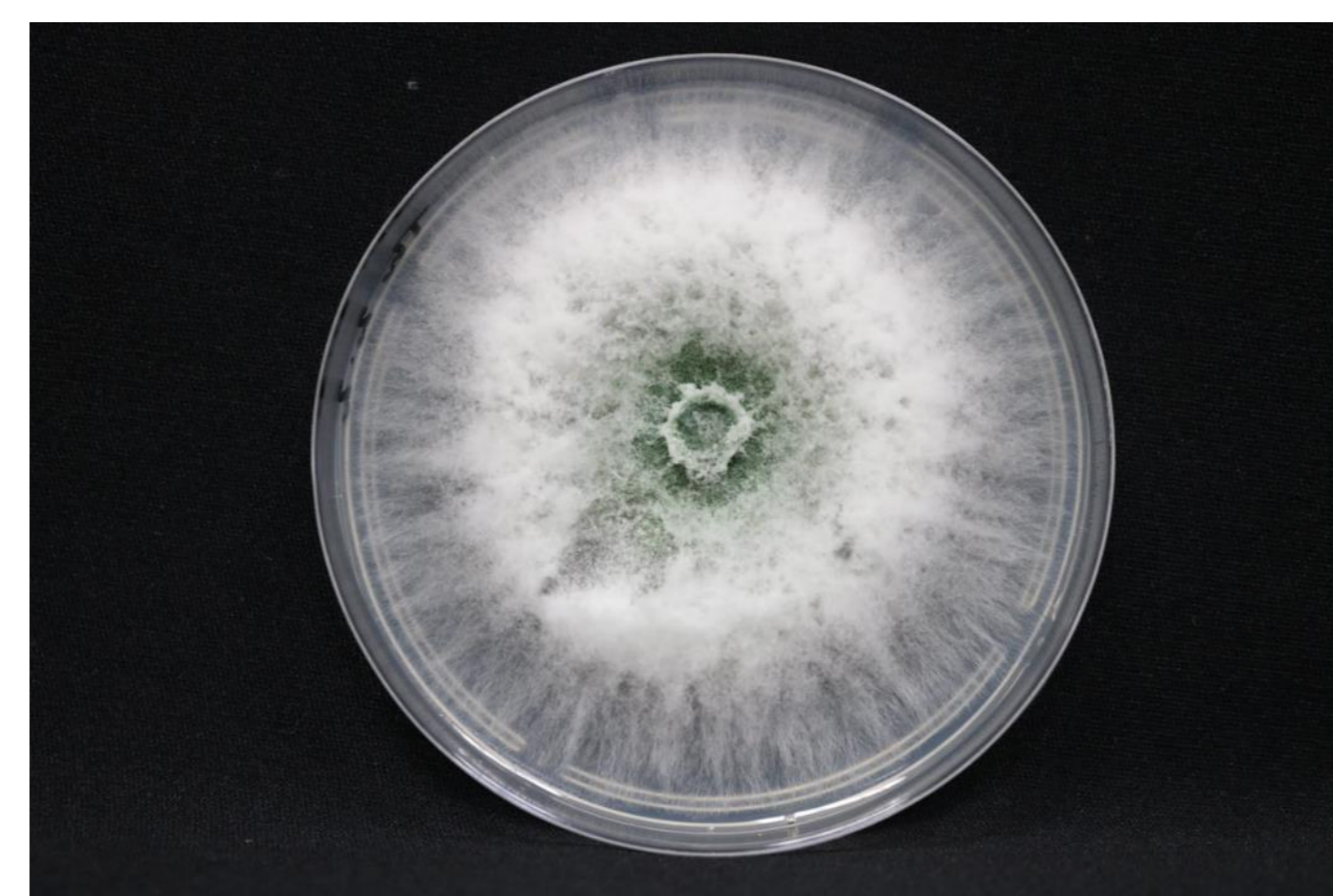


Figura 1. PGR of *Trichoderma harzianum* 3 days after inoculation (DAI). Mogi Mirim, SP, HSeason 19/20. Means followed by the same letter do not differ by Tukey's test ($\alpha = 0.05$).



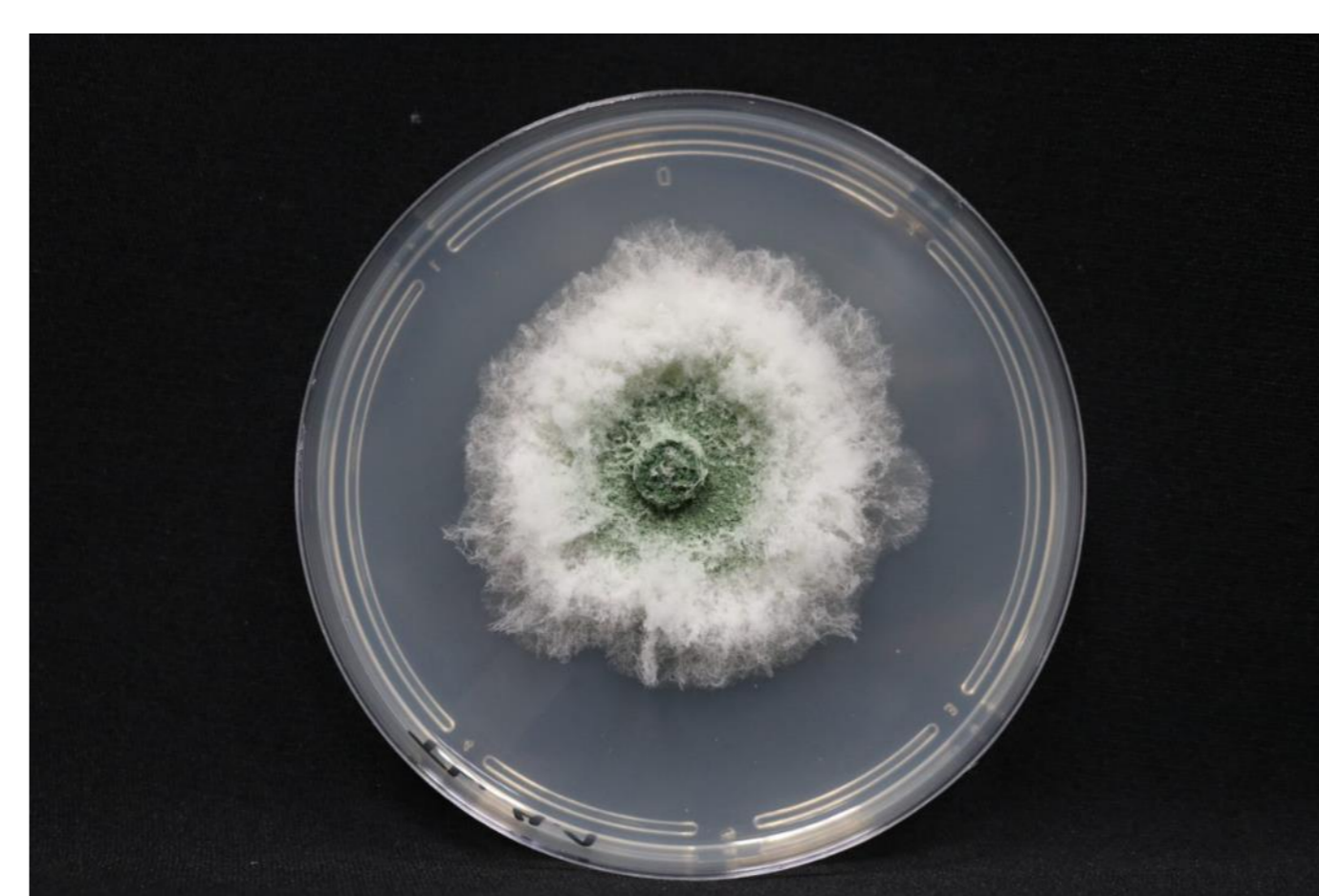
Untreated



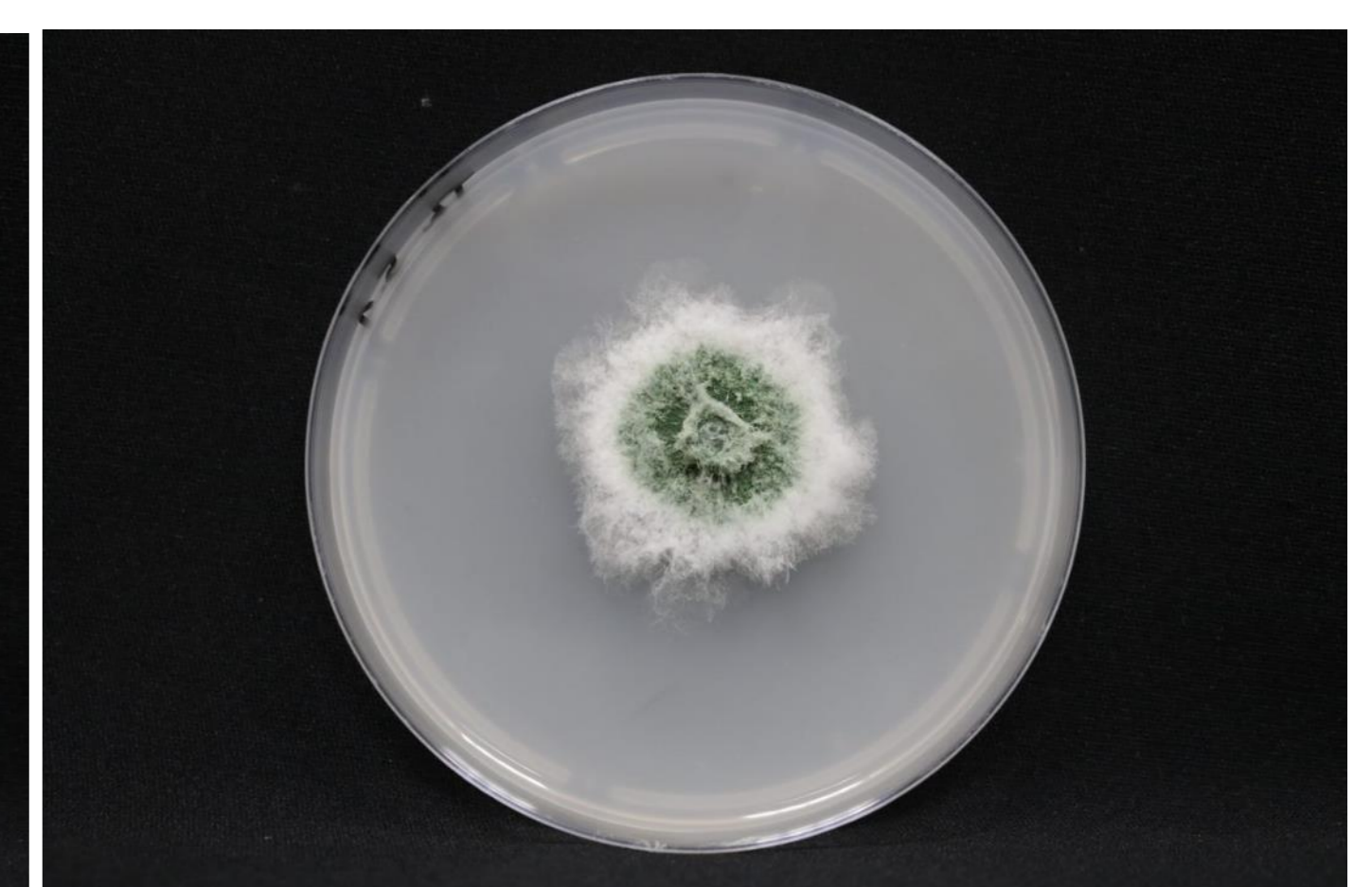
Rekleme™ 5 ppm



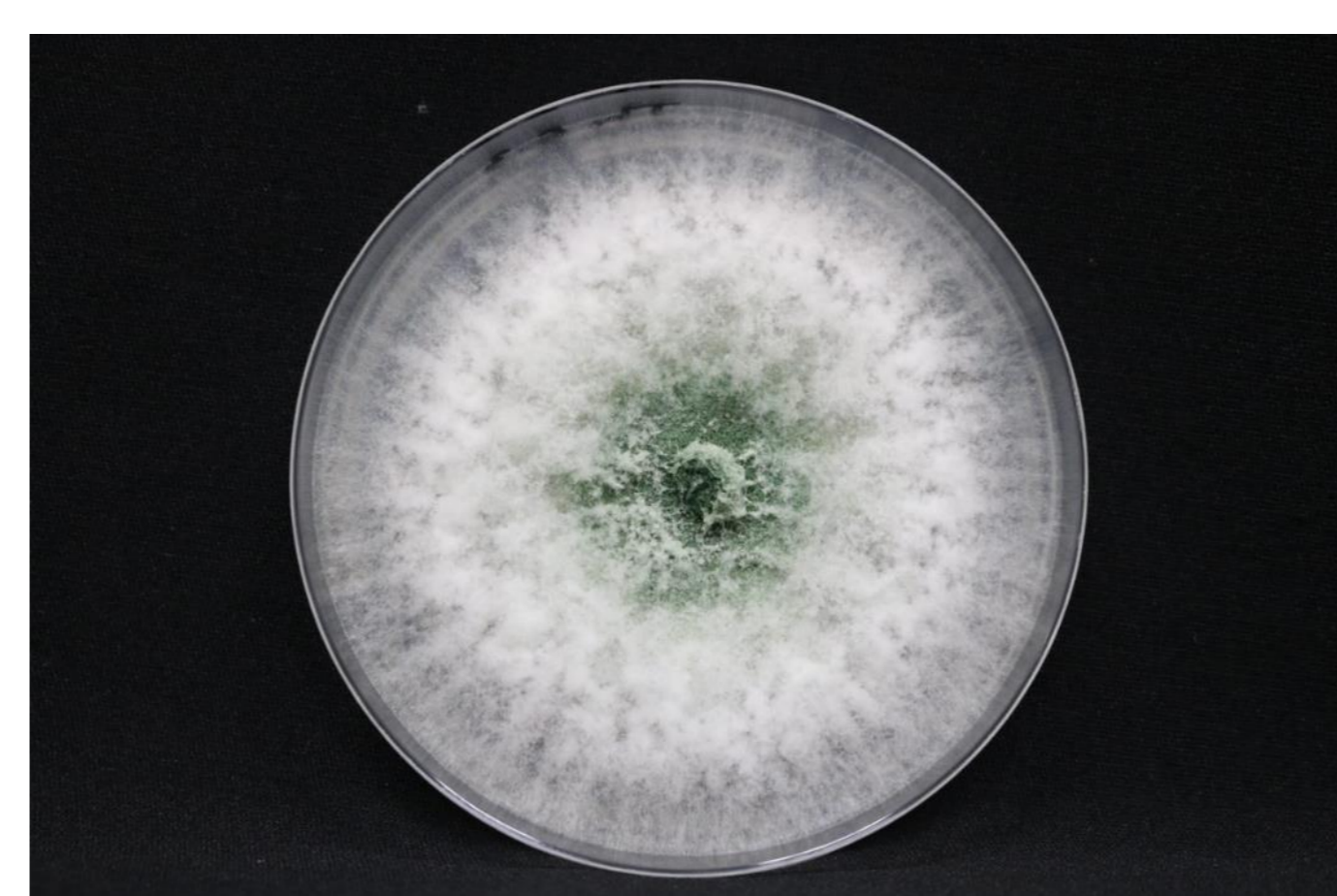
Rekleme™ 50 ppm



Rekleme™ 250 ppm



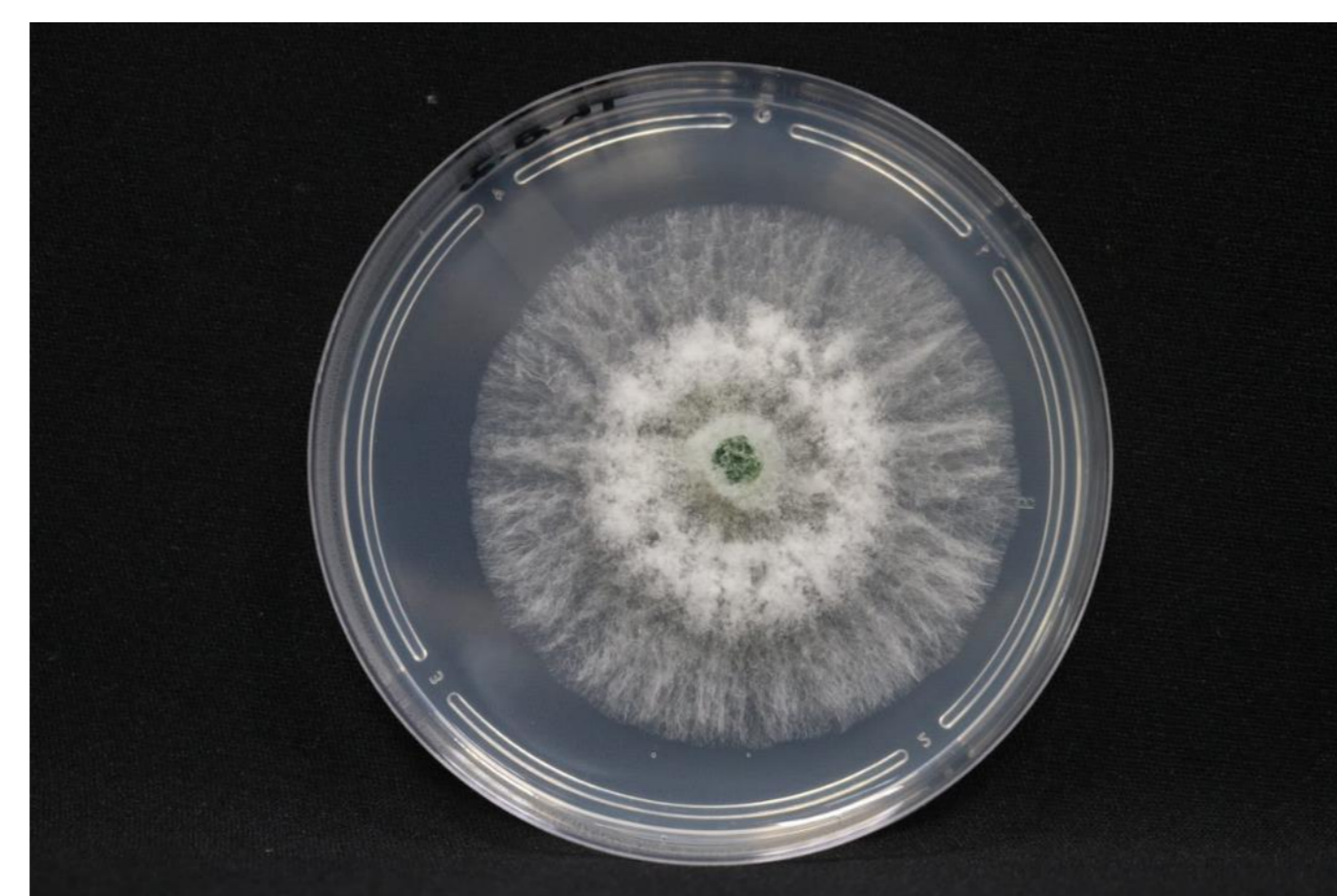
Rekleme™ 1000 ppm



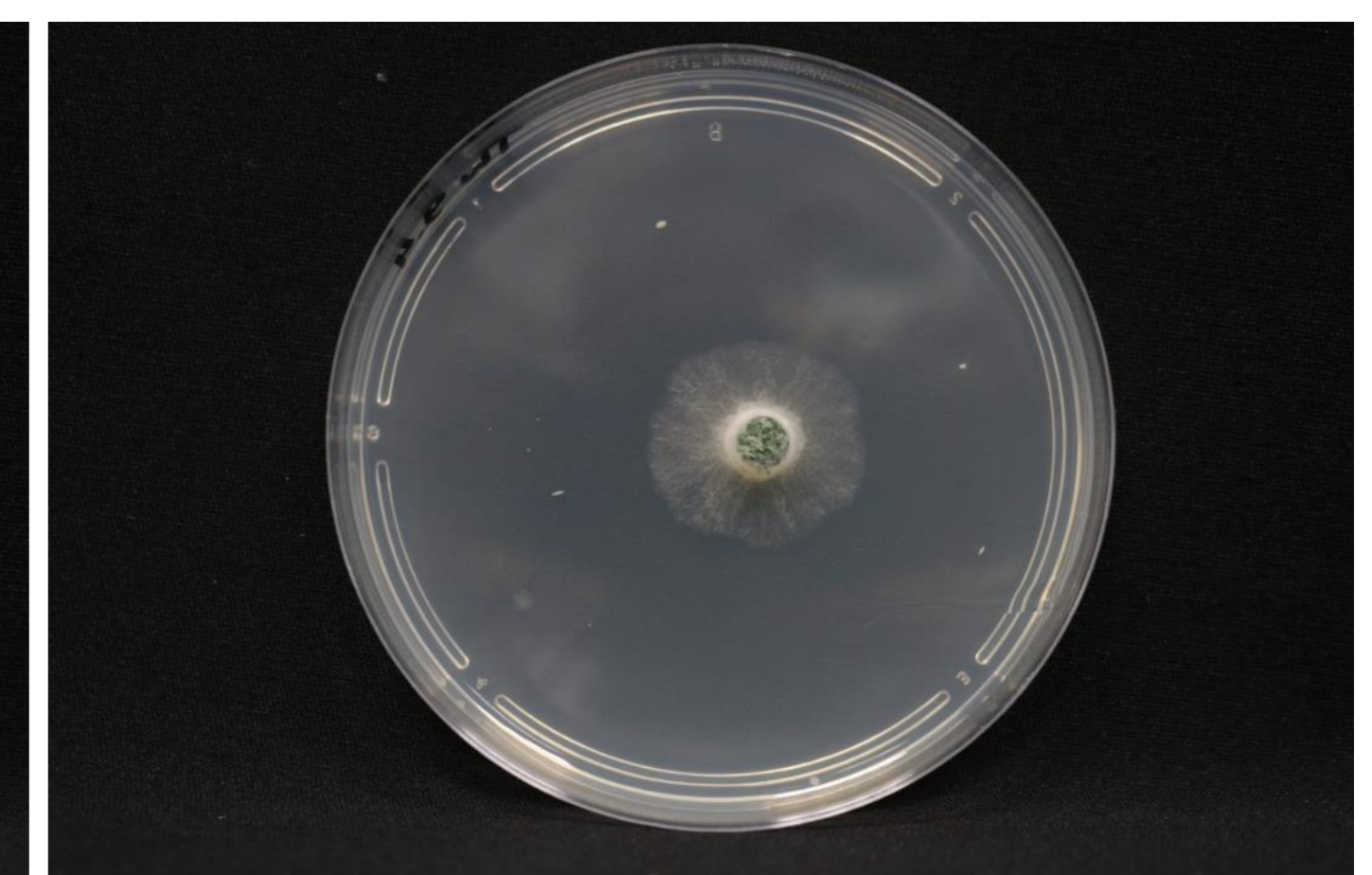
Fluensulfone 5 ppm



Fluensulfone 50 ppm



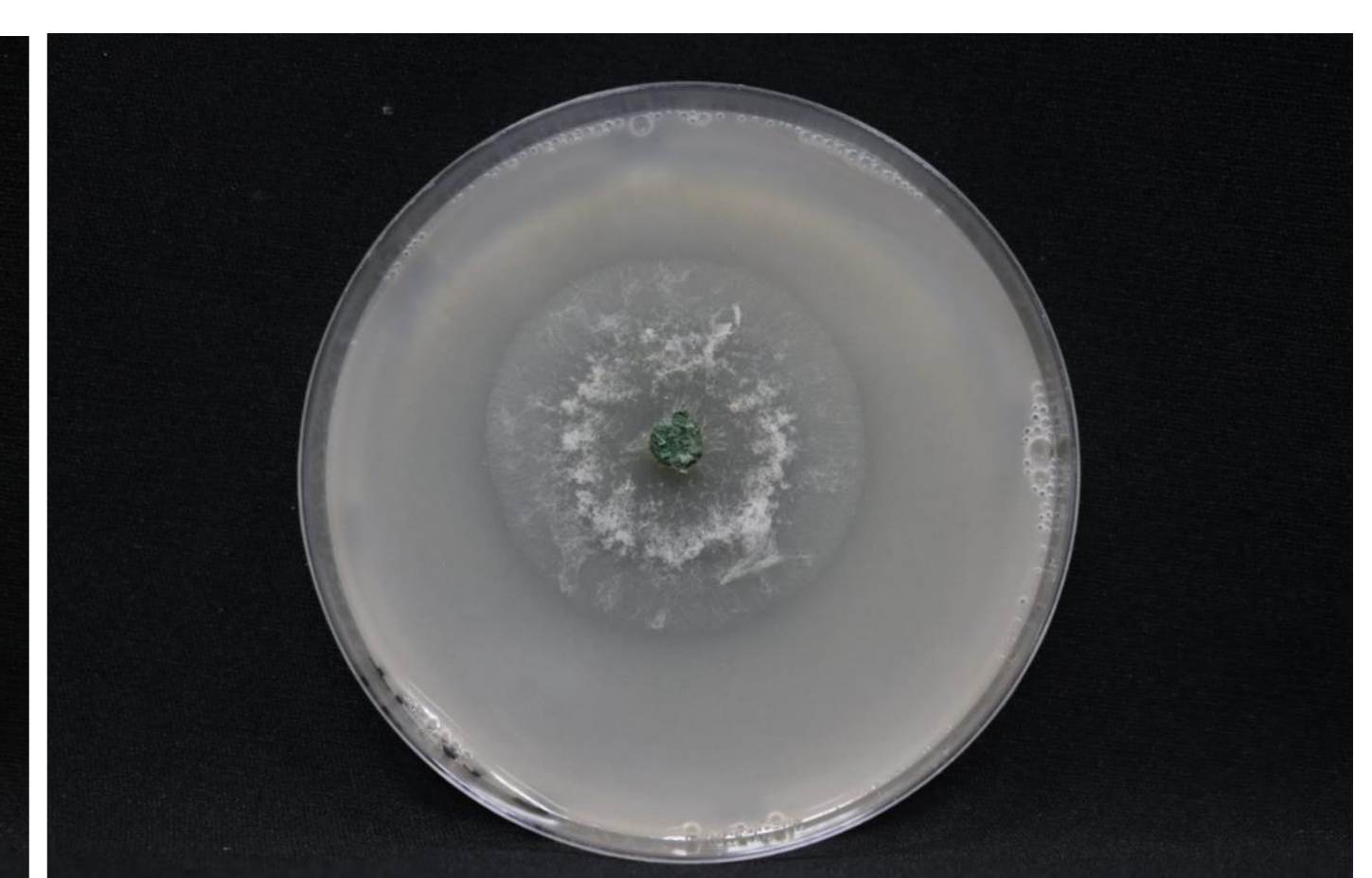
Fluopyram 5 ppm



Fluopyram 50 ppm



Cadusafos 50 ppm



Bacillus licheniformis + *Bacillus subtilis*
50 ppm

Figura 2. *Trichoderma harzianum* 3 days after inoculation (DAI). Mogi Mirim, SP, HSeason 19/20.

It is concluded that Rekleme™ is a selective product for *T. harzianum* at field doses, which has an estimated concentration in the soil between 5-10 ppm.

AGRADECIMENTOS

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