THE SPITTLE BUG ON STRAWBERRIES

by

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Life Habits Outlined:

The spittle bugs, immature forms of the adult frog-hoppers, appear on strawberries shortly after new growth starts in the spring. Feeding is done upon the tender succulent portions of the plants and is accompanied by a frothy material known as "Snake Spit". The function of this "spittle" is not definitely known, but apparently it serves as protection. The nymphs continue to feed and grow by successive molts within the "spittle" until the adult stage is reached, usually in May.

Data secured show that the first eggs were found on strawberry plants in late July. The peak number of eggs within collected females has been found in November with an average of 28.4 eggs per female, and collections as late as January 23 showed eggs were present though in smaller numbers per female. Eggs on strawberries may be laid singly, but more often in groups, on the under side of leaves, stems, and between the stems and crown of the plant. Eggs remain on the plants over the winter, hatching in the spring.

Injury:

The injury caused by the spittle bugs is largely that of devitalizing the plants. Berries upon which the pests have fed develop unevenly and are frequently hardened on one side. Growers have reported that this hardening persists even after canning. Reduction in yield of berries in check plots compared to treated plots has been as much as one-half to one ton per acre, according to experimental data.

Control:

Dusters - The use of hand dusters is recommended for spittle bug control. The machines generally used cost from $20. to $25.

Materials - The commonly used materials are hydrated lime or 2% nicotine-lime dusts. The 2% nicotine-hydrated lime dust may be secured commercially or mixed as follows:

50# of hydrated lime
2½ pints Black Leaf - 40

Place in a closed container (metal or wooden barrel) with about two dozen smooth, clean rocks, and roll over and over for about 5 minutes. Remove the rocks and apply dust as soon as possible or place in an airtight container.
Very excellent control of spittle bugs has been secured with "rotenone" bearing dust of either Derris root or Cube' root. A number of these dusts are available commercially and have given satisfactory control. It appears that the amount necessary for good results must be \( \frac{1}{2} \) or more of the active ingredient, "rotenone", and growers are urged to make certain that this strength is present and that the material is fresh before buying.

**Time and Number of Applications** - A double application of dust is recommended for control. A prolonged hatching period makes this necessary as the early forms have done considerable damage before the late ones hatch. The first application should be made about 10 days to 2 weeks after the first spittle bugs hatch (determined by a close examination of the plants) and the second application should follow about 2 weeks later.

**Amount** - The amount of dust applied depends upon the size of the plants and the planting distance, but generally will average about 100# per acre.

**Caution:**

Apply dusts only when the weather outlook is fair. High temperatures increase the effectiveness of nicotine dust. Make certain that the strawberry plants are thoroughly dusted. The spittle bugs are most commonly found on the underside of the leaves and on the tender developing fruit buds. It is important that the first application be made before much damage is done, which occurs as early as three weeks after the first bugs hatch. Two applications of dust are superior for control, due to a prolonged hatching period. A thorough coverage cannot be obtained with less than 100 pounds of dust per acre on the average strawberry patch. One man, using a hand duster, cannot adequately cover more than two acres per day.