



## How does horticultural oil work?

To properly choose and utilize pesticides, we need to know a little about how they kill their target pests. Such knowledge can allow us to use proper pesticides on correct target organisms, proper locations, at the proper time, among other things.

Horticultural oils kill insects through suffocation. When oil coats the insect's body, it blocks the spiracles. Spiracles are openings on the side of an insect's body that they can open and close to allow oxygen into the body and carbon dioxide out. Since oils need to coat the insect thoroughly to work properly, oils must be applied when some stage of the insect is present. Horticultural oils can also kill eggs by penetrating the shell and interfering with respiration. When using horticultural oils, it is important to get good coverage.

It is important to know differences in horticultural oils. If you choose to use the incorrect oil for the time or place you are treating, you could damage your plant. Dormant oils are heavier oils and evaporate more slowly. They tend to stay on the plant longer and are meant to be used in winter (when the plant is dormant). Summer oils are lighter, stay a shorter period of time on the plant, and can be used throughout the growing season.

Not all conditions are ideal for horticultural oils. They should not be used when it is about to rain or the area irrigated as this washes oil away. Plants that are wilting, stressed by drought, or under excessive heat or humidity conditions should not be treated with horticultural oils. Oils should be applied when temperatures are between 40-90°F, or within the temperature range stated on the label.

Horticultural oils work best when used against soft-bodied insects such as aphids, whiteflies, mealybugs, scale insects, etc. Caution must be taken when utilizing horticultural oils because some oils may cause phytotoxicity (toxicity to plants). To avoid damaging the plant, make sure to read and follow all label instructions.

For more information or help with identification, contact Wizzie Brown, Texas A&M AgriLife Extension Service Program Specialist at 512.854.9600. Check out my blog at [www.urban-ipm.blogspot.com](http://www.urban-ipm.blogspot.com)

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