TOM'S BAMBOO

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Mite Treatment

The bamboo spider mite is a common bamboo specific pest in the Northwest. It is not naturally occurring in our landscape but becomes introduced through infected plants, birds or even human contact. Bamboo spider mites are not insects but relatives of spiders. The mite sucks juices from the leaves preferring the underside of the leaf to build its protective webbed habitat. Just about every genus of bamboo seems capable of playing host to this pest. Host plants live fine with mites; they seem to have a symbiotic relationship. Mite infestation will not weaken or kill a grove, host plants seem to live with the pest like a dog with fleas. The plants will put out more leaves to adapt to the degradation of the infested leaves. Since mites will not kill a plant they are only a problem in the eyes of the grower who wants the plants to be unblemished.

DETECTION

To determine if you have bamboo spider mites look for elongated rectangular patches or striations parallel to the length of the bamboo leaf. These patches are lighter in color, indicating dead plant cells, almost suggesting variegation but the patches will soon elongate and spread out over time. Turn the leaf over and you will see that the underside of the patches is covered by dense webbing. To actually view the mites and their eggs you will need a 10X magnifying lens or better. The eggs have an almost translucent sheen to them and the mites are a creamy yellow color. To look for mites I pluck a leaf, turn it over and place the lens next to the infected spot bracing the leaf with my index finger. The heat from my finger seems to stimulate the mites making their movement easier to see.

PREVENTION

The best method to avoid mites is simply not to introduce any mites into your groves. When buying new bamboos you should inspect the plant carefully for indication of infestation, yellowed rectangular patches, and underside webbing. Since human contact is one of the common vectors of infestation, be careful around infected groves. Don't touch infected plants or allow mites to fall on you from overhanging branches and canes. If you have visited an infected grove don't go directly to your uninfected plants and begin handling them. Since bamboo spider mites are not naturally occurring in the Northwest landscape there is s good chance that if you don't have mites you won't get mites. However if your neighbor across the fence has infected plants then there is s good chance that yours will at some time become infected due to bird or human vectoring. Prevention is better that cure so inspect all new plants carefully. Quarantine all new plants until you are absolutely sure they are uninfected.

TREATMENT

The best method for getting rid of the bamboo spider mite is clear cutting the grove. Whether treating a single plant or an entire grove, there is no better control than cutting down all infected habitat. This is best done in early spring, March or April, as the plant will be fully rested and able to regenerate new growth more rapidly. I have successfully used this method in summer with later shooting species of bamboo. The plants were able to send up new uninfected shoots that still hardened off by winter. After cutting down all infected canes even with the ground, pick up all ground litter, leaves and mulch, and either bag it up or burn it all. Get rid of all the infected material permanently. You should have bare ground with traces of rhizome showing when cleanup is completed. Water thoroughly and fertilize with granulated grass fertilizer or Miracle-Gro to stimulate new growth. Monitor new growth for any tell-tale signs of re-

infection and either clear cut again or spray with a systemic miticide. This method, while drastic, is proven in almost all cases to get rid of mites once and for all.

SPRAYING

If clear cutting is too drastic, then you can spray with a contact or chemical agent to kill the mites. Grove preparation is critical. To prepare the grove for treatment first remove one third to one half of all foliage to enable the spray to contact all the remaining leaves. This removal consists of cutting down all small canes, all short canes, all broken or dead canes and finally half of the canes in the thickest part of the grove. These canes should be cut off even with the ground. When done pruning you should see patches of light through even the thickest part of the grove. This step is necessary, don't worry the canes will grow back and they will be much greener and better looking. After cane removal, remove all leaf litter and mulch from the foot of the grove. Clean the grove down to the ground. You need to remove as much mite habitat as possible by pruning and clean up. If infected leaves and leaf litter is gone from the site then you don't have to treat it for mites and can concentrate on the standing canes.

The two main types of sprays are contact and systemic. Contact spray is usually soap or oil based and relies on actual contact with the webbing to coat and smother the mites and eggs. This is only effective on individual plants or small stands where it is possible to coat the underside of every leaf. Due to the difficulty of contacting the underside of every leaf and coating the thick webbing, it is not a recommended approach to treating larger stands or groves. If you do decide to try contact spraying be sure to follow manufacturers' recommendations on spraying rates and re-applications. The more effective method is to spray with a systemic miticide. The systemic spray is absorbed into the leaf and kills the adult mites as they feed. In order to kill the eggs as they hatch repeated applications will be necessary. I recommend a thorough spraying with a hose end sprayer set to the correct application rate every 10-14 days. This schedule should continue for 30-40 days, in other words three to four spraying sessions. Again it is very difficult to hit every leaf with spray so repeated sprayings will increase the chances of treating every leaf. Follow all manufacturers' directions and wear gloves and a respirator. I like to mix up the sprays I use. During one spray session I'll use one product and on the next spray session I'll use another product. I have four hose end sprayers with four different systemic miticides. One type of spray will always be more effective on any particular group of mites so by mixing up the applications I'll be sure to overcome any chemical resistance in the pests. I start spraying at the bottom of the plants and work up and around all sides to maximize my chances of treating every leaf. If a hose end sprayer won't reach the top of large existing groves, I have used a commercial spraying service such as Haines Spray Service to treat the infestation. I still prepare the grove as before with a major cleanout then let the professionals go to work. The same application schedule applies.

RECCOMMENDED PRODUCTS
Ortho hose end sprayer
Safer Soap
Rigo Cygon II-E miticide
Ortho Isotox
Ortho Orthenex
Hiyeald Kelthane