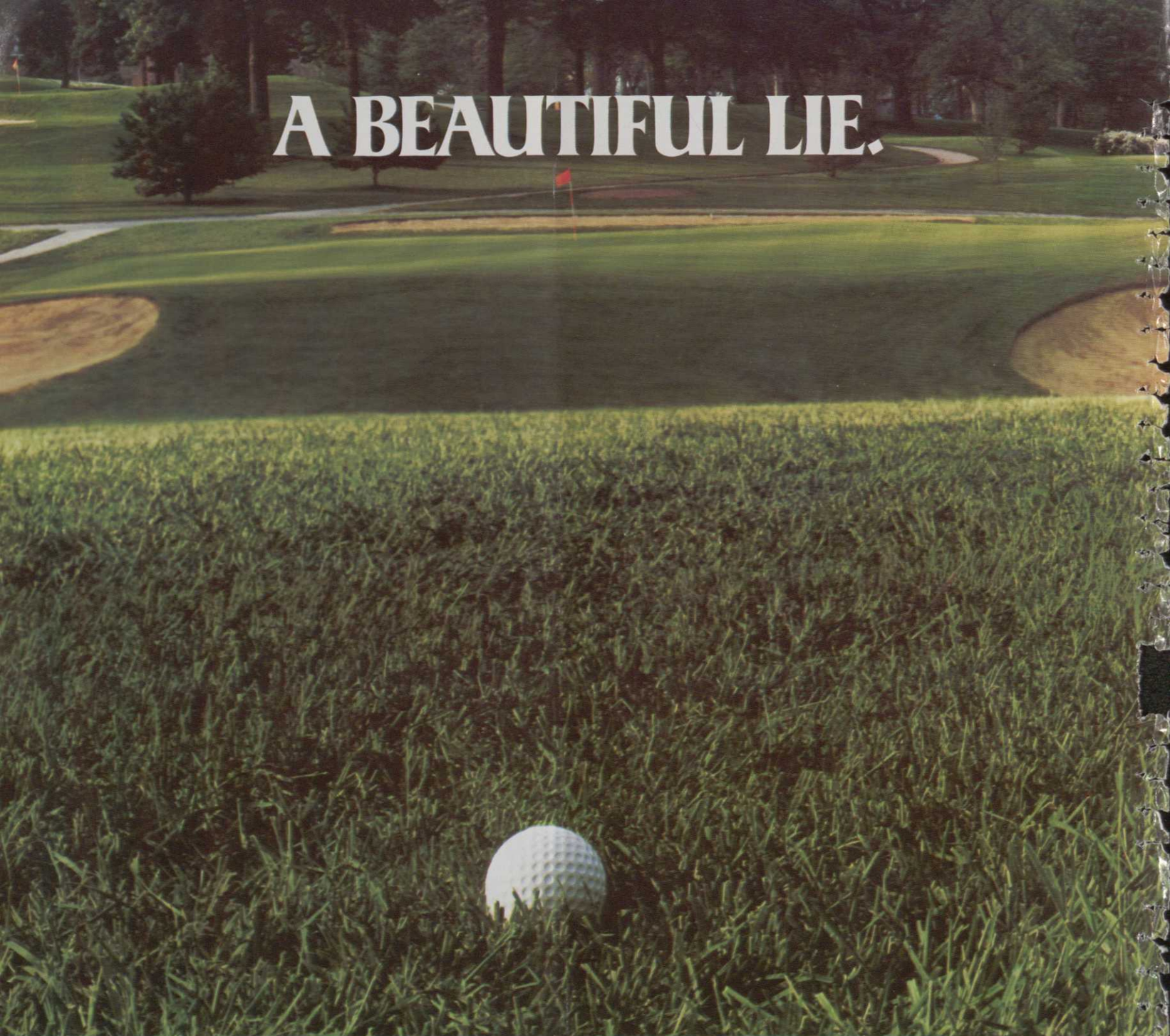

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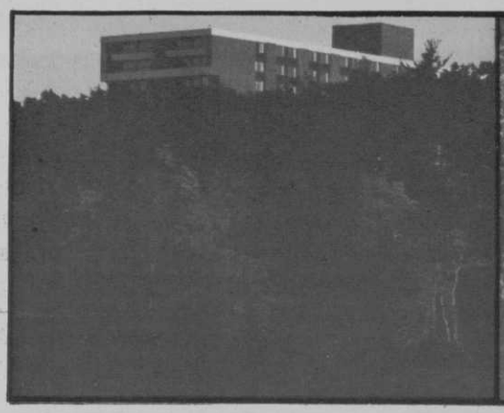

Stage	Goal	Activities	Who Performs
1. Initiate Process	1. Allow enough time for preparation of plans and formulation of goals	1. Communicate with approving authority to set goals 2. Communicate with department managers to start preparation of plans.	General Manager/ President
2. Prepare Budgets	1. Get organized for coming budget period 2. Allow upper management to make decisions	1. Prepare plans of activities 2. Translate activities in accounting terms 3. Prepare a set of alternative projects with required levels of adequate funding.	Departmental Managers
3. Present Budgets	1. Provide complete information for effective decision-making	1. Collate departmental budgets 2. Prepare sets of interrelated projects 3. Get information about departmental practices	General Manager/ President/ Budget Committee Members
4. Approve Budgets	1. Make decisions to achieve goals	1. Operationalize goals 2. Approve projects to meet goals within limits of resources 3. Communicate criteria used for approval	Budget Committee
5. Implement Budget	1. Ensure performance of plans 2. Generate information for future planning	1. Understand how approved projects relate to goals 2. Actually perform planned activities 3. Keep records of activities	Departmental Managers

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golf business/december

VOLUME 53 NUMBER 12

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HARVEST

Clippings

Brief bits of news from in and around the golf business . . .

A reprint in the "Carolinas Newsletter" from "Green World" says that soil scientist Roy Bond in Australia has found a type of **fungus** that invades the sandy base of **golf greens** and coats sand grains with a water repellant layer of organic matter. Wetting agents did not help, but the introduction of loam soil into the sandy soil did help. It was noted that this might help to remember that slow water percolation on a turf soil is not always caused by too many fine particles in the soil mix.

Tom Mascaro, Turfgrass Products Corp., titled a piece in "A Patch of Green", the Border Cities GCSA newsletter, **"Dew is not dew".** In the article, he goes on to explain that the "dew" found on turfgrass is not water of condensation, as the definition of dew explains, but is exudate, or plant sap being pumped out by hydathodes which are relief mechanisms that transport excess water out of the plant system. Wilson from Cornell found, in 1923, that different grasses pumped the exudate at different rates. Bentgrasses, bermudagrasses and *Poa annua* were high pumpers. Other bluegrasses were medium and Zoysiagrass, fescue and ryegrasses were low. The difference explains why patches of heavy "dew" can be observed on impure stands. Dollar spot spores were found to grow better in the exudate than in water. Quickly-available nitrogen was demonstrated to be rapidly transported through the leaf tissue and into the exudate. The high salt content of the exudate caused leaf, stem and root burn. It was noted that the USGA found that superintendents who syringed had less disease than those who didn't.

OSHA is touting its commitment to regulatory conform by proposing to revise its electrical safety standards to make it easier for employers and workers to understand and comply with them. The reduction would be from 250,000 words down to 15,000, more than a 90 percent reduction. That is fine and will benefit those to whom it applies. However, someone should have had the good sense to do it right the first time. We had to pay for and a lot of people had to deal with the unnecessary 235,000 words for a while!

There have been several personnel changes in industry within the past month or so. **Robert Scobee** has joined The Andersons as a Lawn Fertilizer Division technical salesman. He will be responsible for the sale of professional specialty fertilizer products, including those for golf courses. He is establishing a brand new line of High Premium Golf Course Turf Foods under The Andersons Tee Time label. Scobee is a turf management graduate from Purdue University in Indiana.

Jacobsen has named **Fred Schneider** as vice president, engineering. He will be responsible for all product design and product engineering support functions. **William Howard** will be Jacobsen's corporate recruiter for both professional and technical personnel. **Gary Allenbrand** has been named manager of regional sales for Turf Products, Jacobsen. He will represent Jacobsen in the northwestern U.S. and Canada.

Porter Brothers has appointed **Gary Randolph** field sales manager for the turf division. He will work with the division's sales representatives in their marketing of turf maintenance equipment and supplies in the Carolinas, Tennessee, Virginia and W. Virginia. **William Ligon, Jr.** has been appointed sales representative in the turf division. He will live in Conway, South Carolina and call on customers in the eastern S. Carolina and southeastern N. Carolina sales territory. Porter Brothers, Inc. is based in Shelby, N. Carolina.

Rex Dixon has been named marketing manager for the Turf Division of the Rain Bird Sprinkler Mfg. Corp. Dixon will supervise advertising and public relations and marketing efforts. **Ann Runley** has been named an area specifications manager for Rain Bird. Ms. Runley will call on landscape architects, and other firms involved in specifying irrigation equipment in the northern California geographical region. A Rain Bird distributor, A-1 Turf Irrigation Sales, has opened a new branch office in Houston, Texas. **George Burtch** will manage the approximately 10,000 square foot facility.

The Toro Company has named two vice presidents. **John Szafranski** has been named vice president and general manager of Toro's Commercial Products Division. **Ralph Murray** is vice president of marketing of Toro's International Group.

Larry "Casey" Jones has been promoted to Associate Product Manager for TUCO Agricultural Chemicals, Division of The Upjohn Company. Jones will assume management responsibilities for TUCO's line of herbicides, insecticides and fungicides. **Russell Tiller** has been promoted to agricultural chemical sales representative for TUCO. He will be responsible for Agricultural chemical sales in the states of Michigan and Indiana.

Bob Dunning passed away November 1. Bob, a well known golf course architect and erosion control specialist, had built many golf courses in the Kansas, Oklahoma and Texas region.

Bob Williams is retiring from Bob O'Link in Illinois at the end of this year. Among Bob's many accomplishments was the training of 67 young men studying agronomy. Thirty-two are now head superintendents at clubs throughout the country.

The **New Hampshire Turf Conference** will be held **January 10 and 11** at the Sheraton-Wayfarer Motor Inn in Bedford, NH. January 10 sessions include Dr. Vaughn Holyoke speaking on "Soil and Turfgrass Management, Dr. Joseph Troll speaking on 1979 Turfgrass Problems, Dr. Stan Swier on Turfgrass Insect Problems, and Jeff Cornish will give a history of golf course architecture. Friday topics for the golf course session include: Planning your estate; safety and equipment; the energy crisis; and you and the national. The afternoon sessions are: Recertification sign-up; new laws and regulations; fungicide and herbicide review; and an insecticide review. Contact: Dr. John M. Roberts, Plant Science Department, Nesmith Hall, University of New Hampshire, Durham, NH 03824.

The **16th Turfgrass And Environmental Landscape Exposition** is to be held **January 30 and 31** at the San Mateo County Fairground in San Mateo, California. Contact: The Northern California Turfgrass Council, P.O. Box 268, Lafayette, CA 94549.

The **Pennsylvania Turfgrass Conference** will be **February 26-29** at the Hershey Motor Lodge & Convention Center in Hershey, Penn. Contact: Arthur D. Wick, P.O. Box 362, Sewickley, PA 15143; or Christine E. King, Secretary-Treasurer, PTC, 412 Blanchard St., Bellefonte, PA 16823.

Following are the dates and locations for the **USGA Green Section's Regional Turf Conferences for 1980:** Feb. 4, Myrtle Beach Hilton, Myrtle Beach, SC; Feb. 6, Quality Inn, Cypress Gardens, FL; March 3, Phoenix Country Club, Phoenix, AZ; March 5, The Registry Hotel, Newport Beach, CA; March 7, Broadmoor Golf Club, Seattle, WA; March 11, Lakeside Country Club, Houston, TX; March 13, James River Country Club, Virginia Beach, VA; March 18, Westchester Country Club, Rye, NY; and March 20, Oakmont Country Club, Pittsburgh, PA.

Dr. Fred V. Grau (center) holds the trophy he donated for the Mid Atlantic Turfgrass Boosters tournament which contributed more than $1500 for the support of turfgrass research. He is flanked on the left by Bob Orazi, superintendent at Nunt Valley CC and tournament chairman, and on the right by John Strickland, president of the Maryland Turfgrass Council, which cosponsored the event.

News

Penn. reports on pythium blight

Forrest W. Nutter, Jr., Herb Cole, Jr., and Patricia Sanders reported on the pythium blight situation in Pennsylvania recently in an article in "The Keynoter", published by the Pennsylvania Turfgrass Council, Inc. The three concluded from a survey of superintendents in that state that only five percent apply preventive fungicides on fairways. While 35 percent apply preventive fungicides on greens and tees, almost 40 percent rated pythium blight to be a moderate to severe problem on their courses. Nutter, Cole and Sanders concluded that the majority of superintendents apply fungicide on a curative basis.

Four golf courses in Pennsylvania were selected for an experiment to monitor the microclimate of three locations within each course to determine if there are differences in the microclimates within a golf course and if these differences are related to pythium blight appearance and are reliable in forecasting disease with sufficient warning to apply preventive control measures that are cost-effective.

Moisture, measured in the form of relative humidity, was found to be the factor which determined where pythium did or did not occur. Relative humidity greater than, or equal to 90 percent lasted three to four hours longer in low areas where pythium often occurred, compared to the moderately-elevated areas where pythium sometimes or rarely occurred.

Maximum daily temperature and the munber of hours that relative humidity was equal to or greater than 90 percent with temperatures equal to or greater than 68 degrees F. were found to be correlated with pythium outbreaks. These factors were found to be accurate in predicting pythium outbreaks during the 1979 growing season.

A hygrothermograph, which monitors temperature and relative humidity, and placed in the lowest - most pythium prone - area of the course would indicate when conditions required treating pythium-prone areas before the disease strikes. Such environmental data can be used in conjunction with application of herbicides, insecticides, irrigation or syringing.

Silvex final hearing to begin January 22

Focusing on 2,4,5-T, Silvex "risks" followed by "benefits" evidence, the EPA will begin cancellation proceedings on January 22, 1980. Dow, and others, have lawyers challenging the proposed cancellation of certain uses.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) filed a draft report in September that recommended that EPA not hold a FIFRA Section 6(b)(2) hearing on use of the pesticides on rice, rangeland, orchards, sugar cane and certain non-crop uses because the Panel found "no evidence of an immediate or substantial hazard to human health or the environment" from these uses. In an appendix to the draft report, SAP said the potential for significant reporductive and teratogenic (developmental malformation) risk to persons living in the immediate area of 2,4,5-T spraying operations "does not appear to be substantial except as they may be directly exposed on a chronic basis.

These conclusions were in agreement with those of the American Farm Bureau Federation's (AFBF) "dispute resolution conference" on 2,4,5-T. Among their findings were that the miscarriages reported in the Alsea study were not demonstrated to result from the spraying of the forest with 2,4,5-T.

Whether the EPA will agree with these reports will not be known until after the cancellation proceedings.

DBCP turf uses suspended by EPA

All uses of dibromochloropropane (DBCP) on commercial and residential turf and ornamentals have been suspended by Environmental Protection Agency Administrator Douglas Costle as of October 29. Other suspended uses included many fruits and vegetables, but exempted the Hawaiian pineapple uses.

While Dow, Occidental and Shell have already discontinued their products, the Gowan Co. and Quimica Organica De Mexico maintained that their DBCP products were not the same. The registrants will have 30 days to request a hearing on the cancellation actions.

Costle did say, in his final decision, that he did not assume "that it will be impossible to develop terms and conditions of registration which will adequately reduce the potential for exposure to DBCP to levels that will not cause unreasonable adverse effects to man and the environment."

OSHA may try employers for death

If an employer willfully violates a specific OSHA standard and a worker dies as a result of the violation, OSHA may recommend the case for criminal prosecution. Generally, civil willful citations will be issued also in order to establish the employer's requirement to abate the hazard. Civil citations will be sent to a firm when the case is referred to the Justice Department for possible criminal prosecution, when the decision not to refer the case is made or when the expiration of the six-month statute of limitations for issuing citations is approaching, whichever comes first. This is according to expanded instructions that OSHA issued to compliance safety and health officers providing for handling investigations of possible criminal violations of ASHA standards and was effective October 9, 1979.

The Occupational Safety and Health Act of 1970 provides in Section 17(e) that "Any employer who willfully violates any standard rule, or order promulgated pursuant to section 6 of this Act, or any regulations prescribed pursuant to this Act, and that violation caused death to any employee, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than six months or by both." Second convictions carry double maximum punishments.

OSHA to reduce fatality report time

The Occupational Safety and Health Administration (OSHA) has announced a proposal that would reduce from 48 hours to eight hours the time within which an employer must inform the agency of any workplace accident that causes a fatality or requires the hospitalization of five or more workers.

The proposal would also require that any deaths resulting within six months from a job accident be reported to OSHA within eight hous of the time the employer becomes aware of the death.

Assistant Secretary Eula Bingham, head of the Labor Department's OSHA, explained that hazardous conditions that might have contributed to an accident may be evident at the worksite only temporarily. Working conditions can change, key projects may be completed, and witnesses' recollections may fade while a report mailed two days after an accident is being delivered to OSHA, she pointed out. An accident report within the proposed eight hour limit is more likely to permit the collection of the most accurate and useful inspection information.

Dr. Bingham emphasized that the proposal would impose no new paperwork on employers. In fact, notification paperwork could be eliminate entirely since the proposal provides for the creation of a national toll-free telephone number for employers to report accidents during night hours, weekends, and holidays. The contents of the accident reports would also be unchanged.

Of significance is the fact that OSHA is also considering whether accident inspections would be improved if the worksite were kept intact, or "frozen", to preserve pertinent evidence. This issue, however, will be decided in a subsequent rulemaking.

New fungicide registered by EPA

Duosan, Mallinckrodt's new broad spectrum turf fungicide has been registered by EPA. The wettable powder, systemic-contact fungicide is 15 percent thiophanate-methyl and 60 percent zinc ion and managanese ethylenebis dithiocarbamate.

The label covers uses on turf for control of dollar spot, brown patch, copper spot, red thread, helminthosporium leaf spots, fusarium patch and crown rusts. Application rates differ for each disease, but range from 3 oz./M to 6 oz./M.

The label also carries a WARNING designation of moderately toxic. The compound is toxic to fish.

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Isolated cutting heads give each green uniform cutting height, appearance, playing characteristics.

Spiral thatching blades for more efficient thatching and throwing into baskets.

Quick disconnect reel motor means easy change to spiking or thatching reels.

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All wheels are drive wheels for excellent traction and maneuverability.

Reels with independent suspension follow ground contour, improve quality of cut.

Hydraulically powered reels and wheels eliminate belts and gears.

Reversible reel motor permits "backlapping" for reduced sharpening frequency.

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So we're letting you in on some ways we engineer turf care products with you in mind.

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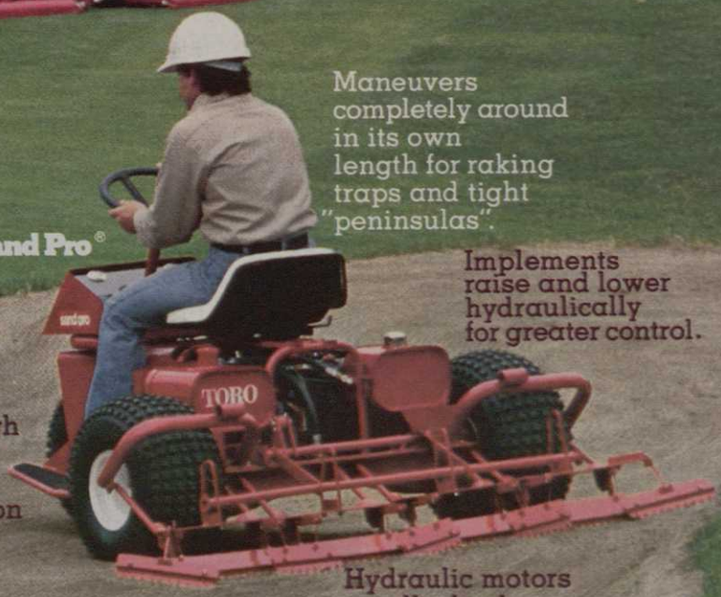

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Boundary plantings offer course privacy

By Jeanne A. French and R.P. Korbobo

Just how private is your course? Some clubs have come to realize that what they thought was a beautiful green wall of privacy around their golf course was nothing more than empty air space after removal of the trees for various legitimate reasons.

Such catastrophes can happen almost overnight. Many golf course members have awakened to the sad realization that much, if not all, of the tree growth around the outside of the course was never really on their property.

Highway construction

Add to this situation the fact that highway departments, whether the public objects to them or not, in about 99 percent of the cases put their roads right where they want to. All too frequently it is right through your course. On one 36-hole layout in New Jersey, a big super-highway came right down between the two courses and took a 600-foot-wide swath right out of it. On the one course, the highway was at the same elevation as the first and second holes. On the other course, the highway left them with an embankment up to 30 feet high.

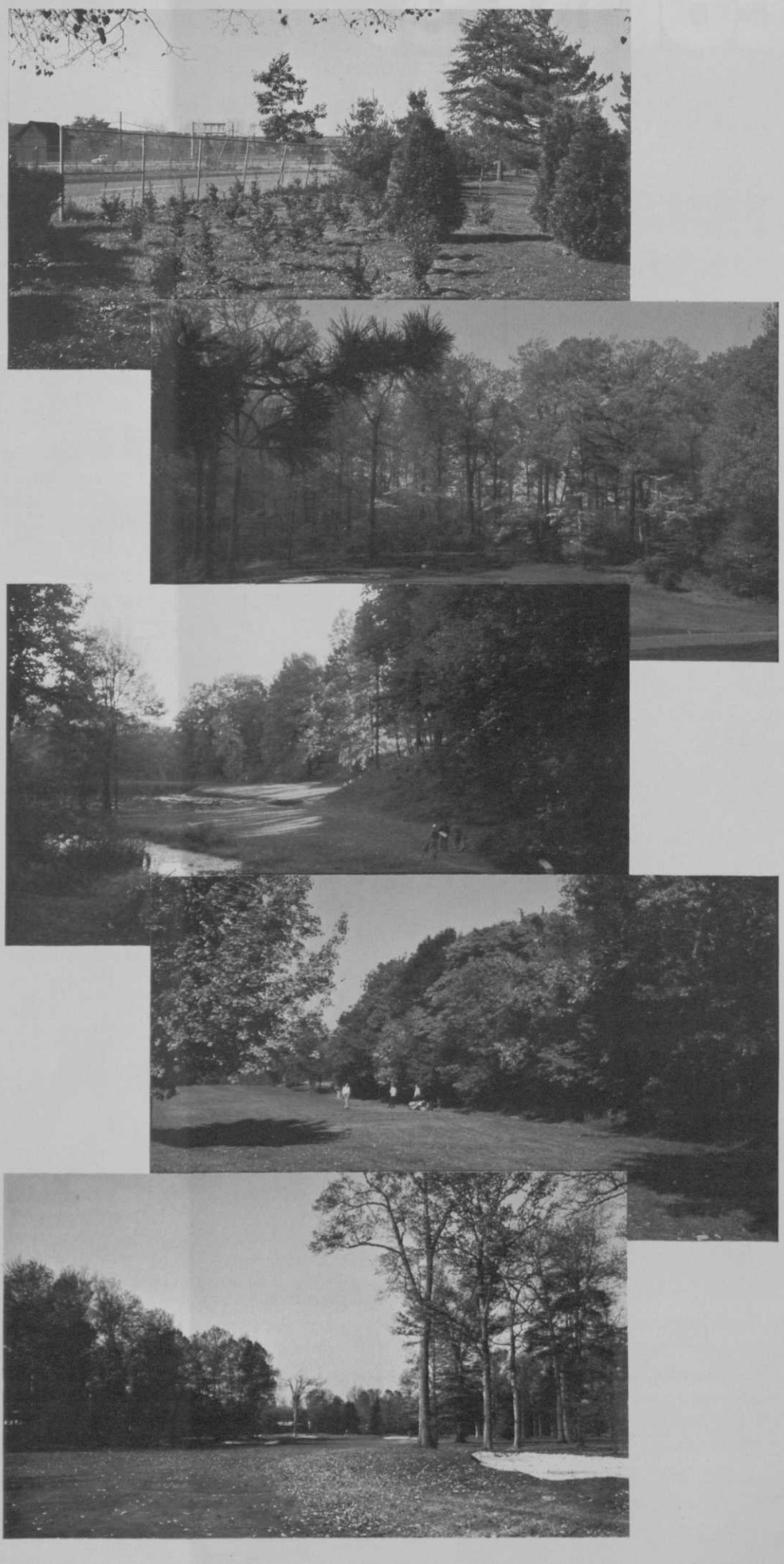
Fortunately, the Greens Committee saw the necessity of immediate starts to overcome this vicious scar left by highway department surgery on their course. Within the next three or four years, there will be close to a thousand trees, both deciduous and coniferous, planted along these particular holes, not only to screen out the busy traffic, but to help with noise abatement.

Another reason for stripping the plantings along the edges of the golf course is often residential or commercial construction.

Don't waste time

The important action that must be taken if one or more of these things have happened to your course, is to get going as soon as possible. Trees take a long time to mature, so every year you wait, you are simply postponing the inevitable need for new plantings.

The objects that you will be trying to screen may be many. Sometimes you have a screen job within your course and it is usually the dump area or the



work shed area. This is needed on many of the courses that we visit. More often, the need for screening is created by outside distractions. There is one course where the objects to be screened are white roofs of hundreds of private homes and garden apartments. These roofs are nearly a mile off the course. However, they catch your attention when you walk down three particular fairways and create a very distracting situation for the golfer.

Height of object

The next important item to consider is how much space is available for the new planting. This space factor can, by a rough rule of thumb, be broken down into four different categories. The first one would be considered minimum, and that would be from zero to five feet. Under these conditions, you have to be extremely knowledgeable to take advantage of every inch of available space.

The next category would stretch from five to 20 feet of width. This might be called a narrow space. Here your problem gets much easier but still it is not the easiest. In the first category you may have to work with nothing more than a fence, a wall, or a narrow hedge. In the second category you can still work with those same items, but you can add trees of small to medium size. In unusual cases, land sculpturing may help solve the problem.

The third space description would be from zero to 50 feet in width. Here you have much more freedom and it won't demand such intense planning. You can still work with fences, but trees and shrubs will be your most likely material.

The fourth category, which very few courses would be able to claim, would stretch up to 150 feet in depth. In this case, you could do it all with trees and shrubs. This would be the simplest boundary planting to create as far as making critical decisions are concerned.

How high?

Not only does the ground elevation come into play when you try to develop a screen planting but also the height of the objects to be blocked from view. In the majority of instances the objects are usually one story houses. These are not too much trouble to hide.

The next category would be two story houses. Once in a great while they might be older houses three stories high.

The third category, of course, would be commercial buildings of almost any height. Sometimes this even includes water towers, communications, electronic towers, smokestacks, etc.

Year round play?

The next question that you must throw into your mental computer when making your plans for boundary plantings is the subject of how many months of the year your course is in play. Certain courses close down completely for a few of the winter months. Others play around the calendar. It only follows that on those courses where play is for 12 months of the year, the boundary plantings take on more importance.

Sun or shade?

Extremely important is the consideration of degree of light in various locations. The problem here is one of orientation in relation to the sun. Since golf course holes are at various angles in relation to the sun, there is no one answer as to which plants will be best suited to each hole. We realize that particular plants can be used either in the sun or the shade of other trees while others either need full sun or at least a half day of it. It would be disastrous if anyone just indiscriminately planted trees either near to or under larger trees without really knowing what he was doing concerning the light requirements of various tree species.

Wind as a factor

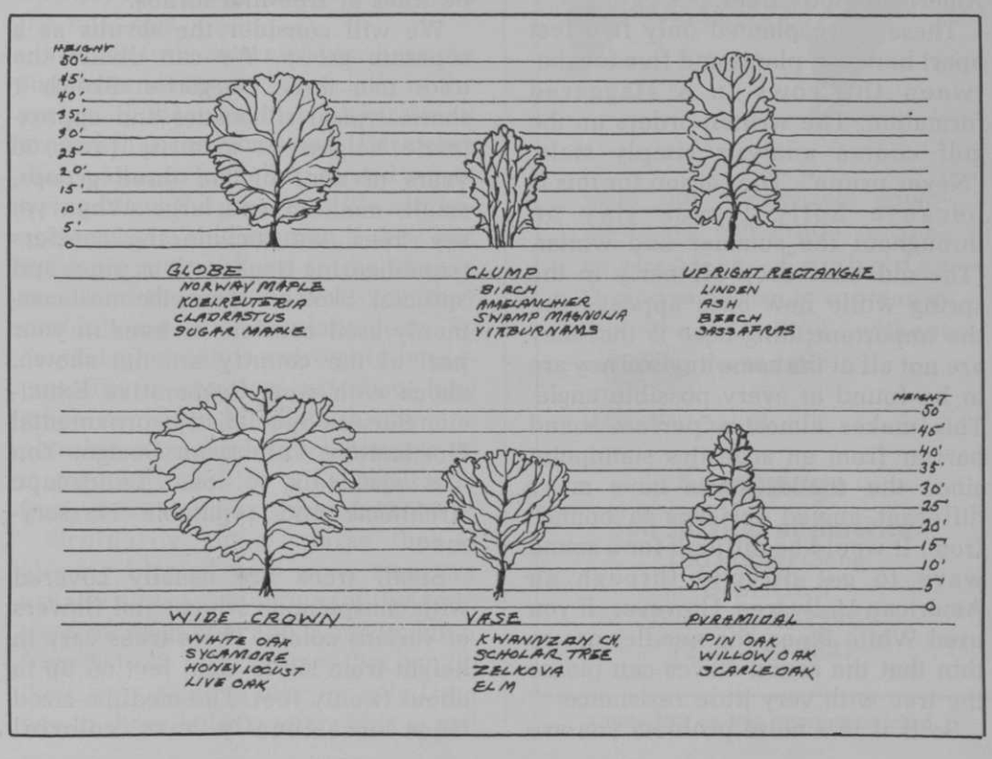
We must take into account the prevailing winds. Do you live in a part of the country that gets "northeasters", such as the East Coast does? Or do you live in some part of the country where it is almost as sure as the sun will rise tomorrow that the winds will be out of the north or the south. Perhaps your course is along the ocean with its own set of problems. And so it goes. Each section of the country has its own wind patterns and the wise landscape designer knows about these and works with them.

Color

The question of color in the landscape picture should be uppermost in the designer's mind. A pleasant composition should be created in these boundary plantings. This is especially so where there is a lot of depth to work with. Each season of the year can be a changing and attractive picture.

Take the common flowering dogwood as an example. It grows naturally in about 25 states. It is an extremely attractive tree during its spring flowering season. Its white (or pink) blossoms accentuate the horizontal branching effect that the tree is noted for. In the summertime it has shiny deep-green foliage. In the fall the foliage color is most spectacular. And after the leaves drop it shows off its attractive red berries until the birds eat them. In addition, the branching habit is so attractive it is a pleasure to behold all through the winter months. Then picture a wet, sticky snow or a beautiful ice storm covering these same trees. This is why you must be

SKETCH # 1 DECIDUOUS TREES



able to take into account all four seasons when you make a choice of trees for your boundary planting.

Noise abatement

These boundary plantings can carry a bonus with them if the initial problem was created by road construction. If such is the case, then still different requirements must be brought to bear on the choice of the plants as well as the distances apart at which they will be planted.

On a 36-hole layout in New Jersey, the first tee on one course is only about 20 feet away from the highway! There is a chain-link fence on the property line. This fence will ultimately be covered with an evergreen English Ivy (variety Baltica) and the space between the fence and the edge of the tee is already filled in with 87 young American Holly trees.

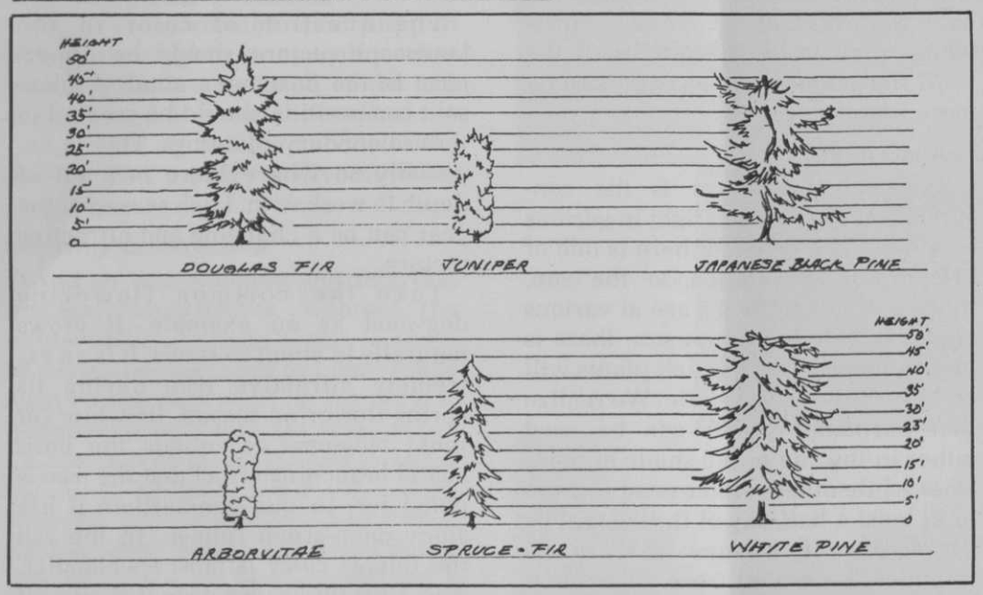
These were planted only five feet apart between plants and five feet between the rows in a staggered formation. The written orders on the golf course analysis simply state, "Never prune". The reason for this is because holly leaves stay on throughout the summer and winter. (The old ones drop off early in the spring while new ones appear.) But the important thing here is that they are not all at the same angle. They are to be found at every possible angle. This makes almost a perfect sound barrier from an acoustics standpoint since the sound waves have many different angled surfaces to bounce from. It would be difficult for a sound wave to get directly through an American Holly tree. However, if you used White Pines, the needles are so thin that the sound waves can pierce the tree with very little resistance.

So if it is a noise problem you are working with, again, the designer will have to know about the various possibilities of plant selection that he has at his fingertips. Each plant has its own potential.

Size

When we speak of shrubs and trees we must think of their ultimate sizes. Such knowledge can prevent an amateurish job as well as saving thousands of dollars and years of time. Flowering shrubs should only be used where the ball would almost never come to rest. They should rarely be used in the interior part of the golf course. The reason for this is that shrubs have many branches down at soil level. We simply don't think that it is fair for a golfer to have his ball completely enmeshed in such a plant. Therefore, most of the plants should be trees or tree-like shrubs.

SKETCH #2 CONIFERS



We will consider the shrubs as a separate group. We can divide the trees into three categories. Sketch 1 shows typical silhouettes and approximate heights at maturity (over 30 years of age) of the three groups, small, medium and large. When we say trees, we include the conifers (cone-bearing trees, such as pines and spruces). Sketch 2 shows the most commonly used conifers. If trees in your part of the country are not shown, check with your Cooperative Extension Service Specialists in ornamental Horticulture Landscape Design. You can also talk to local Landscape Architects and reputable Nurserymen.

Small trees are usually covered with conspicuous ornamental flowers of various colors. These trees vary in height from six to eight feet on up to about twenty feet. The medium-sized trees occasionally have colorful flowers on them, but not always. The height range of these reach from 20 to 40 or 45 feet. The large shade trees rarely have conspicuous flowers on them.

Colorful flowers are a great variable depending upon what part of the world you are talking about. The closer you get to the tropics, the more colorful the flowers become. Many more medium- and large-sized trees are covered with explosions of blossoms in those areas. The average height of the large shade tree should be considered between 50 and 80 feet and sometimes all the way to 100 feet high.

Silhouettes

The silhouette of a tree is always drawn as though the tree were standing free as a perfect specimen. This ordinarily gives a false impression. There is no way of telling what will happen to any tree when you use it in a landscape composition where it will be competing for soil nutrients, light and space. Therefore, the silhouette sketch only gives us a starting point.

We have placed trees, large trees, as close as 10 feet to each other when we knew full well that if it were growing out freely in the middle of a field it would easily reach a diameter of 70 or 80 feet. However, we were trying to re-create a natural effect. Therefore, some of the trees can be placed very close together while others are planted 30, 40, 50 and more feet apart. You then could plant understory trees to get a true woods effect. The use of understory plants makes a better screen. The understory plants will always have their foliage mass down low while most large shade trees would lose their lower branches as they mature.

This is not to confuse you or scare you, but it is simply to make you aware of the fact that this is not simply a guessing game.

Hedges

If you went back to the first two or three categories mentioned at the head of the article, you will see we called for a possible use of hedges. In this case, we can bring some plants down to as close as two feet from each other. The same effect can be had with other plants that would also give you a hedge as the ultimate screen and these plants could be as far as eight or 10 feet away from each other.

In a coming article we will cover various trees and shrubs and hedge plants by name and give approximate distances for planting.

Leaf texture is usually placed in