



For Pear Psylla and Fire Blight Suppression

RECOMMENDATION FOR USE ON PEARS

Benefit	Rate Per Acre	Control Expectation
Pear Psylla Suppression	2 oz	30-50% reduction of eggs and juveniles
Fire Blight Suppression	2 oz	30-60 % reduction of blossom blight 20-45 % reduction of stem blight
Fruit Sizing	2 oz	Advance early cell division for larger fruit
Calcium Mobility	2 oz	Increase bound calcium in fruit

Overview: The Harpin protein active ingredient in Employ activates plants systemic defense mechanisms which has shown to suppress various diseases, insect pest and increase fruit size and quality

Pear Psylla:

USDA Wapato conducted a 3 year replicated study demonstrating harpin protein applications suppressed pear psylla populations 30-50%. Most of the effect was due to poor survival of juveniles, reduced egg laying, and reduced egg viability. It is believed the impact on sucking insects is due to defensive components in phloem which affect insect gut bacteria and reduce effective feeding. **Applying Employ early will provide the highest impact on pear psylla populations, interfering with the reproductive and survival capacity to reduce population potential for the season.**

Fire Blight:

Ken Johnson OSU 2017 fire blight trial using Employ showed a 23% reduction of blossom blight. Studies from Cornell have demonstrated 42% - 84% reductions of blossom blight. Natural inoculation trials have shown as high as 87% reduction of blossom blight with an application made at pink (apples). Performance on stem blight has historically shown 40-65% reductions. Employ provides a systemic suppression mode of action in a fire blight prevention program. **Early, pre-bloom (first white – full white) applications appear to provide the highest efficacy toward fire blight.**

Application Timing and Strategy

Early Season Protection *activates plant defenses towards pear psylla & fire blight*

- First white – Full white
- 14 days after 1st Treatment – Petal fall
- 21 Days after petal fall treatment

In Season

- 21 – 28 day interval preceding psylla egg deposits

Beneficial Predator Safety: Employ has no effect on beneficial predators or pollinators. The use of Employ along with other beneficial safe insecticides will allow establishment of predators.

Mode Of Action: Biochemical that activate plant defense – **SAR** Systemic Acquired Resistance

Surfactant Use: The addition NIS

Tank Mixing: Employ can safely mix with most pesticides – avoid oxidizer or phosphoric acid buffers

Regulatory: 0 day PHI, 4 hour REI, Exempt from food tolerance, Zero Residue product

