

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



## **Research Report**

**Title:** Powdery Mildew Control on Flame Seedless Grapes

**Location:** Fresno Co., CA

**Crop:** Grapes

**Variety:** Flame Seedless

**Date:** 1998

### **Abstract:**

The purpose of this study is to evaluate the efficacy of natural and conventional treatment protocols against powdery mildew on grapes. The treatments that were tested in this study were Permatrol<sup>1</sup> at 1%, Sulphur/Rubigan<sup>2</sup> and an untreated group. Treatments were applied to grape plants and were later observed for symptoms of powdery mildew. Plants treated with Permatrol had an 82% reduction in effected plants and 87% reduction in effected surface area.

### **Methods:**

Three applications of Permatrol were applied to grape plants on 5/11, 5/26 and 6/11/1998. Applications of Sulphur and Rubigan were also applied to grape plants. After plants received treatment they were evaluated for symptoms of powdery mildew using an incidence rating (0-10 (x100); 0=no infection; 10=infection evident) and a severity rating (0-10 (x10); where 0=no infection and 10=100% of leaf or fruit surface).

### **Results:**

On average, plants treated with Permatrol demonstrated an average incidence rating of 11% and an average severity rating of 1.1%. Plants treated with Sulphur/Rubigan had an incidence rating of 60% and a severity rating of 6.7%. Untreated grape plants demonstrated an average incidence rating of 61% and an average severity rating of 8.6% (Table 1 below). Plants treated with Permatrol had an 82% reduction in effected plants and 87% reduction in effected surface area.

<sup>1</sup> Permatrol is a natural fungicide manufactured by Soil Technologies Corp in Fairfield, IA, USA

<sup>2</sup> Rubigan EC is a chemical fungicide CAS # 60168-88-9

Treatment	Foliage		Fruit	
	Incidence %	Severity %	Incidence %	Severity %
Untreated	42.0	5.2	80.0	12.0
Permatrol 1% v/v	7.0	0.7	15.0	1.5
Sulphur/Rubigan Standard			60.0	6.7

Table 1: Results of all treatments

### Conclusions:

Results from this study suggest Permatrol is an effective treatment for controlling powdery mildew on grapes. Plants treated with Permatrol had a lower level of incidence and severity on both foliage and fruit, compared to the control. Permatrol at a solution rate of 1% produced a better result when compared to the conventional fungicide Rubigan.

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