

PREPARING FOR AN INSECT INVASION



The winter of 2011-2012 was one of the warmest winters on record. While that might be a good thing to a lot of people, it means early pest pressure for trees and compressed treatment windows for applicators.

Why is it so warm?

Meteorologists at the National Oceanic and Atmospheric Administration (NOAA) say that because it is a La Niña year, the jet stream is farther north than usual. This means that the cold air we're accustomed to in the northeast United States has stayed even farther north than usual, creating warmer temperatures throughout the country. The same goes for precipitation — it's been a relatively dry winter, too.

The biggest variant in weather patterns is caused by the Arctic Oscillation (a natural seesawing of atmospheric pressure between the Arctic and mid-latitudes of the North Pacific and

An unusually warm winter means additional stress on trees from increased pest pressures.

BY JOSEPH DOCCOLA

North Atlantic Oceans). This year, it's been in its positive phase, which contributes to the warm weather.

What to expect this growing season

First off, expect an early start. Because the weather has been so consistently warm, the season likely will be pushed forward. Leaf and bud emergence, as well as pest activity, will occur sooner than usual.

An early spring season can jeopardize plants. With early bud break, trees are more susceptible to a cold snap or

being damaged in storms.

Consider the snowstorm that pounded the Northeast in October. Trees sustained severe damage from the weight of snow on full canopies, and those wounds are susceptible to wood-boring insects and canker disease.

Cold winter temperatures have a significant effect on insect survival. Extreme temperatures reduce survival of overwintering pests. In the absence of cold, insect survival is favored. If temperatures remain mild, pest emergence will occur earlier than usual. With relatively mild temperatures and wet spring conditions, you can expect greater disease outbreaks as well.

What to do about it

In preparing for the season, be ready for an early start.

Local extension agents are a wealth of knowledge, so consult them. They offer helpful information about pest

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emergence, often online.

Extension offices also can help you identify the phenological indicators of when to treat for common pests. For example, in New England, treatments for winter moth are applied when forsythia blooms.

As the season continues, if temperatures rise rapidly and stay elevated, expect overlap in insect emergences. That means treating for a number of pests early. Researchers have forecasted that areas with dry climates are likely to become drier and wet areas wetter.

Dry regions like Texas and the West can expect increased pressures from pine bark beetles and Ips beetles, which attack drought-stressed stands of trees. Pine sawyer beetles attack stressed trees, and vector pine wilt. Mites, more active in hot, dry weather, damage evergreens.

Wet areas such as the Northeast and Florida, on the other hand, can



expect an increase in foliar diseases such as anthracnose and insects such as whiteflies. In the upper Midwest, elm bark beetles can transmit Dutch Elm Disease. Expect earlier beetle flight, and earlier DED applications.

Many species of scale insects that infest trees and shrubs are most susceptible to treatment at the crawler stage. Crawler emergence and new leaf development usually are coordinated. Though hemlock trees develop later than many hardwoods, expect an early push of foliage this year. Treatment for elongate hemlock scale, for example, should be made earlier.

To manage all of this, check weather conditions and anticipate having to

The mild winter we've had is likely to bring higher populations of pests such as emerald ash borers (left) and whiteflies (right).

apply treatments early. Read all label instructions and dilution rates. Lastly, inject trees when soils are moist and have warmed in spring. In summer, inject trees early in the morning, when conditions are cooler. In dry conditions, water your trees before treating them.

Whatever the weather, by planning properly this season, we can prevail. **LM**

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