

Down the Garden Path

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GARDEN

You Say Hedge Apple, I say Osage Orange!

B. Rosie Lerner, Extension Consumer Horticulture Specialist

No matter what you call it, there's no question that the tree known botanically as *Maclura pomifera* is a unique curiosity. Depending on where you're from, this tree has such names as hedge-apple, osage orange, bodark, bowwood, and bois d'arc!

Originally, this plant comes from the Southwestern US, but was so widely planted throughout the Midwest as a hedgerow, that is now considered to be "naturalized" throughout much of the Eastern US and beyond.

The reason why it was so popular on farmsteads as a hedge plant is that it's really a tough cookie; easy to transplant, fast-growing, adapts to a wide range of soils, and tolerates just about any environmental stress you throw its way. It is armed with wicked thorns, making it an ideal hedge plant from a security standpoint! In general, the plant will reach 20 to 40 feet in height and branches very low on the plant. Hedgeapple will form an impermeable thicket all on its own, making a great livestock barrier.

The wood of this species is naturally rot-resistant and has been used for fence posts (they can be grown in place and then simply cut down to size, no driving needed!), bows, furniture, and decks. The resistance to decay is thought to be due to the presence of 2,3,4,5-tetrahydroxystilbene, a substance that is toxic to fungi.

The "apple" in hedgeapple comes from the huge, four to six inch diameter fruit ball, which is actually made up of many fruit that have coalesced into one unit. They turn from yellow green to bright yellow in autumn, and have been described as "lethal" if you are unfortunate enough to be underneath one when it falls from the tree!



The fruits are an awful mess with their thick, tough rind and lots of sticky, white sap. The fruits are numerous on female plants and disposal is a nuisance. They are far too large to mow over! Most folks today consider the plant to be a weedy pest plant, like its "cousin", the mulberry.

There are male forms as well as some that have fewer thorns, but they are relatively difficult to find in the trade. The cultivar 'Whiteshield' is a male selection that is supposed to be thornless, and is available from Forestfarm Nursery, but only available in small quantity at the present time. For more information, contact Forestfarm at 1-541-846-7269 or visit their web site at <<http://www.forestfarm.com/>>.

Editor's Note: Osage oranges have been used by some people to repel insects. However, according to Gary Bennett, an entomologist at Purdue University, there is no proof or documentation that they do repel insects. In addition, he has not found any documentation that they do not repel insects (which would be less likely to get published). ☺

YARD

HELP- my spruce trees are dying!!!

Gail Ruhl, Senior Plant Disease Diagnostician

Last winter we observed extensive needle and stem death on spruce throughout Indiana. In many cases, entire plants, especially the dwarf 'Nest' spruce, were observed to have died. Spruce have a shallow root system and prefer a moderately moist soil, making them especially prone to drought stress. The lack of adequate ground moisture during the summer/fall months of 1998 and the extreme low temperatures of early January 1999 most likely contributed to the injury observed.

This growing season has not been much kinder to woody ornamentals and concern over the increased amount of foliar discoloration and appearance of bare branches on mature spruce trees has prompted numerous inquiries to the diagnosticians of Purdue's Plant and Pest Diagnostic Lab. It is important to remember that soil moisture, aeration, drainage, extreme fluctuations in temperature and the number of years the tree has been at the present site all play a key role in root development and the expression of above-ground symptoms such as foliar discoloration and dieback.

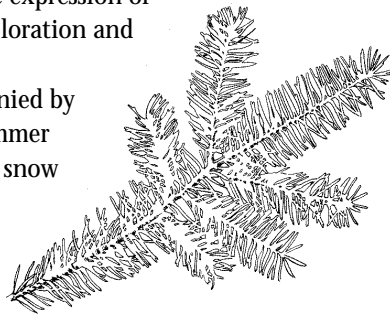
Severe summer drought periods accompanied by extremely high temperatures during the summer months, in conjunction with below normal snow coverage and winter desiccation of foliage during the winter months, spells trouble for needled evergreens. On the other extreme, most conifers are also not tolerant of the low oxygen levels that occur in saturated soils.

Thus, in some cases, foliar discoloration and dieback are a result of a combination of stressful environmental conditions, such as drought conditions following poor root growth due to waterlogged, oxygen depleted soil. Poorly drained soils or low areas contribute to this scenario.

It is important to examine the trunk and crown for injury or signs of mechanical strangulation from nylon twine or girdling roots. In addition, investigate the possibility of any grade changes (additional soil placed on top of the existing root system) or recent construction that might be contributing to the observed symptoms. If no extenuating circumstances can be found, it is likely the symptoms are related to root stress.

The severity of the symptoms observed on spruce trees relates to the degree of root stress and the overall vigor of each tree. Some trees are only yellowing a bit while others are exhibiting excessive needle discoloration, needle loss and branch dieback. The rate of tree recovery is dependent on the extent of root injury and improved growing conditions. This can usually best be seen by the amount of new growth apparent during the growing season. Severely stressed trees may not be able to recover due to the extent of injury to the root system. Denuded branches will not grow new needles in the place of lost needles. The only new growth on bare branches will be that from healthy buds.

To encourage new root production on trees in drought-stressed sites, it may be advisable to deep-core aerate to improve aeration of the soil and the percolation of water into the soil. In order to apply one inch of water a week, the minimum needed during drought periods, you may need to run a hose and sprinkler or soaker at full capacity for 1.5 hours under the branch spread (drip



line area). Proper fertilization is also recommended. Refer to Purdue's Extension publication HO-140 for fertilization recommendations, available on-line at <<http://www.agcom.purdue.edu/AgCom/Pubs/>> or from your local county Cooperative Extension Service Office or by calling Purdue's toll-free Extension information line at 1-888-EXT-INFO (1-888-398-4636). ☺

Late Season Tips on Lawn Maintenance

Zac Reicher, Turfgrass Extension Specialist

Though lawns take very little work at this time of the year, there are a few things that you should keep in mind to help insure the health of your lawn:

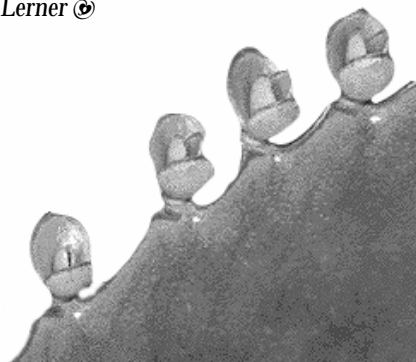
1. Keep mowing well into the fall, as long as the grass keeps growing or as long as tree leaves keep falling in your lawn. Continue to mow at your regular mowing height.
2. Fertilize in November after growth has slowed or stopped but while it is still green. Use a quick-release form of nitrogen (I like urea) and apply 1.0-1.5 lbs N/1000 sq. ft.
3. Minimize or eliminate traffic on the lawn after it has stopped growing because it cannot heal itself during the winter. This is especially true on frosty mornings while the grass is still green.
4. Instead of piling snow into one large pile at the end of the driveway or walk, try to spread the snow more evenly on the lawn. This will help to prevent snow mold.
5. Winterize your mower at the end of the year to insure that it will start next spring. Many mower shops and some lawn care companies offer a winter servicing. Be sure to sharpen the blade! ☺

OVER THE BACK FENCE

Q: I have a plant referred to by some as *Pennies from Heaven*. It is a plant that produces little plants on the leaves. When the tiny plants fall off, they root. Is there another name for this plant? Also, my plant is not producing little plantlets anymore. --submitted by Titania Cole

A: There are a number of species of *Kalanchoe* that produce little plantlets from the edges of their leaves, and the common names of these species are even more numerous than the species! Some of the more commonly used names include maternity plant, mother of millions, air plant, and chandelier plant.

All of the *Kalanchoe* are considered to be "succulent", meaning they thrive best in relatively high light conditions and well-drained soil that is allowed to dry a little in between waterings. Although not a heavy feeder, an occasional application of houseplant-type fertilizer according to label directions would be helpful. If it has been in the same pot for a long time, you might want to repot into fresh soil, perhaps even a slightly larger pot. Also, if the stems are getting old and leggy, the plant might benefit from a bit of pruning. Cutting back leggy side branches will encourage the main stem to send out new branches. I hope this helps! -- B. Rosie Lerner ☺



Kalanchoe daigremontiana

Photo Source: Images of Life 5.0 by Purves, Orians, Heller, and Sadava. Sinauer Associates, Inc., Sunderland, Mass, and W.H. Freeman, San Francisco.

THE GRAPE VINE What Do We Do in Extension?

Fred Whitford, Pesticide Programs Coordinator

Editor's Note: This article first appeared in Purdue Pesticide Programs' Newsletter, *The Label* (October, 1997) and is being reprinted with permission. This and other issues of *The Label* are available on-line at <http://www.btny.purdue.edu/PPP/PPP_index.html>.

Sometimes it's easy to forget what we do in Extension. When others are home, we're holding night meetings or beating the pavement, trying to get home. There's an endless need to answer phone calls, attend campus meetings, review electronic mail, finish reports, answer mail, and assemble the next presentation: so much to do today, for tomorrow, that we quickly forget what we learned the night before.... But what we "forget" is not lost; it's just temporarily stored in our mental filing system! It's bizarre what triggers these old and forgotten memories—some good, some bad—to take on new and powerful meaning. It's the trigger event that makes us recall why Extension is the coolest job going!

A few nights ago, just after my family had finished supper, our phone rang; on the other end of the line was a would-be commercial applicator—"would-be" because he had failed previous attempts at passing

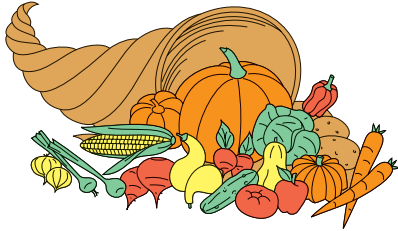
the exams. This person was worried that if he didn't pass the pesticide certification exams he would lose his job. He was embarrassed; but worse yet, he was talking about not being "smart enough" to get certified. As I hung up the phone, I felt that I was about to embark on a retrospective journey. I thought about the person and how he was trying to communicate with me, and how I was trying to connect with him. He was no longer a stranger, but a person.

Scientists typically work with facts and groups. In Extension, emotions complement facts; and individuals stand out among the group silhouette. But it's *making the connection* with the rich and the poor; those educated and those not; those who boss and those who perform; the young and the old; American or not, that makes Extension fun.

I began to recall instances that had touched me. There was the elementary-educated man from Chicago; the little girl on the straw bale; the man who refused to fail; the Amish boy who stared at me; the kid in the adult class; the little girl farmer; the high schoolers in the soybean field; the maintenance man at the school; the card-waving applicator; the young adult who challenged the odds; the young handicapped student; a farm wife who understood the city wife; the Honduran potato farmer; the boy farmer preaching to the adults; my humbling experience with the Master Farmer program; and the countless hand shakes.



Happy Thanksgiving



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It's fair to say that it wasn't facts that made me remember these specific instances. It was that, in the process of teaching, both the teacher and student learned. I've been lucky to speak the language of the *working person*. Making this connection in education doesn't hinge on impressing people with what I know (which, by the way, isn't a whole lot!). In fact, most people are not impressed with what others know. And they don't give a hoot about your awards or degrees. They assume that you are knowledgeable or you wouldn't be in front of the crowd. What's important is your ability to make what you say pertinent to their daily lives, or to demonstrate that you really do understand and, more importantly, care for them as individuals.

So I often ask myself what I will leave behind as my legacy. Will it be old facts and confusing figures in reports yellowed with age? I do hope to leave some reports, but I always strive to make connections with people in small ways that make their lives better or their world less confusing; I like to challenge them to think.

The phone is ringing, I'm late for yet another meeting, and someone is standing at the door, needing something. Boy! The good feelings are fleeting, aren't they? ☹



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