

**In vitro compatibility of different herbicides with entomopathogenic fungus *Beauveria bassiana***

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Correspondence address: [cristina.fatu@icdpp.ro](mailto:cristina.fatu@icdpp.ro)**Introduction**

The use of microbial bio-pesticides and their successful integration in the integrated management of diseases or pests together with other techniques cannot be achieved without prior testing in various compatibility studies. The entomopathogenic fungus *Beauveria bassiana* (Balsamo) Vuillemin is a capable alternative control agent against the important pests. Treatment of soil containing inoculum of entomopathogenic fungus can antagonize and reduce the infectivity of conidial inoculum (Ignoffo et al., 1975). In order to use mycoinsecticides based on *B. bassiana* in integrated crop protection, chemical pesticides must be compatible with the entomopathogenic fungus.

**Key words:** herbicide, entomopathogen, *Beauveria*, compatibility

**Objective:** To find if some herbicides can be used in soils inoculated with entomopathogenic fungus

**Purpose:** To determine the effects of three herbicides on mycelial growth of a selected strain of *B. bassiana*.

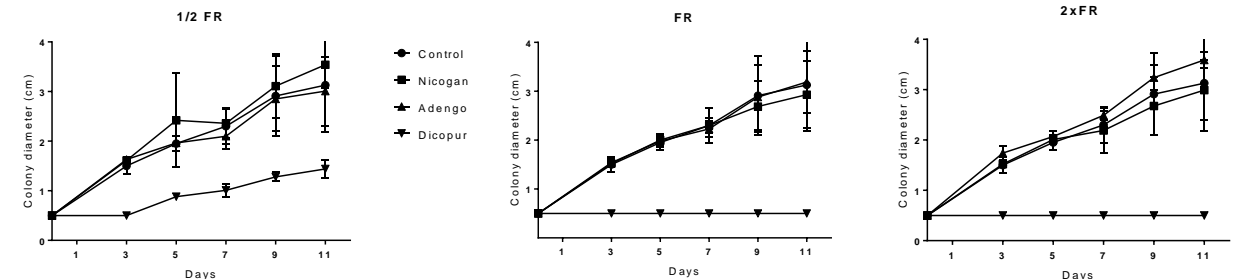
**Materials and methods:**

One strain of *B. bassiana* was tested both on solid and liquid media containing the pesticides. The formulations with Isoxaflutole 225 g/L + Thien carbazon-methyl 90 g/L + cyprosulfamide (safener) 150 g/L (ADENGO), Nicosulfuron 40g/L (NICOGAN) and dimethylamine salt 600g/L (DICOPUR) were tested at three different concentrations (field recommendation- FR, half and twice the FR). On the solid media, the radial growth of the fungus was measured for 11 days. On the liquid media mycelial biomass was weighted after 7 days of incubation on a rotary shaker.

**Results**

Percent of mycelium growth inhibition (positive values) or increased growth (negative values) of entomopathogenic fungus *Beauveria bassiana*, cultured on liquid Goral media treated with selected herbicides, after 7 days.

Product name	Concentration		
	½ FR	1/1 FR	2/1 FR
Nicogan	-15.20±12.33	-52.77±15.92	-40.24±4.96
Adengo	-97.73±4.17	1.18±12.07	5.75±4.93
Dicopur	77.47±0.48	82.35±1.89	85.13±0.47



Colony diameter of entomopathogenic fungus *Beauveria bassiana*, cultured on PDA media treated with selected herbicides at different concentrations

**Conclusions**

In our tests, only DICOPUR had a negative effect on the mycelium growth of the entomopathogen, in both testing method.

ADENGO and NICOGAN did not affect the growth of this fungus on the contrary, they stimulated the growth of this strain, therefore they can be used together with biological preparations containing *Beauveria bassiana*.