

## **Protocol for testing fruit for presence of spotted wing drosophila larvae:**

Best to test the berries the evening before they are to be picked

THE SALT METHOD (page 1) IS RECOMMENDED.

THE SUGAR METHOD AND BOIL METHOD (page 2) ARE ALTERNATIVES

### Method 1A: salt extraction with the bag test

#### Supplies:

1. Salt (common table salt)
2. Warm water
3. Zip-top bag (gallon or quart size)
4. Suspicious ripening fruit: about 75 raspberries or blackberries, or 50 strawberries, or 2-4 cups of blueberries or grapes.

#### Directions:

1. Mix salt and water in any of the following quantities:

Salt	Warm water
1 tablespoon	1 cup
¼ cup	1 quart (4 cups)
1 cup	1 gallon

2. Put fruit in bag. Cover with salt solution. Close bag. Better to not crush the fruit so that larvae will be easier to see.
3. Allow to sit for about 20 minutes.
4. Look for maggots floating to the top of the solution in the bag. Fruit should sink to bottom. Maggots are white, head-less, leg-less, length of 1/8 inch.

### Method 1B: salt extraction with the pan test

#### Supplies:

1. Salt (common table salt)
2. Warm water
3. Suspicious ripening fruit: about 75 raspberries or blackberries, or 50 strawberries, or 2-4 cups of blueberries or grapes.
4. Shallow pan or tray, at least 1 inch tall (such as an 8 x 8" cake pan)
5. Piece of hardware cloth that fits inside the pan

#### Directions:

1. Place fruit in pan or tray. Cover with salt solution.
2. Place hardware cloth over fruit so that fruit stay on bottom of pan.
3. Allow to sit for about 20 minutes.
4. In well-lit area, look for maggots floating to the top of the solution.

## Method 2: sugar extraction

### Supplies:

1. Sugar (common white granulated sugar)
2. Warm water
3. Zip-top bag (gallon or quart size)
4. Suspicious ripening fruit

Directions: same as for salt bag test; same ratio of sugar to water as for salt to water. Fruit might float instead of sinking.

## Method 3: boil test

This test is used primarily by blueberry growers who are exporting fruit to Canada or other countries, and who already use a boil test to detect the blueberry maggot, which is larger than the spotted wing drosophila larva.

### Supplies:

1. Heat source
2. Heat-proof pan
3. Water
4. Sample of suspicious ripening fruit
5. Tray or shallow pan
6. Mesh frame to place on top of tray or pan

### Directions:

1. Place fruit in pan, cover with water, heat to boiling for one minute.
2. Pour the fruit mixture on a mesh frame over a tray or shallow pan, then mash fruit over the mesh with a spoon, then wash lightly with water.
3. Look for maggots on the tray.