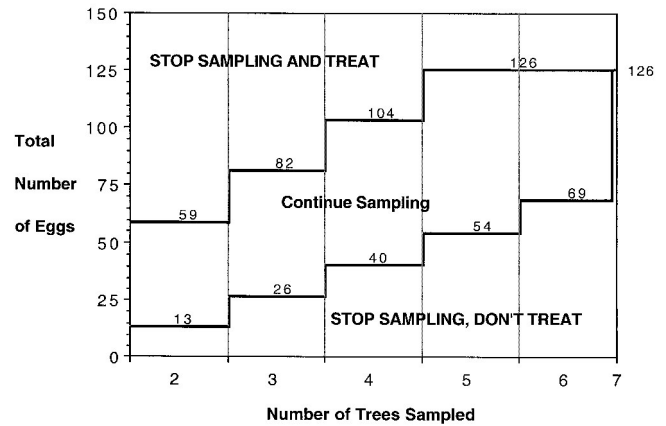


# Scouting Apple Leaves for Spotted Tentiform Leafminer

(adapted from Cornell University's 2000 Pest Management Recommendations for Commercial Tree Fruit)

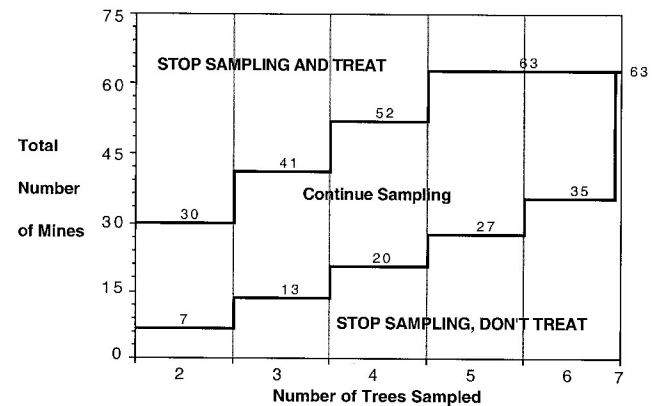
## Scout at pink or early bloom for eggs of the first generation of leafminer.

- A hand lens is useful for seeing the eggs, which are small, round, and translucent.
- Examine 3 fruit clusters from each of 5 trees (= 15 clusters).
- Count the number of eggs on the undersides of the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> leaves from base of cluster.
- If more than a threshold number of eggs per fruit cluster are detected at pink, then plan to use an insecticide *at petal-fall* to kill young (sap-feeding) leafminer larvae.
- If less than the threshold number of eggs is detected, then leafminer control will probably not be needed at petal-fall, but you can also scout for early mines at petal-fall to confirm the decision.
- General threshold: 8 or more eggs per fruit cluster ( $\geq 120$  eggs per 15 clusters).
- Specific thresholds: see *chart* to the right for more precise sampling on 2 - 7 trees per block.



## 2. Scout at petal-fall for early mines of the first generation of leafminer.

- Note that early mines (with young larvae) are blister-like areas visible only on the *underside* of the leaf.
- Examine 3 fruit clusters from each of 5 trees (= 15 clusters).
- Count the number of early mines on the *undersides* of the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> leaves from base of cluster.
- If more than a threshold number of early mines per fruit cluster are detected, then use an insecticide for leafminer larvae at petal-fall.
- General threshold: 4 or more early mines per fruit cluster ( $\geq 60$  mines per 15 clusters).
- Specific thresholds: see *chart* to the right for more precise sampling on 2 - 7 trees per block.



## 3. Scout in early- to mid-summer for new early mines of second generation leafminer.

- Scouting should be done 690 degree-days, base 43F (about 25-30 days) after the number of leafminer moths begins to sharply increase in pheromone traps.
- Examine 4 mature terminal leaves per tree from 15 trees (= 60 leaves).
- Count the number of new mines on the undersides of these leaves.
- If more than a threshold number of new mines per fruit cluster are detected, then apply an insecticide effective against young (sap-feeding) leafminer larvae.
- General threshold: 1.6 or more new mines per leaf ( $\geq 96$  new mines per 60 leaves).
- Specific thresholds: see *first chart* to the right for more precise sampling on 3 - 20 trees per block.
- Re-sample at 840 degree-days (base 43F) if treatment not needed after 1st sampling (see *second chart* to the right).

