BALSAM TWIG APHID SAMPLING TECHNIQUE

OBJECTIVE: To predict current populations of balsam twig aphid in balsam fir Christmas tree plantations or stands before injury occurs and in time to initiate control measures.

SAMPLING PROCEDURE:

1. To be conducted when buds begin to swell and show green (during second and third weeks of May) when the insect is in its first mobile life stage.
2. Sample 10 randomly selected balsam fir trees scattered throughout the planting by walking along a diagonal line through the plantation and sampling trees nearest your line of travel. To predict population levels on trees preferred by the insect, choose trees with damage evident from the previous year as sample trees.
3. Sampling of individual trees:

A. one square foot (930 cm^2) of foliage to be beat at mid-crown of each tree. Use 1sq.ft. of black or white cardboard or plywood and place under the branch that is to be sampled.

B. Gently beat the branch over the cardboard or plywood with a stick.

C. Count aphids that fall on the board (the warmer and sunnier the day, the more active the very small aphids will be and the easier it will be to count them).

D. Record number of aphids for each tree.

E. Total and calculate average number of aphids counted (total ÷ 10).

4. Assess aphid hazard in plantation:

If average per tree is 1-8, light injury may occur
9-15, moderate injury may occur
16+, severe injury may occur

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