

**201- EFFECTIVENESS OF BIONEM WP AGAINST *Meloidogyne javanica* ON CUCUMBER AND TOMATO CROPS IN A PLASTIC HOUSE [EFICIÊNCIA DO BIONEM WP CONTRA *Meloidogyne javanica* NA CULTURA DO TOMATEIRO EM CASA PLÁSTICA]** Alcalá, S.<sup>1</sup>; Ornat C.<sup>1</sup>; Sorribas F.J.<sup>1</sup>; Izquierdo J.<sup>2</sup> <sup>1</sup>DEAB-UPC. 08860 Castelldefels, Barcelona, Spain.; <sup>2</sup>BAYER CropScience S.L. 46290 València. Spain. E-mail: francesc.xavier.sorribas@upc.edu

The effectiveness of BioNem WP (BN) (*Bacillus firmus*,  $3 \times 10^9$  cells/g) against *M. javanica* on cucumber cv. Dasher II and tomato cv. Durinta cultivated from September to December 2008 was assessed. The experiment included 7 treatments: a) BN at 60 kg/ha; b) BN at 80 kg/ha; c) Rhizo Vital 42 (RV) (*B. amyloliquefaciens*,  $2.5 \times 10^{10}$  cfu/g) at 2 l/ha; d) BN at 80 kg/ha + RV; e) Nematicur micro (Nm) (Fenamiphos 24% CS) at 40 l/ha; f) b+e; and g) untreated. BN was applied 5 days before transplanting. RV was applied five days before transplanting in treatment c, and twice, five days before transplanting and at transplanting in treatment d. Split application of Nm was done, 70% five days before transplanting and the remaining 30% seven days after transplanting. Individual plots consisted of four rows each of six plants per row. Initial population densities in cucumber plots ranged from 166 to 371  $J_2 / 250 \text{ cm}^3$  of soil, and from 670 to 1825  $J_2 / 250 \text{ cm}^3$  of soil in tomato plots. Each combination crop-treatment was replicated three times according to a stratified randomized block design. Dry shoot weight, fresh root weight, gall index, and number of eggs per plant from 12 plants per plot were evaluated at 8 and 14 weeks after transplanting. In addition, yield of crops was assessed, and nematode densities in soil were evaluated at the end of the assay. Gall index and number of eggs per gram of root of cucumber and tomato in plots treated with Nm were lower than in untreated plots. Cucumber growth and yield in plots treated with BN at 80 kg/ha, alone or in combination with Nm, were higher, and root galling and eggs per gram root were lower than in untreated plots. Tomato yield in plots treated with BN at 80 kg/ha, alone or in combination with Nm, was higher than in plots with other treatments. However, only tomato plants cultivated in plots treated with BN at 80 kg/ha in combination with Nm or with RV, as well as RV alone, showed a lower number of eggs per gram of root than those cultivated in untreated plots.