



### 1. GREAT STYLE ON APPROACHES

The Jacobsen Turf King 84" is a versatile, all-purpose mower with variable forward speed plus reverse. It will put a fine smooth finish on up to 20 acres in an 8 hour day. The three power-driven high-frequency reels are ideal for mowing bermuda or bent grasses on tees and approaches. Also 76" width.



### 2. NEW STAR ON THE GREENS

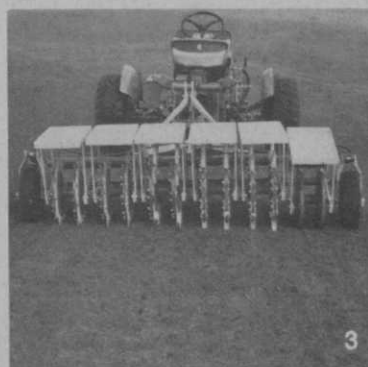
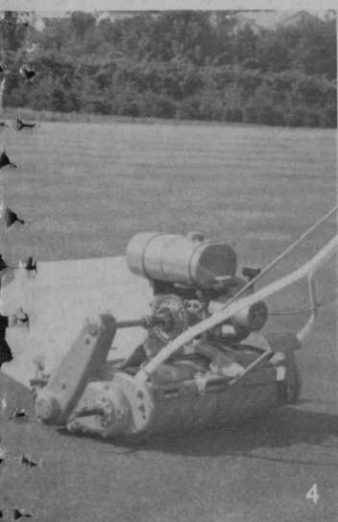
Meet the Greens King, world's first and only powered triplex greens mower. Jacobsen designed it to speed up greens care. It's the first breakthrough in greens care since Jacobsen introduced the first greens mower in 1924. It mows greens—straight cut or elliptically—and travels to the next green at 8 M.P.H. Wide, low-pressure tires won't mark tender turf. Only 3 major controls—all hydraulic. It can reduce greens care man-hours by about two-thirds.

### 3. SMOOTH OUT YOUR GAME

Every golf course needs this Rogers 590 Aerator to promote healthier, better looking turf. Designed to deep slice and condition contoured or compacted turf, the flexible 590 may also be used for coring, renovating, slicing, spiking and cultivating. Fits any tractor with 3-point hitch.

### 4. FIRST ON THE GREEN

The Jacobsen Greens Mower is the standard of the industry. The fine precision 9-blade reel is designed for an extra smooth cut. Perfectly balanced, very maneuverable.



### 5. HUSTLES AROUND THE COURSE

Makes this Rogers Utility Truck your all-purpose vehicle. Easy-loading ramp for equipment, tools, fertilizer, supplies. It will tow gang mowers, sweepers, trailers, spreaders, seeders. Use it wherever low-cost transport will save expensive man-hours and heavy equipment.

### 6. TOP DRESSING IN ONE OPERATION

The Sod Master top dresser allows one man to do the job of three men spreading and raking by hand. Exclusive rotating brush drives materials downward into base of turf. No raking or dragging. Large steel hopper and welded steel frame. Highest quality cast iron gasoline engine. Spreads at a rate of 225 feet per minute.



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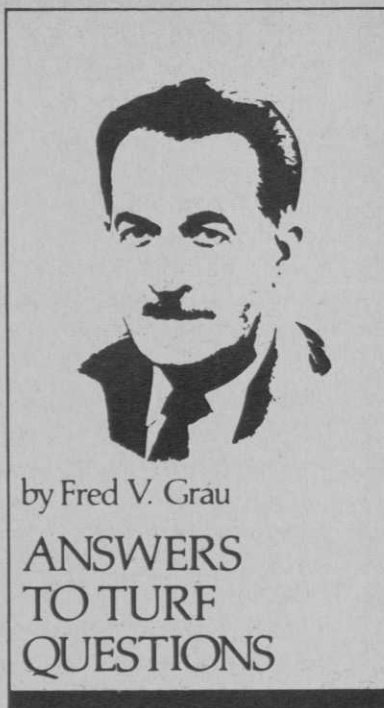
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by Fred V. Grau

## ANSWERS TO TURF QUESTIONS

### Turfgrass: a "must" for a better environment

Living turf is a significant factor in improving the environment. It has roots in the soil, it absorbs rainfall, oxygen is released, carbon dioxide is absorbed, respiration cools the atmosphere, players feel the resilience underfoot and the natural green color is a delight to the eye.

Plastic or artificial turf is something different. It adds nothing to the environment, it has no roots, it absorbs no rainfall, releases no oxygen, has nothing to do with carbon dioxide.

Absorption of air-borne toxins by living turf has to be a real plus. This feature is being played up by horticulturists and arborists as a reason for planting trees. A few have even plugged turfgrass for the same reason.

Living, breathing turf has been, in some instances, replaced by synthetic turf for two very good reasons: 1) The owners were unwilling to spend the few extra dollars to prepare the base, the drainage, and to supply the right grass and to fertilize and manage it properly; 2) The turfgrass manager assigned to take care of the turf didn't know his job and couldn't meet the job requirements.

True, there are some situations where living turf can't take it. One example is the Astrodome where

there is not enough light to grow grass and the intensity of usage is beyond the capacity of living grass to survive.

In golf the only place where an artificial mat seems to be justified is on a tee which is too small and where the play is so heavy that living turf just can't make the grade. Golf superintendents have a glorious chance to keep living turf in the "ball park" by calling on all resources (their own and those of university scientists) to maintain beautiful playing turf under seemingly impossible odds.

**Q—***Our club is considering springing P-16 bermudagrass into new fairways in 1971 after some kind of temporary seeding. In your opinion is this the way to go?*

(Maryland)

**A—**My personal experience does not include P-16, although its origin and background are well known to me. In consultation with Dr. Juska at Beltsville and with A.J. Powell at University of Maryland I conclude: 1) P-16 has not been released or approved for use on fairways in Maryland; 2) performance in test plots has been mediocre and disappointing. With several excellent cool-season grasses of known performance available, which provide green turf nearly year-round, may I suggest a reassessment of your goals. Annual re-seeding to thicken turf in certain areas seems to be excellent planning especially with improved re-seeding equipment that does not require "scorched earth" or taking the course out of play.

**Q—***Ours is a new seaside course which occasionally is subject to salt spray. Greens will be seeded fall 1970 (we hope). My choice is Putting Green Quality Blue Tag Certified Pennncross creeping bent. Are there other putting green bents that I should consider. (Maryland)*

**A—**Pennncross has all the salt-spray tolerance that you will need for your greens. As you know, this polycross bent has had bred into it the ability to compensate for unusual conditions and to adapt itself to the local environment. This advantage simply cannot be ignored. Cost is moderate.

(Continued on page 60)



# 5 questions to ask before buying a tractor-loader.

From the people  
with the  
right answers.

1. Does it have the capacity I need? 2. The right transmission for my conditions? 3. Easy adaptability to other jobs? 4. Maneuverability and easy handling? 5. Dependable performance?

These are five big questions you should ask when buying a tractor-loader. We're eager to mention them because Ford answers a big YES to every one!

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Maneuverability and easy handling? A superb balance of power and weight make Ford famous for those qualities.

And for over 50 years Ford has set the standard for more dependable, trouble-free performance. See your Ford tractor dealer now. The man with *all* the right answers.

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Ford 3000 tractor shown with 730 loader. Lifts 2,240 lbs.



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## 15ft. cut Fully-Hydraulic 7-unit Power Gang Mower

The Hydraulic 5/7 has a proven record of a high work output over the last two years and a great record too for rugged reliability under testing conditions.

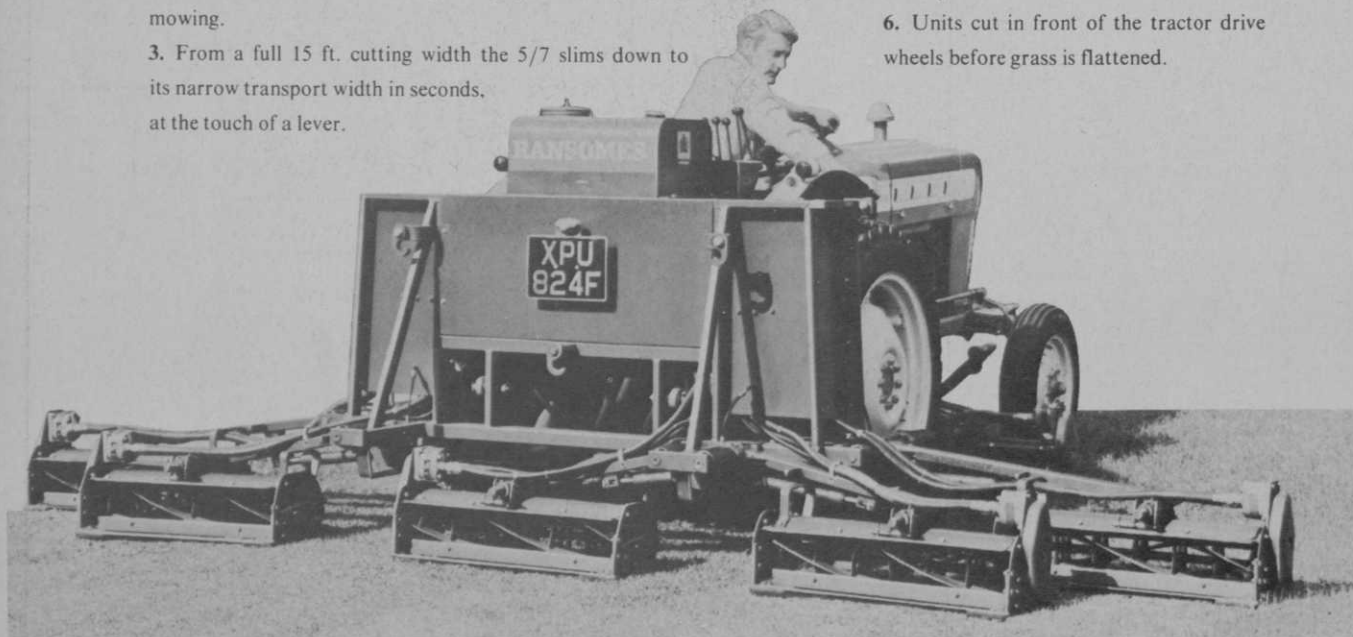
All gang mowing operations on the 5/7 are handled hydraulically, with fingertip control, from the driving seat.

The units are raised and lowered . . . hydraulically. Forward, neutral and reverse reel drive is provided . . . hydraulically. We're proud of the 5/7. It's the biggest step forward in large area grass-cutting for 20 years.

**EAST COAST—WEST COAST. To see this revolutionary machine at work contact:—WARRENS TURF NURSERY, MAPLE & BATES ROAD, GOSHEN, NEW YORK.**

### The 5/7 simplifies the driver's job because—

1. Hydraulic direct transmission gives him power where he needs it most—at the cutting reels. Variable cuts per yard from 20 to 75.
2. Providing the tractor can get a grip he can go gang mowing.
3. From a full 15 ft. cutting width the 5/7 slims down to its narrow transport width in seconds, at the touch of a lever.
4. Reverse drive clears choked reels and allows back lapping.
5. Hydraulic power allows from 1 to 7 units to be used separately or collectively.
6. Units cut in front of the tractor drive wheels before grass is flattened.



## NEW GREENS MOWER

Britain's newest, best greens mower for perfect turf grooming. Ten high-speed knives of NEW super-tough, impact-resistant steel, together with an extra-thin bottom blade combine to give the closest possible cut—faster with the 20" cut Auto-Certes.

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**Duke Lawn Equipment,**  
1184 Plains Road East, Burlington, Ontario. Telephone 637-5216  
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**Morin Equipment Inc.,**  
2075 Branly (Centre Industriel STE-FOY) Quebec 10.  
Telephone 418 681-7741 Importers for the Province of Quebec.

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# THE VANISHING URBAN COURSE

If permitted to continue unharnessed, urban sprawl will leave behind only concrete and asphalt where once the open space and greenery of golf courses offered respite. The club industry and the public must join to halt further devastation. **GOLF Magazine** offers a hard-hitting plan of action

**I**N these days of frequent clash between public interests and business interests, it is rare when the two can come together in support of a cause for the good of the public and the benefit of an industry. GOLFDOM's sister publication, **GOLF Magazine**, in its October issue presents just such a cause in "Golf: America's Vanishing Green Belt"—an article that will rally the nation's golfers behind the troubled club industry.

Golf club administrators and officials are well aware of the problems that beset the industry and threaten the very existence of many clubs, particularly in metropolitan areas.

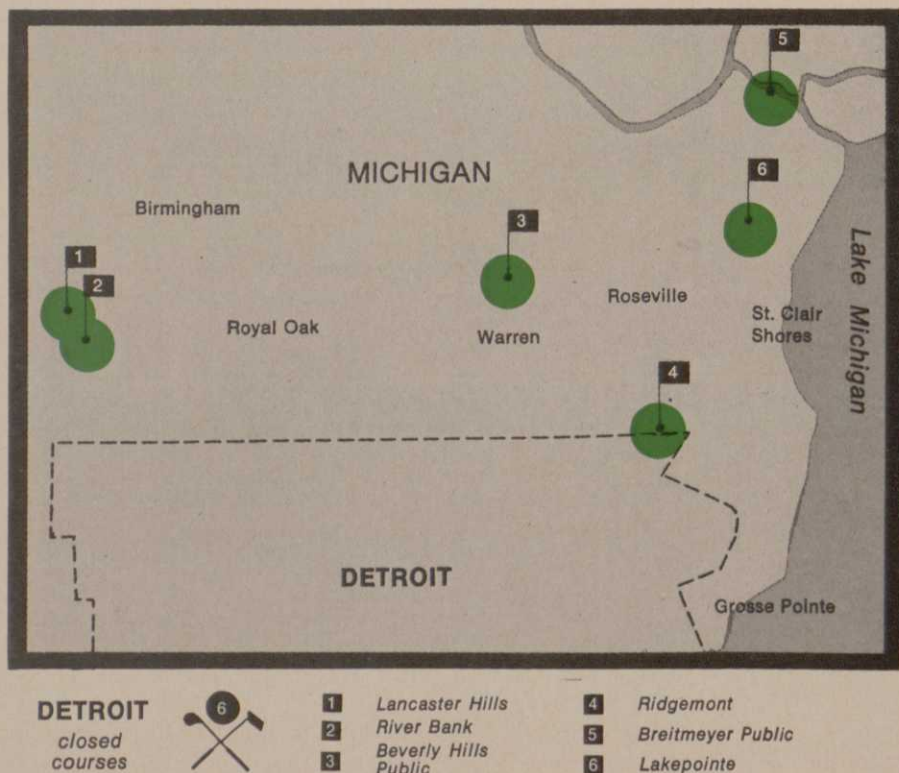
GOLFDOM and the major industry associations have been alerting clubs to these conditions, and the list is growing with great rapidity.

- Soaring property taxes as hard-pressed municipalities, particularly in megalopolis areas, revise assessments on golf courses.
- Rising operating costs in the wake of wage law changes and inflated prices.
- Higher insurance costs combined with the continual need for more protection as replacement values increase.
- New taxes to be paid on non-member income.

These are just a few of the problems that are tightening the stranglehold on clubs. And in seeking solutions, they find themselves foiled at almost every turn. If a club attempts to meet new property tax costs by increasing its non-member business, it runs the risk of losing its non-profit status. If a club tries to levy special assess-

ments, it is likely to meet member resistance in these days of belt tightening. Tell a golfer about this financial treadmill and he may offer, at best, a sympathetic nod. But **GOLF** hits Americans with the hard fact that the resulting tragedy of these problems is theirs.

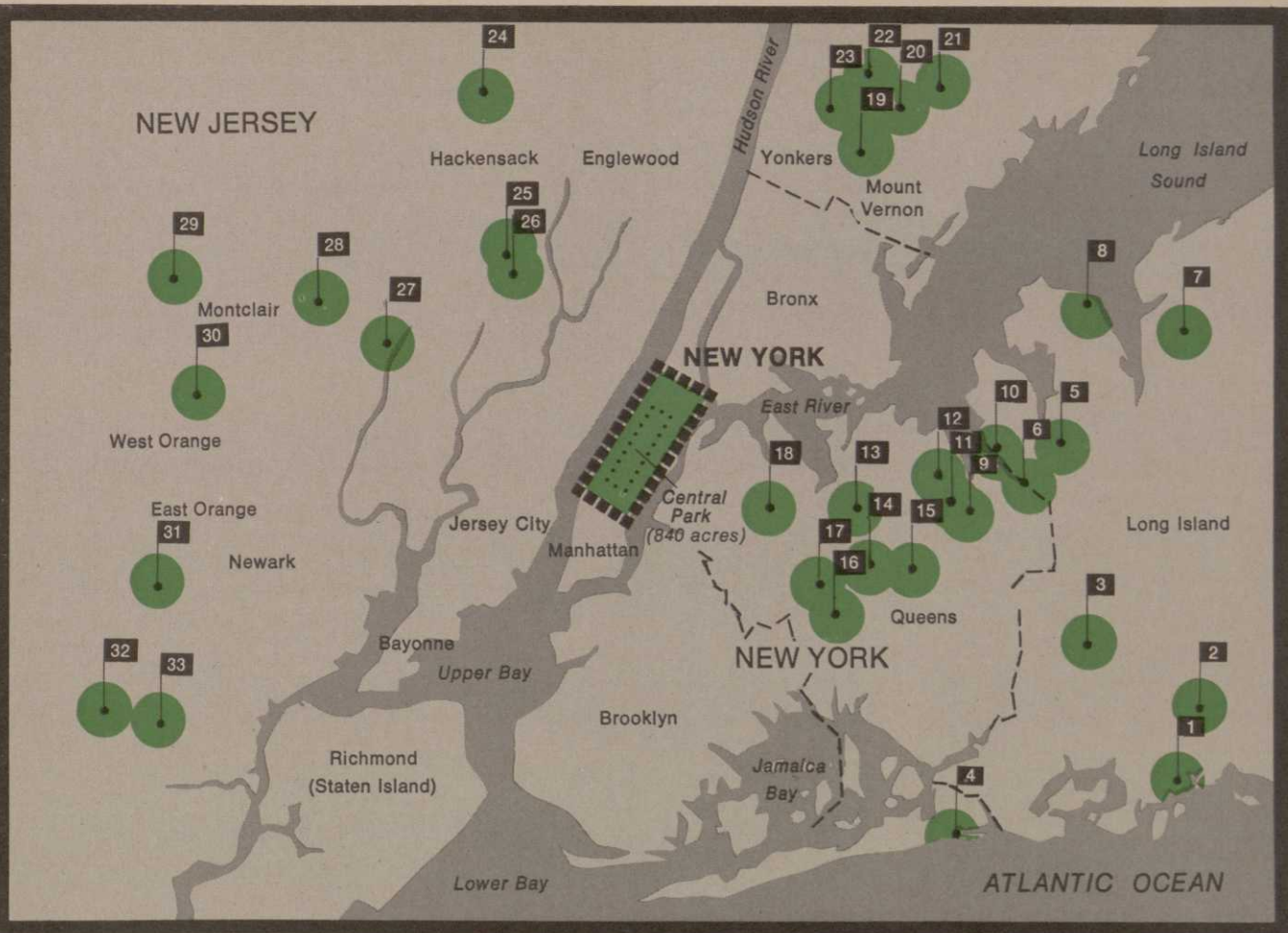
*Hundreds of golf courses offering green respite to the dreary concrete shroud of urban development are surrendering the land to asphalt, steel and concrete. Taxes and the too-sweet deals of builders are smothering the fairways and greens which once made urban life more than endless stone.*



LOST FOREVER to fast-growing suburbs are thousands of acres of golf course land. This map of northern Detroit, much of it suburb, shows fairly recent loss of six golf courses.



## NEW JERSEY



## NEW YORK



- |   |                     |                                |                                    |                 |
|---|---------------------|--------------------------------|------------------------------------|-----------------|
| 1 Oceanside   | 7 Cedar Creek       | 15 Hillcrest                   | 22 Hudson River                    | 27 Yountakan    |
| 2 Willow Brook  | 8 Guggenheim        | 16 Queen Valley                | 23 Grassy Sprain                   | 28 Elmbrook     |
| 3 Valley Stream   | 9 Oakland           | 17 Arrowbrook                  | 24 Orchard Hills (took nine holes) | 29 Ferncliffe   |
| 4 Ocean Country Club  | 10 Soundview        | 18 Jackson Heights (12 holes)  | 25 Aviation (36 holes)             | 30 West Orange  |
| 5 Greentree   | 11 Old Belle Claire | 19 Lawrence Park West          | 26 Teterboro                       | 31 Battleground |
| 6 Lake Success (Deepdale, suffered land loss due to expressway) | 12 Bayside Links    | 20 Hickory (formerly Oakridge) |                                    | 32 Locust Grove |
| 13 Old Country Club   | 14 Pomonok          | 21 Broadmoor                   |                                    | 33 Sunnyfield   |

LOST FOREVER to the over-all New York metropolitan area in a single generation as a result of commercial acquisition of golf courses: a green belt of 5,511 acres, equal in size to more than one-third of Manhattan Island.

Sound like science fiction? It's not. It's a process that has been going on for three decades and continues to go on with greater acceleration. Since the beginning of 1968 alone, according to a National Golf Foundation compilation, almost 100 golf courses have been wiped out mostly because of replacement by housing, industry and shopping centers or because of taxation. GOLF and GOLFDOM believe it must and can be halted.

For nearly half a year, GOLF has consulted with ecologists, urban planners, architects and government officials, and has charted on maps, reproduced here, the steady conversion of open golf courses into concrete shopping centers and real estate developments. From this research, a solution of economic and ecological simplicity emerged: Make golf courses an integral part of a massive "green belt" pro-

gram. Use the existing golf courses and build new ones on the edges of urban centers to prevent them from joining into one city. These green barricades can be federally subsidized for the public good much as the Government subsidized airlines for a while to help create a viable industry. In this case, the Government would be subsidizing a viable environment. England, with greater population pressures, has instituted such a program and many golf courses are within the green belts.

Experts agree that the ecological balance and the needs of plant life are not destroyed when a golf course is built. Moreover, golf courses even exceed parks as feasible green belt material, because they provide financial returns.

(Continued)



The problem now is to get such a green belt program under way, and GOLF recommends a five-point plan that can do it.

1. The Federal government should encourage states and cities to declare certain areas surrounding urban concentrations as green belt lands. This can be done through Federal subsidies which would compensate state and city governments for the taxes they would ordinarily get from industry or housing on the same land.

2. City and state governments would, in turn, allow golf courses in green belt areas and other recreational facilities to be tax exempt, or at least to enjoy a lesser tax rate, which would enable them to survive.

3. Land zoned as green belts would be required by law to remain green. This would eliminate the pressures to turn a meadow into a cement factory. It would be zoned green, much as some areas are zoned residential and others industrial or commercial.

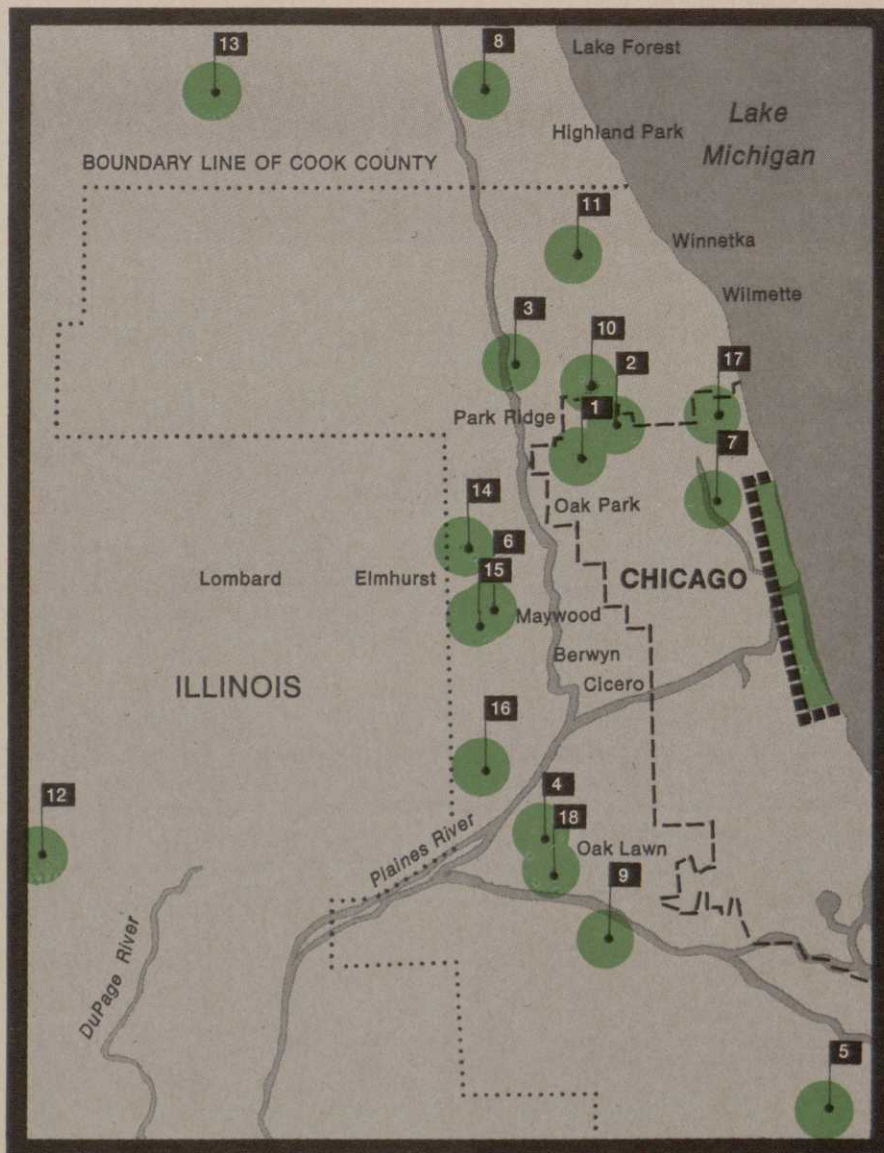
4. Courses already in urban areas and open to the public should be encouraged to remain as courses through further use of Federal subsidies by cities and states—e.g., compensating the owners who might be tempted to sell to a housing developer. The compensation would stipulate that the owner could only sell his course to another green-belt type operation.

5. The Federal government should act now while the plan is feasible. There is land available now, belts of it, scattered between the growing metropolises. Once this land is built on, it is no longer economically feasible to return it to nature.

GOLF has laid the groundwork for a sound green belt program. But the club industry, with the backing of a concerned public, must now pick up the ball. Golfers undoubtedly will be incensed by the grim situation related in GOLF's article and will be ready, as never before, to take action. Club administrators and officials and organizations such as the Alliance of Club and Golf Organizations must lead the way for and work with these concerned private citizens to make their demands known on every level of government. Unify your efforts by forming green belt committees.

is awaiting passage by Congress. This bill is desperately in need of amendment. The bill provides for Federal grants to states for extensive studies and development of land use plans, but offers no Federal aid to bring these plans to fruition. You and your members should write your Congressmen now, asking them to initiate action that will make the bill into an effective land saving measure.

GOLFDOM urges you to read the article, "Golf: America's Vanishing Green Belt," in the October issue of GOLF Magazine to get a full picture of the existing threat to America's golf courses and to its environment. □



- |                   |                  |                    |
|-------------------|------------------|--------------------|
| 1 Big Oaks        | 7 Mid-City       | 13 Wanconda        |
| 2 Bunker Hill     | 8 Mill Road Farm | 14 Westward Ho     |
| 3 Dempster        | 9 Navajo Fields  | 15 Hillside Public |
| 4 Dynell          | 10 Tam O'Shanter | 16 Acacai          |
| 5 Lansing Airport | 11 Techny Fields | 17 Edgewater       |
| 6 Maywood         | 12 Waubensie     | 18 Walnut Hills    |

Currently, Senator Henry M. Jackson's National Land Use Policy Bill

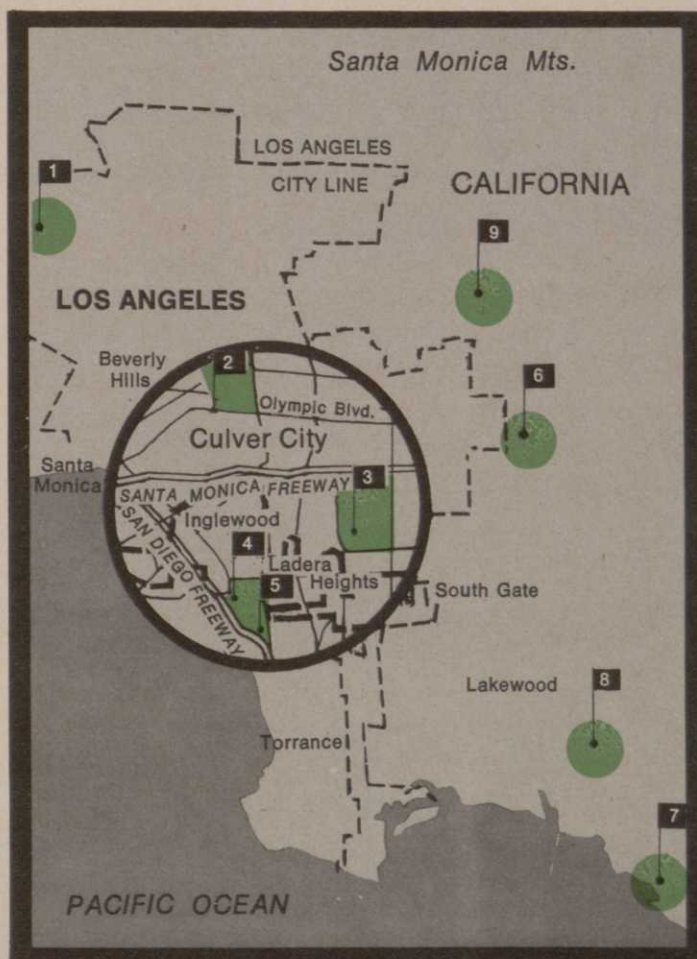
LOST FOREVER to the City of Chicago since 1947 are 2,907 acres of golf course. This would have made up green belts 20 times the size of the Chicago Loop.



## Red-faced about green belt

About six months ago, not long after news had appeared of the sale of another 18-hole golf course to a shopping center builder—this time in Georgia—GOLF's and GOLF-DOM's Editorial Director, John Fry, set about planning a major article which would uncover the real extent of the golf land lost to urban development across the nation. The assumption at the time was that a wealth of facts would be available about a situation so dangerous to the national environment. But as the weeks wore on, information failed to turn up. Writer Dick Sapir journeyed to Washington only to find Federal bureaucracies either ignorant of, or indifferent to, the land loss. GOLF Magazine's assistant editor Ann Heavner called planning offices in dozens of cities and states asking for figures and facts on golf courses which had disappeared in recent years and on possible future losses which these cities presumably should be studying. In every case, she encountered widespread ignorance.

Faced with this almost complete absence of information Editorial Director Fry assigned Sapir, Heavner and a network of stringers to dig up the facts. The study zeroed in on five cities: New York, Chicago, Cleveland, Los Angeles and Detroit, where the permanent loss of green belt due to the liquidation of golf courses could be demonstrated most graphically. The resulting maps, by artist Robert Ritter, showing the extent of permanent open land loss, accompany the story.



**LOST FOREVER**, near the center of Los Angeles, nine golf courses totaling 1,460 acres. Other privately held golf courses in the L.A. area currently are threatened with sale to developers.

- LOS ANGELES**
- closed courses.
- 1 San Fernando Valley
  - 2 Old California
  - 3 Sunset Fields (54 holes)
  - 4 Baldwin Hills
  - 5 Foxhills
  - 6 Southern California
  - 7 Huntington Beach (just sold)
  - 8 Long Beach Golf Course
  - 9 Carmelita Approach G. C.

**LOST FOREVER** to the City of Cleveland as a result of disappearing golf courses since 1940: green belts equal to 1,377 acres, or 333 city blocks carved out of Cleveland.



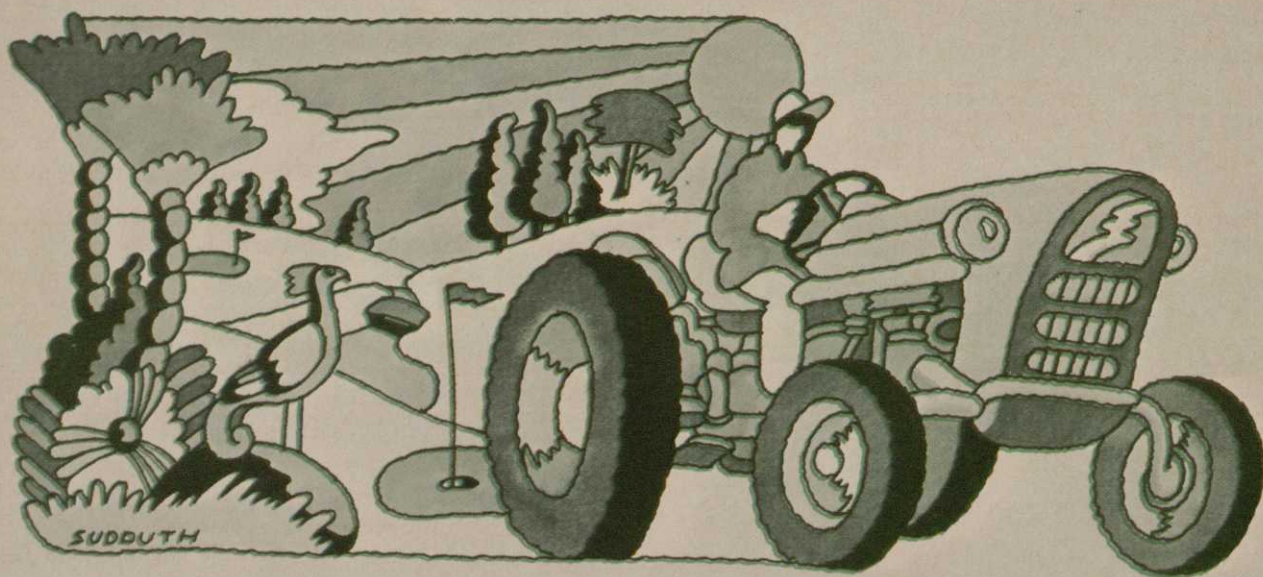
- CLEVELAND**
- closed courses
- 1 Deauville
  - 2 Terrace C C
  - 3 Lake Shore
  - 4 Mayfield Heights
  - 5 University Heights
  - 6 Ridgewood
  - 7 Berea
  - 8 Mentor Headland
  - 9 Willowick



# ADJUSTING TO THE ENVIRONMENT

By William Day

Golf courses are ideal ecological testing grounds, provided the approach blends sophistication and sensitivity to the land



**E**COLOGY is a word that is being bantered about by many people today. To the college student it probably has a different meaning than it does for the golf course superintendent, manager or professional who works with and on the land and has a first-hand knowledge of the laws of nature.

Defined, ecology is the branch of biology dealing with the interrelation between organisms and their environment. A more common definition is the relation of man to his physical surroundings.

The golf course superintendent is a person who has undeniably strong ties with the environment. In his daily work he is continually striving to make his course more beautiful, more functional, as well as a place where golfers will want to come for recreation and enjoyment of the area he has developed for them.

Since World War II, the introduction and proliferation of detergents, chemical pesticides and fertilizers and the automobile have seriously jeopardized the environment with

air, water and noise pollution which ultimately also endanger all plant and animal life.

However, in the last few years people have become more ecologically aware and are now determined to act upon this awareness before damage is irreversible. In Southern California, a mecca for ecological thinking, golf course managers and superintendents are now looking for ecologically sound methods for maintaining and improving the natural environment of their courses without further adding to the problems of pollution.

The use of "hard" pesticides such as DDT has long been under fire from ecologists because of its long-lasting toxic effects. Some clubs in Southern California are now experimenting with new non-toxic herbicides like Rotonone and Tri-Excel-DS which, according to one manager, work as well as the hard pesticides without any danger to golfers and beneficial plant and animal life. (Tri-Excel-DS can be purchased from Natural Development Company, Bainbridge, Pa.)