



# North Central Horticulture

Cameron, Clearfield, Elk, Jefferson, McKean and Potter Counties

Elk County  
Cameron County

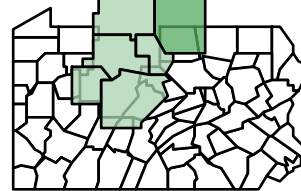
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## A Look Inside. . .

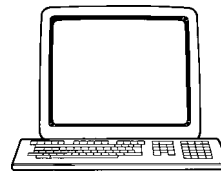
- *Upcoming Activities*
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### Horticulture Education



McKean,  
Potter, Elk,  
Cameron,  
Clearfield,  
and Jefferson  
Counties

## E-Business and the Small Scale Horticulture Producer



As you know e-mail and the web have practically taken over our culture as the primary means of all types of communications ranging from friendly letters keeping up with distant relatives to business development and commerce. And no wonder; electronic communication is fast, easy and usually free. Have you ever thought about utilizing this excellent service to enhance your own small business? In the north central region of Pennsylvania marketing opportunities are very limited. We can produce much more than we can profitably sell in our own backyard. Therefore, the smarter entrepreneur should take every possible opportunity to reach out and gain greater market share by attracting a customer base that does not live in their own backyard. The web and e-mail are excellent ways of doing this and can open up your business to customers from around the world. Are e-mail and web based sales for you? This issue of North Central Horticulture features two new opportunities to examine your potential to use this tool. The first is a four-part course being conducted at the Elk/Cameron Community Education Council in St. Marys entitled "Access PA Main Street." Check out the attached brochure for specifics. The other opportunity is entitled "AgMap." Through this new Penn State service any producer can put themselves into a statewide database that makes it easy for farmers and buyers to link up with each other. It is something like joining a common web site with producers from all over Pennsylvania. Be sure to look at the enclosed brochure. AgMap is an extremely easy way to start your e-business marketing and promotion efforts.

Through the smart use of internet commerce you may have found the missing key to improved marketing and greater customer numbers. Good luck as you move your business forward!

## APRIL 2002

### Upcoming Activities

#### *E-Business Course*

Wednesday, April 3, 10, 17 and 24, 6:00-9:00 p.m. at the Elk/Cameron Education Council. This is a 12 hour course consisting of hands-on Internet exploration and use of e-mail for small and home based businesses. See enclosed brochure for more information.

#### *Cameron County Farmers Market 2002 Reorganizational Meeting*

Thursday, April 24, 10:00 a.m. at the Cameron County Extension Office in Emporium. Both growers and buyers are welcome! For more information call Greg Burns at 486-3350.

#### *Swimming Pool Recertification Class*

Monday, April 8 at the Elk/Cameron Community Education Council in St. Marys. Pesticide credits available for licensed applicators. Call 776-5331 for information or to register.

#### *Pesticide Licensing Examination*

Tuesday, April 23, 9:30 a.m. at the Cameron County Extension Office in Emporium for those desiring a Private or Commercial pesticide license. Call Greg Burns at 486-3350 for more information or to register.

#### *PSU Gardeners Selects Spring Meeting at Penn State*

Tuesday, May 21, 10:00 a.m. to 3:00 p.m. in Room 101 of the ASI Building. Call Toni Bilik, Penn State Master Gardener Coordinator at 814-863-7716 or e-mail at [amb2@psu.edu](mailto:amb2@psu.edu) for more information.

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## Commercial Horticulture

### Crop Insurance

#### PA Specialty Crop Producers and Their Risk Management Needs



The last few years have been challenging for specialty producers as well as for all farmers. Low prices and adverse weather conditions have impacted Pennsylvania growers and stimulated new interest in tools to help cope with the risk that is inherent in agriculture.

Specialty crop growers in Pennsylvania have recently received a special survey about their risk management and cropping practices. It is called the Risk Management Survey of Specialty Crop Producers. The mail survey is a partnership endeavor among the USDA Risk Management Agency, the Pennsylvania Agricultural Statistics Service and Penn State Cooperative Extension.

The surveys are being mailed by the Pennsylvania Agricultural Statistics Service during the first quarter of 2002. Specialty crop producers include growers of fruit, vegetable, floriculture, nursery products, maple syrup, Christmas trees, turf, aquaculture, honey and mushrooms.

#### Question? Why should specialty crop producers complete this survey?

**Answer: To provide input that will be utilized to evaluate current risk management tools for producers and to help design new and/or improved products.**

The primary objective of the survey is to determine why federal crop insurance and other risk management products are utilized at the current level. Pennsylvania is considered and under served state in terms of farmers' use of crop insurance and other risk management products and tools, and growers of specialty crops in particular make less use of these tools than other farmers.

**Pennsylvania producers are among a select group being asked to provide input. Other states involved in this survey are California, Florida and New York.**

A second objective will be to determine how the design of crop insurance and other risk management tools could be improved to better meet the needs of producers. It is widely believed that many of the current crop insurance products will need to be redesigned as coverage is extended to specialty crops and **this survey will help to**

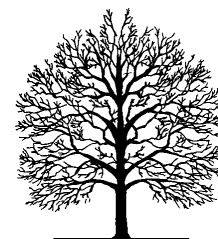
**provide guidance to the Risk Management Agency about the particular needs of producers.**

The survey asks for information about crops grown, marketing channels utilized, sources of risk in the commodities grown, use of risk management tools (including growers recent experiences with crop insurance) and suggestions for improvements to the crop insurance program. The survey information will be used to develop reports in mid-2002 that will be used by policy makers in Harrisburg and Washington to assess the need for a new risk management products and revisions to the current crop insurance program for specialty crop producers.

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### Landscape

#### Drought and the Landscape By Jim Sellmer



Drought stress or water deficiency remains both a complex and confusing issue to many people. Short-term or seasonal droughts may occur in one season and result in scorched leaves, daily wilts and recovery in the evening, slowed growth and leaf loss. These seasonal droughts may be alleviated with irrigation and by adequate rainfall in the later part of the season. Long-term (multiple year droughts) can become devastating with greater plant stress, increased disease and insect susceptibility, loss of branches and death of the fine tender roots that the tree relies on for mining water. Our confusion as growers come from understanding the symptoms of drought stress, mechanisms for managing moisture stress, planning to avoid stress and recognizing that brief rainfalls or down pours do not reduce the potential drought.

Most often, our response to drought does not occur until we see signs of drought stress. Then we consider what we should do. In order to reduce that tendency the following describes some of the signs and symptoms of drought and some methods for controlling or reducing drought stress.

#### Progressive water stress symptoms in plants include:

**Leaf scorch:** Leaf tissue away from the main veins browns and dies due to loss of large amounts of moisture without replacement by the roots due to low soil moisture on deciduous plants. This may occur due to lack of available moisture and due to reflective hot surfaces such as trees planted in inadequately small planting pits of parking lots. Scorch may be confused with anthracnose;

however, moisture stress induced necrosis rarely crosses over leaf veins on the inner section of the leaf area. Leaf scorch tends to be most severe in the upper branches of the tree or shrub in contrast to anthracnose that is evident in the lower branches. Maples and dogwood readily show leaf scorch symptoms. Needle tip die back is a common symptom to moisture stress in conifers.

**Interveinal necrosis:** The leaf tissue surrounding major veins remains green but the tissues between the veins turn brown. This can be confused with nutrient deficiency, specifically micronutrients such as iron. Knowing the pH and soil fertility in your planting beds combined with keeping track of rainfall rates can help to differentiate between the two issues.

**Midsummer defoliation (leaf drop):** This is commonly preceded by scorch and necrosis mentioned above. Defoliation will begin at the top of the tree and move downward. Other issues that may be confused with drought stress induced leaf drop are verticillium wilt and girdling root. Although both may affect water uptake, the reasons are clearly different. Both of these problems will be manifested in trees if water stress is present. Being aware of verticillium wilt will help you to determine if this soil borne disease is a problem. See the fact sheet at [http://www.cas.psu.edu/docs/CASDEPT/PLANT/ext/vert\\_wilt.html](http://www.cas.psu.edu/docs/CASDEPT/PLANT/ext/vert_wilt.html) to learn more about wilt. Investigating the root flare may help you in determining if girdling root is a problem on your tree.

**Unabscised dead leaves remaining on the tree:** Oaks and other deciduous trees may show complete browning of foliage and the foliage remains attached. If the leaf loss occurs too rapidly for the abscission layer to form, the tree will remain in full leaf but brown.



#### Realities of drought stress symptoms:

1) In a single year, moisture stress symptoms may not appear until late in the summer after extensive hot and dry windy weather.

2) Extended drought stress (more than one season) can result in crown decline, twig die back, small branch die back in the upper crown and progressively larger branches can succumb or are vulnerable to breakout under strong wind conditions. Suckering may occur on the trunk and upper branches of heavily stressed trees, cambium death and cankers may occur resulting in the girdling of the tree and total tree death. Often cankers may be the direct result of moisture stress or may occur with the development of disease which produce cankers while the tree is severely stressed and susceptible. Another symptom of extended

drought stress is heavy seed loads the year following the drought.

3) Often the symptoms of drought stress are delayed. Water deficiency may cause extensive root injury in the late summer and fall. The current year's foliage may not reveal any symptoms. Conifers are an example of a plant that by the time it expresses symptoms of stress the plant is already in dangerously poor health. In sum, the symptoms and effects of the drought may not appear until the following year when rainfall is normal.

#### Tips for avoiding water stress situations:

- Keep track of rainfall amounts at your location.
- Supplement with an efficient watering system such as drip irrigation.
- Scout your plants for signs of water stress and use indicator plants to assist you in measuring need for supplemental watering.

Good indicator plants include *Viburnum tomentosum* var. *plicatum* "Doublefile Viburnum," Azalea, *Cornus* sp. (Dogwood), Forsythia, *Acer palmatum* (Japanese maple), *Cercis Canadensis* (Redbud), *Hydrangea* sp., annuals and herbaceous perennials.

- Keep an eye on trees near normally wet areas (streams, lakes, low areas). Once their access for water has been diminished, these plants will have a great susceptibility for damage because their root systems are not sufficiently developed for mining water outside of the root zone.
- In the landscape, consider designing with water use in mind and target not irrigated areas with more drought tolerant species.
- Mulch landscape beds to maintain moisture with two to three inches of well-composted organic matter. Do not allow the mulch to directly contact the trunks of trees, shrubs or herbaceous plants.
- Designing group plantings can provide for greater water management. Beware of over-planting, over-planting can place further stress on the soil moisture available to the plantings.
- Do not plant during drought seasons. Hold off new landscaping planting activities until the drought has subsided. This is especially true where water restrictions are activated. Maintaining the plants you presently have in the ground should be the main concern.

#### General Guidelines for watering in the landscape:

During establishment, trees should be provided with 1-2 gallons/inch trunk caliper through a slow, soaking system such as drip irrigation, irrigator tree watering bags placed close to the flare or collar of the tree. Watering approximately two to three times per week for at least the first eight to ten weeks after planting should be sufficient.

Shrubs and smaller container trees (one to three gallon pot size) requires three to five gallons of water two times a week. These rates should be modified based on the amount and frequency of your rainfall and your soil type.

After establishment, the frequency can be reduced to once a week and the area of water coverage should be increased to assure that the growing edge of the root ball is receiving moisture (water beyond the drip line). A rate of one gallon/square foot of soil surface area within the root zone of the plant should be covered. Watering should be slow assuring moisture reaching a depth of eight inches. Do not allow runoff. If runoff is visible then reduce the rate of watering and keep track of the amount of water going onto the area. More is not better in this case.

**Plant Lists:**

**Low water use plants:**

- Green Ash, Sweetgum, Baldcypress, Zelkova
- Smoketree, Silverbell, Ironwood, Saucer Magnolia
- Staghorn sumac, Rose of Sharon, Witchhazel
- Abelia, Mahonia, Oakleaf hydrangea, Bridalwreath spirea
- Sweetspire, Kerria, Deutzia, Juniper
- Leriopie, Periwinkle, Creeping juniper, Wintercreeper
- Yarrow, Daylily, Coral bells, Statice, Salvia

**High and Moderate water use plants:**

- Red maple, River Birch, Ginkgo, White pine
- Redbud, Fringe tree, Am. Holly, Crabapples
- Rhododendron, Firethorn
- Forsythia, Mtn. Laurel, Azaleas, Hetz holly
- Ajuga, Moss phlox, Columbine, Coneflower
- Hosta, Peony, Gayfeather, Iris
- Snapdragon, Ageratum, Impatiens, Tobacco
- Clematis

# # # # #

New York to Georgia and west to Arkansas and Illinois. The great naturalist and plant explorer John Bartram sent Phlox paniculata to England in the early 1770s. "David" is an erect perennial 36-40 inches tall with opposite leaves. The glossy leaves are thin with bristly hairs on the margins. The fragrant white flower panicles are six to nine inches long and six to eight inches wide with one inch diameter florets. Phlox "David" has a long bloom period during the summer. It performs well in hardiness zones 4 to 9.



**HISTORY:** Phlox "David" is an offspring of native Phlox paniculata plants rescued and preserved in the 1980s by volunteers at the Brandywine Conservancy, near Philadelphia. These volunteers acting under the able leadership of F. M. Mooberry, established Phlox paniculata plants in a bed at the

Brandywine River Museum, Chadds Ford, Pennsylvania (part of the Brandywine Conservancy). These phlox were grown from open pollinated seed collected in the Brandywine Valley's natural areas. They may well be the descendants of the phlox that John Bartram sent to England in the 1730s. On an August day in 1987, Richard Simon of Bluemount Nurseries, Monkton, Maryland and F. M. Mooberry (Horticultural Coordinator for the Brandywine Conservancy) inspected the Phlox paniculata collection. During this visit Mr. Simon suggested that a white fragrant form should be introduced because of its clean foliage with little trace of powdery mildew. Mrs. Mooberry selected the name of David, after her husband David Mooberry.

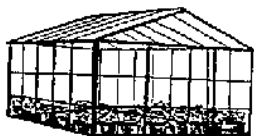
Initial propagation was undertaken by Bluemount and North Creek Nurseries, Landenberg, Pennsylvania, followed by propagation at Dunvegan Nursery, Coatesville, Pennsylvania and Greenleaf Enterprises, Lancaster, Pennsylvania. Subsequently, plants were disseminated throughout the perennial industry. Research at the University of Vermont and Cornell University determined that Phlox "David" was superior in powdery mildew resistance and it was cold hardy to zone 4.

**LANDSCAPE USE:** Phlox paniculata is known as garden phlox, summer phlox, perennial phlox or autumn phlox. It is a delight to all gardeners because it has a long bloom season. Many landscape designers call it "the backbone of the summer border." "David" can be used in both the formal garden and the informal garden as in a cottage garden style or in a naturalized design. It provides great garden color and fragrance from July through September. Use "David" with Echinacea purpurea "Magnus" (purple cone flower) or Echinops ritro (globe thistle) for a study in color and textural contrasts. For a stunning effect plant "David" with Miscanthus sinensis "Morning Light" or

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## Home Garden

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### Phlox "David"

The Perennial Plant Association has awarded the title of Perennial Plant of the Year 2002 to Phlox "David." Contemporary nomenclature now lists Phlox "David" as Phlox "David" Paniculata Group rather than the long standing name Phlox paniculata "David." Phlox is a member of the Polemoniaceae family and is native from

Miscanthus sinensis “Cabaret” to provide a color echo of the variegation of the grass foliage with the white flowers of “David.” The blue flowers of Aster laevis “Bluebird” highlight the white panicles of Phlox “David” for an excellent autumn-blooming combination. If gardeners are looking for a great choice for fragrance, color, mildew resistance and long season bloom, there is no better choice than Phlox “David.”

**CULTIVATION:** An excellent cultivar of an old-fashioned favorite, this long-blooming perennial for full sun to partial shade grows best in moist but well-drained soil. If planted in full sun, organic matter and extra water should be added to mitigate the effects of heat and drought. Without these precautions, spider mites may be a problem. Old blossoms should be removed from the plant to maintain vigor, prolong bloom and prevent self-seeding. Deadheaded plants will flourish into early fall. Plants should be divided every two to three years to maintain vigor.

Although Phlox “David” is fairly resistant to powdery mildew, proper culture will aid in mildew prevention. Plants should be thinned to four to six stems to increase air circulation and to prevent a heavy mass of stems. Phlox should be watered at the base of the plant and not the foliage.

**PROPAGATION:** Phlox “David” can be propagated by root cuttings, stem cuttings, divisions and tissue culture. Clump division simply requires the separation of crowns within a clump. Division is done in spring or early fall. Three to five crowns per division are sufficient for a one gallon container.

Root cuttings are best done for dormancy in the fall. Dig the plant and select roots that are thick because thin feeder roots and root ends are not suitable. Roots are cut into two inch long sections and placed horizontally in a potting media and covering with two inches of sand.

Tip cuttings are easy to obtain from stock plants. Cuttings three to four inches long, containing several nodes, are used to create liners or plugs. Young terminal vegetative cuttings provide optimum rooting although older cuttings will root. As the tissue ages, the cuttings will require a rooting hormone at 1000 ppm IBA. A cool temperature of 55-60 degrees F is needed for optimum root initiation.

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Sincerely,

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