

Sustainable Trapping

Some Thoughts from Matt Allan, Pacific Pollination

1. It would be to our advantage to show that our bee trapping is sustainable.
2. I suggest this means *‘withdrawing bees in such a way that the population level is not significantly reduced, either short-term or long-term’*.
3. We should be prepared to have this assessed independently.
4. We have to decide what we can **practically** measure, and whether our measurements realistically describe how sustainable our practices are.

Measuring Sustainability 1

- Each year a **fixed number** of bees from trap nests is returned to the habitat, for example 10,000 females plus associated males.
- Advantages – easy to measure; easy to do; easy to determine when sustainability is compromised.
- Disadvantages – takes no account of natural fluctuations in population.

Measuring Sustainability 2

- Each year a fixed number of bees from trap nests is retained, for example 50,000 females plus associated males, and **the remainder** returned to the habitat.
- Advantages – easy to measure; easy to do; easy to determine when sustainability is compromised.
- Disadvantages – takes no account of natural fluctuations in population.

Measuring Sustainability 3

- Each year a fixed proportion of bees from trap nests is returned to the habitat.
- Advantages – easy to measure; easy to do.
- Disadvantages – we need some consensus of the percentage – 1%? 10%? 50%; this is not necessarily an indication of sustainability.

Measuring Sustainability 4

- Compare two similar populations in close proximity, one which is trapped for bee removal and one which is a reference population. Remove bees so that the fluctuations in the trapped population mirror the reference population.
- Advantages – more scientifically rigorous.
- Disadvantages – exceedingly complex; possibly unreliable.

How Do We Create Sustainable Trapping Systems?

1. Provide abundant clean nests.
2. Create nests which reduce parasite and predator attack.
3. Clean all harvested cocoons, removing parasites and pathogens.
4. Return clean cocoons to the habitat thereby reducing parasite levels.
5. Consider enhancement of forage and mud provision.