New uses for compost are being found

by Christopher Sann

Uses for the composted final products of the microscopic break down of animal manures, agricultural plant residues, and other organic wastes are as many and as varied as astute minds have been able to devise in the several thousands of years that man has been stockpiling these materials. To the long list that includes soil amendments, growing mediums, plant protection materials and insect and disease protection, please add another: bioremediation.

The use of compost materials in bioremediation involves the detoxification of contaminated soils or waters using the structural as well as the biologically active portions of compost to eliminate carbon based petroleum, pesticide, or mine wastes from the environment.

Old coal mine waste waters are cleaned with the help of compost

Hundreds perhaps thousands of old coal mines dot the Appalachian mountain regions of the East, spewing thousands of gallons of contaminated acid waste waters into the local streams and rivers that feed the Chesapeake Bay. Biologically active composts are layered with limestone to form the bed of remediation marshes to detoxify the mine runoff and leachings from these abandoned mines.

The limestone layer neutralizes the acid of the wastes while the microbes in the compost detoxify the carbon based toxins within the waste stream. Once this has been -continued on page 14
Editor's Note: As a service to our readers, Turf Grass Trends is including this cumulative subject index for 1993.

A

AAPSE (American Association of Pesticide Safety Educators), December 1993: 12
ACRE
See Alliance for a Clean Rural Environment
aerifying, defined, November 1993: 6
aggregation, components of, November 1993: 3
Agriculture, U.S. Dept. of
replacing the Delaney Clause, November 1993: 6—7
Alliance for a Clean Rural Environment (ACRE),
December 1993: 5—6, December 1993: 8
alligators, attracted to DuPont fungicide, November 1993: 14
American Assoc. Botanical Gardens & Arboreta,
Inc., address, December 1993: 10
American Assoc. Landscape Contractors, address,
December 1993: 10
American Assoc. of Nurserymen, address,
December 1993: 10
American Association of Pesticide Safety Educators (AAPSE), December 1993: 12
American Council Turfgrass, Soil & Crop Sci. Ctr., address, December 1993: 10
American Landscape Horticulture Association,
address, December 1993: 10
American Sod Producers Assoc., address, December 1993: 10
annual bluegrass, and Necrotic Ring Spot, November 1993: 3
Anthracnose, causes, November 1993: 8
APPA, Assoc. Higher Education Facilities Officers, address, December 1993: 10
Arkansas, bans on landfilling, December 1993: 6
Assoc. Landscape Contractors of Colorado, address,
December 1993: 12
Assoc. Zoo. Hort., address, December 1993: 10
Associated Landscape Contractors of Massachusetts, address, December 1993: 11
Atlantic Seedsman's Assoc., address, December 1993: 11
Audubon Sanctuary Program, December 1993: 5
Audubon Society of New York, December 1993: 5

B

Baucus, Max, water pollution act, December 1993: 14
Bayleton™ Triamedifen fungicide, November 1993: 7
Benlate fungicide, attracting alligators, November 1993: 14
bentgrass
herbicide and fungicide study, November 1993: 7
and Necrotic Ring Spot, November 1993: 3
Bergen County Landscape Contractors Assoc., Inc., address,
December 1993: 11
Bhopal, India, accident at Union Carbide plant, December 1993: 3, December 1993: 8

Bipolaris, November 1993: 8
Bipolaris Leaf Spot (Bipolaris sorokiniana) growth and temperature range, November 1993: 9
bluegrass, with Dreschlera and Bipolaris, November 1993: 8
Borromeo, Nine Roth, study on water supply hazards, December 1993: 2
broadleaf weeds, resulting from Great Flood of 1993, November 1993: 10
Brown Patch (Rizoctonia spp.) cause, November 1993: 8
growth and temperature range, November 1993: 9
buffalo grass, tolerance of flooding, November 1993: 10—11

-continued on page 4
The message is loud and clear

The revolution is on

by Christopher Sann

Call me a "lawn care nerd." I had forgotten how much I enjoy attending larger regional turfgrass trade shows. I had forgotten how invigorating it is to spend two days away from the routine day-to-day activities of normal life and to immerse oneself in gathering, exchanging and developing information about an industry that is always changing.

Last week, I went to the New Jersey Turfgrass Expo for the first time in three years. I live about 60 miles from Atlantic City and, up until 1992, I had been a regular attendee. So my return this year was full of quite a few surprises.

Better seminar subjects

First, I was pleasantly surprised and pleased with the increase in the number of conference talks that have real content about interesting subjects important to turfgrass managers. Over the years, some of the talks that I have attended, which were pictorial walk throughs showing some golf course superintendent's face in eight out of ten slides, have given way to much more serious and timely talks about topics meaningful to turfgrass managers. I can say that I did not fall asleep in any of the seminars that I attended and that I gained important information from each lecture, whether it was about computerized fine tuning of irrigation systems and how one can save 20% - 40% per year on total irrigation costs, or whether it was the first full-fledged discussion I have ever heard about the nuts and bolts of the how and why of avoiding the development of fungicide-resistant pathogen populations.

Interesting trade shows

The trade show was interesting, too. First, there were many new products. I spent three-quarters of my time talking to many tech reps and suppliers either about new products or about new alignments in the supply portion of the turfgrass industry. Gone are the smiling faces of back-slapping, know-nothing, grizzled, over-the-hill sales types that have populated these events for so many years. In their places, I found that the people that manned many of the booths were decidedly younger, more attentive, and well informed about the details of their products and competing brands. They were much more interested in talking about both the present and the future direction that this industry is headed than their predecessors of three years ago.

At many of the booths regional and corporate headquarters types could be found fielding questions in a concerted effort by manufacturers and suppliers to add a sense of continuity from corporate management down to the end-user level. Being out in the field provides corporations with a better opportunity to gather information directly about the needs of turfgrass managers.

Low rate pesticides are coming on strong

The real nature and depth of the big change that is taking or has taken place in the turfgrass management industry did not really hit me until I had a chance to glance through some of the data sheets that I collected at the many booths that I stopped at. Two things came roaring out at me. The first was the change that was occurring in new low-rate pesticide chemistries and the second was the tremendous push for biological or bio-rational products.

When I looked at one of the sample labels and MSDS catalogues that most major product producers provide to end-users, I did not recognize half of the names of the products listed. I had only seen or heard the other half mentioned in passing over the last few years. There has been a major overhaul of many turfgrass management products. New reduced-rate products with new chemistries are swamping the marketplace. These newer low-active ingredient pesticides are more effective than and used at fractions of ounces per thousand square feet when compared to the four to six ounces that many former products frequently required to cover the same areas.

Product manufacturers have invested many millions of dollars in the research and development of these new reduced-rate chemistries. The major players are betting a bundle that reduced-rate chemistries are at least one part of the puzzle that is the future of turfgrass management.

It seems that the remaining life span of many of yesterday's top products will be very, very short. As it is, one would have to look long and hard to find many of the old line pesticides that turfgrass managers have used over the last twenty years being manufactured or marketed by the major players. Many are now environmental liabilities as well as unprofitable. In my opinion, many of the pesticides that introduced since the early eighties will fall out of favor in the next five years as the pesticide producers will want to appear to be green.

Biologicals and bio-rational are gaining strength -continued on page 14
C
calcium deficiency, in Necrotic Ring Spot, November 1993: 3
California Assoc. of Nurserymen, address, December 1993: 12
California Council/American Society of Landscape Architects, address, December 1993: 12
California Landscape Contractors Assoc., address, December 1993: 12
carcinogens
and the Delaney Clause, November 1993: 6—7
and food products, December 1993: 8
chemical leaching, November 1993: 7
chemicals, in the workplace, December 1993: 8
chlorosis, defined, November 1993: 6
Ciba-Geigy, involvement in Environmental Steward Awards program, December 1993: 5
Clean Air Act, provisions taking effect in 1996, December 1993: 14
Clean Water Act, revised, December 1993: 3
Clinton administration
environmental regulations, December 1993: 2
reduced pesticide use initiative, December 1993: 14
wetlands policy, December 1993: 14
Colorado Nurserymen's Assoc., address, December 1993: 12
Community Right-to-Know Information Hotline, December 1993: 14
community right-to-know issues, December 1993: 6
Connecticut, bans on landfilling, December 1993: 6
Connecticut Groundskeepers Assoc., address, December 1993: 11
Cornell University
environmental studies, December 1993: 8
lawn care study, November 1993: 7
study on water supply hazards, December 1993: 2
cortical cells, defined, November 1993: 6
crabgrass, resulting from Great Flood of 1993, November 1993: 10
Crenshaw, Ben, buffalo grass experiment, November 1993: 10
Cultivated Sod Assoc. of NJ, address, December 1993: 11

D
Delaney Clause
and carcinogens, November 1993: 6—7
and Clinton administration, December 1993: 14
prohibiting carcinogens in food products, December 1993: 8
Supreme Court decision, December 1993: 8
diagnostic symptoms, foliar disease, November 1993: 15
Disposal of Hazardous Pesticides hotline, December 1993: 14
Doguet, David, buffalo grass experiment, November 1993: 10
Dollar Spot (Sclerotinia homoeocarpa), growth and temperature range, November 1993: 9
DOT (U.S. Department of Transportation), regulations on hazardous materials, December 1993: 9
Dreschlera, November 1993: 8
Dreschlera Leaf Spot (Dreschlera spp.), growth and temperature range, November 1993: 9
drought stress, distinguished from Summer Patch and Necrotic Ring Spot, November 1993: 6
DuPont
downsizing, November 1993: 14
fungicide, Benlate, attracting alligators, November 1993: 14

E
Eastern Regional Nurserymen's Assoc., address, December 1993: 11
Emerald View Turf Farm, buffalo grass experiment, November 1993: 10—11
Emergency Planning and Community Right-to-Know Act Information Hotline, December 1993: 14
resulting from chemical accident, December 1993: 8
state emergency plans, December 1993: 3
environmental groups, and pesticides, December 1993: 8
Environmental Protection Agency (EPA)
award to Florida for environmental action, December 1993: 2
certification and training process, December 1993: 12
1993 Subject Index

and Clinton-Gore administration, December 1993: 2
enforcement of regulations, December 1993: 2
guide to Toxic Substances Control Act, December 1993: 8
hearings on reduced pesticide initiative, December 1993: 14
informative materials, December 1993: 6
Lawn Care Initiative, December 1993: 7
Lawn Care Monitoring Initiative, December 1993: 2, De-
cember 1993: 6
off-road diesel standards, December 1993: 14
preventive strategies, toxic pollution, December 1993: 14
regional offices, December 1993: 14, December 1993: 15
replacing the Delaney Clause, November 1993: 6—7
Safe Water Drinking Hotline, December 1993: 14
Storm Water Hotline, December 1993: 14
survey of pesticides in wells, December 1993: 8
environmental regulations
cofactors of, December 1993: 3
conflicts concerning standards, December 1993: 8
conformance of local ordinances, December 1993: 5
controversies, December 1993: 1
Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), December 1993: 3
impact on product availability, December 1993: 5
limits on development, December 1993: 3
and related trends, December 1993: 13
trends in violations, December 1993: 6
and turf grass management, December 1993:
1—3
Environmental Steward Awards program, De-
cember 1993: 5
Erysiphe graminis (Powdery Mildew), growth
and temperature range, November 1993: 9

F
federal drinking water standard, November 1993: 7
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), December 1993: 3, December 1993: 9
fertilizer
and lawncare, November 1993: 7
tax on, December 1993: 14
FIFRA
See Federal Insecticide, Fungicide, and Ro-
denticide Act
fine fescue, and Necrotic Ring Spot, November 1993: 3
flocculation, components of, November 1993: 3
flooding
tolerance of buffalo grass, November 1993: 10
turf damage, November 1993: 10—12
Florida
bans on landfilling, December 1993: 6
EPA award for environmental action, December 1993: 2
foliar disease
diagnostic visual symptoms, November 1993: 15

and L. korrae infections, November 1993: 2
Food and Drug Administration (FDA), replacing the Delaney Clause, November 1993: 6—7
food products, and carcinogens, December 1993: 8
"frog eye" symptom, of L. korrae, November 1993: 2—3
Frye, Lance, sod crop, damaged by flood, November 1993: 12
fungicides
attracting alligators, November 1993: 14
and herbicide study, November 1993: 7
for Leptosphaeria korrae, November 1993: 5
Triamedifon (Bayleton), November 1993: 7

G
GAO (General Accounting Office) report, December 1993: 9
Georgia, pesticide posting law, December 1993: 6
Golf Course Builders Assoc.of America, address, December 1993: 10
Golf Course Superintendents Association of America, address, December 1993: 10
of N.J., address, December 1993: 11

Bentgrass
1993 Subject Index

of Northern California, address, December 1993: 12

government
environmental regulations, December 1993: 13
and local regulations, December 1993: 5
Gray Snow Mold (*Typhula* spp.), growth and temperature
range, November 1993: 9

**Great Flood of 1993**, November 1993: 10—12

**Grounds Management Assoc. Wisconsin, Inc.,** address,
December 1993: 11

growth and temperature ranges, pathogens, November 1993: 9

**H**

hazardous materials, transporting, December 1993: 9
hazardous waste generators, December 1993: 3
herbicide
and fungicide study, November 1993: 7
Mecoprop (MCPP), November 1993: 7
hemic acid, deficiency in Necrotic Ring Spot, November
1993: 3

Hurto, K.A., worker exposure study, November 1993: 15

**I**

ICI Americas Inc., Turf and Ornamental Depart-ment, on environmental regulations,
December 1993: 5

Illinois
bans on landfilling, December 1993: 6
bill SB 85, December 1993: 14
Illinois Landscape Contractors Assoc., address,
December 1993: 11
Illinois Turfgrass Foundation, Inc., address,
December 1993: 11
Independent Turf & Ornamental Distributors Assoc., address, December 1993: 10
Indiana, bans on landfilling, December 1993: 6
Indiana State Lawn Care Assoc., address, December 1993: 11

inspections
compared to violations by region, December
1993: 6

and compliance issues, December 1993: 4

and enforcements resulting in civil penalties,
December 1993: 6

Intermountain Grass Growers Assoc., address,
December 1993: 12

International Turfgrass Research Conference, report by Dr. M. Petrovic, November 1993: 7

Interstate Pro. Applicators Assoc., address,
December 1993: 12

Iowa
bans on landfilling, December 1993: 6
pre-emption bill, December 1993: 14
Iowa Turf Producers & Contractors, address,
December 1993: 11

irrigation, herbicide and fungicide study, November 1993: 7

**J**

Johnson, Steve, on reduced pesticide use initia-tive, December 1993: 14

K

Kansas State Horticultural Society, address, December 1993: 12

Kansas Turfgrass Foundation, address, December 1993: 12

Keener-Sensenig Landscaping, Inc., on inspections and compliance issues, December 1993: 4

Keeven, Ed, buffalo grass experiment, November 1993: 10—11

Kentucky bluegrass, and Necrotic Ring Spot, November 1993: 3

Kentucky Turfgrass Council, address, December 1993: 12

L

Laetisaria fuciformis (Red Thread), growth and temperature
range, November 1993: 9

landfill bans
starting dates for states, December 1993: 7

and yard waste, December 1993: 4—5, December 1993: 9

Landscape Contractors Assoc. MD-DC-VA, address, December 1993: 11

Bermudagrass
1993 Subject Index

Landscape Maintenance Assoc., Inc., address, December 1993: 10
Lawn Care Initiative, December 1993: 6, December 1993: 7
Lawn Care Monitoring Initiative, December 1993: 6
Lawn Service Assoc. of Michigan, address, December 1993: 12
lawn care business, December 1993: 2, December 1993: 6
Cornell University study, November 1993: 7
and fertilizer, November 1993: 7
violations found by state environmental agencies, December 1993: 6
The Lawn Institute, address, December 1993: 10
leaching, November 1993: 7
leaf disease, diagnosing, November 1993: 15
Leaf Spot, causes, November 1993: 8
Leptosphaeria korrae fungus causing Necrotic Ring Spot, November 1993: 1
"frog eye" symptom, November 1993: 2—3
growth and temperature range, November 1993: 9
onset and progression, November 1993: 4
range and critical environmental factors, November 1993: 3 1993: 6
symptoms, November 1993: 2—3
visible damage, November 1993: 4
Leptospora korrae fungus, defined, November 1993: 6
"Liability Crunch" of mid-1980's, December 1993: 5
local regulations, for pesticides, December 1993: 5

M
Magnaporthae poae (Summer Patch), growth and temperature range, November 1993: 9
Maine, bans on landfilling, December 1993: 6
manufacturers, trends, December 1993: 13
Maryland
bans on landfilling, December 1993: 6
pre-emption bill, December 1993: 14
Maryland Nurserymen's Assoc., address, December 1993: 11
Maryland Turfgrass Council Inc., address, December 1993: 11
Massachusetts, bans on landfilling, December 1993: 6
Massachusetts Nurserymen's Assoc., address, December 1993: 11
Massachusetts Turf & Lawngrass Assoc., address, December 1993: 11
Mecoprop (MCPP) herbicide, November 1993: 7
media and public opinion, trends, December 1993: 13
methyl isocyanate, December 1993: 8
Michigan
bans on landfilling, December 1993: 6
pre-emption bill, December 1993: 14
Michigan Nursery & Landscape Assoc., address, December 1993: 12
Michigan Recreation & Park Assoc., address, December 1993: 12
Michigan Turfgrass Foundation, address, December 1993: 12
Microdochium nivale (Pink Snow Mold), growth and temperature range, November 1993: 9
1993 Subject Index

micro-environment, defined, November 1993: 6
mid-Atlantic region, organizations in, December 1993: 11
Midwest flood, November 1993: 10—12
Midwest region, organizations in, December 1993: 11—12
Midwest Regional Turf Foundation, address, December 1993: 12
Minnesota, bans on landfilling, December 1993: 6
Minnesota Turf Assoc., address, December 1993: 12
Mississippi Delta farmland, November 1993: 12
Missouri, bans on landfilling, December 1993: 6
Missouri Assoc. of Nurserymen and Western Assoc. of Nurserymen, address, December 1993: 12
Missouri Park & Recreation Assoc., address, December 1993: 12
Missouri Valley Turfgrass Assoc., address, December 1993: 12
mycelium, defined, November 1993: 6

N
N. Calif. Turfgrass Council, address, December 1993: 12
NAS (National Academy of Science) report, December 1993: 14
Nassau Suffolk Landscape Gardeners Assoc., address, December 1993: 11
National Academy of Science (NAS) report, December 1993: 14
National Assoc. Industrial & Office Parks, address, December 1993: 10
National Audubon Society, December 1993: 9
National Catholic Cemetery Conference, address, December 1993: 10
National Golf Foundation networking with other industry groups, December 1993: 5
recommendation for information clearing house, December 1993: 5
report on wetland concerns, December 1993: 3
study on environmental issues, December 1993: 2
National Institute Park & Grounds Management, address, December 1993: 10
national organizations, list of, December 1993: 10
National Pesticides Telecommunications Network, December 1993: 14
National Roadside Vegetation Management Assoc., address, December 1993: 10
National Survey of Pesticides in Drinking Water Wells, December 1993: 8
Nebraska
bans on landfilling, December 1993: 6
pre-emption bill, December 1993: 14
Nebraska Assoc. of Nurserymen, address, December 1993: 12
Necrotic Ring Spot (*Leptosphaeria korrae*) caused by *Leptosphaeria korrae* fungus, November 1993: 1
chemical controls, November 1993: 5
compared to foliar diseases, November 1993: 4

compared to Pythium root rot, November 1993: 4
cultural practices, November 1993: 5
diagnosis, November 1993: 6
"frog eye" symptom, November 1993: 2, November 1993: 6
growth and temperature range, November 1993: 9
preventive program for, November 1993: 5
reducing damage from, November 1993: 5
role of site usage in, November 1993: 5
susceptible species, November 1993: 3
symptoms, November 1993: 1—3, November 1993: 3

Buffalograss
1993 Subject Index

treatment with Rubigan systemic fungicide, November 1993: 4
New England Cemetery Assoc., address, December 1993: 11
New England Park Assoc., address, December 1993: 11
New Jersey
  bans on landfilling, December 1993: 6
  environmental regulatory actions, December 1993: 2
New York State Turfgrass Assoc., address, December 1993: 11
New York Turf & Landscape Assoc., Inc., address, December 1993: 11
nitrate ground water contamination, November 1993: 7
N.J. Turfgrass Assoc., address, December 1993: 11
non-point run-off, defined, December 1993: 9
North Carolina, bans on landfilling, December 1993: 6
North Central Turf Grass Assoc., address, December 1993: 12
North Dakota, pre-emption bill, December 1993: 14
North Dakota Nurserymen’s Assoc., address, December 1993: 12
northeast region, organizations in, December 1993: 11
Notification Control and Application Act, December 1993: 3

O
Occupational Safety and Health Administration (OSHA)
  case on workplace chemicals, December 1993: 8
  restrictions, December 1993: 9
Office of Pesticide Programs, December 1993: 14
off-road diesel, December 1993: 14
Ohio, bans on landfilling, December 1993: 6
Ohio Nurserymen’s Assoc., address, December 1993: 12
Ohio Turfgrass Foundation, address, December 1993: 12
pre-emption laws, December 1993: 9
organizations
  mid-Atlantic region, December 1993: 11
  mid-west region, December 1993: 11—12
  national, December 1993: 10
  northeast region, December 1993: 11
  western region, December 1993: 12
OSHA
  See Occupational Safety and Health Administration

P
Patch disease, symptoms, November 1993: 2
pathogens, growth and temperature ranges, November 1993: 9
Pennsylvania
  bans on landfilling, December 1993: 6
  environmental regulatory actions, December 1993: 2
Pennsylvania Nurserymen’s Assoc., address, December 1993: 11
Pennsylvania Turfgrass Council, address, December 1993: 11
personal protective equipment (P.P.E.), December 1993: 9
Pesticide Safety Improvement Act (HR 3742), December 1993: 9
pesticides
  Disposal of Hazardous Pesticides hotline, December 1993: 14
  educators group, December 1993: 12
  and environmental groups, December 1993: 8
  granular, and risks to birds, December 1993: 8
  leaching problems, November 1993: 7
  local regulations, December 1993: 5

National Pesticides Telecommunications Network, December 1993: 14
posting law, December 1993: 6
reduced initiatives, December 1993: 14
residues of liquid and granular formulations, November 1993: 15
safety data on, December 1993: 9
tax on, December 1993: 14
worker exposure study, November 1993: 15
WPS labels, December 1993: 3
Petrovic, Martin
Cornell University lawncare study, November 1993: 7
study on water supply hazards, December 1993: 2
Petta, James, on environmental regulations, December 1993: 5
PGMS (Professional Grounds Management Society), address,
December 1993: 10
Pink Snow Mold (Microdochium nivale), growth and temperature range, November 1993: 9
Pinnacle Worldwide of Minneapolis, Minnesota, December 1993: 8
PLCAA (Professional Lawncare Assoc. of America), address,
December 1993: 10
PLCAA (Professional Lawncare Association of America),
December 1993: 4, December 1993: 5
Powdery Mildew (Erysiphe graminis), growth and temperature range, November 1993: 9
P.P.E. (personal protective equipment), December 1993: 9
pre-emption, defined, December 1993: 9
pre-emption bills, passed by states, December 1993: 14
President’s Council on Sustainable Development, December 1993: 2
processed foods, and the Delaney Clause, November 1993: 6—7
Professional Grounds Management Society (PGMS), address,
December 1993: 10
Professional Lawn Care Assoc. of Mid-America, address,
December 1993: 12
Professional Lawncare Assoc. of America (PLCAA)
address, December 1993: 10
Professional Lawncare Association of America (PLCAA)
“public comment” activities, December 1993: 5
recommendation on grass clippings, December 1993: 4
Public Golf Management Assoc., address, December 1993: 10
Puccinia spp. (Rusts), growth and temperature range, November 1993: 9
Pythium Blight (Pythium spp.)
diagnosed with temperature, November 1993: 8
growth and temperature range, November 1993: 9
Pythium root rot (Pythium spp.)
diagnosed with temperature, November 1993: 8
growth and temperature range, November 1993: 9
symptoms, November 1993: 2
R
RCRA (Resource Conservation and Recovery Act)
compliance with, December 1993: 4
Superfund hotline, December 1993: 14
for waste treatment and disposal, December 1993: 9
Red Thread (Laetisaria fuciformis), growth and temperature range, November 1993: 9
registrant, defined, December 1993: 9
regulatory issues
ban on landscape equipment, December 1993: 14
Clean Water Act, revised, December 1993: 3
Emergency Planning & Community Right to Know Act,
December 1993: 3
Occupational Health and Safety Administration (OSHA),
December 1993: 9
off-road diesel standard, December 1993: 14
Pesticide Safety Improvement Act (HR 3742), December 1993: 9
pre-emption bills passed by states, December 1993: 14
1993 Subject Index

reduced pesticide use initiative, December 1993: 14
Resource Conservation & Recovery Act (RCRA), December 1993: 9
Safe Drinking Water Act, December 1993: 3
tax on pesticides and fertilizers, December 1993: 14
U.S. Army Corps of Engineers, December 1993: 9
U.S. Department of Transportation (DOT), December 1993: 9
Water Pollution Prevention and Control Act of 1993, December 1993: 14
wetlands policy, December 1993: 14
R.E.I. (Restricted Entry Interval), defined, December 1993: 9
research trends, December 1993: 13
Resource Conservation and Recovery Act (RCRA) compliance with, December 1993: 4
Superfund hotline, December 1993: 14
for waste treatment and disposal, December 1993: 9
Responsible Industry for a Sound Environment (RISE) address, December 1993: 10
support of re-registration requirements, December 1993: 9
Ressler, Dana, on inspections and compliance issues, December 1993: 4
Restricted Entry Interval (R.E.I.), defined, December 1993: 9
Rhizoctonia, causing Brown Patch and Yellow Patch, November 1993: 8
Rhizoctonia cerealis (Yellow Patch), growth and temperature range, November 1993: 9
Rhizoctonia spp. (Brown Patch), growth and temperature range, November 1993: 9
rhizomes, with “child plants,” November 1993: 2
RISE (Responsible Industry for a Safe Environment) address, December 1993: 10
RISE (Responsible Industry for a Sound Environment) support of re-registration requirement, December 1993: 9
risk management, December 1993: 13
river flooding, turf damage, November 1993: 10
Roger Schroeder Sod Farm, buffalo grass experiment, November 1993: 12
roll over protection standard (ROPS), defined, December 1993: 9
root disease, diagnosing, November 1993: 15
root-damaging diseases chronic infection, November 1993: 1—2
compared to foliar diseases, November 1993: 1
symptoms, November 1993: 1
ROPS (roll over protection standard), defined, December 1993: 9
Rubigan systemic fungicide, for Necrotic Ring Spot, November 1993: 4
Rusts (Puccinia spp.), growth and temperature range, November 1993: 9
ryegrass, and Necrotic Ring Spot, November 1993: 3

S
Safe Drinking Water Act, December 1993: 3
Safe Water Drinking Hotline, December 1993: 14
Schroeder, Roger and Linda, buffalo grass experiment, November 1993: 12
Sclerotinia homoeocarpa (Dollar Spot), growth and temperature range, November 1993: 9
sensitives, defined, December 1993: 9
septic system, November 1993: 7
Seven Cities Sod Development, sod crop, damaged by flood, November 1993: 12
sod crop, damaged by flood, November 1993: 12
South Carolina, bans on landfilling, December 1993: 6
South Dakota, bans on landfilling, December 1993: 6
Sports Turf Managers Assoc., address, December 1993: 10
spp, defined, November 1993: 6
spring dead spot, defined, November 1993: 6
Storm Water Hotline, December 1993: 14
Stripped Smut (Ustilago spp.), growth and temperature range, November 1993: 9
Sudds, Gary, HB 2199, December 1993: 14
Summer Patch (Magnaporthe poae) causes, November 1993: 8
growth and temperature range, November 1993: 9
Supreme Court, on the Delaney Clause, December 1993: 8

T
tall fescue, and Necrotic Ring Spot, November 1993: 3
temperature
diagnosing Pythium root rot or Pythium Blight, November 1993: 8
1993 Subject Index

differentiating between Summer Patch and Necrotic Ring Spot, November 1993: 8
and “site specific” weather conditions, November 1993: 8
as a turf diagnostic tool, November 1993: 8
Tennessee Nurseriesmen’s Assoc., address, December 1993: 12
Tennessee Turfgrass Assoc., address, December 1993: 12
thatch, and L. korrae infections, November 1993: 2
Tidewater Turfgrass Assoc., address, December 1993: 11
Transportation, U.S. Department of (DOT) regulations on hazardous materials, December 1993: 9
Truegreen/Chemlawn worker exposure study, November 1993: 15
T.S.C.A. See Toxic Substances Control Act
Turf & Landscape Council, address, December 1993: 12
turf, nursery, landscaping, and facilities management organizations, December 1993: 11—12
turfgrass management operations, trends, December 1993: 13
Turf Grass Trends, changes in, November 1993: 13
turfgrass Council of North Carolina, address, December 1993: 11
Typhula spp. (Gray Snow Mold), growth and temperature range, November 1993: 9

U
Union Carbide, accident in Bhopal, India, December 1993: 8
United States Golf Assoc. (USGA), address, December 1993: 10
urea formaldehyde, November 1993: 7
urea products, November 1993: 7
U.S. Army Corps of Engineers, wetland protection permits, December 1993: 9
U.S. Department of Transportation (DOT), regulations on hazardous materials, December 1993: 9
U.S. Dept. of Agriculture, replacing the Delaney Clause, November 1993: 6—7

V
Virginia Nurseriesmen’s Assoc., Inc., address, December 1993: 11
Virginia Polytechnic Institute (V.P.I.), tests of rooting compounds, November 1993: 5
Virginia Turfgrass Assoc., address, December 1993: 11
Virginia Turfgrass Council, address, December 1993: 11

W
Washington St. Nursery & Landscape Assoc., address, December 1993: 12
waste treatment and disposal, fines for, December 1993: 9
water allocation, December 1993: 4
Water Pollution Prevention and Control Act of 1993, December 1993: 14
Water Quality Monitoring Council, December 1993: 14
water supply hazards, study by Cornell University, December 1993: 2
West Virginia, bans on landfilling, December 1993: 6
western region, organizations in, December 1993: 12
wetland policy, December 1993: 14
protection permits, December 1993: 9
Wisconsin
bans on landfilling, December 1993: 6
pre-emption bill, December 1993: 14
Wisconsin Turfgrass Assoc., address, December 1993: 12
worker exposure study, November 1993: 15
Worker Protection Standard (WPS), December 1993: 3
community right-to-know issues, December 1993: 6
defined, December 1993: 9
labels, for pesticides, December 1993: 3
and pesticide educators group, December 1993: 12
workplace chemicals, OSHA case, December 1993: 8
WPS
See Worker Protection Standard

Y
yard waste
and landfill bans, December 1993: 9
state bans, December 1993: 6
state efforts, December 1993: 4
Yeary, R.A., worker exposure study, November 1993: 15
Yellow Patch (Rizoctonia cerealis)
cause, November 1993: 8
growth and temperature range, November 1993: 9
The indexes

Tools of the trade

by Juergen Haber

As the future rolls toward us, we find that information is a tool that can supplant real tools. If we have the right information, we may not find it necessary to go out and take that shovel to dig that hole.

Naturally, we at *Turf Grass Trends* tend to be a little biased about information since we’re in the information business. We’ve been in the information business since 1992 and we’ve accumulated quite a bit of useful information up until now. At the 1994 Green Industry Expo, held in St. Louis in November, we met a number of subscribers and the refrain seemed to be that many used *Turf Grass Trends* as a reference tool. We ask our printer to punch it for a three-ring binder and the back issues order chart on the opposite page offers an attractive binder that will hold more than a year’s worth of issues of *Turf Grass Trends*. The readers we met at the Expo verified our ideas: they do use it as a reference tool.

Organizing information in print in a traditional way means presenting it as an index. We decided that a cumulative articles index was one way to do that. It appeared in the October issue.

We’ve also presented the 1992 subject index in the December issue. In this issue we’re presenting the complete 1993 subject index.

Since 1994 was the first year in which we published every month, the 1994 index in necessarily much longer. We hope to be able to give our readers the 1994 subject index in the February and March issues.

Compost continued from page 1

accomplished the plants that make up the vegetative portion of the marshes can remove many of the heavy metal and mineral contaminants prior to the water being released, ultimately to end up in the Chesapeake Bay.

Contaminated soil is cleaned with compost

In a demonstration project for the government, contaminated soils that were excavated from the areas around leaking underground petroleum tanks are mixed with uncontaminated soils from the same site and the mixture is then built into compost piles using spent compost. The spent compost is used as a bulking agent as well as a reservoir of carbon eating microbial populations. Once the soils have been properly composted the remaining product in an excellent uncontaminated soil mixture.

Up until recently, the contaminated soil from leaking underground tanks was either trucked to a hazardous waste landfill or if it was too contaminated it was allowed to sit on-site, while the majority of the petroleum compounds volatilize into the atmosphere with the remainder hopefully subject to decomposition by native microbes. But because the contaminated soils are predominantly very dense subsoils with few native microbial flora or fauna, this technique has been hit or miss at best.

This new procedure takes advantage of the extensive knowledge on composting that these providers have developed over the years of supplying a precise compost to agriculture. The spent agricultural compost is consistent in quality and biological activity, predictable in its response to varying levels of contamination, and available in sufficient supplies that the process hold out an excellent chance of providing an inexpensive cure for the hundreds of thousands of leaking underground tanks that are a ticking time bomb for our groundwater and surface drinking water supplies.

Revolution continued from page 3

Three years ago, one would have been lucky if one could find more than one producer or supplier pushing biological or bio-rational pesticides. Today it seems like just about every major player or supplier is either working on or is marketing at least one new bio-based product or product line.

Many of the front-line producers of bio-based materials of three years ago have larger displays with many more people gathered around. These same producers are introducing second and third generation bio-based materials that offer increased efficacy over their previous products or are headed into new and promising directions.

The message is loud and clear

The message is loud and clear for those of us that may not have been paying attention these last three years. The revolution is on. The new products are here. This new direction is just the first of many steps in a journey that will take the turfgrass management industry through a generational change. Twenty years from now the industry will have changed so much that we won’t even recognize it.
How to profit from the past

Turf Grass Trends Back Issues

Did you join the Turf Grass Trends team recently?

Could you benefit from issues you don’t have?

In the October issue is an index of the articles and their authors of all the back issues of Turf Grass Trends that have been published. The back issues are available. Just write the number of copies you want on the form below (photocopy this page so your issue remains intact), return the entire page with your check and we’ll rush your issues to you. Don’t forget to order one or more handy Turf Grass Trends binders for an extra $5.00 each. Now is also a convenient opportunity to extend your subscription for an extra year for $120.00.

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