

**Soil Technologies Corp.**  
**Research and Development Department**



## **Research Report**

**Title:** Efficacy of Intercept against *Rhizoctonia Solani*

**Location:** Iowa, USA

**Principal Investigators:** Soil Technologies Corp.

**Crop:** Tomato

**Date:** January 2008

### **Abstract:**

The purpose of this study was to evaluate the effect of Intercept<sup>1</sup> on greenhouse tomato plants infested with *Rhizoctonia solani* (*R. solani*) AG-4. Tests were performed growing tomatoes from seed in potting soil infested with *R. solani* and treated with Intercept during planting. Tomatoes in soil infested with *R. solani* had statistically significant reduction in plant count of 59% and in plant mass by 28% per plant. Tomatoes planted in soil infested with *R. solani* and treated with Intercept had no significant yield change.

### **Methods:**

A standard soil potting mix was used to create four test conditions. The negative control has no treatment, nor pathogen added. The positive control was treated with Intercept at a rate of 106 cells/seed. Experimental plots were created by infesting *R. solani* in the potting mix. Half of the experimental plots received no treatment. The other half were treated with Intercept at a rate of 106 cells/seed. Plants were grown for six weeks. Plant counts and plant mass data was collected, averaged, and analyzed for statistical significance at  $p = 0.05$ .

### **Results:**

Significant reductions in both plant survival and plant mass were found in soils infested with *R. solani*. Plant survival counts were reduced by 59% while total plant mass was reduced by 28% per surviving plant. Both reductions were statistically significant at  $p = 0.05$ . Plants grown in soil with Intercept treatments at planting did not produce statistically significant changes to the control. Results are shown in Table 1 below.

<sup>1</sup>Intercept is an OMRI listed soil microbial inoculant.  
Intercept is manufactured by Soil Technologies Corp., Fairfield, IA, USA.

	Number of Plants Emerged		Shoot Dry Matter (g)	
	Control	with <i>R. solani</i>	Control	with <i>R. solani</i>
No Treatment	4.4	1.8*	3.9	2.8*
Intercept	4.6	3.8	4.6	4.1

Table 1: Test result of Intercept inoculant in soils with *R. solani*

\*Values of statistical significance at  $p = 0.05$

**Conclusions:**

The field trial results of this study show that the use of Intercept as a soil inoculant has demonstrated the potential to improve plant viability and plant mass in tomato plants grown in soils with *R. solani*.