

# Maintaining California's gemstone—Bel Air Country Club

by Harold LeSieur



Players arrive at 10th green, after tee shots across canyon and walk over fabled suspension bridge. Vistas of magnificent trees abound and frame each hole at Bel Air.

Architecture of the famous Bel Air golf course, located in one of the most affluent sections of California, began 50 years ago and has culminated today in one of the show place courses in the nation. Site of the 76th Amateur USGA Championship tournament in 1976, this proud club boasts some of the biggest names in the Hollywood entertainment industry and Los Angeles business world as regular players and members.

Hardly discernible from well-known Sunset Boulevard, and near Beverly Hills and the University of California at Los Angeles (UCLA), this course of over 100 acres lies nestled in the steep terrain of the Santa Monica mountains, the exclusive Bel Air section. With elevations varying from a high of 662 feet

to a low of 429 feet above sea level (not very far away), layout of some tees (such as the fabled 10th, across a broad canyon) presented special challenges. To illustrate the magnificent vistas possible from this course, from the 17th tee, Bel Air golfers can view distant snow-covered San Bernardino mountains in the winter. Fewer than 600 families can be members of this exclusive club and enjoy such privileges, and there is said never to be an opening which is not immediately filled.

To maintain this gemstone in Southern California's hillsides at the peak of its natural beauty requires a staff and golf course superintendent with a high experience level, a sizeable investment in equipment, and a cooperative management — all of which the Bel Air Country Club has

in abundance.

Focus for the model Bel Air maintenance program is 38 year veteran Ardyce Twombly, who received a 1976 Citation of Performance Award from the GCSAA in recognition of his superior job in course preparation at the club. Although he now enjoys conveniences unknown in his earlier golf course maintenance days, Twombly and his assistant superintendent Charles "Bud" McDonald still report to work often near dawn, to ready the course for early players. Together they supervise a crew of 2 foremen, 6 section men responsible for three greens apiece, a mechanic, an equipment operator, 2 clubhouse gardeners and a labor gang of 6 "all-around" hands. Unusual to many maintenance crews, management attention at Bel Air results in a noticeable spirit of pride, and is reflected in course and maintenance center cleanliness. Few scraps of paper escape the watchful eyes of Art Twombly and his helpers!

## Modern maintenance center saves money

The golf course maintenance center has finally graduated from the "barn" designation to the status of control center for an important part of total club management. Not at all clubs yet, but surely at the Bel Air Country Club, strong Board of Governors' support was extended to Twombly's plans for a modern maintenance control area. "I knew what I wanted for a new building since my experience at my other three positions told me exactly what I did not want", says Twombly.

Twombly came up the "hard

*Continued on page 28*



*Pot nursery sits near maintenance center allowing easy access for transplanting flower flats into 4-inch pots.*



*Tractor operator tows 9 gang fairway mower on way to maintenance center.*

## Bel Air *continued*

way" in golf course maintenance, during days when maintenance was relegated to repairs in the snow because there was no room in the "shacks". Today he basks in the reflected glory of a handsome course and enjoys the conveniences of a well-equipped 50 x 250 foot maintenance center. On first view, one sees massive counterbalanced truck doors, adequate carload lot storage space, separate mechanic's area and double locked chemical and seed rooms, plus locker and lunch rooms for workers and a spacious office for the superintendent. Room is pro-

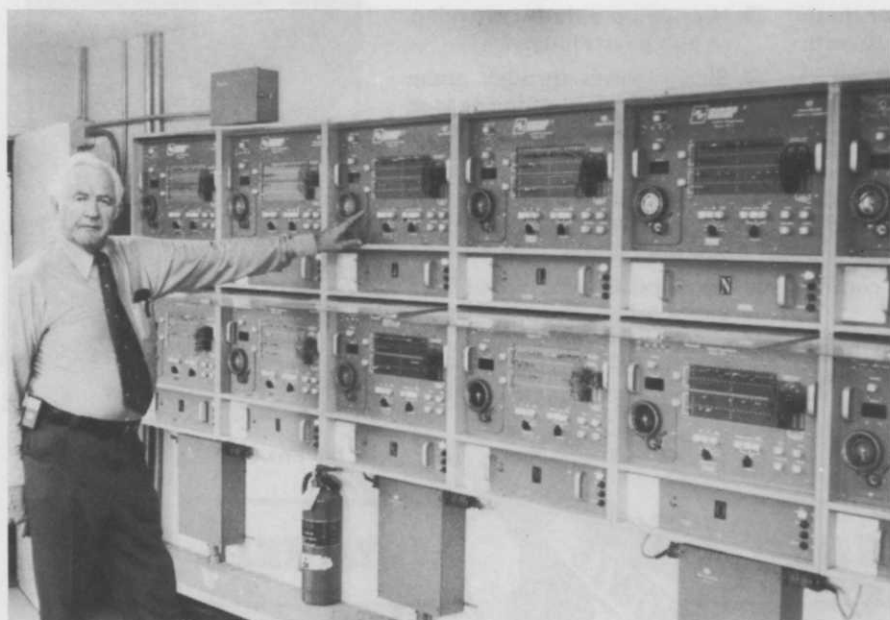
vided to store indoors an impressive list of maintenance equipment.

These gains were not won all that easily, since Bel Air's maintenance staff experienced many frustrating months of hassles over building permits, neighbors who objected, and construction difficulties. Not the least project was the installation of 25 miles of irrigation piping, over a course which spans one mile and over 100 acres of hilly terrain. Today, this remarkable system is controlled automatically from the superintendent's office.

Twombly observes that no one plans the maintenance center nor thinks about equipment storage and repair, usually looking at this as a good place to save club money. Accordingly, he says, the superintendent must take the lead to show the cost savings possible. "When building a new club I strongly suggest that the superintendent, club officials, the golf course and club house architect, and the maintenance building designer work together on the master plan before it is submitted for final approval," is Twombly's sage advice.

### Plantings beautify hillsides

A tour in Art Twombly's golf cart can be both a pleasant and unexpected experience. Pleasant is the enjoyment of flowering plants of diverse colors, unobstructed by preoccupation with making a satisfactory golf course. Unexpected? A sudden meeting with entertainer Lawrence Welk! Returning from a brisk game, Welk is a member and regular player at Bel Air, along with a Hollywood directory of famous



*Superintendent Art Twombly explains operation of Binar Control system, installed in his office to permit easy automated operation of 25-mile sprinkler irrigation system.*

*Continued on page 32*

## Maintenance Equipment Package at Bel Air Course

- 1—tractor with 9-gang fairway mower.
  - 2—tractors for rough and intermediate-rough mowing.
  - 2—utility tractors with power take off.
  - 1—front end loader and excavator.
  - 1—1 1/2-ton dump truck with stake body.
  - 1—1/2-ton pickup truck.
  - 1—3/4-ton pickup truck.
  - 1—200-gallon greens sprayer (insecticides & fungicides).
  - 1—150-gallon fairway herbicide sprayer.
  - 13—30-inch pull-type rough mowers.
  - 3—greens and tees aerifiers.
    - 1—fairway aerifier.
    - 1—fairway renovator or dethatcher.
    - 1—Howard turf quaker.
    - 1—power spiker for greens and tees.
    - 1—Mattaway (tee renovator or dethatcher).
  - 2—sweepers for fairways and roughs.
    - 1—small sweeper for tunnels.
    - 1—8-foot drop spreader.
    - 1—Lilly rotary spreader.
  - 2—small rotary spreaders.
    - 1—small drop spreader.
    - 1—top soil spreader for greens and tees.
    - 1—power drag mat.
  - 2—Ren-o-Thins (verti-cut machines).
    - 1—Hahn 3-gang machine for dethatching.
  - 14—22-inch greens and tee mowers.
    - 1—72-inch rotary mower.
    - 2—small rotary mowers
      - 1—Rogers seeder and renovator.
      - 1—Danasner digger with 4 augers.
      - 1—Ditch Witch.
    - 6—haulsters or trucksters.
      - 1—Superintendent's cart.
      - 1—Assistant superintendent's cart.
      - 1—Ryan sod cutter.
- Power take-off equipment, as appropriate.

## Bel Air *continued*

personages. Some of these notables live within sight of the Bel Air course, and such a tour reveals past or present residences of Conrad Hilton, Alfred Hitchcock, Charles Bronson, Ray Milland, Mary Tyler Moore and even the late Howard Hughes.

"We are always trying to improve and beautify the Bel Air course even further," confides Twombly, although he modestly disclaims the labels of "outstanding" or "famous" for his handiwork. Nevertheless, a systematic tour of all 18 holes reveals many plantings and decorative features which did not exist before Twombly's arrival.

Bel Air is situated on very hilly terrain, so that large hillside areas have required attention and coverage. Responding to this need, Twombly and his crew have planted azaleas, bottle brush and bougainvillea, presenting striking shades of red, with scarlet ice plant and daisies decorating the frequent sandstone outcroppings of this park-like course. Again, ice plant, ivy and African daisies are used in profusion to break-up the "monotony" of unlimited grass.

Along walkways and roadsides, one may see liberal use of the hibiscus plant, and shielding the edges of certain tees or greens from surrounding homes are colorful, high hedges of the golden nugget shrub. Mindful of feminine members, Twombly has thoughtfully provided gazanias to surround several ladies' tees, and even a bed of pansies on one tee, out of the line of play.

At the main entrance to Bel Air Bay Club, members are welcomed by generous plantings of exotic blooming flowers, principally gardenias, camellias and azaleas. This pleasing array is shaded by ficus trees. At one time, rather than discard some of these attractive trees, which required removal from the driveway entrance, they were salvaged and used to separate two different fairways.

In order to economize, Twombly and his crew buy flats of small plants and hand-transplant into 4-inch boxes. During a recent two

week period, 20 such flats were transplanted. Based on a purchase price of \$8 for 64 plants, and replotting into the 4-inch size (which sell normally at 70¢ to 80¢ each), the savings more than justified the trouble involved.

## Trees emphasize beauty, require maintenance

Flowers and flowering shrubs contribute charm, but what adds explanation points to this picturesque setting are the many varied and dignified trees. Sycamores, Brazilian peppers, jacarandas, junipers and a large variety of eucalyptus, pines and even fruit trees provide fresh vistas from each tee.

Included in the pine family are the Monterey, Leppo and Italian Stone varieties. Flowering eucalyptus, borrowed from Australia, is a favorite, and orange, peach and pear trees lend a particular California feeling to the Bel Air course.

Behind the scenes of this majestic beauty are occasional problems, and saving elderly sycamore specimens is one. Where trunks have been weakened by natural causes, Bel Air has hired outside tree experts to tie these large beauties together, and to anchor points, with wire cabling. When a limb or branch becomes diseased some many inches in diameter, where possible it is removed and the wound chemically treated to save the tree.

The Bel Air staff attends to its own tree maintenance, as much as possible, but does not hesitate to call in outside services for pruning taller trees involving more hazards. To do otherwise, Twombly admits, would be to require exorbitant insurance coverage. Smaller tree varieties, however, are pruned at least every one or two years by his staff, depending upon requirements. New trees and shrubs are continuously planted, year-round.

## Manicured turf requires dedication

No element of a golf course can be more important than tees, fairways and greens, and maintenance of this "backbone" of any course

*Continued on page 34*

## Bel Air *continued*

must necessarily demand major attention from the groundskeeper and his staff. Caring for the beautifully-landscaped Bel Air turf requires not only careful attention to irrigation needs, and a careful schedule of mowing, but a dedicated campaign of weed grass elimination. Mowing at Bel Air is a seven-day per week proposition for greens, and not less than five days weekly for all fairways, with weekend mowings often necessary under California's productive growing climate.

Bermuda is the majority planting on all fairways. A hybrid bermuda is sometimes utilized to provide a smoother fairway area, where appropriate. On greens, every effort is made to maintain a maximum of bent grass. Here, as on fairways, open warfare is waged against *Poa annua* and kikuyugrass. *Poa* looks good in winter months, when bermuda browns, but in summer months this pest turns brown and unsightly. Additionally, *Poa annua* (or annual blue grass) grows as a clumpy grass, which golfers do not appreciate.

Weapons used to combat *Poa annua* and kikuyugrass include overseeding with desirable grasses, such as bermuda, bent and rye, and pre-emergence treatment with Mallinkrodt's Pre-San in the case of *Poa annua* and Monsanto's Roundup versus kikuyugrass. Betasan also has been found useful, in fall months, to prevent seed germination by *Poa annua*.

### Unique automatic irrigation system

How to water "wall-to-wall", without overwatering and runoff, or underwatering and dry spots, a 124 acre course set in scenic but steep hills was the question faced by Bel Air maintenance professionals. With the old hydraulic system, first constructed of oil field pipe in the 1920's, "You either had to water everything or shut everything off." To this statement of the problem, expressed by assistant superintendent Charles "Bud" McDonald, could be added the problem of how to adjust an irrigation system —

other than by hand watering — to the vagaries of weather.

An ideal answer to these problems, which has become the pride and joy of superintendent Twombly, is an automatic irrigation system using the Johns-Manville Binar control system. From his office, Twombly can choose from among a large number of irrigation options, simply by selecting appropriate settings on 21 different central programmers. Each programmer panel controls 26 to 28 valves out on the golf course, and two sprinkler heads per valve (rather than 16, under the old system) can be individually set for times varying from 2½ to 60 minutes.

Flexibility is built into this system, and allows "programmed watering" at short intervals, say a 20 minute watering of hillsides in the morning, then another 20 minutes four hours later — with complete water absorption and no run-off as the bonus. Adding to this flexibility are alternate programs, permitting an additional 50 percent to 100 percent time over the original setting, for hot, dry spells, or a fraction of the base setting (such as 75 percent) when weather is overcast and courses still moist. Again, if one portion of the course requires more water than another, adjustments can easily be "plugged in". In short, "for everything, there is a setting." Twombly and his department are proud that they helped install this system, over a five month period, and feel as a result "each of us knows where every valve is located." This becomes quite an advantage, when emergency measures are necessary, or even routine inspection. Since no system can be operated 100 percent automatically, without checking, Bel Air maintenance personnel "eye ball" inspect each of the 1500 sprinklers weekly, to insure correct operation. Then, if dry or brown areas are spotted, quick couplers are available throughout the course to permit rapid, supplementary watering.

An even easier way to spot water is available to the Twombly crew. At various points on the course are underground control boxes to which they can connect portable command units. If the manual override button has first been pushed at the

central programmers in the office, these portable units can be used to set off groups of sprinkler heads for up to one-half hour each. An even newer wrinkle is a special device recently acquired which allows overriding even the central programmers. This equipment has obvious advantages during power outages or earthquakes (not infrequent in California), and can be run from the battery terminals or even cigarette lighter of any vehicle.

A rain gauge installed on the maintenance building roof also can cause a manual override of this irrigation control system, and a quarter inch of rain will shut down the whole works. From rain to drought, according to Twombly, "We have found that the automatic system will do anything we want it to do, providing it is installed properly and we don't ask it to do too much." To this he adds, "Having just gone through a seven month drought, we can safely say we've proved it will operate in California."

For frosting on the cake, the Bel Air automatic irrigation system contributes to much-needed water conservation, saving 30 to 40 percent over the old, hydraulic system. To emphasize the point, Twombly's crew even hand-rakes all drainage culverts to remove accumulated debris, replacing the former water wash-down procedures.

### Pesticides role in preventive maintenance

Preventive maintenance is the fundamental remedy for fungus and, insect and weed pests, explains Twombly, requiring at least three spray rigs in continuous use. Seven different fungicides are employed in this program — against such hazards as fusarium, melting-out and rust (on grasses) — not less than once every three weeks, and sometimes twice weekly.

Insecticides are also applied with the same tractor-driven spray equipment, on an "as necessary" basis, following visual inspection. Cutworm and sod webworm are the chief pests. After greens are spiked or aerated by machine, these insects prefer to lay their eggs in the air pas-

*Continued on page 41*

# Maintaining Bel Air

Continued

sages thus created. Bel Air maintenance experts find that Diazinon, Dursban or Proxol are all effective in combating these types of insect pests.

Equipment used in this control program presently consists of a 200-gallon fungicide and insecticide sprayer, for greens only, plus a 150-gallon sprayer containing herbicides for fairways and roughs, and a 50-gallon herbicide spray rig for small weed control jobs. Each rig contains its own motor and compressor and is drawn by tractor, and careful attention is paid to insure there is no mixup in pesticides, since this could result in killing desirable grasses.

Still a gleam-in-the-eye, Twombly enthusiastically describes his "next" piece of new equipment, a 300-gallon spray rig rated at 600 p.s.i. pressure. This will enable Bel

Air maintenance professionals to reach their tallest trees, formerly reserved for outside maintenance crews at least three days each year.

A final piece of equipment, shown with pride, is a foam marker rig. This unique device dispenses a trail of foam, to show personnel where herbicides have been sprayed or fertilizers placed, thereby preventing wasteful or even tragic mistakes.

## Fertilization tailored to needs

A fertilization program for Bel Air Country Club must take into account a predominately acid soil rich in phosphate ( $P_2O_5$ ). Since *Poa annua* thrives on phosphate, little or none can be applied. Consequently, a 20-0-16 blend (as Scott Greens Fertilizer) is a favored mix. In winter months, a supplementary dress-

ing of potash ( $K_2O$ ) is often applied, preferably in the form of potash nitrate ( $KNO_3$ ) or sulfate of potash ( $K_2SO_4$ ) straights.

High nitrogen fertilizers are favored, during cooler weather, for fast greening of turf. Examples are a 20-0-0 with trace elements (Scotts' Pro Turf) or a complete mix such as a 16-4-7 (as Best Fast Green). The pelletized form is generally preferable, to insure ease of application and no setting-up in the sacks.

Supplementary soil conditioners are found helpful at Bel Air, such as gypsum to provide better water penetration, and limestone to neutralize excess soil acidity. This latter condition was found to prevail in certain areas, with a soil pH in the 4 to 5 range, from repeated dosages with sulfate of ammonia. Twombly reports that such treat-

Continued on page 42

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## Bel Air continued

ments finally failed to produce adequate grass growth, and after a soil analysis to detect the cause, limestone was tried with notable success. During hot summer months, especially July and August, a low nitrogen, slow-release fertilizer (Milorganite) is used to keep grass growing slowly and steadily, without hazard of burning. In addition to fairways, tees and greens, this is even used on roughs and around trees.

In addition to Milorganite, trees are fed with other slow-release fertilizers. For this purpose, holes are drilled in the ground at the drip line and fertilizers poured in.

## Equipment package impressive

At today's prices, the value of maintenance equipment owned by Bel Air Country Club exceeds \$220,000, on a replacement cost basis. Unlike many courses, Bel Air is bisected by a public roadway and is so hilly as to require four separate, underground tunnels (one 400 feet long) to permit players a full eighteen holes of golf. Some mowing equipment is kept at the fourteenth green, instead of transporting across the public road, and the total equipment investment is thereby increased. Again, with escalating costs of labor, Twombly feels that as much mechanization as possible is justified.

An impressive list of maintenance equipment at Bel Air is summarized in the chart. One of the most-used items is a tractor-drawn, 9 gang hydraulic mower.

Rising replacement costs for equipment are well illustrated by the Bel Air capital improvement program. Spending for this purpose has risen to approximately \$20,000 per year, up from only \$10,000 a few years ago. To illustrate, a 22-inch walking mower costing \$626.46 in 1973, now commands a sales price of \$959.30. Again, a 200 gallon spray rig dramatically shows the effects of inflation: a \$1,700 item in 1972, now exacts \$3,142 to replace.

Continued on page 44

# Maintaining Bel Air

Continued

One means to minimize this investment, hardly a secret, is a good maintenance program. At Bel Air, a seasoned mechanic is available full-time to catch all needed repairs, and workers are instructed to notify his shop at the first signs of trouble. Mechanic Bill Schaeffer practices all trades related to maintenance, especially enjoys electronics, and says he can do "everything but automatic transmissions." Schaeffer came with Twombly from New York, and has worked for him many years, in his own words "Through thick and thin."

All equipment is owned, none is leased or rented, at Bel Air. This includes 45 golf carts, for which the maintenance center must accept responsibility. Unlike a former superintendent post held by

Twombly, where 90 percent of "much too little" space was occupied by golf carts, at Bel Air a spacious maintenance building provides adequate room for carts, equipment and supplies. Twombly feels grateful for the progressive attitude and business acumen of Bel Air members who, he says, understand the words "expensive equipment deterioration" and are willing to spend money for a more efficient maintenance operation.

The need for mechanization to conserve payroll is apparent when the high cost of overtime labor for mowing and changing holes (7 days per week) is considered. Exaggerated last year, because of the U. S. Amateur Championship match held there, Bel Air is seeking a 10 percent to 15 percent cut in overtime during 1977. Pay scale ranges from

\$3.00 to \$5.50 hourly, with generous fringe benefits, but some relief is gained by staggering shifts to avoid overtime. □

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