TERMINATION REPORT

PROJECT NO: 5743

TITLE: Improved Pollination of Pears

PERSONNEL:
Project Leader: D.F. Mayer, Entomologist, WSU-Prosser

REPORTING PERIOD: 1994-96

ACCOMPLISHMENTS:

Fruit Boost™ tested as a honey bee attractant on pears did not increase fruit set or size of the pears. Preliminary data indicates that the use of pollen traps can increase the number of pollen collecting bees and the total number of foragers on pears.

These results are significant to the industry and to science to define the best amount of honey bee management practices needed to maximize pear fruit set and size.

RESULTS:

Fruit Boost was applied to two separate one acre plots of Anjou pears during bloom and the number of foraging honey bees, fruit set, fruit length and fruit weight recorded in the treated and check plots. There were significantly more honey bees in the plots treated with Fruit Boost at six hours but not at four or 24 hours after application as compared to the untreated check. There were no significant differences in percent fruit set, the length of the pear fruit or the weight of the pear fruit in the treated plots as compared to the untreated checks. Applying Fruit Boost resulted in an increase in the number of foraging honey bees at six hours after application. Applying Fruit Boost did not increase pear fruit set or size.

Experiments were carried out for the second year on the effects of pollen traps on honey bee foraging in pear orchards. We used Ashby pollen traps which can be deactivated by pulling a screen and then no pollen is trapped. In this test, the number of foraging honey bees in the orchard was very low. However, at the colonies we counted more pollen collectors and more returning bees when the

traps were activated. Further work is necessary with this method to determine if it improves pear fruit set.

PUBLICATIONS:

Mayer, D.F. 1994. Wild bees for pollination of tree fruits in Washington. Proc. Wash. St. Entomol. Soc. 56:1023-1025.

Mayer, D.F., S.J. Bradley, and J.D. Lunden. 1994. Commercially managed bumble bees for pollination of pears. Proc. Wash. State Hort. Assoc. 90:86-88.

I used data generated from this project in twelve different presentations to growers, consultants, beekeepers and others.