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10	15	30	35
1.1	2.1		
.7	1	4.3	
.1	.2	1.3	2.0
.1	.3	1.9	3.2
.1	.3	1.9	2.8
		.5	1.0
			.5
		.5	.7
			.4

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## Midwest Breezes



## Upcoming Events — Mark Your Calendar

**August 6** — U of I Field Day at Urbana, Registration 8 A.M.

**August 17-23** — Western Open at Butler National

**August 20** — CAGCS meeting at Naperville C.C.

**August 24** — MAGCS meeting at Turnberry C.C.

**September 21** — MAGCS meeting at Balmoral Woods G.C.

**October 8** — MAGCS meeting at Woodstock C.C.

**October 23** — Dinner Dance at Riverside G.C.

**November 4** — Annual Meeting at Cyprus Inn

**December 8-10** — NCTE at Pheasant Run, St. Charles, IL

-----  
**For Sale:** 7 gang Jacobsen 6 blade fairway mower, sharpened and lapped for \$2,000 — 3 wheel Cushman, large box, cab, runs good - \$1600. Call Steve Block (312) 634-3521.

-----  
Personal to Mike Nass: Art Benson, Jr. will verify that not all of the residents of DuPage County are Republicans!

-----  
Bob Kronn had a little visit to the hospital in late June, but is back on the job and swining those golf clubs.

-----  
Dr. Dave Wehner is going to take a six month sabbatical leave from the U of I. He will be at the Field Days on August 6 and the NCTE in December. He will be working out of his office at home, so if you need to reach him, write to him at: 1604 Harbor Point, Champaign, IL 61821.

-----  
For those of you who have planted wildflowers and have had problems with crabgrass, give Harold Frederickson a call. He has had some success using Acclaim on his wildflowers.

-----  
John Ebel has some good experience acidifying his wells this year. It seems that the soil around his wells now is at a much lower pH due to this. Also he has had some high counts of nematodes in a couple of his greens.

-----  
What a sad state that only four superintendents took the time to write an article for **The Bull Sheet** this year. That's all we have to enter the Ray Gerber Editorial Award Contest.

-----  
The MAGCS & GCSAA will again have Seminars at Pheasant Run Lodge on January 5 & 6, 1988. The seminars will be: Introduction to Soil Science and the other will be Effective Business Writing. Plant to attend now for these excellent educational sessions.

## "I.T.F. Golf Outing Nearly Set" "Highland Park C.C. & Glencoe G.C. to Co-Host"

The Illinois Turfgrass Foundation has received word that Highland Park Country Club and Glencoe Golf Club will co-host the 1987 Northern Illinois I.T. F. Golf Day. Arrangements are being worked out for ticket sales and promotion for the September 28th golf day. Our committee personnel include: Tom Robinson, Verlyn Strellner, Al Pondel, John Turner, Fred Opperman, Dennis Wilson and Pete Leuzinger.

Watch for specific announcements in the September **Bull Sheet**. And please, Superintendents and your assistants, get registered handicaps for official entry for the second annual Dom Grotti trophy.

The day will be informal, with plenty of food, refreshments, prizes, raffles and enthusiastic support for I.T.F. and research for turf in the State of Illinois.

## "Optimism"

August — majestic, imposing, magnificent, grand,

If You've weathered Summer's demand.

Seems great to survive August's last day,

When all of the pressures fade quickly away.

How gratifying, You still own Your Soul,

Made another Summer, that was Your Goal.

Halleluiah! to the Lord up Above,

For another success, in the Field We Love.

**Kenneth R. Zanzig**

-----  
Remember the MAGCS Hospitality at the Western Open will be set up at a different location this year. It can be found at the dogleg on the 7th hole. It will be open only on Friday, Saturday and Sunday from 11:00 A.M. to 3:00 P.M. To help staff the tent call Mike Nass at 668-5170.

-----  
Don Ferreri is the new Superintendent at Woodridge Golf Club. Don started in April and has worked as a trainee at Riverside G.C. and for the past 7 years as the assistant to Art Benson at Butterfield C.C.

## For Sale

-----  
1978 Jacobsen F-10, 10 blade reels, 18" wheels — call Ted Mochel, (312) 798-4927.

-----  
**As a rule a man is a fool,  
When it's HOT he wants it COOL,  
When it's COOL he wants it HOT,  
Always wants what is not.**

## Problems Most Frequently Associated with Lawns

'Most of the problems associated with lawn care are basically caused by Man.' Let's take a closer look at this statement.

It is Man's desire to have a lawn, in a particular soil, in a certain location, at a specific amount in time, in accordance with his own selfish desires.

Man selects a specific site that has a certain kind of soil already existing (most often this soil is non-supportive for grasses). He does not take into consideration that the soil or the site is not ideal for growing lawns. He does not consider that this grass plant may have certain requirements necessary for growth. He doesn't even attempt to find out if any of these requirements can be met, or even to find out what the requirements actually are.

As a final requirement, Man expects to grow a pure strain of grass. He demands that there are no foreign plants (broadleaf weeds and wild grasses), that each grass blade looks exactly the same as all other blades, and that the grass be dense, deep-green and beautiful at all times.

The problem is Man! He expects all of these things without knowing or realizing the requirements, the obstacles, or the problems associated with attempting to obtain such a pure state of plant growth.

**Credit — Nature's Touch**

**Donald J. Arenberg, Consulting Agronomist**

## Unfavorable Temperatures for Lawns

At times when temperatures within the root zone are not favorable for growth or when air temperatures are not favorable for foliar development, lawn care practices are not likely to produce desirable results. For cool season [northern] grasses, soil temperatures above 65 degrees Fahrenheit increasingly prohibit root development. When soil temperatures in the upper 70s and low 80s are reached, root growth stops completely. For these grasses, air temperatures above 75 degrees Fahrenheit, especially at night, cause increased rates of respiration that drain the grasses of reserve carbohydrates and cause them to lose vigor. For warm season [southern] grasses, root growth slows down when soil temperatures drop below 75 degrees Fahrenheit. As soils cool down progressively, root development ceases as temperatures drop into the low 60s: For these grasses, growth of foliage starts to slow down as temperatures drop below 80 degrees Fahrenheit. Through a 30 degree Fahrenheit range down to 50 degrees, this decline continues until all growth ceases and the turf makes final adjustments for winter dormancy.

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Raise your lawnmower height of cut by only 1/8 inch and next time you mow, your lawngrasses will have close to 300 square feet more leaf surface for each 1000 square feet of lawn. This would be equivalent to one big extra leaf 25 feet long and 12 feet wide that, in addition to the other leaves, will help keep your lawn vigorous, healthy and more easy to maintain.



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## Verticillium Wilt

by James A. Fizzell

Senior Ext. Adviser, U. of I.

Leaves on a large branch in your favorite maple tree wilt, turn brown & fall in mid-summer. A plant in the barberry hedge dies, followed by death of the plants on either side. Or, a tomato plant yellows and dies just as it starts to produce fruit.

This kind of problem is a common occurrence this year. The cause is often Verticillium Wilt, a soil borne fungus disease. The soil becomes infected with the disease, when diseased plants or contaminated soil is brought in. Susceptible trees, shrubs and also garden plants growing in the soil are invaded through roots.

As well as attacking the above plants, Verticillium Wilt also attacks Ash, Box Elder, Catalpa, Cherry, Dogwood, Elm, Honey Locust, Horse Chestnut, Kentucky Coffee, Lilac, Linden Locust, Magnolia, Oak, Osage Orange, Poplar, Privet, Redbud, Rose, Russian Olive, Sumac, Tulip Tree, Viburnum, and Yellow Wood. Many garden flowers and vegetables are also susceptible.

Infected plants may not show symptoms until they are damaged or stressed in some ways. Floods last fall, and drought last winter damaged plants and hence, those with Verticillium are showing the characteristic symptoms. Susceptible tomato varieties usually succumb from the stress of fruit production. You can tell if your plant has Verticillium Wilt by cutting into affected stems. If the disease is present, vascular tissue or sapwood will be streaked green, purple & brown, depending on the variety of plant. Infected garden plants usually die from the disease, but often a woody plant wilts and recovers, not showing symptoms until stressed again. By keeping the plant healthy and vigorous an affected plant can often live out its normal life span.

A spring application of nitrogen fertilizer to trees and shrubs will promote formation of thick sapwood and may wall off further infection. Remove dead limbs, but postpone pruning any newly wilted branches to see if they will produce new leaves. Water during drought periods.

If your plant dies, be sure to replace it with a resistant variety such as Apple, Beech, Birch, Ginkgo, Hawthorn, or Oak (White or Burr). Most evergreen trees and shrubs are resistant. Plant only resistant varieties of garden plants.

If you are fortunate enough to have avoided contaminating your soil with Verticillium Wilt, be very selective about any plants you bring in, especially from neighbors. This is one place where it may pay to look a gift horse in the mouth.

## Crabapples: Their Evaluation and Selection

by Edward R. Hasselkus, Prof. of Hort.  
Univ. of Wisconsin-Madison

During my more than 20 years of evaluating crabapples, I have made at least five general observations:

1. **Selection should be made on the basis of fruiting, not flowering qualities.** Fruits add color for up to eight months, where flowers last only a few days.

(cont'd. page 16)

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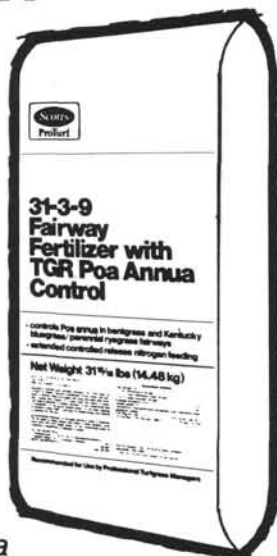
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(Crabapples cont'd.)

2. **Selection should also be based on disease resistance.** Apple scab is the most serious problem in the humid Great Lakes region. Fire blight is another serious disease problem. In my experience, fire blight can be fatal to these crabapples: *Malus baccata* "Columnaris", *Malus croonaria* and *ioensis* and their cultivars, *Malus* "Guiding Star", *Malus micromalus*, *Malus x scheideckeri* and its cultivar "Hilliere", *Malus* "Snowdrift", *Malus spectabilis* "Riversii" and "Van Eseltinei", *Malus tschonoskii*, *Malus yunnanensis* veitchii.

Though not fatal, I have also observed severe fire blight on the following: "Beverly", "Bob White", "Golden Hornet", *M. sieboldii* and *M. x zumi calocarpa*.

Cedar-apple rust contributes to the decline of *Malus coronaria* and *ioensis* anywhere within the natural range of red cedar (*Juniperus virginiana*).

3. **There are no disease-resistant rose-pink flowered crabapples at the present time.**

4. **Most upright or columnar crabapples eventually suffer "middle-age spread."** Although upright in their branching habit as young plants, most increase dramatically in spread following the production of heavy fruit crops.

5. **Suckering from the rootstock is the most serious maintenance problem with crabs.** This is especially troublesome when the non-vigorous crabapples are grafted on-to vigorous seedling apple rootstocks. The practice of propagating crabapples on their own roots should minimize this problem.

## Designing with Crabapples

by Anthony Tyznik, L.A.,  
Morton Arboretum

Crabapples comprise a major portion of the palette of plants used in the design of landscapes. Unfortunately their use often ends in the same predicament common to silver maples and junipers. Their inherent design characteristics are overlooked. Selection is made in haste, based only on the flowers of spring. Disregarded is the size, branching pattern, form and other features, as well as the location they will assume in the executed design. This quick choice is often the start of a landscape destined to failure and disappointment. The very basis for sound design is omitted — consideration of all the characteristics of the tree. Rather than a striking feature, it ends up as an incidental dropping in the landscape scene.

To understand the landscape potential of the beautiful and versatile crabapple, it is necessary to first understand the basic characteristics of the species. The following features should be carefully considered: buds, flowers, fruit, form, branching patterns, textures, foliage, winter effects.

As we use the list of characteristics just compiled, the landscape compositions will vary by application. The combinations are as varied as our capabilities. We see them used as contrasting forms, colors and textures to the forms of conifers and deciduous plants; blending with other buds, flowers and leaves; fruit colors extending through fall and winter; fall colors harmonizing with conifers and deciduous plants; and the beauty of a well-chosen specimen to add charm in a special place.

There it can display its form, elegant flowers, colorful fruit, autumn colors and artistic branching in uncrowded splendor,

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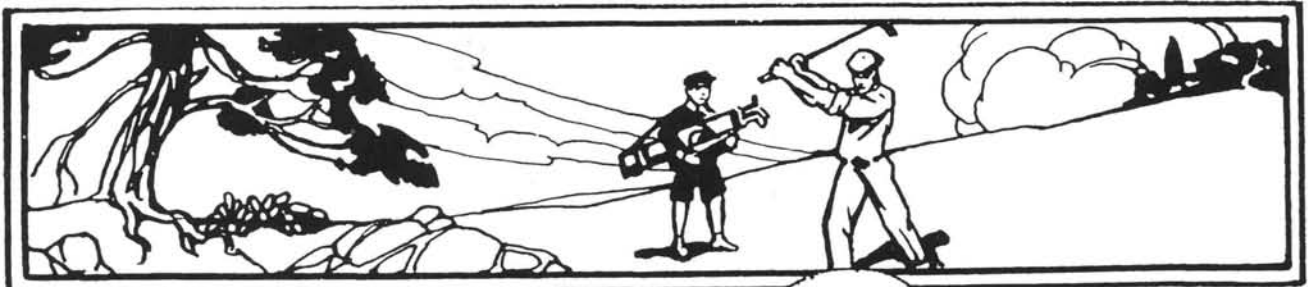
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# Digging, Planting and Care of Flowering Crabapples

Ralph Synnestvedt, Jr.

Synnestvedt Landscape Company

## Extending the season

There are several steps to take. First, use better judgment concerning tree selection for transplanting, site conditions (avoid hot, windy sites), weather conditions (don't plant when it's in the 90s and bone dry).

Secondly, avoid digging crabapples when they are just coming into leaf from May through late June.

Thirdly, consider the digging method. There are three fairly successful ways for summer planting. (Hand, trencher or spade digging used with any of these three will yield equally good results.)

**Spring pre-digging:** Dig before leaves emerge, then store trees above ground in a mulch. This is the surest way to guarantee survival. Plants will even put out a heavy crop of hair roots and scarcely slow in growth. The only drawbacks are cost and the necessity of long-range planning.

**Stage digging:** The sides of the ball are dug and burlapped, but the bottom roots are left intact for three or four days before digging is completed. Ideally, the tree is then placed in a lath house and the tops kept misted and the root ball thoroughly watered. One significant advantage is the chance to saturate the ball while the tree's still in the hole. This method takes time, but it isn't particularly costly and is quite successful.

**Tree spade root pruning:** The simplest and most economical method. Plants are root pruned in the spring with a tree spade, then final dug with the same tree spade in the summer. The result is a tree whose growth has been retarded and hardened off sufficiently to allow safe summer transplanting.

## Planting

More plants are lost from inadequate and improper watering when the plants are installed and during the first week or so after planting. Ideally, the nurserymen should deliver a plant that has a moist ball of earth. But it is the responsibility of the contractor to see that the ball is saturated when the plant is installed. We have found only one way to really tell if a plant has too much, too little, or just enough moisture. Use a probe.

## Soil Amendments

While some of the current research indicates that amendments are unnecessary, we still use them.

## Mulch

Always mulch with at least three inches of organic material; shredded bark, wood chips, leaf mold, or native peat are all good.

## Pruning

Newly installed plants needed exactly the same kind of pruning that mature crabapples need, i.e., removal of dead wood, crosses, rubs, water shoots, suckers and any branch that does not compliment the tree. It is not necessary to head back a newly transplanted crabapple. For some reason, severe heading back does not appear to be beneficial.

Timing is not particularly significant. We try to stay away from pruning when the plant is in full bloom, and again when the fruit is weighing down the branches. We just don't care to harm the bloom display and, in the case of heavy fruiting, it is easier to tell exactly what to remove if the limbs are not bending with a heavy crop of fruit. **Credit: OGA Notes, 4/85**

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## Golf Sites Found on Half of All New Real Estate Projects

About one out of two real estate projects under construction for year-round or resort living include golf site lots for potential buyers, according to the American Society of Golf Course Architect's new pocket-size brochure on golf course planning and building costs.

One reason is aesthetic appeal which attracts golfers and non-golfers alike. Another is demographics, showing that white the number of golf courses has more than doubled since 1960 the ranks of players has quadrupled.

Finally, there is the excellent track record of profits for developers and soaring property values for homeowners. Home sales were more than double the projected target in the first year at a New England area resort and conference center. Buyers who paid \$90,000 for their units were able to sell them two years later for \$150,000.

Developers can expect to spend at least \$1 million to build a regulation length 18 golf course, according to the ASGCA. Maintenance costs usually run between \$100,000 and \$250,000 annually.

ASGCA members provide long-range planning services, assistance in selecting proper sites, and advice on the best methods to finance design and construction of the course. In addition to laying out the site for playing areas, maintenance and clubhouse facilities, the professionally-trained architect supervises actual construction from start to finish, and offers follow-up consultation services to see that playing conditions meet the owner's and players' expectations.

For a free copy of "Planning the Real Estate Development Golf Course," and other literature related to golf course planning, design and construction, write to the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, IL 60601.

## Soil Organisms in Lawngrass Root Zones

Good lawn soils will support an extensive population of very small animals that contribute to natural microbiological processes. These include springtails, fly larvae, myriapods, mites, nematodes and many other insects. As many as 2000 may make their homes in a square foot of soil down through the lawngrass rootzone. Most of these are never seen but work quietly converting organic matter and soil minerals into useful nutrients for lawngrasses. Earth worms are probably the best known of these soil organisms. Seventeen per square foot of lawn is not an unusually large population in a good lawn. This many worms would pass about a pound and a half of soil through their bodies each year. Some of this is left on the soil surface as casts. Soil processed by earthworms often has over 300 percent more nitrogen, over 600 percent more phosphorus and over 1000 percent more potassium than the surrounding soil. Forty percent increases in calcium and 200 percent increases in magnesium are also common. Benefits of these organisms far outweigh the detrimental effects of the few insect pests that injure lawns.

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