



Research Report

Title: Effect of Fungastop on *Erwinia amylovora* in Pear Trees

Location: Morocco

Principal Investigators: Atraco S.A.

Crop: Pear Trees

Date: June 2010

Abstract:

The purpose of this study was to observe the effects of Fungastop¹ on pear trees infected with *Erwinia amylovora*, commonly known as fire blight. Pear trees in Morocco are commonly attacked by this disease in the late Spring when the weather is alternating between humid and dry weather. Under optimal conditions *E. amylovora* can destroy an entire orchard in a single growing season. One-half hectare of severely infected pear trees was treated with two applications of Fungastop, while a control area was designated to an adjacent field. After the applications of Fungastop, the pear trees were evaluated. The progression of the *E. amylovora* pathogen was observed to have ceased on pear trees treated with Fungastop, while the control group did not recuperate from the pathogenic damage.

Methods:

One-half hectare of pear trees that were severely infected by *E. amylovora* received two applications of Fungastop at 50 cc/100 liters of water at the end of April 2010 and at the end of May 2010. The treatments were applied to the leaf area of trees following periods of heavy rainfall. A control area was established adjacent to the trees receiving treatment. Following the applications of Fungastop, the pear trees were evaluated.

Results:

Pear trees that were treated with Fungastop displayed significant new growth despite incurring severe damage from *E. amylovora*, and grew out new leaves and flowers within two weeks following the second application. On the other hand, pear trees that were left untreated did not grow out new flowers or leaves. The photos below were taken from the treated area and show

¹Fungastop is an EPA 25b list antifungal and antibacterial product manufactured by Soil Technologies Corp. in Fairfield, IA, USA

the new growth on the stem in contrast to the top of the stem, which shows 100% chlorosis, taken two weeks following the second application of Fungastop.



Photos: New leaf and flower growth on treated stem

In addition, flowers were observed in the treated areas. The flowers came out at the end of the infected stem, which suggest no residual effect of the pathogen attack.

Conclusions:

It appears that the utilization of Fungastop in infected pear trees seemed to stop the progress of *E. amylovora* and allow the trees to recuperate and quickly grow out new leaves and flowers. The untreated control pear plants did not recuperate from the seasonal damaging effects of the severe *E. amylovora* pathology. Timing of the application at the first sign of the disease incidence may be a method to prevent the severity of *E. amylovora* in fruit trees.