

THE BULL SHEET, official publication of THE MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.

Editor: ROGER LA ROCHELLE  
1818 — 177th Street  
Hammond, Ind. 46324

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## Turfgrass Conference

The 11th ILLINOIS TURFGRASS CONFERENCE will be held December 3 & 4, 1970 in the Main Auditorium at the University of Illinois in Urbana.

Dr. Jack Butler with the cooperation of the ILLINOIS TURFGRASS FOUNDATION the following program (see attached). The purpose of this program is to provide up-to-date information for those in the turfgrass field.

The registration fee for this conference is \$12.00 which includes a copy of the proceedings and admission to the banquet Thursday, December 3rd, at the Ramada Inn.

Transportation from the Ramada Inn to the Auditorium will be furnished thru the courtesy of the ILLINOIS LAWN EQUIPMENT Co. of Orland Park, Illinois and LEON SHORT & SONS, INC. of Keokuk, Iowa.

Reservations for housing can be made at the Ramada Inn, Paradise Inn or the Holiday Inn in Champaign.

#### PROGRAM

**Thursday, December 3 — 10:30 - 12:00 Noon**

##### Registration

##### FIRST SESSION

Moderator —

**1:10 - 1:20 p.m.**

WELCOME — G. W. Salisbury, Director  
Agriculture Experiment Station

**1:20 - 1:50 p.m.**

**Golf Course Construction Problems**  
R. Mazur  
University of Illinois

**1:50 - 2:10 p.m.**

**Turfgrass Salt Problems**  
T. D. Hughes  
University of Illinois

**2:10 - 2:55 p.m.**

**Trees — A Vital and Versatile Element of Every Golf Course**

L. T. Whitlock  
LANDTEC, Chicago

**2:55 - 3:10 p.m. — BREAK**

**3:10 - 3:30 p.m.**

**Turf Weed Control**

J. D. Butler  
University of Illinois

**3:30 - 4:15 p.m.**

**Some Difficult Turf Problems and Possible Solutions**

C. W. Lobenstein  
University of Missouri

**4:15 - 4:35 p.m.**

**Question and Answer Session**  
Above Speakers

**6:30 p.m.**

**Illinois Turfgrass Foundation BANQUET**

Rev. Gervase Brinkman, O.F.M.  
Guest Speaker  
Illinois State Penitentiary

**Friday, December 4**

SECOND SESSION

Moderator —

**8:30 - 8:50 a.m.**

**Changing the Environment to Reduce Turf Diseases**

M. C. Shurtleff  
University of Illinois

**8:50 - 9:20 a.m.**

**Unusual Turf Fertility Problems — And What Caused Them**

Roger Brown  
IMC — Skokie, Ill.

**9:20 - 9:45 a.m.**

**A Practical Approach to Tree Disease Problems**

D. F. Schoeneweiss  
Illinois Natural History Survey

**9:45 - 10:00 a.m. — BREAK**

**10:00 - 10:20 a.m.**

**Systematic Fungicide Activity and Turf Disease Research**

W. A. Meyer and J. F. Nicholson  
University of Illinois

**10:20 - 11:00 a.m.**

**Trends in Turfgrass Disease Control**

H. B. Couch  
Virginia Polytechnic Institute

**11:10 - 11:30 a.m.**

**Question and Answer Session**  
Above Speakers

**11:30 a.m. — ADJOURN**

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#### JOB OPENING

Evergreen Country Club  
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### *The President's Message*

Thanks to the GCSAA for having myself and the other officers of our association to dinner one evening during their fall meetings at the Conrad Hilton Hotel in Chicago. A very open discussion followed dinner with full participation by everyone. It was very interesting to learn of the work load taken upon by the National Board. These men work hard!

Questions on certification and the pension were brought up. Certification is to be voluntary, not mandatory, for now. Unless many superintendents become certified under the national program, its overall effect will not be useful. The idea of the national instead of local associations controlling certification is for standardization. Since certification will be left up to the individual, the program is going to have to have some incentive in order to have full support. We have trouble enough getting members to meetings let alone spending time to become certified. The success of the program depends upon the support of all of the individuals who make up the local associations. Let's hope that the individuals who make up the Midwest Association will get together and help to make it a success.

The pension plan has been taken under advisement by the IRS. Let's hope it is accepted. If so, there will be a fine tax break for all who participate.

The annual MAGCS dinner dance was a suc-

cess and all who attended had a wonderful time. Many thanks go to Tom Gilman and Bert Jannes, co-chairmen; Marve Gruening, host; and their wives for their effort. The local commercial men are also to be commended for the fine array of prizes which they donated.

December is our annual meeting. Full participation of all voting members would be welcome.

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## Midwest Insect Problems

by Stanley Rachesky  
Entomologist, University of Illinois

We have in the midwest some insects that could blossom out and become real problems.

The caterpillar of the **brown-tail moth** feeds on the foliage of a very wide variety of trees. Plum, pear, apple, maple, willow, etc., just to mention a few. This particular insect is confined mainly to the New England states.

The adult male and female are white except for some brown hairs at the tip of the abdomen. The larva (caterpillar) is kind of a reddish brown and on each side of its body is a broken yellow stripe. The caterpillar overwinters protected in a little webbed area of leaves. When spring arrives it feeds for a short time before forming a pupa. The adult emerges in July and immediately mates depositing its egg masses, which are brown in color, on the undersides of the leaves of trees. And so on year after year.

The most destructive moth of all is called the **gypsy moth**. It is a leaf feeder that attacks most shade and forest trees. The major area of concern is located east of the Hudson River on the east coast. A few years ago, however, Michigan encountered an outbreak of this insect.

Many objects are used by the female moth for depositing her eggs including such things as tree trunks, buildings, etc. The caterpillars grow to a length of about 2½ inches and are very colorful. Five pairs

of blue tubercles followed by six pairs of red ones run along its back.

The gypsy moth overwinters in the egg stage. As the spring of the year blossoms and the leaves unfold, gypsy moth eggs are hatching. The caterpillars feed for about 60 days stripping the foliage off the trees. In late July the adults emerge from their eggs for a long winter's nap and so it continues on and on.

Everyone has heard of the **Japanese beetle**. Population explosions of Japanese beetles means destruction to a great variety of trees, shrubs and other leafy plants.

The year 1916 the United States encountered its first find of this beetle, a native of the Orient. Isolated problems now happen in Illinois occasionally. The adult beetles are easy to recognize. They're metallic green beetles about one-half inch long and have white spots on the tips of their abdomens. They're closely related to the June beetle so if you know what they look like just picture the color change.

Japanese beetles are real strong fliers and enjoy chomping on apples, corn silk, grape foliage, etc. Females drop their eggs in the soil. Grubs hatch out and feed on the roots of grasses. The grubs live under the frostline in the soil during the winter and emerge as adults in June and July. The adults begin feeding on the foliage for about three months. The Japanese beetle life cycle enables it to produce only one generation per year.

If I can be of service to you to help solve your own personal insect problem please feel free to contact me.



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  - (b) Check wear at wear ring  
Remachine or replace if clearance is greater than .030
  - (c) Clean impeller and volute of possible debris
2. Remove Packing Gland and Packing
  - (a) Check wear on shaft sleeve  
Replace sleeve if worn or grooved
3. Run Motor — Check Bearings
  - (a) Clean bearings with solvent  
Replace if noisy or rough or shows moisture etching
  - (b) Clean motor of dust and debris
  - (c) Check insulation of windings
  - (d) Check throw-out switch or
  - (e) Check commutator and brushes if single phase
4. Check shaft for run out
5. Grease bearings
6. Repack pump
7. Replace suction cover — use new gasket
8. Store in clean dry place
9. Check main switch contact points

**IN THE SPRING**

10. Make sure no rodents have nested in motor or pump
11. Check suction line — must be air tight
12. Check motor rotation
13. Check terminal connection — must be tight
14. Prime pump
15. Irrigate

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## TURF MANAGEMENT

A. J. Powell, Jr., Turf Specialist  
"Turf" — The Anti-Pollutant

It behooves the sod industry and turf enthusiast to mount the pollution bandwagon and tell the nation just exactly how a high quality turf protects our environment. Anti-pollution is the current thought. Therefore, sod and other green vegetation is our immediate antidote to the current trend to help "clean up America". Let's go on a spree of insisting to our neighbors, club members, cohorts, business associates, and politicians that cleaner air and water is a must and that something can be done within our own industry.

There is a possibility of adding to the pollution by using pesticides indiscriminately on turf and not according to the label. Just as an engineer must study his blueprints, the pesticide user must read and understand the label. A turf plant is a living organism, as is the bald eagle, and must be spared within the safe tolerance limits of the pesticide which is applied directly to the plant. It is also noteworthy that turf pesticides are applied directly to a high organic layer that greatly decreases the amount of chemical run-off or leaching and holds the chemical for a longer period of time so that it may be used or dissipated safely. When used correctly, run-off or movement through soil erosion is minimal. So, with the many known advantages of turf in our environment, let's consider turf pesticides as "Environmental Protectants" rather than harmful pollutants. Turf and other green vegetation are anti-pollutants unapproached to even a small extent by any artificial medium.

Plants on land and in the sea supply man and animals with the oxygen desperately needed for life. The oxygen supply is said to be dwindling in our cities that have continuously overpopulated and undervegetated themselves. Considering that we breathe in approximately 20% oxygen, it is estimated that one average sized home lawn with healthy, vigorous turf can replenish the air with enough oxygen for eight persons. Not only that but plants absorb and detoxify sulfur dioxide, one of the most critical air pollutants. Some green plants are used as pollution detectors. However, preliminary work has shown that turf is more tolerant of polluted air than many plants.

Soil erosion and subsequent stream pollution is nothing new. But, the improved chances of getting immediate turf cover on highly erodable areas by sodding is relatively new. Considering the high repair cost of eroded soils in development projects, it is undoubtedly cheaper and surely less polluting to use sod.

What about eye pollution? Turf virtually eliminates glare and helps to detract from the ugliness of our asphalt, metal, and concrete inventions. Why are our utility lines being placed underground and advertisement billboards being virtually eliminated from our interstate system? At least some persons were quite proud of the recent Highway Beautification

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Program and the effects it has had to decrease the monotony that can be prevalent on slum-like highways. Landscaping reflects our inherent love of beautiful surroundings whether on our highways, in our cities or around our homes. This represents the natural intimacy between man and nature. Millions of city or suburbia dwellers flock to the outdoors yearly to discover the wonders of nature as given to our care by the one supreme Being. Artificial turf has placed its mark upon our illustrious society but no one praises its natural appeal just because it is painted green.

Turf and ornamentals also help to control heat pollution. Because of evapo-transpiration, a lawn is usually 20 degrees or more cooler than pavement or artificial turf and even at 5 feet above the surface, the temperature may be 10 degrees cooler above turf. The artificial turf mediums absorb heat and thereby alter our own micro-environment.

Vegetation also deadens sound thereby reducing noise pollution. It is said that both psychological and physiological problems are increasing because of increased noise pollution. Small areas of turf can then be considered as acoustical sound blocks to deflect, absorb and muffle the many sounds which make city and community living miserable.

Homeowners should be the big target for our salesmanship of turf as an anti-pollutant. People do not like ugliness in their surroundings and should be demanding better quality lawns for their new homes. Many people move from old homes because of the increasing slum-level appearance of their neighborhood. Poor lawns and rundown ornamentals tend to produce a ghetto atmosphere which destroys morale and property values alike. Many times, however, the enthusiastic activity of one homeowner can influence all others to improve his community.

At present, the homeowner can make many improvements himself. However, the present do-it-yourself system of lawn maintenance is being challenged. Several states are considering legislation that requires pesticide applicators to be licensed. This could be a "big break" for custom applicators, but it might also force many homeowners to neglect their lawns because of the added expense. Pesticides should be used correctly. But let's insist upon reasonable restrictions. If regulations become too severe, then the result can only be poorer quality lawns leading eventually to lawns consisting possibly of painted rocks, unstable sand, lawn rugs (so-called "artificial turf"), and artificial mulches. The pesticide controversy is only a small segment of the larger problem of pollution from other sources. Pollution must be controlled and everyone should advertise the fact that the Maryland Sod Industry has an "anti-pollutant" for sale.

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### PROBLEMS WITH EVERGREEN BROWNING

by Stanley Rachesky

Entomologist, University of Illinois

Fall is such a beautiful time of the year. If you're like me you're hoping the grass will stop growing. Many golf course superintendents are doing their fall cleanup. This gives you a great opportunity to really take a good look at your trees and shrubs and to kind of plan what you're going to do next year.

We've been receiving inquiries as to the browning of evergreen needles on many of the shrubs in the area lately. There are probably a thousand reasons why an evergreen would lose its needles. For example:

1. Planting — maybe you didn't follow the directions.
2. Soil — is it right for your plant?
3. Nutrient deficiencies — are they available?
4. Fertilizer — use it how and when it says!
5. Salt injury — what did you use last year to melt the snow? Did it run off near your evergreen?
6. Pruning — were you careful?
7. Shade — does your evergreen get enough sun?
8. Wounds — loss of fluid!
9. Soil drainage — did it get too much?
10. Water — did it get enough?
11. Temperature, leaf scorch, winter injury, chemical injury (pollution), gas injury, mechanical injuries, electrical injury, spider mites, disease, etc., and of course, last but not least, **insects**. Gall aphids, bud scale, pine needle scale, borers, bagworms, needle miners, sawflies, pine shoot moths, Zimmerman pine moths, etc., all cause evergreens to brown.

I'm sure that golf course superintendents can now see some of the problems causing evergreens to turn brown. In order to recommend a method of control, no matter what it is, positive identification of the problem must be made.

Send me in a specimen if you are having a problem.

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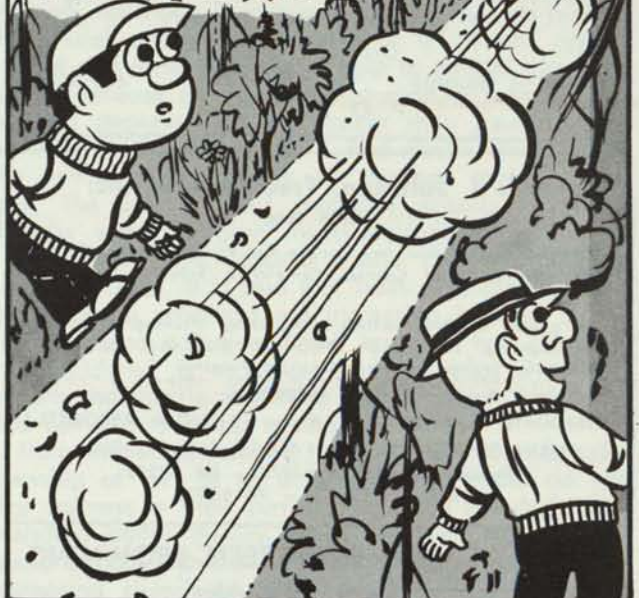
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The following is a summary of a program presented by a Golf Course Superintendents Association in the East.

## Environment — Pollution — Pesticides

Program: Metropolitan Golf Course Superintendents Association, July 23, 1970 — Walter Androsko.

**Environmental Quality** — one of the high priority issues of our times, also political and very emotional. A survey indicated that 51% of people interviewed were deeply concerned and 35% somewhat concerned about problems of environmental quality.

**People and Their Requirements Cause Pollution** — urban crowding, population explosion, industrialization, luxury use and consumption of goods and service, modern transportation, agriculture and horticulture, homes and gardens each adds to the total problem. 500,000 chemicals are used in the United States with little known about their total effects upon the environment.

An ecologist has estimated that this old World could support a population of one billion without a serious pollution problem. We now have 3½ billion people and heading for 6 billion by the year 2,000. New York State has a birthrate of 300,000 each year; a deathrate of 190,000 for a net gain of 110,000 persons each year.

The United States with 6% of the world's people causes 50% of the world's pollution and uses 60% of the world's resources. The United States has a program to encourage industrialization in many of the emerging countries.

**New York State Department of Environmental Conservation** — newly created will take over many of the environmental functions of various other departments. Pesticide control functions will be under this department. **Hearings were held at 10 A.M., Monday, August 3, 1970, Room 20, New York Academy of Medicine, 2 East 103rd St., New York City** for the purpose of developing a list of "restricted use" pesticides. Mr. Henry L. Diamond is the new Commissioner.

### Pesticides

**Pesticides** are a part of the pollution problem and contribute "for and against" environmental quality.

**Problems:** improper usage, persistence, toxicity, contamination, storage, disposal of unused pesticides and empty containers.

- Read the label — follow directions
- Practice safety precautions
- Know the toxicity of pesticides used man, animals, fish, etc.
- Problems of storage and fires.

Pesticides add to the quality of the environment  
Control insects and diseases — food, horticulture, house pests.

- 1970 Westchester leaf defoliation problems
- Various Cankerworms
- Gypsy moth
- Aerial Spraying

1971 — Insect Potentials

### Considerations

Am I familiar with chemicals used under my directions?  
LD50-figures, toxicity — man, plants, animals.

Do I set a good example for my men when I handle pesticides?

Do not smoke, keep out of drift, wash after using, flush materials spilled, wear proper clothing, clean up equipment.

Are pesticides stored to present a minimum hazard?  
Locked, labeled, vandalism, mistakes, children.

In case of fire-run-off, smoke drift.

Do I have a program to dispose of "empty containers"?

Are containers "really empty"?

Are containers made totally non-usable?

Are piles of containers allowed to accumulate?

Where and how are they disposed of?

What about old pesticides that won't be used?

**Most widely used pesticides in 1969** — Parathion LD50 - 4 - 18 deaths in 1961, Toxaphene - LD50 - 80 - 0 deaths, Carbaryl LD50 - 850 - 0 deaths, D.D.T. - LD50 - 118 - 0 deaths, Endrin LD50 - 7 - 1 death. Herbicides only 1 death reported - 2,4-D ester - LD50 - 700 - 1 death. Fungicides no deaths reported.

**Other:** asperin LD50 - 365 - 182 deaths in 1961 Strychnine LD50 - 1 - 1 death, Lead arsenit (?) 50 LD50 - 10 - 29 deaths in 1961.

**Pollution causing fish kill in U.S. in 1967** — 11 million fish killed: Industrial wastes 72%, Municipal wastes 5.8%, pesticides 3%, fertilizers 0.1%, manure-silage drainage 11%.

**U.S.D.A. — insect research** effort of \$18 million — 51% budgeted for biological control: parasites, predators, pathogens, sterility, photo period, attractants, resistance. Conventional insecticide research — 16%. About 100,000 insect species in the U.S. of which 10,000 classified as pests.

**U.S. Pesticide sales — big business:** 1968 — fungicides \$70 million sales, insecticides — \$335 million, Herbicides \$505. Estimated for 1975 — fungicides \$75 million, insecticides \$526 million, herbicides \$950 million.

**Control of malaria in Ceylon with D.D.T. — 1950 — cases of malaria 2,000,000; 1950's D.D.T. mosquito eradication program begun; 1962 — 31 cases; 1963 — 17 cases; 1964 — 150 (D.D.T. use stopped); 1965 — 308; 1966 — 499; 1967 — 3,466; 1968 — 1,000,000; 1969 — Eradication program initiated again.**

\* July 25, 1969, report from Health, Education and Welfare, Atlanta, Georgia.

Walter Androsko  
Cooperative Extension Agent  
Rm. 204 P.O. Building, Grand St.  
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