Varroa Mite Treatment

Powder Sugar Shake

Equipment Needed

1. Wide Mouth Jar
2. #8 Screen Mesh to Replace Solid Lid
3. Powdered Sugar
4. White Plate, Tray, Or Similar Device
5. Water Mister

Do not perform this test in high humidity or during strong nectar flow, because dampness will cause the sugar and mites to stick to the bees.

Sampling

1. Collect 300 bees (about ½ cup of lightly packed bees) from a brood frame.
2. Add approximately 2 Tablespoons of Powdered Sugar.
3. Shake the jar for 1 minute to cover the bees.
4. Set the jar down and wait 3-5 minutes.
5. Shake the jar onto the white plate until the mites quit falling out.
6. Spray the contents on the plate with water to dissolve the sugar.
7. Count the mites.
8. Add an additional Tablespoon of sugar and repeat the steps to improve the accuracy of your count.
9. Return the bees to your colony.

Alcohol or Soap Wash

Equipment Needed

1. Wide Mouth Jar
2. #8 Screen Mesh to Replace Solid Lid
3. Alcohol: Ethanol, Ethyl Alcohol, or Isopropyl (Rubbing) Alcohol
4. Or Soap: Automotive Windshield Washer Fluid (something low-sudsing)
5. White Tray, or Similar Device

Sampling

1. Collect 300 bees (about ½ cup of lightly packed bees) from a brood frame.
2. Add enough alcohol or soap to completely cover the bees in the jar.
3. Shake the jar for 1 minute.
4. Empty the liquid into a shallow white pan.
5. Add more alcohol or soap to the jar and repeat the steps.
6. Count the mites.

What Treatment

Dormant Phase

Highly Effective:
- Oxalic Acid Fumigation

Moderately Effective:
- HopGuard 2
- Apiguard
- Api Life Var
- Formic Acid (MAQS)

Least Effective:
- Screen Bottom Board

Population Increase

Highly Effective:
- Apivar
- Apiguard
- Api Life Var
- MAQS (Formic Acid)
- Drone Brood Removal

Moderately Effective:
- HopGuard 2

Least Effective:
- Screen Bottom Board
- Powdered Sugar
- Mineral Oil

What Treatment

Population Peak

Highly Effective:
- MAQS
- Apivar
- Apiguard
- Api Life Var

Moderately Effective:
- HopGuard 2
- Oxalic Acid Drip

Least Effective:
- Screen Bottom Board
- Drone Brood Removal

Population Decrease

Highly Effective:
- Apivar
- MAQS
- Apiguard
- Api Life Var
- HopGuard 2

Moderately Effective:
- Oxalic Acid Drip

Least Effective:
- Apistan
- Check Mite+
- Drone Brood Removal
- Screen Bottom Board

Apivar (Amitraz)

- It is a slow release chemical. Leave strips is for 42 to 56 days and then remove them.
- Must use 8 weeks before you put on honey supers, or after honey supers are removed. Do not use while honey supers are on.
- Place strips in the cluster, and 2 strips per brood box.
- Some disadvantages: There are low levels of residue in beeswax and honey.

Apistan (Tau-fluvalinate)

- Slow release, leave the strips in for 42 days before removing.
- Do not use while honey supers are on.
- Best if temperature is greater than 50 degrees F.
- Some diadvatages: long half-life, residue common in wax, there is some mite resistance.

CheckMite+ (Coumaphos)

- Slow release, leave in for 6 weeks before removal.
- Do not use while honey supers are on.
- Some disadvantages: There is mite resistance in some area's. Long half life, contamination of hive components. Negative activity with other products, and can affect reproductive health of queens and drones.

Apiguard (Thymol)

- Must treat twice 7 days apart.
- Best when temperature is greater than 59 and less than 105 degrees.
- Do not use while honey supers are on, but can be used anytime of the year.
- Disadvantages: May reduce queen laying, may increase larvae mortality.

Api Life Var (Thymol + Essential Oils)

- Must treat 2-3 times 7-10 days apart.
- Do not treat while honey supers are on.
- Use when temperatures are greater than 65 but less than 85 degrees.
- Disadvantages: Temperature considerations, may taint the taste in honey.

Mite Away Quick Strips (Formic Acid)

- May be used while honey supers are on.
- Full dose, 2 strips per hive. If you use ½ dose, a second treatment is recommended.
- If temperatures are above 92 degrees, it can cause high brood mortality.
- Disadvantages: Can cause brood mortality and queen losses.

HopGuard 2 (Potassium Salt)

- There is not much research done since they just released it.
- It has been approved for use in Utah.
- It is a Natural Compound and can be used during the honey flow.
- Disadvantage: It can be messy to use.

Oxalic Acid

- There are two forms. Crystals that can be vaporized, or you can make a syrup.
- This is a Natural Organic Acid.
- When using as a drip, drizzle 5mL between each frame.
- It has been approved for use in Utah.