



THE GARDEN SPADE



A monthly Gardening Publication of the University of Missouri Extension -- Southeast and East Central Regions

Dormant Oil

By Bruce Barrett

Now is the time to apply dormant oil spray. One of the best pest control tactics is the application of a dormant oil spray to yard plants during the early spring.

For a long time, farmers and gardeners have realized the importance of this spray in controlling overwintering mites, aphids and scale on fruit trees. Homeowners should be aware that they too can purchase and apply a horticultural oil to many of the trees and shrubs surrounding their home.



Most oils available as insecticides today are termed superior-type horticultural oils, and are considered appropriate for use both in the dormant season and in the growing (or verdant) season. Horticultural oils are paraffinic, degrade rapidly through evaporation, and at rates used to control pests, have very low toxicity or almost no toxicity to humans or wildlife. Properly used, they also have low toxicity to plants. This distinguishes them from the more familiar aromatic and naphthenic oils used as motor fuels and solvents, which can be toxic to wildlife and plants.

Horticultural oils kill mites and insects

primarily by suffocating them, although there may be additional toxic reactions in some species. Oils are most effective against eggs, immature forms and soft-bodied adults. In the dormant season, oils are useful against scales, mites, aphids, psyllids and plant bugs. Remember, oils affect pests present at the time of application but do not kill pests arriving after application.

If applied properly and at the recommended rates, a dormant oil spray will not be phytotoxic to most species of deciduous tree or shrub commonly found in Missouri. This is true for most conifers, except for the blue spruces in which the oil removes the bluish frosted material (glaucus bloom) from the needles. Always remember to first read the label regarding any plant species that may be sensitive to oil.

There may also be some additional precautions listed on the label when applying oils during the summer. We still have time to apply a dormant oil spray, but do not delay or it will soon be too late.

This article was written by Bruce Barrett, Extension Entomologist and was taken from the March 2005 Issue (Volume 11, No. 3) of the Missouri Environment and Garden.

March 2010

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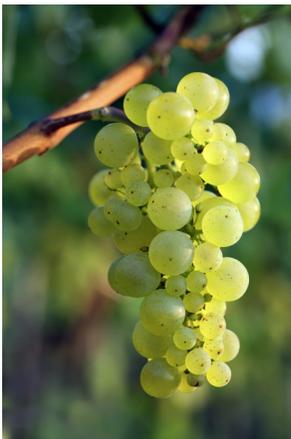
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DISEASE OF THE MONTH

Mildews and Black Rot of Grapes by Sarah Denkler

Many of us have had a beautiful looking crop of grapes in May only to be devastated weeks later by black fruit or leaves covered in mildew. I think it is the waste that bothers me the most, or perhaps the thought of all that sweet fruit that won't make it into my stomach. A simple plan that includes history, sanitation and a spray program when necessary can eliminate these pangs of regret.

Knowing the history of your vineyard tells you what diseases to prepare for. If you have not had a problem with powdery mildew in the past then you may not need to worry about it in the next season.



Sanitation is critical to prevent further spread of diseases you have had in the past. Clean up any dropped leaves or stems, prune out diseased tissue and burn any material left by vines.

The most critical time for disease control when using a spray program is from pre-bloom to three or four weeks after bloom. By preparing for diseases at this time you can prevent their spread and devastation as grapes mature.

The following spray program can be followed by homeowners who have a history of disease issues:

- Before bud swell, spray for anthracnose using liquid lime sulfur products.
- When new shoot growth is 1/2 inch spray for black rot, leaf spot, powdery mildew and downy mildew. Repeat at 7-10 day intervals based on history and weather using captan or myclobutanil or sulfur. (Sulfur applications may injure plants if temperature exceeds 85 degrees Fahrenheit.)
- When caps begin to fall spray for black rot, leaf spot, powdery mildew, downy mildew and Botrytis bunch rot using captan, or myclobutanil, or sulfur. (Sulfur applications may injure plants if temperature exceeds 85 degrees Fahrenheit.)

Repurpose/ Reuse/ Recycle

Tips passed on by Barb Grey - Master Gardener

Barb Gray passed along a handy tip for reusing or repurposing what might otherwise be trash around our homes. She gathered this tip for making a plain black nursery pot look like a more expensive decorative stone pot from the December 2009 Issue of Garden Gate e-notes online.

Materials - plastic nursery pot, outdoor glue, 1/2 inch foam pipe insulation with slit down side

- Take a plastic pot (needs holes if you plan to use it as main pot) clean and sanitize inside and out.
- If you intend to paint the pot sand it lightly with fine sand paper. Make sure to paint the

inside of the pot at least 2-3 inches down for a consistent look.

- Cut your foam pipe insulation to the circumference of the pot lip (roughly 3 foot for a 10 gallon pot).
- Place a bead of outdoor or construction adhesive on the inside of the foam insulation and on the lip of the pot.
- Press the foam insulation down around the pot and hold firm. Duct tape can be used to seal the seam if desired.



March Gardening Calendar

By Donna Aufdenberg

Outdoor flowering plants and Ornamentals

- If weeds occur in bulb beds, do not remove them by cultivation. Pull them by hand so the bulbs and roots will not be disturbed.
- Rejuvenate your liriopé by using a lawn mower to cut back the old foliage to a height of 2 to 3 inches. Avoid mowing too close and damaging the crown of the plant since that is where the new growth emerges.
- Hostas, liriopé, daylilies, dicentra, and coral bells are some perennials that can be divided before growth starts in spring.
- Loosen winter mulches from perennials cautiously. Recover plants at night if frost returns. Clean up beds by removing all weeds and dead foliage at this time.

Indoor Plants

- If you want flowers on your cactus, plant it in a small pot. Most cacti bloom sooner if rootbound.
- Wait until the weather warms to start putting houseplants outside.
- Start fertilizing houseplants now for good growth. Any that are rootbound should be repotted.

Vegetable Gardening

- Plan your garden. Remember, it takes at least two hours per week to care for 1000 square foot garden.
- Don't plow your garden when the soil is wet. It will form clods that are difficult to break up and interfere with cultivation during the summer.
- Towards the end of the month, plant onion sets, potatoes, peas, radishes, asparagus, carrots, turnips, leaf lettuce and other cold-hardy vegetables.
- Fertilize the garden as the soil is being prepared for planting. Unless directed otherwise by a soil test, 1 to 2 pounds of 12-12-12 or an equivalent fertilizer per 100 square feet is usually sufficient.

Fruits and Nuts

- Gradually remove mulch from Strawberries as the weather begins to warm.
- Don't turn under grass and weeds to plant strawberries. Enough old growth will survive to compete with the young plants, making for a weedy mess. There is increased danger of grubs in such locations.
- Continue pruning grapes. Bleeding causes no injury to the vines. Tie vines to the trellis before the buds swell to prevent bud injury and crop loss.
- Look at guide sheet MU 6010 Fruit Tree Spray Schedule to plan on spraying your fruit trees all season long.

Potato Planting Time!



In Missouri, the best time for planting potatoes is from March 1st through April 15th.

Start potatoes by planting "seed pieces" which are potatoes that are cut into 1 1/2 –2 ounce pieces with at least one good eye for sprouting.

Small, whole, certified seed potatoes are often the best choice for home gardeners.

Plant seed pieces 10 inches apart and cover in a furrow about 1-3 inches deep. Space rows 24 inches apart.

After the potatoes begin to emerge, gradually build up a low ridge of loose soil by hoeing toward the plants.

Vegetable Companion Planting

by Sarah Denkler

Companion planting is the practice of putting plants together that can benefit each others growth in a positive way. Organic growers may rely on companion planting instead of chemical application as one way to prevent insect and disease outbreaks.

There has not been a lot of research done on the validity of companion planting. It has been in practice since before the use of chemicals and a combination of word of mouth and experience has spread the practice.

The research that has been completed has shown various reasons for the beneficial or detrimental combination of plants. Poor companions may not necessarily hurt each other. For example plants may not necessarily be detrimental to each other but they could derive no benefit when grown together. One plant may benefit while the other does not in a beneficial combination. Some combinations could appear detrimental because one plant grows at a faster rate than the other, capturing more root mass and nutrition from the soil. Sometimes the beneficial relationship may be due to the reduction in 'same species' and not necessarily due to the specificity of the other 'companion' species.

One such study conducted by M.K. Bomford appeared in the June 2009 issue of Journal of sustainable agriculture volume 33, no. 4 p. 396-417. The article entitled, *Do tomatoes love basil but hate Brussels sprouts?* revealed that tomato plants grown with basil produced more fruits per plant (27.7 ± 3.4) than those grown in monoculture (20.6 ± 3.3) or with Brussels sprout companions (15.2 ± 2.1). Plants grown with basil companions produced more biomass than those grown in monoculture, or with Brussels sprout companions. Tomato yields were reduced by Brussels sprout

companions.

This study also revealed some specifics for these results. Brussels sprout growth occurs at a different time of year compared to tomatoes. Tomatoes benefit from companion planting with basil

but basil may not benefit from this relationship. Brussels sprouts don't usually benefit in combinations with plants that were started earlier.

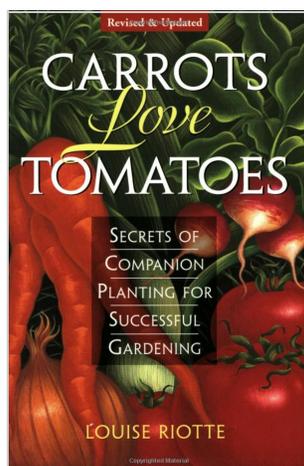
I use companion planting and I know many gardeners who do but the reasons behind each combination could have more to do with typical competition between plants or personal preference rather than actual benefit.

Kentucky State University offers a spacing calculator for companion planting.

This can be found online at <http://organic.kysu.edu/>

[CompanionSpacingCalculator.shtml](#).

You can fill in the standard spacing requirements for up to four plants that you would like to put together and the calculator will let you know how far to space each plant.



One of many books that discuss at length - companion plants, allies and enemies in the plant world.

Companion List

From North Dakota State University Extension

ASPARAGUS: Basil, parsley, tomato

BEANS: Beet (to bush beans only), cabbage family, carrot, celery, chard, corn, cucumber, eggplant, pea, potatoes, radish, strawberry

BEETS: Bush beans, cabbage family, lettuce, onion

CABBAGE FAMILY: Beet, celery, chard, cucumber, lettuce, onion, potato, spinach.

CARROTS: Bean, lettuce, onion, pea, pepper, radish, tomato

CELERY: Bean, cabbage family and tomato

Continued on Page 5...

Companion List

From North Dakota State University Extension

...Continued from page 4

CHARD : Bean, cabbage family and onion

CORN: Bean, cucumber, melon, parsley, pea, potato, pumpkin, squash

CUCUMBER : Bean, cabbage family, corn, pea, radish, tomato

EGGPLANT : Bean, pepper

LETTUCE: Beet, cabbage family, carrot, onion, radish, strawberry

MELONS : Corn, pumpkin, radish, squash

ONIONS: Beet, cabbage family, carrot, hard, lettuce, pepper, strawberry, tomato

PEAS: Bean, carrot, corn, cucumber, radish, turnip

PEPPERS: Carrot, eggplant, onion and tomato

POTATOES: Beans, cabbage family, corn, eggplant, pea

PUMPKINS: Corn, melon, squash

RADISHES: Bean, carrot, cucumber, lettuce, melon, pea

SPINACH: Cabbage family, strawberry

SQUASH: Corn, melon, pumpkin

STRAWBERRY: Bean, lettuce, onion, spinach, thyme

TOMATOES: Asparagus, carrot, celery, cucumber, onion, parsley, pepper

Pest of the Month: Asian Lady Beetle

By Katie Kammler

Questions usually pour in about Asian lady beetle in the fall, but when brief warmer winter temperatures occur, the calls come in again. The Asian lady beetle is often an unwanted house-guest during the fall and spring. They can vary in color from beige to yellow to yellowish orange to bright reddish orange and might have 0 to 19 black spots. This species was introduced to agriculture areas in the late 1970s as a biological control agent. During the growing season the larval and adult stages feed on aphids, mealy bugs, scale and other soft-bodied insects infesting cash crops.

Now for the reason that they are in everyone's house.....during the fall, adult beetles seek out protective

sites and congregate there to overwinter in clusters. In their native countries, they usually overwinter in cliffs. Unfortunately for us, our houses have now become their overwintering cliffs and they often congregate on a home's outside walls, windows, doors or porch decks that are light-colored and have a southern exposure. Then the



beetles will enter buildings through cracks and crevices, vents, and around windows and doors.

The beetles can be a serious nuisance in the home but are not harmful. They do not feed on anything in the house or reproduce. They do give off an offensive odor if squashed (they also taste bad!) and can leave stains on walls and fabrics. A vacuum cleaner is the most effective method for collecting them in the house.

The best control method is to prevent their entry into your house. This can be done by sealing all outside cracks and crevices around doors and windows. This will also help make your home more energy efficient. I am sorry to say that even this will probably not end your problem totally and a vacuum cleaner will still be needed. If they are really bad, chemical control measures can be used. I know that I am sweeping them up constantly but my dog finds chasing them around highly entertaining so it is all in your point of view. They are beneficial insects and help us control pests in the summer months; they just want a warm place to spend the winter, just like us!

Plant Trivia: Botanical Mania

by Donna Aufdenberg

Answers to last month's Plant Trivia. 1,E; 2,G; 3,J; 4,B; 5,C; 6,D; 7,A; 8,H; 9,F; 10,K; 11,L; 12,I;

So what is so important about that Latin Botanical Name of a plant? The botanical naming of a plant gives every plant a unique label so it can be identified in any language and anywhere in the world. This language is well over 200 years old and keeps becoming more valuable as the internet expands and plant enthusiasts around the world share information on local plants in their regions. All countries have common names for their plants, so this system of bi-nomial nomenclature gives us a tool to ensure that the names of the plants we see or want to buy are recognizable anywhere.

- **Fruiticans** is a descriptive word that means shrubby. A common species that we see is *Potentilla fruticosa* which maintains a short shrubby appearance.
- **Dentatus** means toothed. A common species using this term is *Quercus dentata* which has toothed leaves.
- **Indicus** is a term used for describing a plant grown in the far east (India). *Lagerstromea indica* or Crape Myrtle is an example.
- **Laevis** meaning "Soft" refers to soft hairs that cover

the leaves of the *Amelanchier laevis* (Service berry).

- **Cordata** describes the heart-shaped leaves on *Tilia Cordata* (Littleleaf Linden)
- **Sempervirens** mean "Evergreen" which describes *Buxus sempervirens* (Common Boxwood).
- **Officinalis** refers to a plant that was commonly sold in shops as medicine. A good example is *Calendula officinalis* (pot marigold) which is still used as a herbal remedy.
- **Dioicus** is a term used for plants having male and female reproductive organs. An example is *Gymnocladus dioicus* (Kentucky Coffeetree).
- **Flavens** means "Yellow". *Crocus flavus* is a good example for it's yellow flower.
- **Hirta** means "Hairy". The stems and leaves of *Rudbeckia hirta* (Black-eyed Susan) are abundantly hairy.
- **Repens** refers to the creeping habit of *Ficus repens* (creeping ficus).
- **Procumbens** describes the prostate growth that is demonstrated by the Japanese Garden Juniper.



The Garden Spade

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Group News - What's Happening

March 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 Parkland Master Gardener Meeting, Farmington Courthouse Annex, Third Floor at 6:30 p.m. Grow Your Farm - TCRC, Poplar Bluff, MO	2 Poplar Bluff Master Gardener Meeting, 6:00 pm, UMC Ext. Center. Grow Your Farm - Ag Bld., Fredericktown, MO	3	4 Grow Your Farm - UMC Ext. Center, Perryville, MO	5	6 Parkland Master Gardener Spring Symposium
7	8 Small Farm Conference on March 8 & 15 in Fredericktown - contact Donna for info Grow Your Farm - TCRC, Poplar Bluff, MO	9 Grow Your Farm - Ag Bld., Fredericktown, MO	10	11 Grow Your Farm - UMC Ext. Center, Perryville, MO	12	13 Cape Girardeau Co. Master Gardener Spring Seminar
14	15 Ste. Genevieve Master Gardener Meeting at the Ste. Genevieve Co. Ext. Center at 6:30 pm. Grow Your Farm - TCRC, Poplar Bluff, MO	16 Grow Your Farm - Ag Bld., Fredericktown, MO	17	18 Stoddard County Master Gardener Meeting, Chamber of Commerce, Dexter at 6:00 pm Cape Girardeau Co. Master Gardener Meeting at Cape Co. Ext. Center at 7:00 pm. Grow Your Farm - UMC Ext. Center, Perryville, MO	19	20
21	22 Perry Co. Master Gardener meeting at the Perry Co. Ext. Center at 6:30 p.m. Grow Your Farm - TCRC, Poplar Bluff, MO	23 Beginning Gardening Class in Piedmont at 6:30— Contact Donna for info Grow Your Farm - Ag Bld., Fredericktown, MO	24	25 Grow Your Farm - UMC Ext. Center, Perryville, MO	26	27
28	29	30	<i>Contact your local Extension Center if you have questions about any event on the calendar or if you have a horticultural event for the calendar.</i>			

More Upcoming Events....

APRIL

- 5 - Parkland Master Gardeners meet on the first Monday each month at 6:30 pm at the Farmington Courthouse Annex (Third Floor).
- 6 - Poplar Bluff Master Gardeners meet on the first Tuesday each month at 6:30pm.
- 15 - Stoddard County Master Gardener Meeting is held every Third Thursday of each month at the Chamber of Commerce in Dexter, MO at 6:00 pm.
- 15 - Cape Girardeau County Master Gardener Meeting is held every Third Thursday of each month at the Cape County Extension Center at 7:00 pm.
- 19 - Ste. Genevieve Master Gardener Meeting is held every Third Monday of each month at the Ste. Genevieve County Extension Center at 6:30 pm.
- 26 - Perry County Master Gardener Meeting is held every Fourth Monday of each month at the Perry County Extension Center at 6:30 pm.

MAY

- 3 - Parkland Master Gardeners meet on the first Monday each month at 6:30 pm at the Farmington Courthouse Annex (Third Floor).
- 4 - Poplar Bluff Master Gardeners meet on the first Tuesday each month at 6:30pm.
- 17 - Ste. Genevieve Master Gardener Meeting is held every Third Monday of each month at the Ste. Genevieve County Extension Center at 6:30 pm.
- 20 - Stoddard County Master Gardener Meeting is held every Third Thursday of each month at the Chamber of Commerce in Dexter, MO at 6:00 pm.
- 20 - Cape Girardeau County Master Gardener Meeting is held every Third Thursday of each month at the Cape County Extension Center at 7:00 pm.
- 24 - Perry County Master Gardener Meeting is held every Fourth Monday of each month at the Perry County Extension Center at 6:30 pm.

Editor's Corner

The Monthly Spade is published monthly by University of Missouri Extension staff for individuals and families living in South-east and East Central Missouri. This newsletter is provided by your local extension council.

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We welcome and encourage Master Gardener groups and individuals to submit items to the newsletter. We encourage the submission of any news such as upcoming volunteer opportunities, community events related to gardening, warm wishes or congratulations to fellow gardeners. We also encourage Master Gardeners sharing experiences and writing articles on timely topics.

All entries into the group news sections must be received by 4:30 on the 15th of each month for the following months news.

Email News to: kammlerk@missouri.edu,
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