



**PLANT BIOACTIVATOR "ORGANIC BLOOM" IN THE INDUCTION OF PLANT RESISTANCE AGAINST NEMATODES.** Bioativador vegetal "Organic Bloom" na indução de resistência à planta contra nematoides. Reis, C.L.<sup>1</sup>; Zambiasi, T.C.<sup>2</sup>; Dias-Arieira, C.R.<sup>3</sup>; Santana-Gomes, S.M.<sup>3</sup>; Miamoto, A.<sup>3</sup>. <sup>1</sup>Ingal Agrotecnologia, Santa Maria, RS; <sup>2</sup>Agromax Pesquisa, Primavera do Leste, MT; <sup>3</sup>UEM, Umuarama, PR. Email: [agro.crisreis@gmail.com](mailto:agro.crisreis@gmail.com)

The chemical control of nematodes has negative effects on environmental and human health, We evaluated "Organic Bloom" (OB), a plant bioactivator (organic carbon + phytic acid) as agent induced resistance in soybean against nematodes. The objective was to evaluate whether OB can trigger the process of induction of resistance in soybean against nematode infection and reduce the reproduction of *Meloidogyne javanica* and *Pratylenchus brachyurus*. The experiment was conducted in ITAM, Maringá/PR, in a DIC design with 4 treatments and 8 repetitions. The treatments consisted of the following application forms: 1) Witness; 2) TS (seed treatment) (0.25 L ha<sup>-1</sup>) + V4 (aerial application at V4) (0.3 L ha<sup>-1</sup>) + R1 (aerial application at R1) (0.3 L ha<sup>-1</sup>); 3) TS (0.25 L ha<sup>-1</sup>) + Furrow (0.5 L ha<sup>-1</sup>) + V4 (0.3 L ha<sup>-1</sup>) + R1 (0.3 L ha<sup>-1</sup>), and 4) Furrow (0.5 L ha<sup>-1</sup>) + V4 (0.3 L ha<sup>-1</sup>) + R1 (0.3 L ha<sup>-1</sup>). All forms of application of the OB treatment promoted a reduction in the number of *M. javanica* (g/root), with maximum percentage of reduction of 64.22% in the application via seed treatment. Treatment 3 reduced the highest number of *P. brachyurus* nematode, 60.98% and 62.70% for the total nematode number and nematode per gram root, respectively. OB promoted increase in the specific enzymatic activity of phenylalanine ammonia lyase (PAL), peroxidase (POX), polyphenol oxidase (PPO) and catalase (CAT), especially at 6 days after inoculation. The commercial product Organic Bloom can be considered potential to control *M. javanica* and *P. brachyurus* in soybean, activating defense mechanisms in the plant.