What does the Field Trial Data Tell Us about the Economics of Using Hilo Bees?

Using the data generated in field trials, profitability can be estimated for Hilo bees managed in a typical commercial beekeeping operation. The calculations shown below are based on three years of data from field tests of bees used for honey production in North Dakota and almond pollination in California. Untreated Hilo Bees are compared to a standard Italian control stock that is treated for mites (*note that the cost of Varroa treatment is not included in this model*). The honey price is varied to show profitability under different market scenarios.

Data taken from the field trials:

- Survival of colonies with original queens at honey production: Hilo = 65%; control = 69%
- Average honey production: Hilo = 30 lbs; control = 41 lbs
- Colonies with original queens at almond pollination which have $\geq$ 6 frames of bees: Hilo = 37%; control = 26%

Scenario 1: Using field trial data, with almond pollination rental set at $200 per colony, and with various honey prices:

Profits per colony of Hilo Bees, compared to control stock

Honey sold at $1.75/lb: $6.40
Honey sold at $1.50/lb: $8.60
Honey sold at $1.30/lb: $10.36

Scenario 2: Assuming controls produced the average honey crop for North Dakota (65 lbs/colony) and calculating proportionately less honey production by Hilo stock (47 lbs/colony):

Profits per colony of Hilo Bees, compared to control stock

Honey sold at $1.75/lb: -$2.66
Honey sold at $1.50/lb: $0.83
Honey sold at $1.30/lb: $3.63

These calculations show that Hilo Bees are more profitable with low honey prices or poor honey production years, although reduced *Varroa* treatment costs have not been accounted for.