

Down the Garden Path



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Get a Jump on Spring Pest Problems with Dormant Oils

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Tired of looking at the white flecks of scales on your wintercreeper euonymus? Now is the time to start thinking about applying dormant oil sprays. This is a great way to get the jump on your summer pest problems and reduce the need for using other pesticides. These applications are called "dormant oil sprays" because they are applied when the tree is dormant. This oil is able to kill the overwintering forms of many pests, including spider mites, aphids, scales, and leaf hoppers on contact. Dormant oils kill the insects by smothering and suffocating them. These sprays help to reduce the number of insects that survive the winter. Furthermore, they have little, if any, impact on natural enemies.

Before discussing when and where oils can be used, it is important to know that there are two types. *While both oils are suitable for dormant use, only one of these oils can be used in the summer.* On the summer oil label you will see that the distillation point is 414 degrees Fahrenheit or less. These summer oils will not injure plants even after leaves are on the plants. The other oils with a higher distillation point will injure plants if applied at high doses when the leaves are present. This article is about using oil in the dormant season.

To avoid injuring your plants, you must apply your oil at the proper time and rate. First of all, oil must be applied after plants have become dormant. If oil is allowed to rest on leaves for an extended period of time, it will cause them to fall off. Likewise, twigs on a tree can suffocate if the pores in a plant bark are covered with oil while the roots are growing. While many plants are dormant in winter after leaves have fallen and before buds swell, some plants may still be actively growing. Second, temperatures must be above 40 and below 85 degrees Fahrenheit.

The recommended rate of application is three to four percent. This rate is roughly four to five ounces, or seven to ten tablespoons per gallon of water, or three to four gallons per 100 gallons. It is important to know that some trees are sensitive to the oils, even when applied at the proper time.

Dormant applications of oils can be helpful against the wintering stages of the following pests:

- *Armored and Soft Scales (except oystershell and winged euonymus scales)
- *Spider mites on flowering fruit trees and honeylocust (does not kill twospotted spider mites)
- *Aphids wintering on twigs
- *Plant bugs (on honeylocust)



Although oils are generally safe on your plant, some plants are sensitive. Rates must be reduced to three percent or less (six to seven tablespoons per gallon of water) for sensitive species.

Do not use dormant oil on these plants:

- *Black Walnut (*Juglans nigra*)
- *Butternut (*Juglans cinerea*)
- *Cryptomeria (*Cryptomeria*)

Plants sensitive to dormant season oil sprays

- * Any blue needled conifer will be turned green by a dormant oil spray.
- *Hickory (*Carya*)
- *Red and SilverMaple (*Acer*)

Plant somewhat sensitive to dormant season oil sprays

- *Beech (*Fagus*)
- *Douglas fir (*Pseudotsuga menziesii*)
- *Norway spruce (*Picea abies*)
- *Redbud (*Cercis canadensis*)
- *White spruce (*Picea glauca*)

Common Dormant Oils

- Clean Crop
- Scalecide
- Volk

Common Summer Oils

- Rockland
- Sunspray 6E Plus
- Ultrafine



HOME

Powdery Mildew on House Plants

Mark Gleason, Extension Plant Pathologist, Iowa State University

From a plant’s perspective, your house is a desert in the wintertime. The parched winter air in a typical Indiana house is not an ideal environment for many house plants. On the positive side, diseases that attack the leaves also are discouraged by the dryness.

But even a desert has oases. Some nooks and crannies of your house may be wetter than others. Breezeways, porches, attached greenhouses and basements are places where the air can be humid and stagnant. It is in these oases that you may find powdery mildew on African violet, begonia, kalanchoe, and poinsettia. You may not thrive on prolonged cloudy winter weather, but it is practically perfect for powdery mildew. Disease outbreaks are common during or just after the dreary days of winter.

Powdery mildew fungi form whitish spots on leaves and flowers. The fungus growth hugs the plant surfaces tightly, causing a powdery or granular look. When the air stays moist and still long enough, the spots expand to blanket the

plant tissues with a layer of white. Severely infected leaves or petals turn yellow or brown and may die. But the plant itself is seldom killed. Powdery mildew is an “obligate parasite,” so its own survival depends on keeping its victim — the plant — alive.

To the naked eye, one powdery mildew fungus looks like another. But through the microscope, more than a dozen species of powdery mildew that can attack house plants can be identified. Each species has its own preferred “host” (a polite word for victim) species. But they all thrive in wet, still air. Powdery mildew does not need drops of water on the leaves; it gets all the water it needs from the air. Tiny spores of powdery mildew from infected plants drift on air currents to new hosts, where they invade again.



Since powdery mildew loves saturated, terrarium-like conditions, a good way to discourage attack is to dry out the environment. This could mean adding a fan to increase air circulation, using a dehumidifier or heater, increasing the space between plant pots or all of the above. Some African violet varieties are resistant to powdery mildew, including Allison, Brilliant Eva, Dolly, Mitzi, Pearl and Rachel. The Rieger begonia varieties Encore and Connie, as well as Aphrodite-type begonias, also are resistant.

If just a few leaves have powdery mildew spots, pinch them off and dispose of them to keep the fungus from spreading. But keep in mind that the disease will come back quickly if you do not

decrease the humidity and get the air moving around the plants.

Several fungicides can control powdery mildew effectively, but should be used on house plants only as a last resort. If you do decide to spray a fungicide, check the garden center for products with labels that specify powdery mildew control on the host plant species you plan to spray. Not to a beat a dead horse, but if you get the air moving and cut the humidity, your powdery mildew problem will be solved without resorting to chemical weapons. ☺

OVER THE BACK FENCE

Q: I am very curious about black walnut toxicity. Do you have suggestions for trees and shrubs that will grow in the shadow of the black walnut?

A: Small amounts of juglone are released by live roots. Therefore, some sensitive plants may tolerate the amount of juglone present in the soil near a black walnut tree, but may not survive directly under its canopy. Also, decaying roots still release juglone, toxicity can persist for some years after a tree is removed.

The following landscape plants have been observed to be tolerant to juglone: arborvitae, autumn olive, red cedar, catalpa, clematis, crabapple, daphne, elm, euonymous, forsythias, hawthorn, hemlock, hickory, honeysuckle, junipers, black locust, Japanese maple, maple (most), oak, pachysandra, pawpaw, persimmon, redbud, rose of sharon, wild rose, sycamore, viburnum (most), and Virginia creeper.

The above information is described in more detail in Purdue University's Extension publication *HO-193 Black Walnut Toxicity*, available from your county Cooperative Extension Service Office. ☺

GARDEN

Gardening Tips for Beginners

B. Rosie Lerner, Extension Consumer Horticulturist

If you are just starting out in the world of gardening, do not be overwhelmed by your neighbor's 1000 square foot "patch". It is not difficult to be a successful gardener, but it will take some time and elbow grease.

Good planning is essential to successful gardening. Start your garden off right by selecting a location which receives at least six hours of direct sunlight daily. Check the site for good drainage by making sure water does not stand after a rain or irrigation. Try to avoid trees and shrubs which would compete successfully with your garden plants for water, light, and nutrients. Walnut trees in particular, produce a substance called juglone which is toxic to some garden plants.

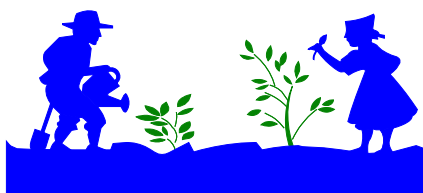
Once you've selected your site, sketch your plans on paper. Decide how big the garden will be, what crops you want to grow and where to place them. Beginners have a tendency to go overboard at first, not realizing how much work lies ahead. It is best to start out small and gradually add to your patch each year as needed. A 100 square foot plot should be plenty for your first venture.

Many different vegetables will produce well in Indiana. Most new gardeners start out by picking up a few seed packets at their local grocery. This is an acceptable way to get started although there is no guarantee that the cultivars of vegetables being sold are best suited for Indiana conditions. More experienced gardeners usually order from seed catalogs, taking time to pick out cultivars that are recommended for Indiana or those that have the particular characteristics of interest.

Before heading out to the garden to plant, you will need to gather some tools and properly prepare the soil. A hoe, rake, spade, sprinkler, string, and stakes are the minimum supply of tools you will need. It is a good idea to have your soil tested as early as possible to learn how much of what kind of fertilizer to apply. (Soil testing is not available at Purdue University).

Next, you should prepare a good planting bed but make sure the soil has dried sufficiently before you work it. Working wet soil will damage the soil's structure. Squeeze a handful of soil and if it crumbles away easily, its ready. If it sticks together in a muddy ball you should wait. When it is ready, work the soil at least six inches deep. A roto-tiller makes this job easier but for small plots, a spade and strong arms will do. Then rake the soil surface level.

Most seed packages will list planting directions such as depth and spacing. When setting out transplants, be sure to dig a hole larger than the soil ball of the plant to aid root establishment. Transplants dry out and wilt rapidly so be sure to water thoroughly as soon as possible after transplanting.



HAPPY VALENTINE'S DAY



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Most transplants are sold in containers that must be removed before planting. The exceptions are those sold in peat pots (brown, fibrous pots) which can be planted but do need a little modification. First, make sure that the pots themselves are moist when planting to assure that they will break down in a reasonable amount of time. Second, tear off the rim of peat pots to ensure that no part of the pot will stick out of the soil. The exposed rim of a peat pot can act as a wick and cause the transplant to become excessively dry. Third, if roots are not growing out of the bottom of the pot already, it is helpful to tear or poke holes through the bottom of the pot to allow for easier root penetration.

The job does not end with planting. They are always weeds, insects and diseases to battle. There are numerous preventative measures and control options that can be used. It is important to identify the problem correctly and then choose the proper control.

If this all sounds overwhelming, do not despair. Publications about gardening and other topics are available from your county Cooperative Extension Service office. To contact your local Purdue Extension office, look in the government pages of the phone book under county government. ☺

