

Get the most from equipment and men and . . .

## Anticipate Disease Problems

IT'S common knowledge among those who enjoy the game of golf, that you don't drive near putting greens with electric golf cars, you don't set your club-laden bag on the closely clipped turf, nor do you use any golf club on the greens except the putter. If you spend your leisure time trying to conquer that sport at Oglebay Parks relatively young Speidel Golf Course, the same rules hold for the tees; except you are not limited to just the putter. The tees at Speidel are identical to the greens, and both receive the same care and attention as part of golf director Ed Murphy's disease and weed control preventive program.

"I have a young course," explained Murphy, "and want to keep it as disease and weed-free as possible. I must anticipate problems."

"It costs extra money for the two or three additional sprayings, but I don't have any blemishes on my trees, greens or fairways except for the ball marks and divots people fail to repair," he added.

As golf director for the Wheeling, West Virginia Park Commission, Murphy oversees all golf-related activities taking place on the par-3 course, and the Crispin Golf Center (another 18-hole course) in addition to his role as superintendent of the Speidel course. His disease and weed control programs have already registered results with Speidel's first LPGA event — the Wheeling Classic played last July.

"My observation on being a good superintendent," Murphy says, "is to get the most out of my men and equipment. I constantly supervise and take a real personal interest in the grass."

The Robert Trent Jones designed course has quite a variety of grasses. The greens and tees on the public course are all Penncross and are kept clipped at 3/16" to 5/32" for general use.

Baron, Fylking and Pennstar cover the automatically irrigated fairways. The perennial rye grasses, Pennfine and Manhattan, were added after a USGA suggestion because they are excellent for wear under the heavy traffic conditions found at most tournaments.

"I'm trying to develop first class fairways," the superintendent explains, "to go along with the nice tees and greens we have here."

"That's why it's so important to have a good disease and weed control program, because there are really three seasons of weeds that occur during the regular golfing season. First, we get common crab in the early spring, during mid-summer it pops up again, and then in the late fall *Poa annua* hits us. With the extra couple sprayings of pre-emergence herbicides, we keep the level of material at an effective rate for best control."

The fertilizers, herbicides and fungicides he uses for his turf maintenance program are as varied as the type grass seed found on the turf itself. The fertilizer, herbicide, and fungicide applications all go hand in hand, but because of the fertilizer program and the excellent pH count, Murphy's weed population is kept at a minimum.

The first three years the course was in operation, soil tests were taken annually and a count of seven was always the result. In fact, fairways 6, 7, 8, are constructed right over limestone. Magnesium and calcium counts were also excessive according to Murphy.

Therefore, he uses a low phosphate grade of fertilizer on the greens and applies it every two weeks. Iron is added during the Fall and Spring, and occasionally throughout the rest of the season. "The reason we fertilize so often," he says, "is because our green con-

struction is 75 percent sand and 25 percent peat, so they're very porous."

Greens and tees are kept healthy with a number of fungicide and insecticide combinations. Daconil 2787®, Dyrene, Tersan 1991, Dexon, and Diazinon and certain combinations of these fungicides, all contribute to the fine condition of the turf. "I always try fungicide combinations in my nursery before I apply it to the turf," explains Murphy. "One combination I really like is Daconil 2787 and Tersan 1991. I've found Diamond Shamrock's Daconil 2787 compatible with almost anything. It's also a liquid so I have no problems with nozzles clogging up and slowing down my spraying. I just follow the label instructions."

With the weed population on the fairways at a minimum the superintendent has found that regular applications of Dacthal® pre-emergent herbicide beginning the first week of May, have contributed significantly in eliminating common crab, goosegrass, and have a large effect in reducing the *Poa annua* infestation in the late fall.

"If you're going to develop a first class course, you must be willing to spend the extra few dollars for additional sprayings to keep the material at an effective level," he emphasized, "you can't hope to 'get by' any other way. That's the key to a good preventive program."

As the 17-year biology teacher and coach, turned golf director indicated, "to be a good superintendent, you must take a real personal interest in the grass." Judging from his complete disease and weed prevention program, Speidel's Ed Murphy obviously does, and is the reason Oglebay Parks newest course is rapidly developing into one of the best in the area. □

# The Second Fifty Years

AN ERA ended when the gavel changed hands and Jack R. Rogers became the first president of the International Society of Arboriculture. For 51 years they've been known as the International Shade Tree Conference (ISTC). But with expanded interest developing in all areas of urban forestry, landscaping, horticulture and tree research and development, the present membership feels the new title would better describe the membership and better define the function of their organization.

Rogers, superintendent of street trees, City of Los Angeles, California, received his commission from John Z. Duling, past president, Duling Tree Expert Co., Muncie, Indiana, in a ceremony following the annual banquet.

John C. McGuire, Chief of the U.S. Forest Service, opened the meeting with the keynote address saying there are four major environmental hazards; air and water pollution, soil erosion and destruction of natural flora and fauna. "As our population increases, urban forestry has much to offer as a solution to these problems," he said. "More needs to be done by the ISA to coordinate all governing bodies to cooperate in solving these natural hazards."

"One recent study shows that nature has become so foreign to urban children that they are actually afraid of forests. It's time to bring the forests to the city. Trees help reduce pollution and noise, beautify, harmonize more with nature and screen unsightly but necessary structures," McGuire said.

Americans express strong desires for trees. Arbor Day for example, indicates the extent of popularity of urban forestry. "The Forest Service is presently lacking funds for urban forestry programs. But new bills will be introduced to the President for approval of Congress to renew urban forestry programs," the chief added. "A National program is needed to make cities a more healthy place for people to live."

With so many urban problems using trees as a solution, the proper

selection of trees is necessary to insure that the tree will live and grow. And reporting on solutions to this problems was Alex Shigo, U.S. Forest Service, Durham, New Hampshire. "The number one problem with trees is wounds and wound diseases. All trees have some wounds and it all depends on how a particular tree 'handles' a wound that determines whether it survives," Shigo said. The European wound concept states; first the wound, decay fungi moves in, and then decay. According to Shigo, this concept has not been big enough the past ten years or encompass all aspects of the wound and tree's reaction.

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"This concept has withstood the test for years, but a new concept would have to include the individualism of trees. Some trees are strong reactors and some are rather weak," Shigo said. "The decay portion includes a succession of organisms that move in patterns, not randomly."

"Our entire concept of a tree can no longer be a textbook definition," he said. "Each tree is constructed of compartments bounded by growth rings, rays and chemical barriers. The cambium tissue that has been injured, changes its mode of operation and changes to react to injurious or negative organisms." "The most important concept to remember is that each tree be considered an individual," Shigo added.

Other reported research dealt with tree stress from salts and herbicides. Elton Smith, Ohio State University, Columbus, Ohio, again reinforced that trees react differently to similar stimulus. Smith pointed out that the white pine is one of the most susceptible trees to aerial-borne salt sprays lifted off the streets by passing motorists. "Anti-desiccants applied twice a year keep the inci-

dence of damage to a minimum on most species of trees," Smith pointed out. "There are, however, some salt-resistant species."

Smith also reported on the incidence of damage caused by herbicide use near trees. He described the leaf cupping effect caused by dicamba herbicide and damages resulting from increased use of paraquat. "A ring of activated charcoal placed around the base of the tree can reduce the effect of herbicides," he said.

Alex Shigo, in another one of his many presentations during the educational portion of the ISTC meeting, captivated an audience for a one-and-a-half hour session entitled "New Ideas in Tree Care." "There's a great difference in the ability of trees to heal after wounding," he said. "One indication of whether a wound dressing will work, is the ability of that particular tree to heal."

Shigo described some of his recent work with micro-organisms in an attempt to keep out decay fungus. One method included placing trichoderma, an aggressive decay micro-organism, in a fresh wound and wrapping it with polyethylene

*(continued on page 21)*



There were 39 commercial exhibitors and 18 field demonstrators at this year's conference. A first-time exhibitor at the ISTC convention is Strong Mfg. of Remus, Michigan.



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**INTERNATIONAL HARVESTER**

# GOLF VEHICLE PHOTORAMA



CAPRI-100, from Southern Golf Equipment in North Carolina, is an electric car with rear body latch and cushioned brake to prevent turf damage.



PEOPLE OR TOOLS, up to a 1,000-pound capacity can be transported in this Jacobsen Cruiser 2 truck. It's powered by a 8 HP engine and can move 12½ mph.



MINNESOTA-based American Continental makes both gas and electric three-wheel golf cars. Length for both models is 91 inches, while the width is 47½. Construction: fiberglass body and steel frame.



WORKMASTER from Toro has a closed, self-lubricating drive system. It has a 1,000-lb. payload.



WESTINGHOUSE makes a three-wheel electric that weighs 965 pounds and a four-wheel that weighs 1,030 pounds.



RUNABOUT from Cushman has automotive steering, rear shock absorbers and an 18-hp air-cooled engine.



X-440 from E-Z-GO is a steel frame, steel body gas car which weighs 730 pounds.



THIS IS the Brute-Car from Lake Sports, weighing only 340 pounds with fuel. It has a fiberglass body, steel frame and is 88 inches long.

# Servis machines are built with one simple idea in mind.

If you're familiar with the name, Servis, you know that we've been manufacturing rotary mowers, cutters and shredders, box scrapers, landscape rakes and rear-mounted blades for a long time. Since 1946 to be exact.

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Of course, this is only part of our story. The point is that Servis builds a complete line of equipment with one simple idea in mind. To be the best.

So whether you've got 4" brush to cut, stalks to shred, ditches to dig, soil to move or land to level, see your Servis dealer. He's got the equipment you need.

For more information about the Servis line, contact your nearest authorized Servis dealer, or write: Austin Products, Inc.,  Dept. 2-75 S, P.O. Box 1590, Dallas, Texas 75221.

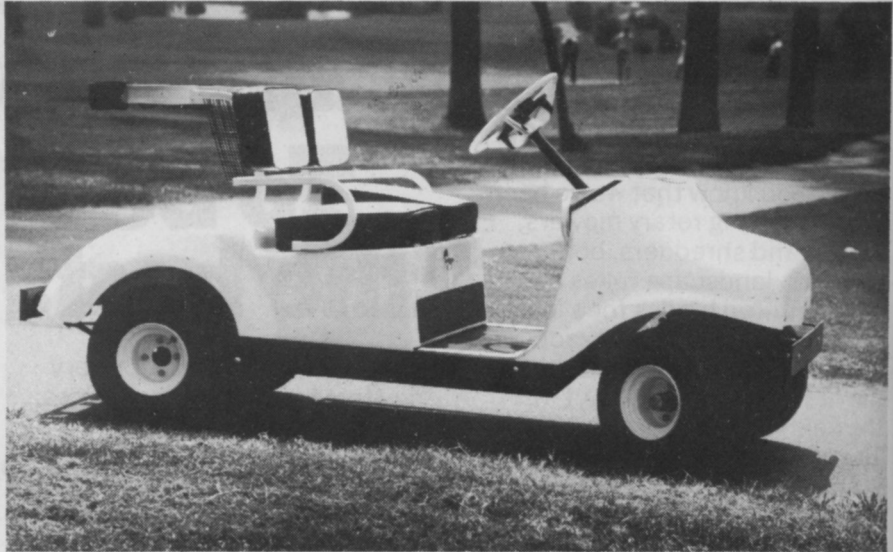
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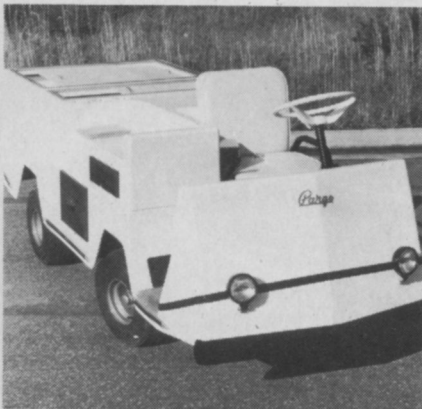
PARGO 804 is an electric car with fiberglass body and it features two wheel drum brakes, spike guard, rub rails and seat brake.



PANTHER, a personnel/burden vehicle from Electric Carrier Corp., is an electric vehicle with a 44" x 36" cargo space. It has automotive steering, disc brakes, automatic parking brake and can be equipped with extra-wide flotation tires.



THIS IS the GT-7 Truck from E-Z-GO, re-introduced this year. It's powered by a 20 hp ONAN and has a rated payload of 1,500 pounds.



BAHAMA BAR CAR from Pargo even has a cutting board for slicing fruit with a waste bend below.



KUSH-N-KART weighs only 283 pounds, and is an electric 3-wheel cart with a spring suspension design. It's made by a firm in Barberton, Ohio.

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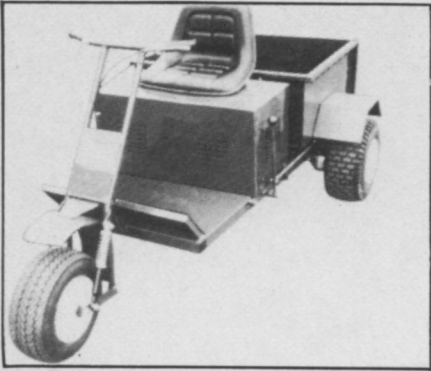
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\* Bonnieblue, Majestic, Sydsport and Birka Kentucky Bluegrasses and Keket Chewings Fescue.



HMC's Jobmaster utility vehicle has a body made of 16 gage steel electrically welded. Options include a reverse transmission, dump bed and larger turf tires.



QUARTER HOUR is a new utility vehicle from Promark with a counter-balanced dump bed which holds 500 lbs.



AMF Harley-Davidson's new DE-40, the firm says, can handle a 750-lb. payload at speeds up to 11 mph. An added feature are front beverage wells.



TAYLOR-DUNN's electric car is all steel and features an automotive drive axle and leaf spring suspension. It weighs 1,065 pounds with battery.

*(Photorama continues on page 30)*



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William Kobel, Superintendent, Union Country Club, Dover — New Philadelphia, Ohio

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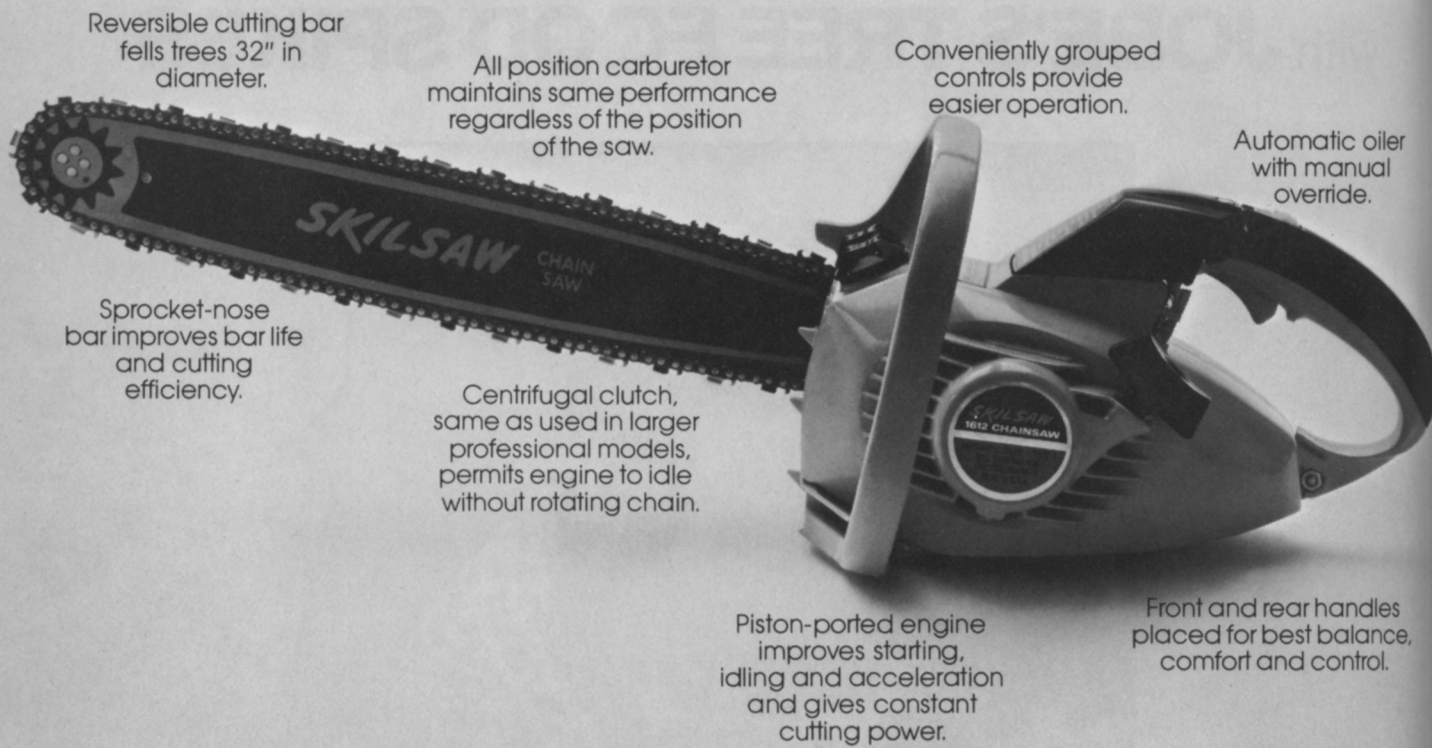
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