What can a hole in the ground do?

When your grounds become hard-packed from constant use and temperature changes, or if the ground is naturally hard, grass has a tough time growing.

The answer is aeration.

These holes allow air, water and fertilizer to penetrate to the root zone where they’re needed. They relieve compaction, giving grass room to grow. New, more drought-resistant roots are stimulated. And the turf takes on a springy, soft feel.

Ryan makes two pieces of equipment specifically for aeration of parks, athletic fields, playgrounds, golf course fairways, or any large turf area.

The Ryan Renovaire® is designed to contour aerate compacted turf on hilly as well as flat areas. Its 12 tine wheels are mounted in pairs, operating independently to give both high and low spots equal penetration.

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Both the Renovaire and the Tracaire can be equipped with coring, slicing or open spoon tines for aerating all types of soil in all seasons. Both can be used with a 12-foot-wide dragmat to break-up cores and groom the grass. And both are built to last, like all Ryan equipment.

Give your large turf areas room to breathe with the Ryan Renovaire and Tracaire aerators. You’ll see the green, healthy difference a few simple holes can make.

Write for your free Ryan catalog today.

Ryan Aerators.
The turfman’s timesaver.
Disease Stresses of Urban Trees 16
City trees not only have to deal with natural hazards, but man's alterations of nature also.

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The historic Wye Oak was appraised under new standard guidelines.

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The biggest breakthrough in the greening of America began in 1970. That's when turfgrass specialists at Pennsylvania State University completed development of a remarkable fine-leafed perennial ryegrass with all the advantages of ryegrass. And none of the drawbacks. They called it Pennfine.

Now, just six years later, the success of their undertaking is evident. On golf courses and athletic fields. In parks and cemeteries. And on public grounds across the country.

**Proven in tests.** Among the nine perennial ryegrasses tested over a five-year period at University Park, Pennsylvania, Pennfine ranked finest in texture. Most resistant to disease. First in density and decumbency (low growth).

The University Park test results were only the beginning. Over 5,000 test kits with seed samples were distributed over the entire country in answer to requests from turf professionals wanting to test Pennfine. The results confirmed the University Park findings.

Most importantly, Pennfine established a new standard of mowability. Some other perennial ryegrasses, cut with the same mower, left ragged, fibrous tops that quickly turned brown. Pennfine’s softer fibers cut smooth and clean.

**Proven from coast to coast, from North to South.** Pennfine’s durable beauty has been demonstrated at prestigious sites all over America. From the lawns at an historic national landmark to the greens at a nationally-renowned golf course.

Besides possessing the ability to stand up under heavy traffic, Pennfine germinates rapidly. That makes it ideal for winter overseeding in the South. And, its non-competitiveness allows a smooth spring transition to bermudagrass.

**Proven quality control under the Plant Variety Protection Act.** You can be sure that all Pennfine Perennial Ryegrass meets the same high standards, because Pennfine is covered by the Plant Variety Protection Act. That means every pound of Pennfine is certified. You are assured, by law, that it’s produced exactly as intended by the original variety breeder.

**Prove it to yourself.** To learn more about how Pennfine is changing the face of America—and how it can work for you—write: Pennfine, P.O. Box 923, Minneapolis, MN 55440.

![Pennfine Perennial Ryegrass Logo]

The best thing growing.

Circle 133 on free information card
Hello Green Industries

For nearly four years I've been behind the scenes at Harvest waiting for the opportunity to be your editor. Now that it has become reality, I feel grateful to Harvest and challenged by your needs.

In the coming year, I have four chief goals:
First, to involve as many readers as possible in the magazine. I plan to arrange question and answer columns with knowledgeable experts in your field. The letters section will be enlarged to fit opinions from more readers than in the past. I hope to create a board of industry advisors to help direct the magazine.

To direct the magazine's content toward the primary industry sectors is the second goal. Ron Morris and I have outlined four primary subject matter areas to cover every month, not just in special issues. These are, as the magazine's name signifies, weeds, trees, and turf, plus increased emphasis on landscaping and rights of way.

To make the magazine graphically more functional is the third objective. Beginning with the January 1978 issue, WEEDS TREES & TURF will look different. The information you need will be easier to find, easier to read, and more pleasing to the eye. You will be able to catch quickly the information most important to you at the time, and then go back for more thorough coverage when you have time.

The fourth goal is to bridge the technical/layman gap. It is my contention that the people who have the most significant information to pass on, are often not the easiest people to understand, primarily because their work is disguised in scientific jargon and poorly explained statistics. There is middle ground and I intend to find it.

This takes cooperation from both sides. It's not easy to ask a researcher to write in lay terms. From his bachelor's degree on, he (or she) was taught to write in big, multisyllabic words with latin names scattered throughout. As editor of Pest Control magazine, I discovered that it can be done, without sacrificing a reference image, which business publications in technical fields must have.

In addition, there will be other improvements, such as a steady supply of how-to-material for training purposes; industry data to point out trends; and news from industry sectors, regions, and organizations.

As you can see, Ron and I have a lot to do. It's not easy to make a good magazine even better. We would appreciate any comments or suggestions from you. After all, it is your magazine.

Bruce F. Shank, Editor
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State Certification

Maine and Utah applicator certification plans have been given "full approvals" by the EPA, according to notices published in the August 31 Federal Register. Colorado, Massachusetts and Nebraska are now the only states without an EPA approved certification program.

The notice on the Maine plan stated that the only comments on it were filed by the National Canners Association, and that the State's responses to the comments were satisfactory to EPA.

"Grandfather Clause"

The proposed Federal applicator certification rule, titled "Federal Certification of Pesticide Applicators in States or on Indian Reservations without an EPA-Approved Certification Plan", has a "grandfather clause" which would permit the EPA to "issue a certificate to an individual possessing any other valid Federal, State, or Tribal certificate without further demonstration of competency."

Under the proposal, commercial applicators would be certified by passing written examinations; be recertified every two years; keep and maintain records on use and application of restricted pesticides for at least two years and make the records available for inspection and copying by EPA representatives.

Record Requirements

The commercial applicator record-keeping requirements include:

"(a) name and address of the person for whom the pesticide was applied; (b) location of pesticide application; (c) target pest(s); (d) specific crop, commodity, and site to which the pesticide was applied; (e) year, month, day, and time of application; (f) trade name and EPA registration number of pesticide applied; (g) amount and concentration in pounds or gallons per unit or percentages of active ingredient per unit of the pesticides used; (h) types and amounts of pesticides disposed, methods of disposal, date(s) of disposal, and location of disposal sites; and (i) other information as the Administrator may deem appropriate."

Heptachlor/Chlordane

The National Cancer Institute (NCI) has concluded, in its final validated report, that in separate bioassays of chlordane and heptachlor, mice receiving either compound in feed responded with significant incidences of liver cancer, but that rats given either compound did not have liver cancer increases that could be related to the chemicals. The final NCI results also showed that both chlordane and heptachlor were possible causes of thyroid tumors in rats, although that report cautioned that this evidence was not conclusive.
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7. Industrial Parks
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9. Hospitals, Nursing Homes, Schools, Colleges and Universities (Grounds maintenance personnel only)
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