
APPLE IPM

A Guide for Sampling and Managing Major Apple Pests in New York State



A. AGNELLO, J. KOVACH, J. NYROP, H. REISSIG, D. ROSENBERGER, W. WILCOX

Spotted Tentiform Leafminer Sampling Form



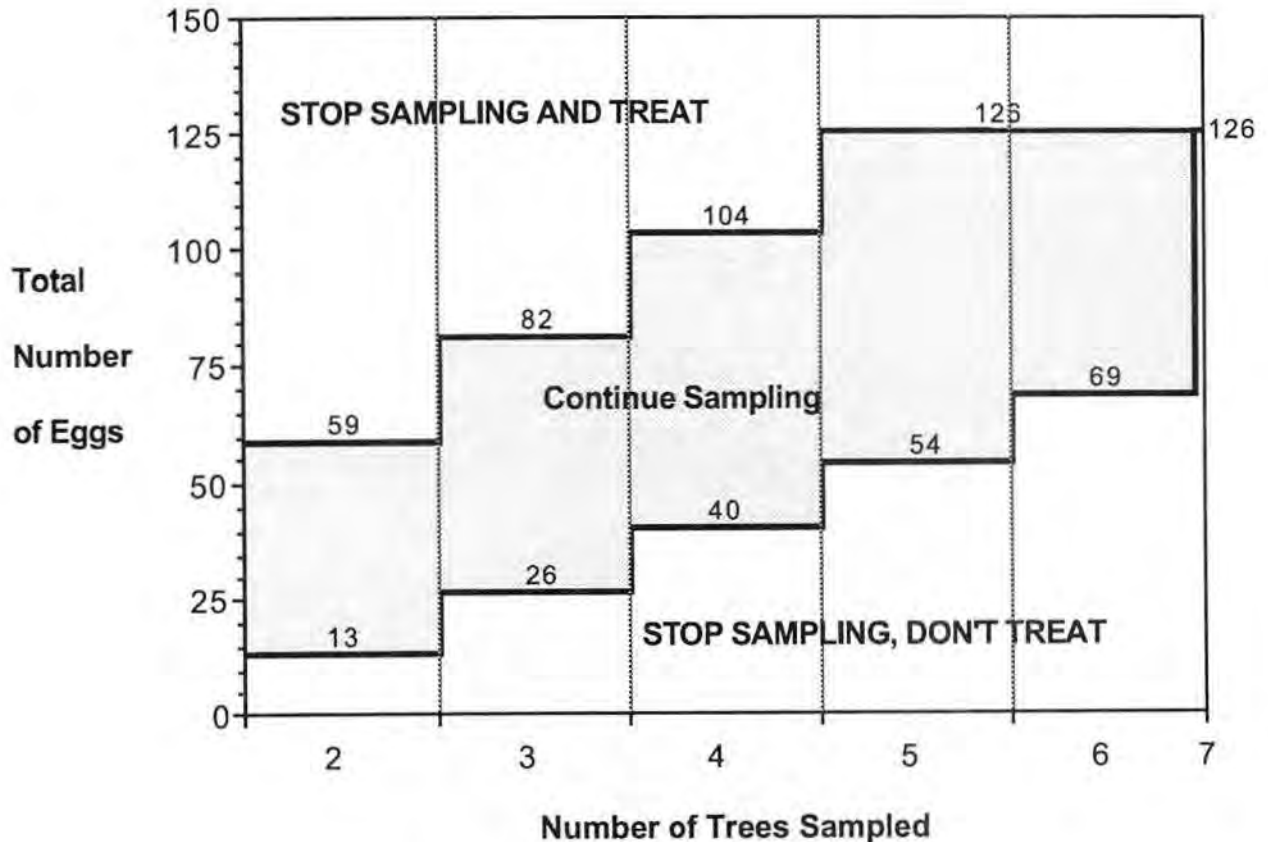
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STLM PINK SAMPLING FORM

- During the pink bud or early bloom stage, start near one corner of the block, and go to every other tree until you have sampled enough trees to reach a decision. Select 3 fruit clusters from around the canopy of each tree sampled.
- Using a magnifier, count the eggs on the undersides of the 2nd, 3rd, and 4th leaves in each cluster, counting leaves in the order they unfolded (see diagram at right).
- After 2 trees have been sampled, begin comparing the accumulated total number of eggs found with the decision lines shown in the chart below for that number of trees.



If the number of eggs falls between the two stairstep lines, sample another tree. If the total is less than the lower line, sampling is stopped and no treatment is recommended. If the total is greater than the upper line, sampling is stopped and a treatment is recommended at either pink or petal fall. If 7 trees are sampled and the total number of eggs equals 126, the population is below threshold.

Refer to *Cornell's Pest Management Recommendations for Commercial Tree-Fruit Production* for a choice of pesticide materials.

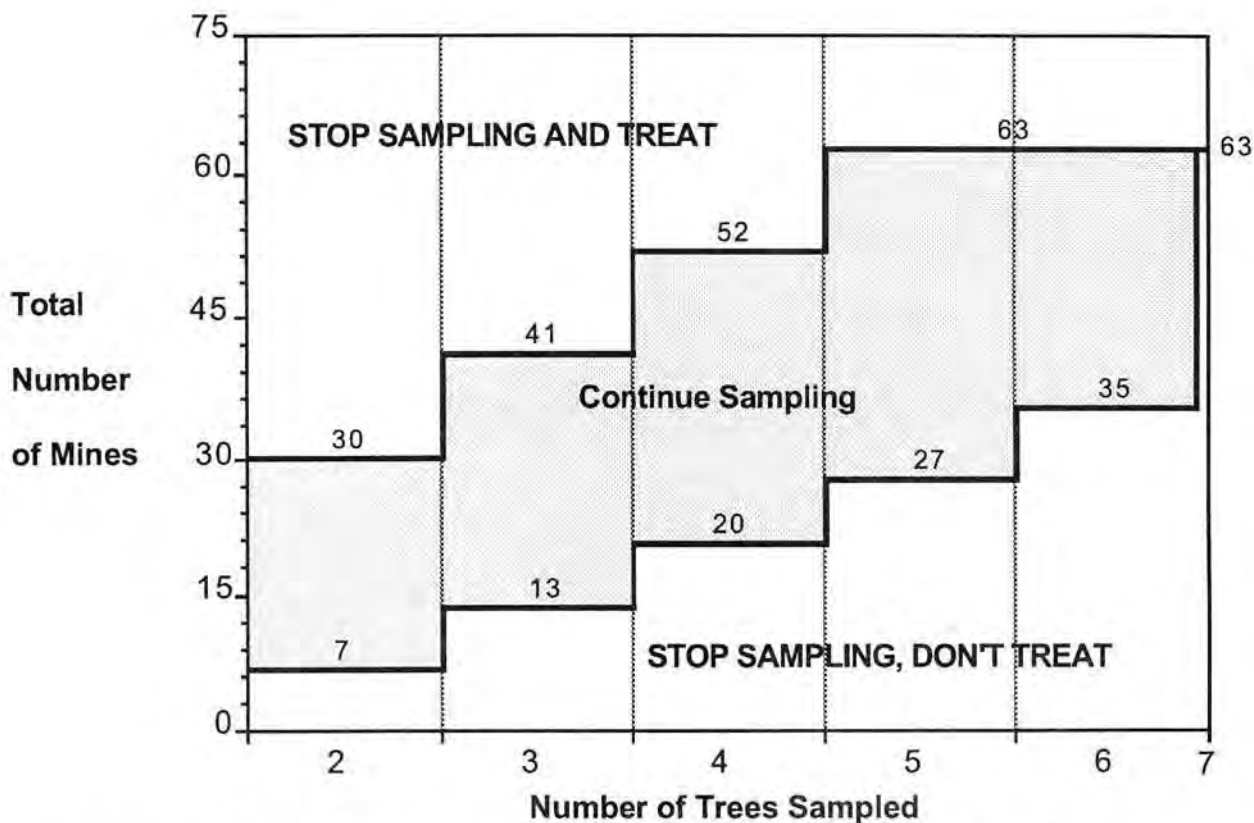
STLM PETAL FALL SAMPLING FORM

- If STLM eggs were not sampled during the pink or early bloom stage, a decision on 1st generation control can still be made by sampling sap-feeding mines at petal fall. After all the blossoms have fallen, start near one corner of the block, and go to every other tree until you have sampled enough trees to reach a decision. Select 3 fruit clusters from around the canopy of each tree sampled.



- Using a magnifier, count the mines on the undersides of the 2nd, 3rd, and 4th leaves in each cluster, counting leaves in the order they unfolded (see diagram at right).

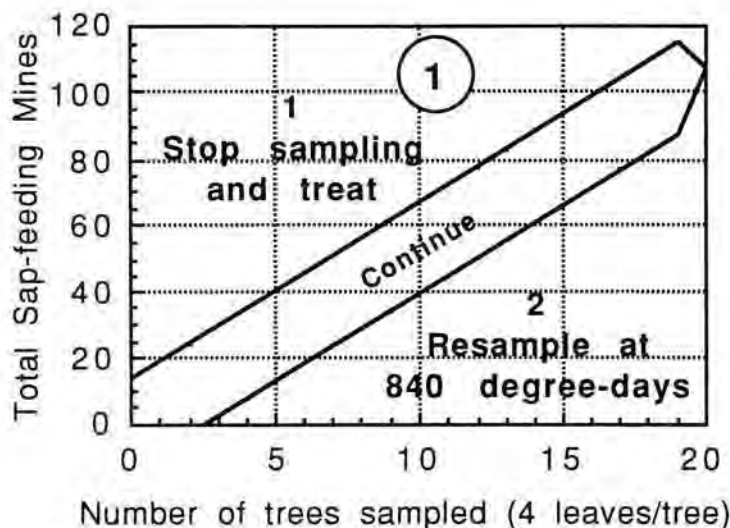
- After 2 trees have been sampled, begin comparing the accumulated total number of mines found with the decision lines shown in the chart below for that number of trees.



If the number of mines falls between the two stairstep lines, sample another tree. If the total is less than the lower line, sampling is stopped and no treatment is recommended. If the total is greater than the upper line, sampling is stopped and a treatment is recommended at petal fall. If 7 trees are sampled and the total number of mines equals 63, the population is below threshold.

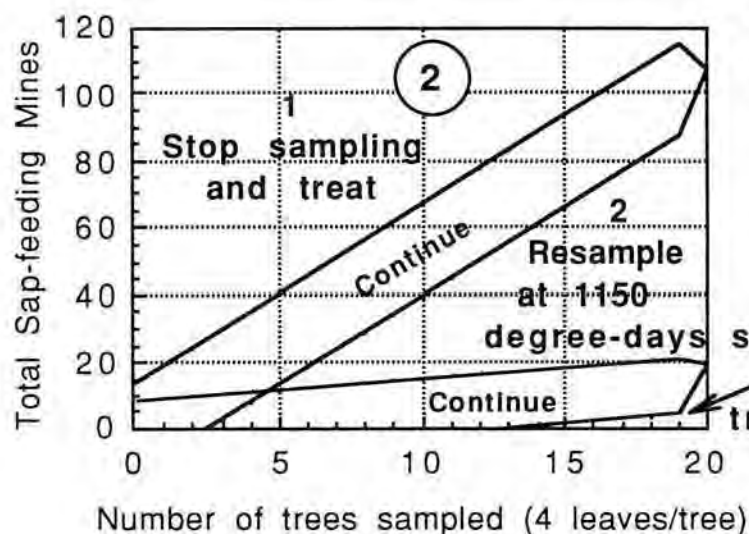
Refer to **Cornell's Pest Management Recommendations for Commercial Tree-Fruit Production** for a choice of pesticide materials.

STLM SUMMER SAMPLING FORM



Because of variability in this pest's development from one site to the next, more than one sampling session may be needed to reach a treatment decision for 2nd generation STLM. The first sample should be taken at 690 degree-days (base 43°F) after the start of the 2nd moth flight (or approximately 25-30 days). Use July 9 as an approximate sampling date if you don't have access to pheromone trap catch data.

Start near one corner of the block and sample trees along a diagonal, moving toward the opposite corner of the block. At each tree, count all the **sap-feeding** mines on 4 mature terminal leaves randomly selected from around the outside of the canopy. Sampled leaves should be those located near the middle of the terminals. After sampling 3 trees, start comparing the accumulated total number of mines found with the appropriate chart for the sampling session and proceed as follows:



SAMPLING DONE AT 690-840 DD

If the number of mines falls in the "Continue" zone on **Chart 1**, sample another tree and check again. If the total is above this zone (area 1), sampling is stopped and a treatment is recommended. If the total is below this zone (area 2), stop sampling and sample the block again at approximately 840 DD (about 31 days) after the start of the 2nd flight.

SAMPLING DONE AT 840-1149 DD, IF NECESSARY

If it is necessary to sample the population a second time, refer to **Chart 2** after sampling the 3rd tree. If the accumulated total falls in one of the "Continue" zones, sample another tree and check again. If the count falls in area 1, a treatment is recommended and no further sampling is necessary. If the count falls in area 2, stop sampling and sample the block again at approximately 1150 DD (about 42 days) after the start of the 2nd flight. If the count falls in area 3, treatment is not recommended and no further sampling is necessary.

SAMPLING DONE AT 1150 OR MORE DD, IF NECESSARY

If it is necessary to sample a third time, refer again to **Chart 1**, the same as in the first sampling session. This time, however, if the accumulated total number of mines falls in area 2, treatment is not recommended and no further sampling is required for this brood of STLM.

Refer to Cornell's ***Pest Management Recommendations for Commercial Tree-Fruit Production*** for a choice of pesticide materials if a treatment is elected.