

significant plants for food. The Institute of Urban Horticulture will study and develop plants which can withstand pollution and other environment threats such as disease and insects. Horticulturists, plant pathologists, landscape architects and urban planners will play a part in this institute.

The Garden hopes to use its various facilities located in the New York City area to develop the information for application in problems of today and tomorrow.

LANDSCAPING

Nurserymen advise on energy savings

The proper use of landscape materials—including trees, shrubs, ground cover, grass, earth, fences, walls, and surface materials such as paving, brick, and gravel—can help you modify the air temperature, solar radiation, wind, and humidity that affect a home, says James Hayward, horticulturist and executive secretary of the Illinois State Nurserymen's Association.

For example, the shaded area under a tree is from 15 to 25 degrees lower than the surrounding unshaded area, which means that a home in the shaded area will be cooler in the summer.

A row of evergreens planted as a windbreak can reduce wind velocity up to 20 percent, providing a zone of protection 15 to 20 times the height of the plants, and thus protect the home against heat loss from the wind in winter.

The following guidelines prepared by William Nelson Jr., extension landscape architect at the University of Illinois, can be used in planning the energy-efficient landscape:

1. The west wall of the home will benefit most from shading against the summer sun. If there is space for only one tree, place it up to 25 feet from the house where it will shade the west wall from 3 to 5 p.m., when the sun's heating effect is greatest. If there is room for a second tree, put it where it will shade the south end of the west wall from 1 to 2 p.m., as close as 15 feet from the house.

2. Shade is generally not necessary on the east wall, unless there are large glass areas that catch the morning sun. If shade is needed, a tree can be planted to shade the south end of the east wall at the 11 a.m. sun angle.

3. Because the summer sun is at its highest at mid-day, the shadow it casts

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Supreme Court Upholds Surface Mine Act

The decade-old battle over federal strip mining regulation took yet another complex twist in June. On June 15, the Supreme Court unanimously upheld the constitutionality of the four-year-old Surface Mining Control and Reclamation Act.

The Act, enacted after a nine year battle in Congress, called for the Federal Government to enforce the law in the "interim" phase, with the states eventually enforcing the law in the "permanent" phase, once they had developed acceptable programs.

Mine owners, mining industry groups and the Virginia and Indiana governments challenged Congress' right to impose stringent environmental regulations on unwilling states and property owners. Lower Federal courts in Virginia and Indiana found the act unconstitutional, but the Supreme Court held that the 10th Amendment does not bar Congressional regulation of strip mining.

The Court's decision was particularly distressing for James Watt, the Secretary of the Interior. Under Watt's predecessor, the Interior Department had appealed the lower courts' ruling, while Watt had filed a brief on the coal mining operators' behalf. Before the decision was announced, Watt told the National Coal Association that the Office of Surface Mining had to be reorganized because it contained "every abuse of government." He added: "what a shame, what a shame. I promise you it will be changed."

The Interior Department had no comment on the government's unwelcome legal victory.

Federal Plant Care In-House Only

In 1979, Senator James Sasser, Tennessee, upon learning that the General Services Administration (GSA) was contracting for professional services to care for the plants in the Federal Government offices, championed a bill that would eliminate this practice and save the taxpayer's money — \$251,000 in 1977, \$181,000 in 1978 and \$157,000 in 1979.

Now GSA has its own four member gardening staff watering, spraying and feeding 3,688 tropical plants in 32 different agencies in the Washington, D.C. area. They work from 2 A.M. until mid-morning and are paid \$13.24 an hour. A fifth person will be needed next year.

The cost for 1980 was about \$243,600 or about \$60,000 a year more than the professional plant care services charged. GSA estimates that contracting would save about 20 cents per plant per month.

It appears that the Sasser plant bill has added to the national debt. This does not consider the cost of two separate General Accounting Office (Congress' watchdog) reports on plant conditions in the Federal offices.

Where were most of the tropical plants? In 1977, they were in the Department of Interior, Department of Energy, the Veterans Administration, the Environmental Protection Agency and the Department of Agriculture.

Cathey to Direct National Arboretum

Henry Marc Cathey was recently named director of the U.S. National Arboretum in Washington, D.C. Dr. Cathey started with the USDA in Beltsville, Maryland, in 1956 where he did research on the interrelations of light, temperature and chemicals in the growth, flowering and production of florist and nursery plants. Since 1972 he has been chief of the Florist and Nursery Crop Laboratory at Beltsville.

The National Arboretum, established in 1927 and one of the world's great arboretums, is a research and educational institution with an active and acclaimed staff of horticultural scientists. Among the outstanding attractions are the new National Herb Garden, the National Bonsai collection, the Gotelli collection of dwarf and slow-growing conifers, azaleas, crabapples, dogwoods and magnolias, and the community youth gardens.

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NINE-HOLE GOLF COURSES: SERVING THEIR PURPOSE

By Joe Much, NW Director, National Golf Foundation

Just as supermarkets sent corner grocery stores into obsolescence nearly four decades ago, development of multiple-course golf operations and the expansion of scores of shorter courses to 18-hole dimensions yearly is threatening to put nine-hole golf courses "out to pasture," where many were built in the first place.

But it would be premature to suggest obsolescence for nine-holers, which still number 5,993 in America, including 4,749 of regulation length, according to the National Golf Foundation's inventory. While that figure does not account for half of all golf courses, as nine-hole layouts did just a few years ago, it does represent some 47 percent. And it is unlikely expansion programs will reduce that percentage by more than a few points each year.

Thousands of Americans call nine-hole courses their golfing homes and, for many of them, nine holes constitute a complete round of golf. In 21 states, nine-hole regulation courses outnumber those of 18 holes or more, sometimes most dramatically. North Dakota, for example, has 80 nines compared to only 13 full-length courses. In South Dakota the difference is 81 and 15, in Maine 75-25, Arkansas 79-58, Oklahoma 93-66, Nebraska 111-33, and in Iowa an astonishing 252-69.

Even those states with a preponderance of full-length courses also have an abundance of nine-hole regulation facilities. New York lists 252, Michigan 243, and Texas 276.

What constitutes a "round" of golf depends upon the preference of the player or whoever is counting. While 18 holes are generally recognized as a full round, it is probable that the majority of golf exercises recorded on weekdays on all courses across the country are nine-hole rounds. Many golfers will play on a long lunch break or rush out for nine after the evening meal. Most league play is geared for nine holes as are men's and women's day events.

Some busy nine-hole courses actually try to discourage 18-hole play by offering no reduced rate for a second trip around the course. The same courses sometimes make little or no provision for working players making the turn into the first tee schedule during busy times, preferring to get as many new players started as possible. While this is not recommended as good business practice, it reflects the attitude of some nine-hole course owners regarding what constitutes a round of golf on their layout.

Boon To the "Boondocks"

Obviously, there are thousands of communi-

ties in the country to which golf would be nothing more than a television show, a newspaper article or just a rumor if it were not for nine-hole golf courses.

National Golf Foundation feasibility guidelines call for at least 25,000 population to support a public 18-hole facility, and as much as 50,000 when that facility is expected to shoulder a large debt service on opening. Smaller population areas simply have to settle for nine holes or nothing.

Fortunately, it does not require half that much population to support a nine-hole facility. It requires just enough interested people to provide the funds for securing 50 or more acres; building the course (sometimes for \$200,000 or less when volunteer labor and donated materials are used); and maintaining the course once it is in play, on an annual budget of as little as \$40,000 in some cases.

Farmers Home Administration encouragement and guaranteed loans to organizations in rural communities were instrumental in adding over 600 golf courses to the American landscape in the 1960's. The vast majority of these were nine-holers, all built in towns of 5,500 population or less, often much less.

The golfers they produced by the thousands, coaxing them off farms and out of village shops and the schools, are not the most sophisticated in the world. But nobody will convince them it takes 18 holes to make a golf course or a round of golf.

In many parts of the country, the nine-hole municipal course is a golfing staple. This is particularly true in the Midwest, where 263 of the 609 regulation municipals in a 12-state area are nine-hole courses, and in the Mountain States, where 96 of 188 are nines. Like the FmHA-backed community club courses, most of these are situated in rural communities or small cities.

There are, however, many nine-hole courses in urban settings. Some of them are par-3 or middle-length adjuncts to 18-hole regulation courses and, as such, are popular with women, seniors and beginners. Most are independent, regulation daily fee facilities which comprise the largest single category of nines, the mom-and-pop or family-owned and operated golf course.

Most of them fit neatly into the marketplace, providing a supplement or alternative to other, fuller facilities. While they may not appeal to all golfers all the time, they are particularly popular with juniors, women and seniors. They are generally recognized as excellent training grounds for the less skilled.

Many persons who fall into these golfing cate-



gories feel less than comfortable at a busy 18-hole course where more serious golfers are trying to move around at a good pace. They prefer to do their learning at a shorter course where pressures are not so great.

A survey of nine-hole municipals in 1979 showed that 19 percent of the play on the average was by women and 13 percent by juniors. Those figures were greater by four and three percent respectively than those recorded for 18-hole municipals in the survey.

Popular Proving Grounds

Nine-hole courses are doing as much or more to launch new golfers into the game as the nation's 18's. And while many nine-hole courses simply do not generate enough traffic to provide a suitable financial opportunity for a PGA professional, many can offer a good teaching pro a steady, rewarding job. Depending upon the type—private, daily fee or municipal—between 35 and 50 percent of the nines employ pros.

The young professional who logs learning time at a nine-hole course, where some of the problems are halved but many others doubled, will

gain experience that will serve him well through his career. This portion of his career probably should be his first head professional position. If he can be an effective promoter of the game, his merchandise and his personal services among the less sophisticated golfers who normally frequent nine-hole courses, then his future in golf is assured. And once he has moved up, he can feel a sense of satisfaction in having served his time at the grass-roots level of the game.

Recent surveys have shown that from 50 percent to 65 percent of the nine-hole courses in various categories employ a golf course superintendent. Here again, the shorter course, usually operating with a shorter staff and tighter budget, offers an excellent training ground for young men interested in turfgrass management. Many of the most successful superintendents in the profession today can look back to apprenticeships at nine-hole courses, either as laborers, summer help, or simply as neophyte superintendents.

Is a nine-hole golf course a good business? It is difficult to answer that question in today's

Continues on page 16

economy. Land and development costs are so great that the prospective golf course owner/operator likely could find a more profitable place to invest his money. However, such golf course brokers as the McKay Realty Co. of Lansing, MI, and the William Sherman Co. of San Rafael, CA, often list bargains in fine nine-hole golf facilities which are much more economical to purchase already built than to build from raw ground. These may not always be sensationally successful properties, but they offer the enterprising would-be golf operator the chance to launch his own business within his means.

Nine-hole golf courses are also available for lease from time to time from such sources as municipalities, real estate developers, or owners who are simply weary of the daily grind. Probably no other avenue to an initial venture in golf course operations, particularly for the untrained, is more advantageous than the leasing of a good nine-hole course. The painful apprenticeship can be completed without major investment.

Rounds of Play Key to Success

Well located and efficiently run, a nine-hole golf course probably will turn an operating profit, but the golf course owner trying to retire a large mortgage could find himself in trouble. It is possible for a busy nine-hole course to generate up to 40,000 rounds annually, although most do not. The 1979 municipal survey showed a national average of 25,000 rounds for nine-hole courses. A 1980 sampling of daily fee nines showed a wide range from 4,000 to 38,000 rounds with a median of 13,500.

Like the golf business anywhere, rounds of play represent the fundamental factor in generating revenue. Added income from such sources as golf car rentals, driving range balls, merchandise sales, restaurant and bar business, etc., obviously will vary with the nature and scope of the facility. But it is the rare golf course of any size which will succeed without a good, predictable volume of play.

For those who would build nine-hole courses from scratch, the cost will vary from region to region and, indeed, from site to site and will continue to escalate. Excluding land costs, a good target figure for construction of the golf course alone might be \$300,000 in the early 80's. This should include a partially automated irrigation system, greens averaging 6,000 square feet and built to reasonably strict specifications, a minimum of bunkering and perhaps a pond or two. Obviously, cost can vary either way, depending upon the nature of the site, architectural features and construction methods.

Developers of real estate projects generally have regarded nine-hole regulation courses as a last choice in golf facilities. Where it is economically feasible, they prefer to build the 18-hole

regulation course, which offers maximum fairway frontage and increases lot costs. For the same reason, many developers have opted for 18-hole executive golf instead of regulation nines when shown that roughly the same amount of land would be used.

As land becomes increasingly expensive and as the trend to more diversified recreational amenities in planned communities, such as tennis and racquetball courts, bicycle and jogging paths, continues, developers may take another look at regulation nines.

Another attraction of the nine-hole course for land developers is the reduced construction cost, smaller maintenance expense, and reduced personnel requirements. Most real estate developers would rather not be in the golf business at all and a reduction in involvement is desirable.

Advantages and Disadvantages

Subjects of an owners' survey several years ago were asked to list advantages and disadvantages of nine-hole golf operations. Only the philosophers among them could find advantages, but in the grand old American tradition, almost everyone found something to complain about.

The most frequently expressed complaint was the difficulty of working in players starting their second nine holes with those beginning play. This can create confusion at the first tee and, when now successfully carried off, cause friction among players. Course operators also lament the difficulty of offering preferred starting times because of problems at the turn.

Nine-hole courses in a competitive location, one operator said, find it nearly impossible to compete on weekends with 18-hole courses, especially if the nine is situated some distance from the population center.

Slow play is a curse on any course, but can be particularly damaging on a nine-hole layout when players waiting to start are stacked up with others making the turn.

Properly regulated play on an 18-hole course can accommodate more than 300 players on a busy day in season. Nine-hole courses are crowded with anything over 150 if many are playing 18 holes.

These same problems, along with the natural preferences of serious golfers, limit the possibilities for nine-hole courses to host tournaments and realize the revenue of group outings. Restricted revenue, one owner said, prevented him from securing the services of a competent, full-time professional.

There are systems that will minimize the crossover problem at the first tee while maximizing the number of players who can be accommodated on a single day.

Some years ago in connection with its Speedy

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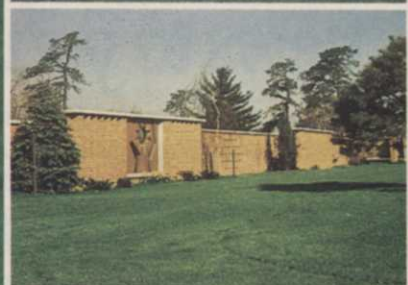
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Nine-Hole from page 16

Golf program, the NGF offered a tee-off schedule for a nine-hole course. It involved the use of the first and fifth tees for the first hour of the day and the closing of the course to additional players for two intervals during the day. Faithfully followed, the system could put as many as 216 golfers around a nine-hole course in 18-hole rounds on a single day.

Obviously, this system would be used only in crush situations such as tournaments or company outings. Other modified systems can alleviate problems on normal days, and strict adherence to reserved starting times will help accommodate all the golfers who wish to play most nine-hole courses.

Imaginative operators can do much to increase the appeal of their courses, even for those golfers who insist upon the challenge of 18 different holes. Many of them provide dual tees or tee settings to change the distances and sometimes the character of the holes from one round to the next. In rare cases, dual pins are used and color-coded for further variety when greens are large enough to permit.

The pro-manager of a Colorado course that has recorded as many as 35,000 nine-hole rounds in a season finds that "keeping most activities of the facility under one manager or professional not only saves money but enables us to treat the public on a friendly, consistent basis.

"In a metropolitan area," he said, "a regulation public nine is hard-pressed to compete with surrounding 18 or 27-hole courses, but good greens care and friendly management are our equalizers."

Nines Have a Future

The future of the nine-hole golf course probably is not far from where its past has been—in the small communities of America. When the FmHA program of assistance to rural area clubs was in force, the 600 courses it helped develop really just scratched the surface. Thousands of other small towns in the country are still without golf courses to call their own. When they get around to building them, chances are most will be nine-hole tracks, at least for the first several years.

Of the 58 new regulation courses opened in America in 1980, 26 were nine-holers. So were all four new executives and five of the six par-3's. Among new courses going into construction the same year, 17 of 53 regulations were of the nine-hole variety, four of six executives and the only par-3 listed.

Meanwhile, additions to existing facilities continue to play a large role in golf course development. There were 64 in 1980, of which 53 were of nine holes, usually to create an 18-hole course. At any given time, at least half the nine-hole golf owners questioned will express aspirations for expanding their facilities.

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