



James B. Beard

## NORTHERN MICHIGAN TURF MANAGERS ASSOCIATION

COLLECTION

(1980)

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THURSDAY, SEPTEMBER 4th, 80  
MISSAUKEE GOLF CLUB  
LAKE CITY, MICHIGAN

Above is the location and date of our next Association meeting. Missaukee is located on the south west corner of M-66 and M-55 intersection. It is an easy location to get to from anyplace in Michigan plus we have had other meetings at this location.

Claude Marcus is the Host Superintendent and he extends an invitation to play this fine 18 hole layout. He promises more, a big steak cookout for dinner and dinner will start at 6:15 P.M. So anyone coming both for golf and dinner, we suggest that you pace your time so that you will be through golf as this our Annual Meeting.

This golf course was built and financed by the Farmers Home Corporation. The first 9 holes were opened to play in 1970 and the second 9 holes opened to play in 1976. The greens are seeded with Penncross Bentgrass, the fairways have blended bluegrasses, with watered fairways. It is an interesting test of golf which you will enjoy.

Starting times are not necessary and golf cart reservations not required. Stewart Radar sandwiches are available, coffee, beer, at the Club House.

We must again know the number that will bethere for dinner and by August 29th. It is impossible to rush across the street to buy steaks because over there, there are still breathing. Steaks must be ordered in advance therefore if you want steak, send in your post card immediately so it will be recorded and a steak set aside. Otherwise you pay for a steak and get a hot dog, its that simple. Need I say more?

The speaker for the evening is Mr. Jim Comp, Cadillac, who as a young man, grew up in Maryland and West Virginia. He lived among the great forests of American Chesnut and saw these great trees wiped out by the blight in the 1920's and 1930's. For the past 15 years, Mr. Comp has been crusading for the reforestation of the American Chesnut. It will be an interesting talk.

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September 9th, is Michigan State University Field Day at Traverse City Golf and Country Club Experimental area. Registration will be at 9:00 A.M. When you register, please be sure to purchase your luncheon ticket at the same time. Luncheon will be in the Club House. We suggest that in going for lunch since parking is at a premium at the Club House, that you try to limit the number of cars, Share rides. The equipment show will start at 1:30 P.M. For further information, please telephone Dr. Paul Rieke, 517/355-0266 or Dr. John Kaufmann, 517/353-2033.

## BLUEGRASSES - 1980

W. H. Daniels, Turf Research, Purdue University

Somewhere in Indiana (and other states) about 30 named cultivars of Kentucky bluegrasses are available in 1980. More than 70 have been named, and many experimentals are in tests. Currently we have 130 bluegrasses in test plots at Purdue, in addition to our Purdue experimentals. (Also in tests are 60 ryegrasses and 80 fescues).

Turf managers are blending three to five cultivars available as one way of utilizing the preferred among those available. Seed companies have many mixes, and for a fee, will blend requested cultivars.

In 1972 a cooperative test of 38 bluegrasses was arranged by Dr. J. Duich as a representative of the Northeast Turf Research group. The test series at Purdue has been maintained at ample nitrogen - 3-4 lbs. N/yr. - with irrigation to avoid drouth, with a cut 1 inch or less plus weed killing and crabgrass prevention with herbicides. No fungicides have been used.

In the period 1975-79 a series of quality ratings were taken after stress periods of disease so that ten data were summarized, then ranked. The following table gives ranking and main source. Others, **not in the test itself**, but available, are listed.

### Kentucky Bluegrasses - Results of 72-79 Tests

\*available

Rank	Cultivar	Source
1	Brunswick	Turf Seed Inc.
* 2	Plush	F.F.R. Inc.
* 3	Touchdown	Pickseed West
* 4	Merit	O. M. Scott
5	Melissa	O. M. Scott
6	Monopoly	
* 7	Adelphi	Adikes
* 8	Victa	O. M. Scott
* 9	Rugby	Northrup King
*10	Cheri	Jacklin Seed
*11	Sydsport	Burlingham
*12	Vantage	O. M. Scott
*13	Parade	Northrup King
*14	Kenblu	
*15	Glade	Jacklin Seed
*16	Baron	Loft
*17	Park	Minnesota
*18	Bonnieblue	Burlingham
*19	Fylking	Jacklin Seed
*20	Merion	(decreasing use)
21	Granada	Northrup King
22	Enoble	Van Engelen E
*23	Majestic	Burlingham
24	Entopper	Van Engelen E
25	Windsor	O. M. Scott (discontinuing)
26	Delft	Cebeco E
27	Geronimo	
*28	Nugget	Pickwest Seed
29	Campina	(leafspot is severe)
30	Pennstar	(discontinuing)

### Others for Sale - Not in Test

* A-20	Warren's Turf
* Bristol	O. M. Scott
* Bensun, A-34	Warren's Turf
* Ram-I	Loft
* Enmundi	International Seeds E
* Wabash	Jacklin (1980)
* Aquila	Northrup King
* Birka	Burlingham
* Delta, Newport	common

America  
Shasta  
Columbia

Pickwest Seed

Some shade tolerance is claimed for Glade, Nugget, A-34, and Bristol. Nugget is slow growing and a poor competitor. Resistance to leafspot and powdery mildew plus low growth character would improve shade tolerance of a cultivar.

Several faster growing types include Wabash, Parade, and Touchdown.

Damage from leafspot and Fusarium disease are keys to the reduced performance of many bluegrasses. Resistance to these, plus protection from competition usually assures continued stands. Most breeding has been to select for improvement in leafspot resistance.

*Fusarium roseum* develops in older mature turf, therefore it takes some time to prove resistance, so research is limited. However, Merion, Fylking, Pennstar, Windsor are known to be susceptible. As a result several of these are dropping out of production.

Where *Fusarium* occurs regularly removal of the known susceptible cultivars and resodding would be ideal. Complete kill with glyphosate (Roundup TM Monsanto), dethatching, and reseeding is an alternative. Just overseeding may gradually improve the tolerance.

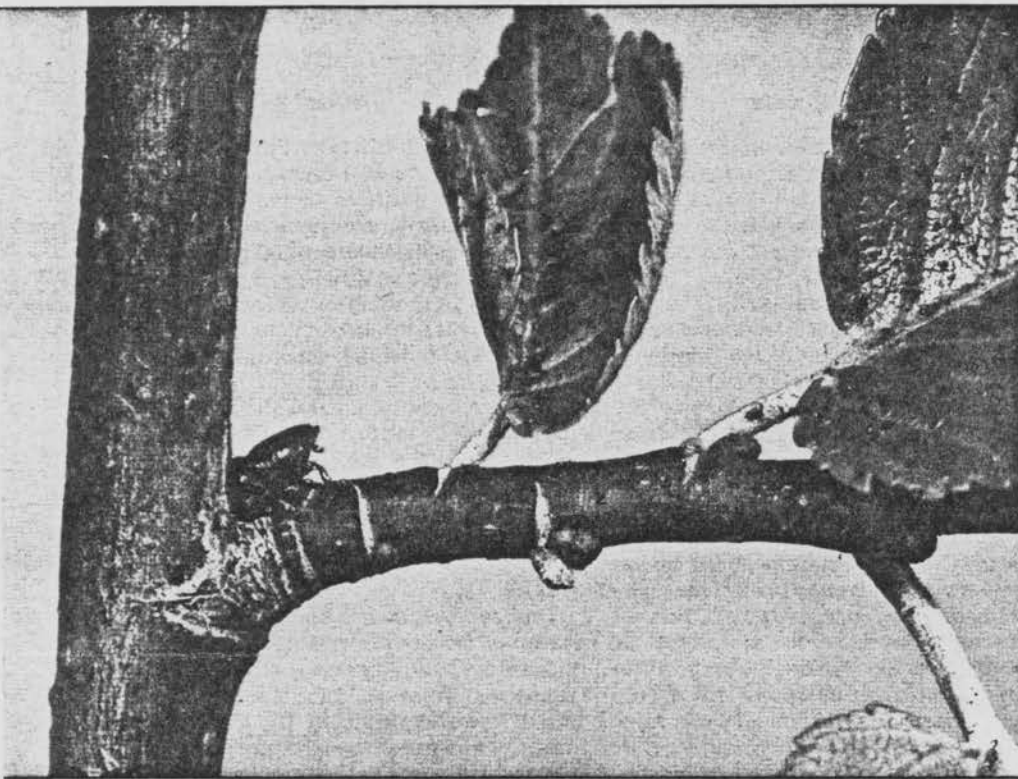
## How to Kill An Association

1. Stay away from meetings.
2. If you come, find fault and never offer an alternative.
3. Decline office or appointment to a committee.
4. Get sore if you aren't nominated or appointed.
5. After you are named, don't attend board or committee meetings.
6. If you get to one, despite your better judgement, clam up until you get outside.
7. Don't work if you can help it.
8. Oppose all banquets, parties and shindigs as being a waste of the attendees' money.
9. If everything is strictly business, complain that the meetings are dull and the officers belong to the old guard.
10. Never accept a place at the head table.
11. If you aren't asked to sit there, threaten to resign because you aren't appreciated.
12. Don't pay your dues.
13. Read mail from headquarters only now and then — never reply if you can help it.

# SAVE THE ELMS

New strategies for fighting fungus and beetles finally may counter Dutch elm disease

BY JULIE ANN MILLER



California Agriculture

Bark beetle carries devastating Dutch elm disease fungus among elm trees.

Like the tiny mouse in the fable who saved a mighty lion from a net trap, so a lowly bacterium may come to the rescue of the stately American elm tree. During the past 60 years Dutch elm disease has ravaged the foliage of many U.S. cities, and disease-resistant varieties of elm are being sought to replace the fallen trees. But millions of elm trees still shade our cities, and scientists remain hopeful that we can save many of those beautiful old trees.

A promising discovery in the search for a defense against Dutch elm disease centers on a bacterium normally found on leaves of wheat, barley and oats. This microorganism can defeat the fungus responsible for Dutch elm disease and thereby may both prevent the disease in healthy trees and in those trees already infected.

"We need to find an organism that could be put in a tree and allowed to colonize it and change the microflora of the tree," explains Gary Strobel, a plant pathologist at Montana State University. Although not many organisms can kill fungi, one group of plant-associated bacteria were known to be antagonistic, Strobel says. He and Don F. Myers screened a large number of those bacteria — called pseudomonads — in the search for a strong opponent to the Dutch elm disease fungus. They found several worthy antagonists, which produce fungus-killing antibiotics when grown on an extract of elm.

Once the biologists found bacteria that oppose the fungus in laboratory dishes, they moved on to greenhouse-grown trees

and found that the bacteria, after being injected, take up residence in the trees without doing any damage. The bacteria are still residing in the trees three seasons later.

But many things that work in the greenhouse do not work in free-living trees, Strobel cautions. So the next step was to take the bacteria out to the field — the streets, parks and forests. Across the country a thousand trees — some free of Dutch elm disease and some already infected with the fungus — are being treated experimentally with the bacteria.

Preliminary data on thirty infected trees injected with bacteria last season are encouraging, Strobel says. In 70 percent of the trees treated, the progress of Dutch elm disease was halted. But in each untreated control tree the disease spread unrelentingly.

The fungus (*Ceratocystis ulmi*) does its damage by triggering an elm's antitoxin response, which blocks water movement in the vascular system and eventually kills the tree. The bacteria seem to work therapeutically by halting the spread of fungus and allowing the tree to grow around its wound. "The elm in most cases is given a chance to outgrow the fungus," Strobel says.

Marketing of the bacteria is already being considered by the Ortho garden products company, according to Strobel. Bacteria grown in large vats would be freeze-dried, and the customer would add water before injecting the bacteria into a tree.

An advantage over fungicides now in use would be that one injection might pro-

tect indefinitely. Repeated injections, which are necessary with the benamyl salt derivatives now used, weaken a tree. In addition, current fungicides can only limit fungus growth; they do not kill the fungus when used at a concentration safe for the tree.

Bark beetles are the target of other elm protection research. The pinhead-size beetles, *Scolytus multistriatus*, carry the fungus from tree to tree. Massive use of DDT to kill the beetles was an early form of protection, but it had adverse effects on the bird populations. A less hazardous insecticide, methoxychlor, is currently in use but more subtle weapons against the beetles are now being sought, such as use of synthetic sex attractants.

Courtship behavior of the beetles has been recorded extensively by University of California entomologist Pavel Svihra and photographer Jack Kelly Clark, who have observed 200 samples of beetle breeding. In half the cases the male courted a female ensconced in a feeding cavity dug into the crotch of an elm twig. In the other cases the female courted a male who was in the cavity, pushing him out and taking his place before they mate.

Previously scientists believed that bark beetle copulation occurs only in dead elm wood, where females excavate egg galleries. Svihra and Clark, however, now have shown that beetle mating is also associated with feeding in living elm tissue. They say, "These observations may influence further studies to identify the chemical messages used by *S. multistriatus* in feeding, mating and egg-laying and may lead to new control strategies." □



## THE C-15 PROBLEM

J.M. Vargas, Associate Professor

Dept. of Botany and Plant Pathology, Michigan State University

C-15 or "Toronto" creeping bentgrass has developed 2 disease problems over the past several years. One has been stripe smut, caused by *Ustilago striiformis*, and the other, with an unknown cause, has become known as the C-15 problem.

The stripe smut problem slowly thins the "Toronto" turf. The disease is recognized in the spring and fall of the season by the dark black stripes of fungus spores running parallel up the leaf blades. It is often difficult to see stripe smut symptoms on closely mowed bentgrass.

The C-15 problem is more striking and an entire green may be lost in a few days. The greens are severely thinned and clumpy in appearance as individual plants are killed. This disease is only a problem on "Toronto" bentgrass cut at green height of  $\frac{1}{4}$ " or less. The problem has not been observed on the "Toronto" growing in the fringes or approaches of the green at  $\frac{1}{2}$ " or more. The disease starts in the cool weather of the spring and appears to recover with the arrival of the warm weather of the summer and then begins to decline again in the latter part of the summer and continues on into the cool weather of fall.

Several things have been associated with the C-15 problem including high populations of nematodes, especially *Tylenchorhynchus dubius* the smut nematode, and *Cricinoides* spp, the ring nematodes. However, where nematicides were used to control these nematodes, very little recovery of the turf occurred. Dr. Wm. Meyer, plant pathologist at Warren's Nursery, has isolated *Helminthosporium erythrospilum* from "Toronto" bentgrass greens in Illinois and has been able to satisfactorily control it by applying 6 oz. of Daconil 2787 every week from early April through October. The best control with Daconil 2787 was obtained where high nitrogen levels were maintained.

For those "Toronto" greens with the stripe smut problem, 8 oz. of Tersan 1991 Fungo, Spot Kleen or Cleary's 3336 drench should be applied as early in the spring as possible, prior to the first mowing.

Neither disease is much fun to have on your greens. The "C-15 problem" is quicker and more devastating. Stripe smut is a much slower disease, but the end results are the same; removal of the desirable "Toronto" bentgrass and its eventual replacement with *Poa annua*. They both can be controlled chemically, but the treatments are very expensive. Controlling the C-15 problem is also very time-consuming. Controlling the stripe smut problem with systemic fungicides year after year could lead to the development of strains of stripe smut which are resistant to these fungicides.

continued

Rule One — The boss is always right.

Rule Two — When the boss is wrong, rule number one applies.

★ ★ ★

Those who already have one of these problems on their "Toronto" greens may wish to follow one of the control programs, in the hope that less expensive and more permanent control will be found. It is my personal belief that overseeding programs with "Pencross" or "Emerald" creeping bentgrass should be started. It may be advisable to completely re-seed, re-stolonize, or re-sod severely affected greens. For those people unfortunate enough to have one of these problems, my heart goes out to you; but for those of you who are contemplating rebuilding greens on an established course or building greens on a new golf course, if you still use "Toronto" creeping bentgrass after having been forewarned, I can only say, "you made your own bed now lay in it".

I realize that "Toronto" creeping bentgrass has become the Cadillac of bentgrass greens, and that having "Toronto" greens on your course is a sign of prestige but when it develops either one of these problems, it will look more like a Model-T and add very little prestige to the course.

### The Clock of Life

The clock of life is wound but once  
And no man has the power  
To tell just when the hands will stop  
At late or early hour:  
Now is the only time you own  
Live, love, toil with a will  
Place no faith in "tomorrow" for  
The clock may then be still.

John S. Swift Co., Inc.

## FOR YOUR READING...

Forthcoming!

Invaluable to the turfgrass professional—

MANAGEMENT OF TURFGRASS DISEASES

by J.M. Vargas, Jr., Michigan State University

Golf courses superintendents, lawn-care operators, landscapers, and other turf professionals will find this book a convenient, practical resource. Its up-to-date account of turfgrass disease management provides the technical background required for sound decision making and the practical information useful in day-to-day operations. To guarantee accuracy and applicability to all major growing regions of North America, the book has been extensively reviewed by twenty professionals throughout the country.

Emphasizing practical disease management, the book describes major diseases of turfgrasses - their pathogens, symptoms, occurrence, and most susceptible species - and their control through cultural practices, chemical applications, and resistant cultivars. As an aid to disease identification, the book contains color plates illustrating specific diseases and tables summarizing symptoms and treatments.

In addition, Management of Turfgrass Diseases examines turfgrass fungicides and surveys individual turfgrass species. It also discusses disease management strategies applicable to golf courses, home lawns, and athletic fields. It will be published by Burgess Publishing Co.

Something which we have all heard  
and how true by one of our favorite  
poets:

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I've trod the links with many a man,  
And played him club for club;  
'Tis scarce a year since I began  
And I am still a dub.  
But this I've noticed as we strayed  
Along the bunkered way,  
No one with me has ever played  
As he did yesterday."

It makes no difference what the drive,  
Together as we walk,  
Till we up to the ball arrive,  
I get the same old talk:  
"To-day there's something wrong with me,  
Just what I cannot say.  
Would you believe I got a three  
For this hole--yesterday?"

I see them top and slice a shot,  
And fail to follow through,  
And with their brassies plough the lot,  
The very way I do.  
To six and seven their figures run,  
And then they sadly say:  
"I neither dubbed nor fozzled one  
When I played--yesterday."

I have no yesterdays to count,  
No good work to recall;  
Each morning sees hope proudly mount,  
Each evening sees it fall.  
And in the locker room at night,  
When men discuss their play,  
I hear them and I wish I might  
Have seen them--yesterday.

Oh, dear old yesterday! What store  
Of joys for men you hold!  
I'm sure there is no day that's more  
Remembered or extolled.  
I'm off my task myself a bit,  
My mind has run astray;  
I think, perhaps, I should have writ  
These verses--yesterday.

—Edgar A. Guest

## Growing Ivy Geraniums (*Pelargonium Peltatum*)

Prof. R.W. Judd, Jr., Extension Agent, Horticulture authored a timely article in the No. 88, October 1978 issue of *Connecticut Greenhouse Newsletter*. His pertinent comments follow:

Ivy geraniums have made a tremendous comeback in the past few years. This is due to their popularity in hanging baskets. They flower freely from spring through autumn on long hanging or trailing stems. The leaves are ivy-like, glossy, 5-angled and sometimes reddish-zoned. The flower colors are white, red, pink or purple. They can be found growing in almost every greenhouse. However, there is a vast difference in quality from one green to another.

Ivy geraniums are fairly easy to grow if a few rules are followed.

**PROPAGATION:** Ivy geraniums are easily propagated from terminal and nodal cuttings. They can be rooted in specialized propagating blocks or practically any good propagating medium.

**GROWING MEDIA:** Use a *well-drained soil mix*. They do not grow well in a heavy soil and are difficult to keep watered in a peat-lite mix. Be certain to use *sufficient limestone and superphosphate*.

**FERTILIZATION:** Ivy geraniums respond to high amounts of fertilizer. In the winter use 15-5-15 or potassium and calcium nitrate. Switch to 20-20-20 in the spring.

**PROBLEMS:** Ivy geraniums are subject to three problems: oedema, chlorotic foliage and mites.

**OEDEMA:** The physiological disorder that causes the pimples or corky lesions on the underside of the leaves. Severe oedema will cause the leaves to turn yellow and drop off. A recent publication suggested some guidelines to prevent oedema.

- The medium should be a porous, well-drained peat-lite type with 20-30% mineral soil.
- Keep the nitrogen level high.
- Water in the morning so the plants can dry out.
- Grow in a well ventilated greenhouse.
- No saucers on hanging baskets.
- Keep away from the upper part of the greenhouse if it is hotter.
- Light intensity between 2000-3500 foot-candles.
- Do not mix with other crops on the same automatic watering line.

**CHLOROTIC FOLIAGE:** The new growth appears as very light green or almost white in color. This often occurs when plants are hung high in the greenhouse or in front of a unit heater. Apparently this is due to high light and/or warm temperatures. By placing the plants on a bench the leaves will turn green. A less dramatic chlorosis may be due to a lack of nitrogen.

**MITES:** Mites are extremely fond of ivy geraniums. They are often confused with oedema and vice versa. Sprays of kelthane and pentac will keep them under control.

Ivy geraniums are in big demand. Let's sell only the best. □

From GARDENLAND 1980

The Constitution- By Laws of this Association states that the annual meeting will be held in September of each year and at that time, three new directors will be elected to the Board. A nominating committee of Tom Reed, Chairman with Fred Bond, Joe Burda, Tom Courtemanche and Russ Hancock as the other members. If you have a selected candidate or nominee, please contact any of this committee with your recommendations. These three directors will serve for three years. Nominations can also be made from the floor at this meeting. The Directors whose terms are expiring are Frank Heminger, Greg Nelson and Robert Rieschl. Only Class "A", "B" and "E" members may vote providing that their 1980 dues have been paid.

We would like to thank these men whose term is expiring for their fine service and devotion to our Association. They have all contributed greatly to our organization.

Names of nominees will be revealed at the meeting. This will give you more time to contact members of the committee.

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In October we will have two meeting dates to remember. The first will be our regular meeting on October 7th at Crystal Mountain and the big Social Party for the gals on October 25th. Shuss Mountain has been chosen as the site of and further details will be forthcoming in a future letter. In the meantime however, please check these dates on your calendar and don't let anything interfere with your being there. Yes, there will be a happy hour as well as live music to help make the nite a success.

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We are still looking for invitations for having our meetings in 1981. The months of May, June, September and possibly July or August are still open. Please check with your people and bring definite information on day of week and month to our next meeting.

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The National Golf Foundation reports that golf is up 7% during the second quarter of 1980. Despite the twin evils of inflation and recession as well as rising unemployment, this is remarkable. It is a very healthy outlook for golf as an outdoor sport and past time.

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The wife of a close acquaintance purchased a rather large grandfather clock at an auction; then sent her husband to pick it up and carry it home. The husband had attended an early formal meeting and was still wearing his tux. He was having some difficulty with the large clock even before he met a staggering man coming in the opposite direction. They collided and the husband fell backwards with the clock on top of him.

"Why in blazes don't you watch where you're going!" the angry husband demanded.

The man shook his head, looked at the man in the full dress suit and the grandfather clock that lay across him.

"Why don't you wear a wrist watch like everybody else?" he inquired.

*The Bagpipe*



RETURN THAT POSTCARD BY AUGUST 29th, Pleeese.....