

Christmas Tree Scouting Report #2 – 4/1/09

Weekly newsletter compiled by Sarah Pickel, PA Department of Agriculture

This week's report includes scouting information from Jim Fogarty and Kyle Halabura of Halabura Tree Farm, Brian Schildt of Penn State University and Cathy Thomas of PA Department of Agriculture.

There have been no signs of white pine weevils yet in traps in Adams, Schuylkill and York Counties. The weather this past week has remained cool and accumulation of Growing Degree Days (GDD) has been slow. In New Ringgold, Schuylkill County, there has been a total accumulation of 8.5 GDD. In Elizabethtown, Lancaster County, there have been a total of 16.5 GDD. These totals are within the White pine weevil's emergence range of 7-58 GDD. The weevils should be emerging any day now as temperatures rise and the average temperature remains around 50°F or above. If growers are not trapping for this pest, they can be monitoring their blocks of susceptible trees. The preferred hosts of the weevils are white pine and several spruce species. Look for feeding holes in the tree leaders, easily seen when the glistening sap bubbles seep from these holes. (Fig. 1)



Figure 1 - Sap oozing from White Pine Weevil feeding holes

Last season, if growers had a problem with kinked or bent needles on Douglas fir, it more than likely was caused by Cooley spruce gall adelgid. The over-wintering nymphs of this insect can be seen on the underside of the bent Douglas fir needles. At this point in the season, when temperatures are still cool, the adelgids will be flat, black and oval-shaped. (Fig. 2) This is the time to treat with a horticultural oil or insecticide. Within the next week or so, the adelgids will begin forming a white, waxy and tufted covering, (Fig. 3) which will protect them from controls. In Cumberland, Schuylkill and York Counties, Cooleys on Douglas have not yet begun to wax over. This is the same pest that forms galls at the end of the branches of Colorado blue spruce. (Fig. 4) The overwintering nymphs on that tree will be found on the underside of branches, towards the ends and tucked in at the bases of needles or new buds. Cooley nymphs found on Colorado blue spruce in Adams County have already begun to wax over, so controls may be ineffective. However, there is a mechanical control for this pest on blue spruce. In June or early July, the galls formed by these insects can be clipped from the tree and removed from the field, preventing the nymphs from emerging back into the field in late July early August.



Figure 2 - Nymphs of Cooley on Douglas



Figure 3 - Waxed over Cooley (with eggs)



Figure 4 - Cooley spruce gall on Colorado blue spruce

For growers of Norway spruce, the time for control of Eastern spruce gall adelgid is drawing to an end. (See picture in last week's report.) This is the pest that will form galls at the base of the new growth on Norway spruce. (Fig. 4) In Adams and Cumberland Counties, the overwintering nymphs, found clustered around the buds at the end of branches, are almost completely waxed over. In cooler areas, growers may still be able to apply horticultural oil or an insecticide to control this insect pest.



Figure 4 – Eastern Spruce Gall

Last week, it was reported that Eriophyid mites had begun to hatch in York County. This week, these mites were also found hatched in Adams, Cumberland and Schuylkill County. These mites can affect many species of tree, but pines and spruces can be especially sensitive to their damage. Discoloration of foliage is the primary symptom, but if populations are heavy enough, the health of the tree can be affected. Growers can spray now for this pest, however they should be careful to choose a miticide that mentions Eriophyid mites on the label, because not all miticides are effective for this pest. The list of registered insecticides and miticides Pennsylvania can be found on the Penn State Christmas tree website at: <http://ctrees.cas.psu.edu>. Horticultural oil can be very effective for this pest, but growers should be reminded that oil will remove the blue color from Colorado blue spruce.

Another insect life stage to be on the look out for now is the newly hatched stem mother stage of the Balsam twig aphid. (Fig. 5) This aphid is the pest that causes the twisting and kinking of needles on true firs. The stem mother will hatch from the overwintering egg within the range of 58 – 120 GDD. This newly hatched stage will be the most susceptible to controls. Growers will want to apply horticultural oil or an insecticide after most eggs have hatched, but before the stem mother gives birth to the next generation. She will give birth to live young around the of bud swell. These young aphids will seek shelter in the swollen buds and be very difficult to control. To monitor for this pest, use a hand lens to scan the undersides of twigs found near some previous aphid damage. The eggs will be oval-shaped and black with silver hairs covering it and can be found on the twig, at the base of the needles.. (Fig. 6)



Figure 5 – BTA stem mother



Figure 6 – BTA Egg

The next scouting report will be available Wednesday, April 8th.