

— meeting dates —

Golf Course Superintendents Association of America, 44th annual International Turfgrass Conference and Show, Boston, Mass., Jan. 7-12.

New York State Arborists Convention, Annual, Nevele Country Club, Ellenville, N.Y., Jan. 14-17.

Georgia Plant Food Educational Society, annual meeting, Rural Development Center, Tifton, Ga., Jan. 15-16.

California Weed Conference, 25th annual, Disneyland Hotel, Anaheim, Calif., Jan. 15-17.

Michigan Turfgrass Conference, 43rd annual, Kellogg Center, Michigan State University, E. Lansing, Mich., Jan. 16-17.

Southern Weed Science Society, 26th annual meeting, Jung Hotel, New Orleans, La., Jan. 16-18.

Ohio Chapter, International Shade Tree Conference, annual meeting, Sheraton-Columbus Hotel, Columbus, Ohio, Jan. 21-25.

Colorado Farm Show, Greeley, Colo., Jan. 22-24.

Allied Horticultural Trades Congress, including the Nursery Sod Growers Assoc., Ontario Nursery Trades Assoc., Ontario Landscape Contractors Assoc., Ontario Garden Maintenance and Landscaping Association, Inc., Skyline Hotel, Toronto, Ontario, Can., Jan. 22-24.

Associated Landscape Contractors of America, 11th annual meeting and trade exhibit, Doral Country Club and Hotel, Miami, Fla., Jan. 22-26.

University of Tennessee, one week Winter Short Course in Turf Management, West Tennessee Experiment Station, Jackson, Tenn., Jan. 22-26.

Midwest Turfgrass Growers Association Meeting, Holiday Inn, I-29 and Arapahoe Rd., Denver, Colo. Jan. 24.

Rocky Mountain Regional Turfgrass Conference, 19th annual, Colorado State University, Fort Collins, Colorado, Jan. 25-26.

Penn-Del Chapter, International Shade Tree Conference, annual meeting, Marriott Motel, Philadelphia, Pa., Jan. 25-26.

Annual Winter Seminar for Commercial Arborists, O'Hare Concord, Rosemont, Ill., Jan. 30.

Virginia Turfgrass Conference, Sheraton Motor Lodge, Fredericksburg, Va., Jan. 30-31.

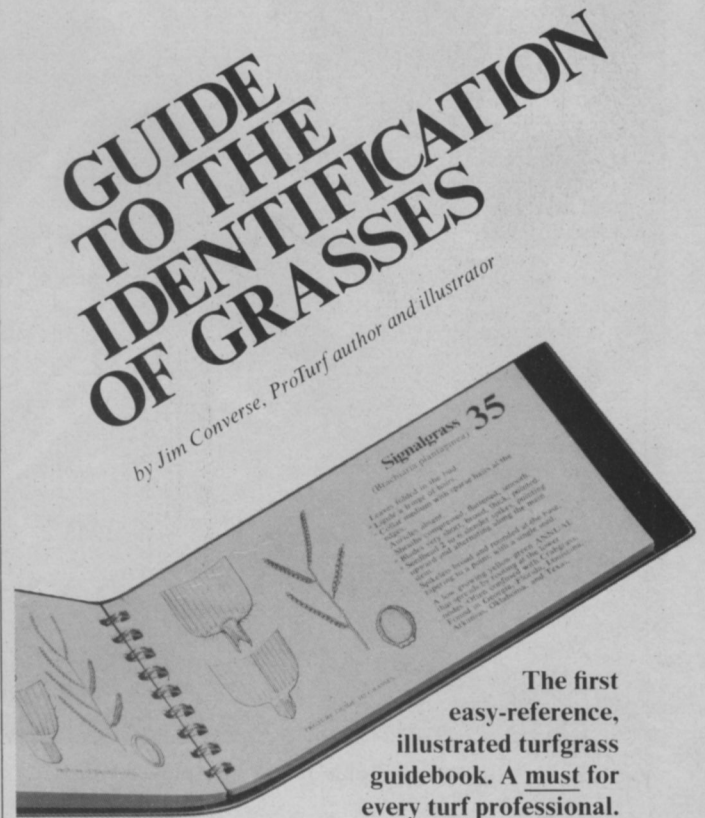
Northwest Agricultural Show and Education Meeting, Portland Coliseum, Jan. 30-31, Feb. 1.

Tennessee Turfgrass Association, annual conference, Roger Millers King of the Road Motor Hotel, Nashville, Tenn., Feb. 5-6.

Midwestern Chapter, International Shade Tree Conference, annual meeting, Holiday Inn, 1926 W. Wisconsin Ave., Milwaukee, Wisc., Feb. 6-8.

Northern California Turfgrass & Environmental Landscape Exposition, 9th annual, Hall of Flowers, San Mateo County Fairgrounds, San Mateo, Calif., Feb. 7-8.

Golf Course Superintendents, Mid-Atlantic Association, annual conference, Lord Baltimore Hotel, Baltimore, Md., Feb. 12-13.



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Cable is fed into plow blade.



Operator breaks up rocks in first pass.

He Plows A Path For Safety

WHETHER you are an amateur or a professional skier, chances are you may be a good deal safer on the slopes this winter. Especially if you ski at Winter Park about 70 miles from Denver, Colorado.

Dave Shelton, director of slope maintenance at Winter Park, has been busy during the "off season" making sure the view is prettier and the telephone service improved. He's been installing underground cable for telephone and electric service and for ski lift communications and operations.

"Being a recreation area, the ecology aspect of it is extremely important to us," he says. "I don't want to under-emphasize that. But service is important, too. Our season runs from around Thanksgiving to mid-April. Interrupted service is very costly. At times we have high winds here and when lines are overhead, there's always the danger they'll snap."

Winter Park is operated by the Winter Park Recreation Association, an agency for the Denver city and county governments. The association

operates 34 trails, 7 chair lifts and 2 high speed T bars.

"For us, the ski lift lines are perhaps the most important," says Shelton. Ski lift communications and operations lines go underground. We can operate the lift from the top, while all the equipment that powers it is below. The lines are installed from tower to tower.

Winter Park now uses its own 65-horsepower R65 Ditch Witch trencher with vibratory plow attachment. Before buying Ditch Witch, Shelton says a large, tracked diesel vehicle with a cable-laying ripper was employed. But the vehicle proved cumbersome. Costs were too high. It had to be hauled on a truck. And the machine was difficult to maneuver into position.

Ditch Witch is a four-wheel drive vehicle. It can be driven along the mountain roads and across the rugged terrain. And speaking of terrain, the Rockies are indeed rocky. As the pictures show, it's really the man-made elements against the natural elements.

Crews at Winter Park have done

all the work in burying the underground lines. This involved three separate telephone systems and a ski lift communication and operations lines. This includes a race telephone system for use in ski competition, an emergency telephone system for the Ski Patrol and the mountain telephone system for regular telephone service. That comes to about 41,000 feet of ski lift cable and another 28,750 feet of telephone lines. Cable sizes range from 1 pair to 50-pair.

Shelton says they rented equipment the summer of 1970 and have found that the Ditch Witch saved enough in the first summer's operation to pay for itself.

His crew makes one pass along the cable route with the plow in the ground, but without the cable, to break up the rock. A second pass is made to install the cable. This is done to prevent damaging the cable as it is installed.

Shelton concludes that this two-step operation is still less expensive than the original system. In fact, he claims, it's faster and frees the more expensive equipment for other jobs.

Question: How do you clear a right-of-way adjacent to herbicide-sensitive crops and ornamentals?

Answer: Very, very carefully.

It's a tough job clearing weeds and brush that infest roadsides and utility rights-of-way. Doubly so since you have to protect bordering private property at the same time.

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the equipment is not at all prohibitive.

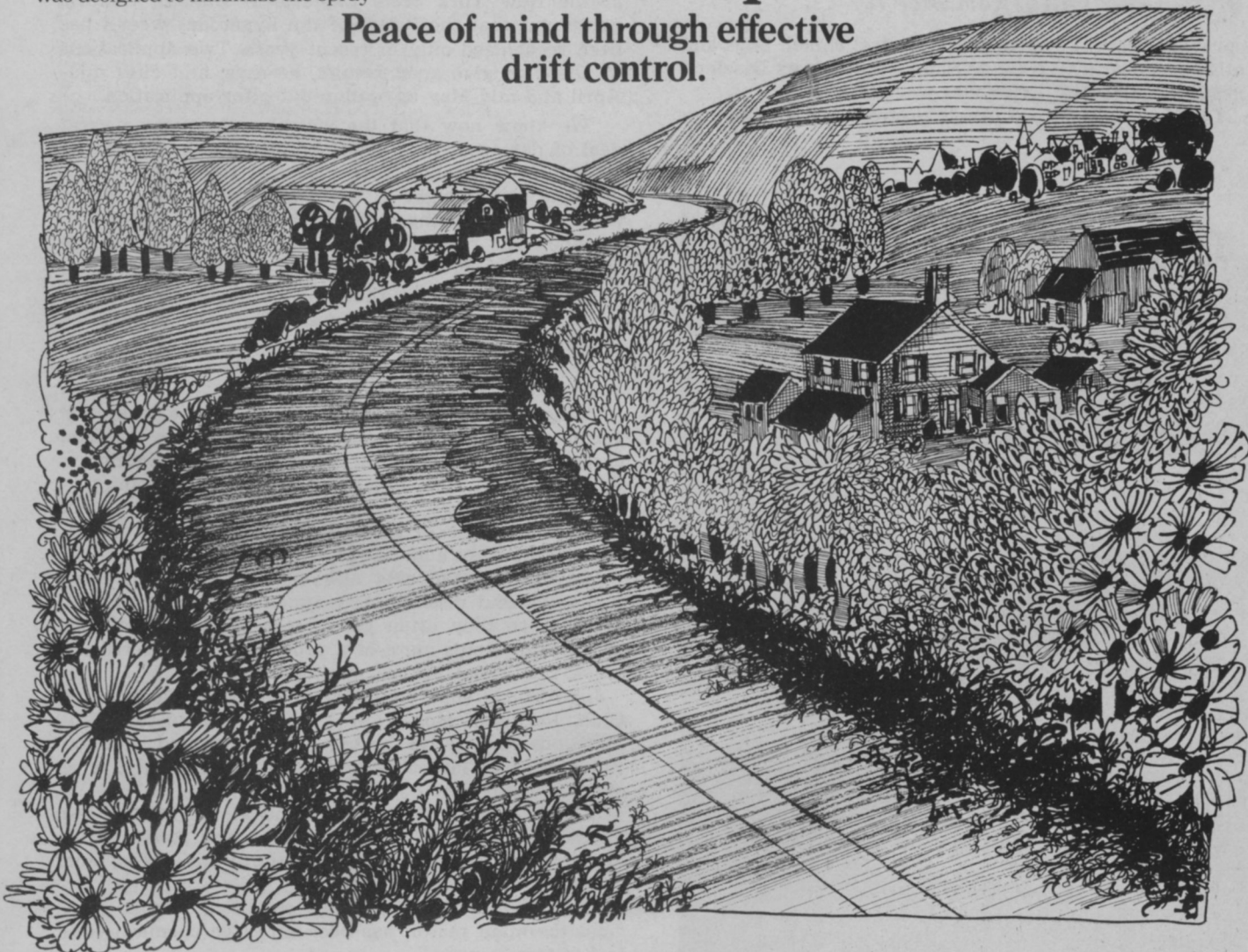
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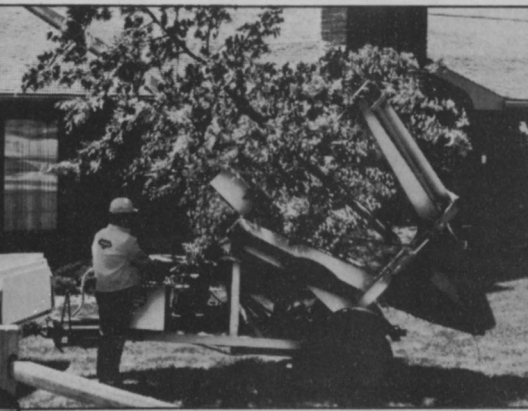


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WEEVIL WORRIES (from page 18)

sprayed on every two weeks to control chinch bugs and other problem insects while Santoianni prefers Diazinon granules to control hyperodes weevils.

Dr. Haruo Tashiro, Cornell professor of entomology



John Roma manages the course for Harbor Hills Country Club, Port Jefferson, N.Y. He keeps turf pests in check with Diazinon. Note the healthy stand of turf on this fairway. Effective chemical control of insects takes much of the worry out of the job.

at the New York State Experiment Station, Geneva, points out that the threat of the hyperodes weevil has been recognized only in recent years. Two applications of Diazinon give good results, he says, and cites mid-April and mid-May as optimum dates for application.

"We know now that the weevil pest causes a great deal of damage," Dr. Tashiro comments, "but it can be effectively controlled with chemical treatments. Much of what was thought to be damage from hot summer weather is now being blamed on the hyperodes weevil. Diazinon has recently been labelled in New York for control of the problem," he adds.

The larval stage is the time to get control of the weevils, superintendents agree. The pest should be killed while still in the first eating stage. Control is more difficult if weevils are left alone beyond that stage.

Cornell research indicates there is one complete spring generation of hyperodes weevil and in some cases at least a second partial late summer generation. Eggs are first laid in April and May, developing to adults in about two months, from as early as late April to late June. Eggs of the second generation are usually laid during July and August.

Many superintendents also agree that aprons need just as careful insecticide treatments as the greens receive, since they often get almost as much fertilizer. The weevil seems more of a problem on well-fertilized areas, they point out.

John Roma, superintendent of Harbor Hills Country Club, Port Jefferson, New York, has found later applications seem to do the best job. He applied Diazinon twice, first in late May and again in late July, once weather turns dry.

A wide variety of grass is found at this course, but *Poa annua* is there, too. Roma says he's found liquid and granular Diazinon serve most of his needs; and chlordane is employed as well.

"This course is in excellent condition," Roma says, "and the main reason has been effective chemical control of insects pests."

Other problems exist in this area, too, he says. Chinch bugs have been his primary worry aside from weevils. Cutworms and June bugs also present problems, but chemical control is usually good on these pests.



Author (r) discusses Kingstown Velvet Bentgrass performance at Melody Hill Golf Course with Charles Mandeville, course superintendent. Golfers find the turfgrass especially true for those critical putts.

VELVET BENTGRASS (from page 20)

As with any golf green bentgrass, Kingstown should be mowed frequently, at least every other day at the height of the growing season. Mowing is customarily 3/16-1/4 inch tall for golf greens, a bit taller for lawns.

The grass should receive moderate, steady fertilization such as with slow-release ureaform products. A complete fertilizer containing about a half pound of nitrogen is suggested each few weeks, totaling three or four pounds of nitrogen annually. Light liming may help with thatch breakdown, but be careful to hold pH well on the acid side.

MANAGEMENT PRACTICES

Disease and pest damage is apt to be superficial, but precautionary fungicidal sprayings should be undertaken with Kingstown the same as with any high quality golf green turf. Recommended rates should be carefully observed in applying chemicals to control disease.

Thatch is controllable by the usual practices or aerification, moderate fertilization and top-dressing (top-dress lightly and work the material into the grass, not always easy with so tight a turf).

Irrigation will be required if rainfall is not sufficient to supply about an inch of moisture each week during the growing season.

Melody Hill Golf Course, Harmony, Rhode Island, (pictured in the accompanying photographs) affords a specific case history of the

use of Kingstown velvet bentgrass.

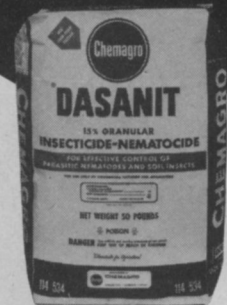
Melody Hill greens were seeded to Kingstown six years ago, and have proven eminently satisfactory. When time for Melody Hill expansion arrived, Charles Mandeville, owner and superintendent, insisted that the nine new greens be seeded to Kingstown. This was in spite of the more or less automatic inclusion of another bentgrass in architectural specifications.

Melody Hill greens are mowed at one-quarter inch three times weekly. They are aerified annually, in the autumn, and are lightly top-dressed, approximately on a monthly basis. Even in exceptionally dry summers the greens are watered only once per week. Fungicides are

This is the ninth hole at Melody Hill. Even from this distance, it's easy to see the outstanding putting surface. The uniform, fine-texture of Kingstown makes a turf that virtually free of graininess.



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applied only when disease is clearly a threat.

When visiting the Melody Hill golf course in August the greens were outstandingly beautiful. Mandeville assured us that this is the case most of the time. He concludes, "I highly recommend this greens grass — if you question its performance, ask the golfers — they will tell you how true the greens putt."



Tony Caranci, superintendent, Ledgemont Country Club.

TURF MANAGEMENT (from page 14)

added to the course. They are used to "screen out walking people and the skyline." These barriers also protect golfers from stray balls. Trees are also planted around greens to frame them for the benefit of the approaching golfer.

With an average of 30,000 rounds annually, the tees need to be large enough "to hold a good stand of turfgrass". Almost all tees have been reconstructed and made larger. They were seeded to good permanent strains of grass such as Merion Kentucky Bluegrass and fescue mixtures.

The irrigation system was already underway when Tony took over the Ledgemont course. An underground manual quick comping system, it was designed to handle the irrigation for tees, fairways, and greens.

The fairways had to be started from scratch to get rid of annual bluegrass *Poa annua*. And in his usual concern for the membership, Tony presented three plans, "One was to completely kill off all grasses and reseed. The second plan was to kill one-half of the fairway at a time and reseed, leaving the other half for play. The third plan was chosen which was to annually overseed

with permanent strains of grass seed. Fairways are now a balanced mixture of desirable bluegrasses and fescues.

Consulting the membership for guidance with long-range plans is still a part of the "Caranci management practices". For instance, this season one-half of the practice putting green has been seeded with Kingston Velvet Bent and the other half with Penncross Bent. The membership will now vote on which grass provides them the best putting surface.

"Having participated in the choice, the membership will cooperate better while we develop better putting greens," comments Tony.

Once the greens, tees, and fairways are constructed properly, the good permanent grasses are established, and the landscape revolves around its seasonal beauty, the job becomes one of keeping the course that way. And, Tony Caranci is an expert in the cultural, mechanical, and chemical practices needed to do the job.

As a visiting instructor to the University of Rhode Island, Tony tells the students, "the practicing golf course superintendent must have a

well-rounded knowledge in many fields. Not only is he a business manager, personnel administrator, purchasing agent, contractor, and mechanic, but he has to know about such subjects as grass nutrition, plant pathology, entomology, weed control, irrigation, public relations, ecology, and landscaping."

Tony's knowledge of these latter subjects enables him to produce fine fairway turf that will withstand regular mowing at 1/2 inch to 7/8 inch. This turfgrass also has to be tolerant to summer heat and humidity. It has to withstand disease and mechanical wear. And Tony insists that fairway turf has to do all this "while staying firm enough to hold the ball up and still not become mated or puffy."

"The fundamental need of grass that is growing and constantly being cut is plant food, and in the correct amount for the particular strain of grass.

"Our fairways annually received 3 pounds of nitrogen per 1,000 square feet. Since timing is important, 400 pounds per acre of balanced fertilizer (1 pound of N) per 1000 square feet are applied in the spring and 800 pounds per acre in the fall.

"We've also learned to apply about one-half of the 800 pounds in early September, leaving the balance for November application. The fairways look better all winter and get a better start in the spring."

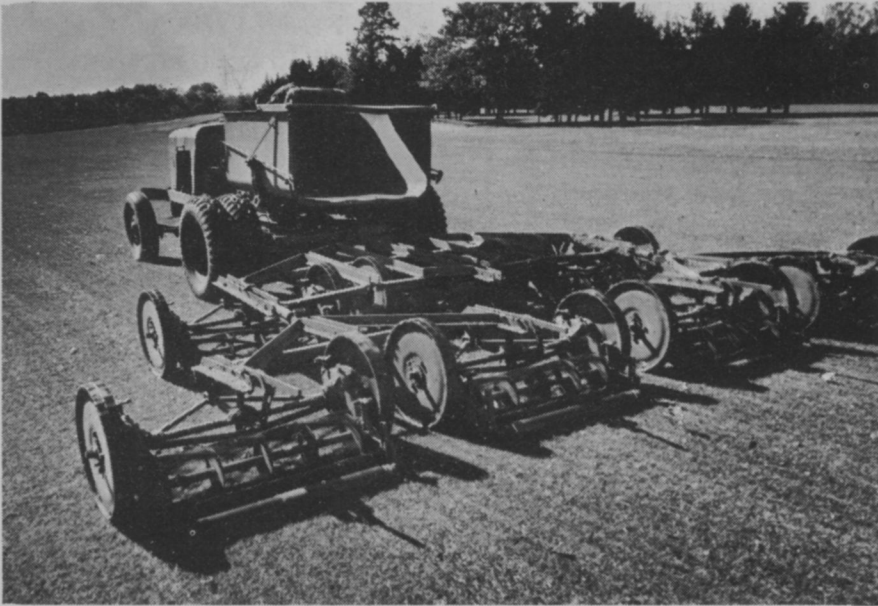
Tony has his general fertilizer custom mixed. Whether it's a 10-6-4 or a 20-5-10, the nitrogen sources are 75% organic with 50% from "Blue Chip" granular "Nitroform" and 25% from activated sewage sludge.

The 4-1-2 ratio is used when there is a need to cut the phosphorus supply to retard *Poa annua*.

Tony runs his own tests under field experience before specifying a mix. "I had my first encounter with "Nitroform" way back in the fall of 1957; and, I pioneered in finding a manufacturer who would be willing to use it in my custom mix. Regardless of whom I now buy from, I still specify the 75% organic product."

"The results on my fairways were so outstanding that after a golf superintendent conference here at our club, other superintendents started specifying the same mix. And many are still using it today."

Tony doesn't hesitate to explain why he likes this 75% organic formula. "The 'Nitroform' has a built-in release which gives the uniform growth needed on today's irrigated fairways and tees. The sludge acts as a good soil conditioner for this clay soil and supplies trace elements along with some of the nitrogen. The



Fairways are aerified twice a year. Caranci uses a slicer in the fall and overseeds at the same time. Here, new turfgrass is coming up in the cut made by the slicer. When the course opens for play in the spring the turf will be in top-notch condition.

wide use of irrigation has helped to create the need for these slow-release products. Even though I could have the labor to do the job with solubles, this combination is easy to use and results in even

growth and color."

Other essentials in Tony's program for fairways include mowing a minimum of four times a week. This has mowers out every day in some
(continued on page 52)

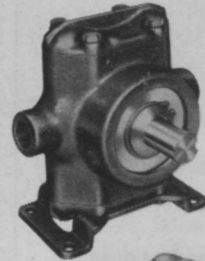
A broadcast spreader is used to apply Caranci's prescription fertilizer mix. Fairways annually receive three pounds of nitrogen per thousand square feet. Nitroform ureaform fertilizer plus activated sewage sludge is used. The built-in release gives uniform growth needed on irrigated fairways and tees.



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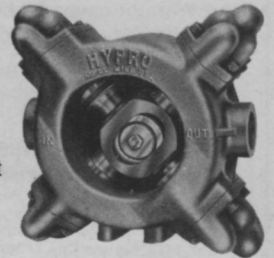
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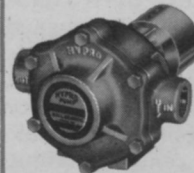
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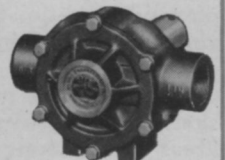
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1973 GOLF OUTLOOK (from page 23)

Current emphasis on recreation and open space has created more official and citizen support for golf/recreation complexes. Such complexes, in addition to a well designed golf course, often include tennis courts (sometimes lighted for night play), swimming pools, artificial ice skating rinks, playground and picnic areas, a community center building, camping, hiking, nature study and sometimes ski areas.

Congress has appropriated \$181,800,000 for use as possible matching grants to states and their cities and counties under the Bureau of Outdoor Recreation funding program for 1973. Apportionments for the individual 50 states range from \$1,500,000 for Wyoming to \$12,500,000 for California.

The Bureau of Outdoor Recreation (U.S. Dept. of Interior) makes grants from the Land and Water Conservation Fund to states and through them to political subdivisions for planning, land acquisition and development of public outdoor recreation areas and

facilities including golf courses.

Alert communities are taking advantage of the BOR 50% matching grants and building needed public recreation complexes including golf courses. Some cities are purchasing existing facilities with the aid of BOR grants.

The city of Overland Park, Kansas, recently purchased the privately owned St. Andrews 18 hole golf course along with 122 adjacent acres which will be used as park land. The city will bear half the \$1,077,200 cost of the site; the BOR authorized matching funds (grant) for the other half.

Recognizing the great need for more municipal golf courses in California, NGF recently co-sponsored two one-day seminars with the California Park and Recreation Society. The first, covering the southern half of California, was held at Los Angeles; the second, covering the northern section, was held in Monterey. Future seminars, similar in nature, are planned for other states interested in municipal golf development.

For further information on NFG services, contact any of the following: National headquarters; Don Rossi, Executive Director, 707 Merchandise Mart, Chicago, Ill. 60654; Regional headquarters: West Coast — Buddy Johnson, 833 Curlew Road, Livermore, California 94550; Southwest — George Kerr, 1102 Seminole Drive, Richardson, Texas 75080; South Central — Fred Stewart, 935 Rodney Drive, Nashville, Tennessee 37205; North Central — Larry Smith, national headquarters office; East Coast — Harry C. Eckhoff, 1500 Arlington Boulevard, Arlington, Va. 22209.

Northern Calif. Turfgrass Council Elects 1973 Officers

The Northern California Turfgrass Council has recently elected officers for 1973. They are: Keith Braman, Keith Braman & Associates, president; Paul Albright, Berger & Plate Seed Co., 1st vice president; Tony Ramirez, City of Concord, 2nd vice president; Jerry Boesel, RainBird Manufacturing Co., sec-treas; Pasco Balzarini, City of Redwood City, director; and C. S. Sandhu, Sequoyah Country Club, director. Continuing Directors who will serve during 1973 are Ralph Evans, Cal-Turf; Grady Simril, East Bay Regional Parks and Chic Cannon, Aqua-Dial, immediate past president.

DED Injection System Reported To Ohio Arborists

Twenty-five local members and guests of the National Arborist Association met in Cleveland in early December.

Speaker for the evening dinner meeting was Dr. Winand K. Hock, research plant pathologist, Shade Tree & Ornamental Plants Laboratory, Delaware, Ohio. He reported on his research of vascular diseases of trees.

"Benomyl is one of the hottest fungicides to come along in the last 20 to 25 years," Hock said. "We have to consider benomyl as a leading candidate for Dutch Elm Disease. Our tests have shown that if we can get it into the tree, it will work."

Dr. Hock told the group that the current problem has been in solubilizing benomyl. Several different chemicals have been tested. Lactic acid currently appears to be a good candidate.

The plant pathologist also reported on his experimental tests of injecting benomyl into diseased trees under high pressure. First he drilled one-half inch in diameter holes two and one-half inches into the tree trunk. Holes were spaced 10 to 12 inches apart around the tree. He then inserted a five-eighths inch lag bolt through which a hole had been bored into the one-half inch hold. Fittings were attached to the lag bolts and via hose, connected to a manifold. A pump then pumped solubilized benomyl with a maximum pressure of 300 psi into the trees.

Dr. Hock said that when the lag bolts were removed, holes were plugged with corks and the area sprayed with a tree wound dressing. No correlation was noted between the severity of DED and the amount of uptake of benomyl by the tree. Likewise, time of day and uptake were not charted in the test.

"Over 50 percent of the trees treated in our test nursery at Delaware (Ohio) were protected from DED with this injection treatment," says Hock. He feels this system, although experimental, offers the arborist an effective method of combating DED.

He also reported on the control of anthracnose in walnuts with foliar applications of Triarimol, an experimental compound from Elanco Products Company. Known as EL 273, this material appears to be an excellent material in controlling this disease, Hock concluded.

—insect report—

INSECTS OF ORNAMENTALS

CONIFER APHID (*Cinara canadensis*)

VIRGINIA: Taken on juniper in Montgomery County July 6, 1972. This is a new state record.

CRAPEMYRTLE APHID (*Tinocallis kahawaluokalani*)

MARYLAND: Very heavy and injurious to plant at Baltimore. Population included males, oviparous females, new eggs, and viviparous females. Sexual forms rare.

TREE INSECTS

BARK BEETLE (*Ips calligraphus*)

ALABAMA: Population explosion killed 80-90 percent of 6 to 10-year-old pine plantings on ornamental area around livestock coliseum at Monroeville, Monroe County. Contributing factor may be large pulpwood yard located within 150 feet where salvaged wood stacked for shipment to mills.

ELM LEAF BEETLE (*Pyrrhalta luteola*)

NEW MEXICO: Damage heavy to Siberian elms at Farmington, San Juan County.

VARIABLE OAKLEAF CATERPILLAR (*Heterocampa manteo*)

OKLAHOMA: Heavy infestation on oaks in Bryan County declined. Fully grown larvae left trees in Payne County. ARKANSAS: Specimens submitted from Benton County. Much lighter in northwest area than farther south. Attacked by diseases and parasites in most areas. WEST VIRGINIA: Larval damage heavy on about 300 acres of scattered red and black oaks in Hardy County. OKLAHOMA: Larvae still common on oak trees in Robbers Cave State Park area, Latimer County, October 29.

HEMLOCK LOOPER (*Lambdina fiscellaria*)

WEST VIRGINIA: Larvae caused heavy defoliation of one hemlock tree at Buckhannon, Upshur County. This is a new county record. Larvae caused 75 percent defoliation of hemlocks in 3-acre area in Hancock County October 5.

DOUGLAS FIR TUSSOCK MOTH (*Hemerocampa pseudotsugata*)

NEW MEXICO: Heavy populations caused defoliation of Douglas-fir in Los Alamos, Los Alamos County. Light populations caused some defoliation of spruce and fir in Santa Fe, Santa Fe County.

BENEFICIAL INSECTS

FLEA BEETLE (*Longitarsus jacobaeae*)

WASHINGTON: About 500 adults released on tansy ragwort November 9 near Battle Ground, Clark County. OREGON: Released 500 adults on tansy ragwort rosettes on state land in western Marion County, November 9.

ENCYRTID WASP (*Ooencyrtus kuwanai*)

RHODE ISLAND: Released 60,000 against *Porthetria dispar* (gypsy moth) eggs in Providence County October 3.

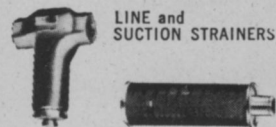
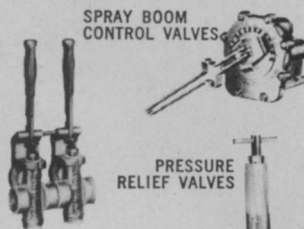
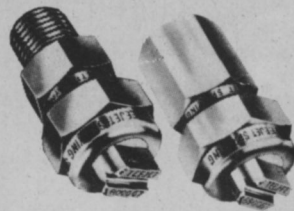
SAGE WEEVIL (*Phrydiuchus tau*)

OREGON: Total of 448 adults from Yugoslavia released on Mediterranean sage, *Salvia aethiops*, in Lakeview area, Lake County, November 2, 1972. Few live adults observed in July 1972 at two 1971 release sites south and west of Lakeview, indicating successful completion of one life cycle.

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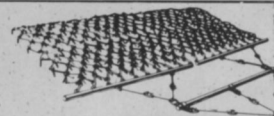
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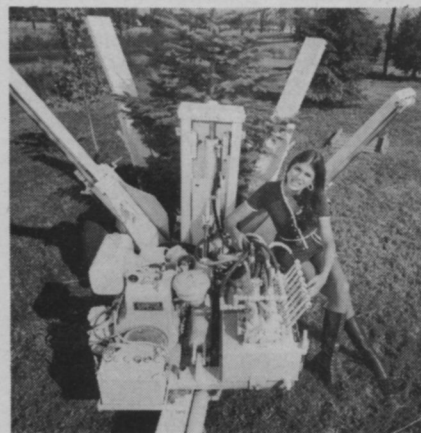
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David Liddle, grounds supervisor at Friends Hospital, Philadelphia, and G. Nelson Watts, Director of Business Administration at the Hospital, look over Elm tree designated a historic landmark. The tree was planted during the 1800's, and was certified by the Elm Research Institute of Waldwick, N.J.



PRESIDING "DEAR ABBY" — Robert Chakales of Richmond, Va., president of the Golf Course Builders of America, will chair the 2nd Annual Dinner of the Association's program January 9 in Boston and will moderate a "Dear Abby for Builders" group discussion. The GCBA meeting will be held during the Golf Course Superintendents' convention.



DIG THIS — Lovely Melanie McClain, "Miss Northwest Ag Show," sits at the controls of this Vermeer Tree Spade, which will be on display at the January 30, 31 and February 1 show in Portland, Oregon. Over 100,000 square feet of machinery and supplies will be exhibited at the fourth annual trade show at Portland's Memorial Coliseum.

Green Industry Newsmakers

PEOPLE PLACES EVENTS

FIRST PRIZE—A floor display of its walk-behind lawn mowers has won top honors in its category in the 13th annual Merchandising Awards Contest for Bolens Division of FMC Corporation, Port Washington. The contest, sponsored by the Point-of-Purchase Advertising Institute selected 38 winners from the more than 1500 entries covering the gamut of point-of-purchase advertising. The display, entered in the Building and Garden Supply section, was created by The Howard Company, Inc., of Elm Grove. David J. Jones (l) of The Howard Company, and Richard Mowry, product manager for Bolens, were co-recipients of the award.



PLANNING — AAN Convention Committee Chairman Larry W. Bachman, Bachman's Inc., Minneapolis, Minnesota, reviews plans for the July 14-18 meeting at the Radisson Hotel in Minneapolis next year. With Mr. Bachman in the Washington offices of the American Association of Nurserymen are: (left to right) Robert F. Lederer, AAN Executive Vice President; Robert D. Doyle, Associate Manager; and Leo Donahue, Administrator. Early plans announced for the 98th Annual AAN Convention promise more information, more special events, more excitement, more enjoyment — more of everything nursery industry families have been asking for.

