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Plant Health Care in the Dormant Season

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It is easy to think of the winter season as a time when not much is happening in the landscape or in the pest and disease world. Trees and shrubs aren't actively growing, insects and pathogens are often in a semi-dormant state, and arborist plant health care trucks and tanks are getting their annual winterizing treatment. However, there are a couple of services that can help landscape trees and shrubs during the colder months – horticultural oil and anti-desiccant applications.

These two oil-based spray applications are often overlooked – either viewed as unimportant or simply unheard of – but they can play a significant role in targeting overwintering pests and pathogens as well as protecting evergreen foliage from winter desiccation. The two products are chemically different and cannot be interchanged or used for both pest control and anti-desiccation purposes. Both have minimal residual effects or environmental impact.

Dormant oil

Horticultural oil, as with any plant health care application, needs a specific target rather than blanket applications on common host plants. Horticultural oil is referred to as "dormant oil" when applied during the dormant season at a higher rate, per the product label. Dormant oil benefits trees and shrubs by smothering overwintering landscape pests and their eggs, preventing early-season infestations and reducing the need for stronger pesticides during the growing season. This treatment is generally safe for beneficial insects, birds, and mammals, and can also control some fungal issues, such as powdery mildew and sooty mold. This makes dormant oil a cost-effective and proactive way to start a healthy growing season. This application is especially noteworthy as one of the few currently viable population-suppression methods for Spotted Lantern Fly.



The timing of dormant oil is important and is dependent primarily on temperature. Most labels recommend applying when temperatures will be above 40 degrees for several consecutive days, with overnight lows above freezing. This is to prevent the product from losing proper viscosity. Seasonally, applications on deciduous trees and shrubs should be made after leaf drop in the fall or before bud-swell in the spring to prevent potential foliar damage. For evergreens, apply dormant oil only before spring growth emerges, while still abiding by the label's temperature restrictions.

Anti-desiccants

Anti-desiccants are generally made from terpene or polymer formulations and are applied to foliage to reduce moisture loss from transpiration. This product coats leaves or needles with a film that still allows the plant to photosynthesize while reducing moisture loss during harsh, drying winter conditions. This is especially useful when applied to evergreens such as boxwoods, hollies, or live holiday greenery in areas that are unprotected from winter winds. Anti-desiccants can also be used to reduce transplant shock for new plantings by allowing the tree or shrub to retain more water during establishment.

Application timing is similar to that of dormant oil. Trees and shrubs should be treated in late fall/early winter while temperatures are still above 40 degrees and the plants are dry. Some labels indicate that reapplication can be made in mid-winter to improve effectiveness, though temperature may be a prohibiting factor.

As with all plant health care services, be sure to read the product label before applying, wear the proper PPE when mixing and applying, and ensure you hold the appropriate licensing to apply the products commercially.

Written by Tyler Mitten and reviewed by Mark A. Webber

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