



GROWER 101:

Scouting for Mites part I



To help identify and treat mites, try a scouting plan with help from this first article of a two-part series.

By Kevin Donovan



To effectively implement a mite management program, you must first identify the mite species, understand its life cycle and determine whether populations are at an economically damaging threshold. This is accomplished through a scouting plan that is performed routinely and in a systematic manner.

Scouting, also known as monitoring, is the cornerstone of an Integrated Pest Management (IPM) program. When mites are found on only a few plants or in a small area, localized control tactics should be used. Not only are spot treatments more economical, they also prevent overuse, reduce resistance build up and preserve beneficial organisms. Look for tips on identifying mites in the June issue of *GPN*.

GENERAL SCOUTING INFORMATION

Scouts must have a thorough understanding of, and appreciation for, the systematic approach to pest management. Working within a framework of ecological and economic factors, a scout must gather the information necessary to make pest management decisions. This endeavor requires an understanding of the agricultural ecosystem, including knowledge of plant and pest biology, pest life cycles, host plants, beneficial insects, mites and organisms, damage caused by the presence of pests and other environmental risk factors. IPM relies on a scout's data to determine whether a pest's population has attained an economically damaging threshold.

Employees can be trained to scout, or you can do your own scouting. The advantages of in-house monitoring include a familiarity with the greenhouse, knowledge of crop production practices and the ability to promptly inspect incoming plant material.

Growers may also hire private pest-manage-

ment consultants. Some of the advantages of private consultants include their ability to scout quickly and efficiently and their specialized up-to-date knowledge of pest-management materials and practices. It is recommended that a grower hire a consultant or professional scout if employees' schedules do not allow consistent scouting and monitoring practices.

SCOUTING GUIDELINES

It is important to scout routinely, at least once every week, through a crop's entire production cycle. Scouting twice each week is an even better production practice. Scout on a specific day and time and keep the same schedule throughout the season. The common pests found in greenhouse crops do not distribute themselves evenly through a crop; therefore, the entire greenhouse must be scouted in a consistent pattern, and since mites tend to be densely aggregated, random plant inspection is needed to locate the various infestations. For each area of 4,000 square feet, samples should be taken from at least 5-10 random sites.

Scouting should start from a major doorway, as this is often where mite problems begin. Special attention should be paid to plants around any openings in the greenhouse, especially those on the outside rows of benches. Also, closely inspect other potential problem

areas, such as the middle of the bench, which may have received less spray coverage, or the ends of benches where there may be less air circulation. Be sure to inspect all crops.

At least 10 minutes should be spent inspecting 20 or more plants for every 1,000 square feet of population area.

A Standard "M" or zig-zag-shaped scouting pattern down aisles and between benches will provide good sampling coverage (See Figure 1).

Select plants randomly, but choose plants from every bench and from the ends and the middle of each bench.

Inspect each plant at the soil surface, and work your way up the plant.

Most mites will be on the underside of the leaves. Start by turning over the older, lower leaves. Then examine younger leaves further up the stalk. Special attention should be paid to buds and blooms.

When you find a plant with a mite (or mites), flag it. This way you can relocate the pot and watch pest development. The flagged plant is your indicator plant. Several days after you treat, turn the leaf over and see if you have eliminated the mite problem.

Next month's article will provide information about identifying the mites found during scouting. GPN

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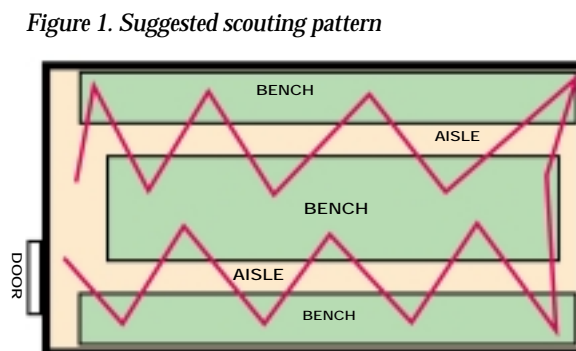


Figure 1. Suggested scouting pattern

Use this zig-zag pattern for better accuracy when scouting.



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