Managing Japanese Hops on Forest Regeneration Sites

More than thirty people participated in the Public Meeting at Greenbrier State Park's Visitor's Center on September 17th to hear Phil Pannill and Aaron Cook present the results of their research on alternative strategies to manage Japanese Hops (*Humulus japonicus*), an invasive exotic vine that threatens survival of young trees on forest regeneration sites near streams in Maryland and nearby states.

Ginny Brace, President of the volunteer Friends of Waterford Park, described how volunteer teams have hand pulled Japanese Hops to remove this threatening invasive from the Rock Creek stream corridor – after appropriate training in plant identification. Volunteers wear gloves in order to prevent the allergic reactions from the plant's prickly stems and leaves. Regular work during the growing season helps prevent the plant from getting established and producing another year of seed.

Aaron Cook reported what had been learned about the plant's life cycle. Surprisingly, the hops germinated at very different dates in 2007 (April 1st) and 2008 (March 13th). The plant is most vigorous in full sun and moist, rich exposed soil, commonly in riparian zones. It does not germinate well in a good grass cover but readily climbs over grass eventually blanketing the land surface. Newly germinated plants remain small until the weather warms and rapid growth begins. The plant germinates between early March and mid-May. Vegetative growth occurs from April 15th through late September. The plant flowers and produces seed from late July through mid October or the first killing frost.

The mat of Japanese hops in tree planting areas can become more than 4 feet thick with the vines climbing up to 10 feet or more over trees and other plants. The plant can easily kill young trees. Deep shade considerably slows the growth of hops. The hops can be readily pulled early in the season when the soil is damp. Mowing can help manage the hops if started early and repeated regularly, almost as frequently as mowing one's lawn.

Aaron Cook reviewed the results of the use of pre-emergent herbicides doing an analysis of two years of data on several products. The most cost effective product was Oust XP (sulfometuron) at an application rate of 1 oz/acre. The second most cost effective product was Escort XP (metsulfuron) at an application rate of ½ oz/acre.

Phil Pannill reviewed the data from the use of post-emergent herbicides. The most cost effective product was Escort XP at an application rate of 1 ounce/acre. The second most cost effective product was Accord Concentrate (glyphosate) at an application rate of 1 quart/acre. Because of the spinulose hairs on the plant, a significant quantity of non-ionic surfactant must be added to the chemical at ½%, or as per label to thoroughly wet the hops.

The research showed that there are a variety of ways to control Japanese Hops but all methods require more than a single effort. The report in its entirety will be linked shortly. Please check back.