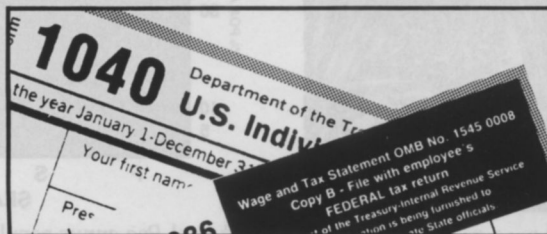


TAX REFORM

Businesses will feel the bite from reform

The tax reform passed by Congress in 1986 represents the broadest change in taxation since income tax was introduced. As a result, individuals and businesses alike are scrambling to learn the new system.

"It will change the way you do business planning," says Michael E. Mares, a partner in the Virginia-based accounting firm Rauch, Witt & Co. Taxes on capital gains from selling assets have increased roughly 12 percent from last year. Tax credits for equipment purchases have been repealed retroactive to Jan. 1, 1986. Credits from prior to 1986 will be cut 35 percent. In addition, the equipment depreciation period has been stretched from five to seven years, with lower deductions in the first two years, increasing taxes. However, the expense amount on equipment pur-



chases has been increased to the first \$10,000 spent, up from \$5,000. "The remaining (expense) is depreciated over the seven years," Mares explains.

Deductions for miscellaneous business expenses have been nearly eliminated: if they exceed two percent of business income, the amount above that two percent can be deducted. The deduction for a business meal has also been cut to 80 percent.

Also, says Mares, "The Internal

Revenue Service now has the authority to disallow what they consider to be lavish and extravagant meals and other forms of entertainment. It is going to be interesting to see what some revenue agents think are lavish and extravagant and what we as taxpayers think are lavish and extravagant," he comments.

Mares' accounting firm has published a booklet outlining changes in the tax structure, but he recommends seeking professional advice when preparing taxes for a detailed explanation of changes.

Though the tax structure is set for 1987, further changes may be in store. Mares says 40 tax amendment bills have already been introduced in Congress this year.

Mares spoke on the topic at the 1987 Virginia Turfgrass Conference.

RESEARCH

Yet unfound: answers for 'black layer'

One of the most heavily-attended sessions at the most recent Virginia Turfgrass Conference was what was originally intended to be a panel discussion of summer decline of bentgrass. Prompted by questions from concerned superintendents, the session ended as a discussion of the progress on finding a cure for anaerobic black layer.

Seated on the panel were Drs. David Chalmers and Houston Couch of Virginia Tech University; Clinton F. Hodges of Iowa State University and Leon T. Lucas of North Carolina State University.

While the panelists said progress was being made, none could provide a conclusive solution to the problem, which has taken out a number of greens on courses throughout the country.

The panelists concluded that excess water is not the only factor causing the disease, and the problem, though more prevalent in sand-based greens, is not limited to them.

Hodges reported that there is a connection between the black layer and



Left to right, Drs. David Chalmers, Houston Couch, Virginia Tech University, Clinton F. Hodges, Iowa State University and Leon T. Lucas, North Carolina State University, prepare for their panel discussion.

algae presence. The algae feeds off of calcareous sand, present in many sand bases, creating a film layer which anaerobic organisms feed on.

Hodges suggested checking the sand base for calcium presence, and checking irrigation water—especially if it comes from a pond or lake on the course—for algae content. Using algae-free water is a benefit, he added.

Chalmers recommended using cultural practices to at least isolate the problem. Aeration, he said, has shown good results.

Couch said he believes the eventual cure for the problem will be a chemical one. He added that he and Hodges are seeking funding for a joint research project to further study black layer.



A candidate sets bricks in a running bond pattern according to specifications in the brick-on-sand portion of the CLCA's certification test. The exam took place last October at Football College, Los Altos.

ASSOCIATIONS

California leading the way in certifying its contractors

Landscape contractors in California are among the most organized in the country. Twice each year, the California Landscape Contractors Association conducts a two-day test to certify qualified contractors.

The exam consists of 15 hours of timed, hands-on work on 30 problems in eight major skill areas. The skills are: plan reading, irrigation installation, plant installation, concrete installation, grading and drainage, brick-on-sand construction, sand box construction and sod installation.

Seventy-one contractors have earned the "Certified Landscape Technician" title by passing the test since it was first administered in 1984. It is open to any landscape worker or contractor who meets certain experience, age and education requirements.

The next test is being given next month in southern California.

Application information is available from CLCA headquarters, 2226 K Street, Sacramento, CA 95816. Phone number is (916) 448-CLCA.

LITERATURE

Bats in the attic? Woodchuck woes?

Are raccoons or moles ruining the turf of one of your most valued clients? Don't know what to do? Now there's an answer to your problems.

Rich Patterson, a professional naturalist and director of the Indian Creek Nature Center in Cedar Rapids, Ia., has written a booklet called *There's a Bat in the Attic and a Woodchuck in the Garden*. He describes the life history and suitable control methods for 12 types of wildlife that commonly occur in suburbia. Research and writing of the booklet was sponsored by the Iowa Science Foundation.

The solutions Patterson suggests are designed to be long lasting and non-violent to individual animals, since they generally involve altering

the animal's environment.

Animals covered in the booklet include snakes, squirrels, raccoons, woodchucks, cottontails, moles, gophers, mice, woodpeckers and bats.

"When people discover damage," Patterson says, "they are often annoyed or afraid. Their first reaction is usually to kill the offending animal, even though this often does not solve the problem for long."

To effectively reduce pest damage it is necessary to understand the life history of the animal causing a problem and choose control methods that are suitable, Patterson says.

The booklet is available at cost. To order, send \$5 to the Indian Creek Nature Center, 6665 Otis Rd., SE, Cedar Rapids, IA 52401.

Dr. Gary Smith of the University of Maryland told Maryland Turfgrass Conference attendees that the best way to avoid chemical accidents is to avoid having materials left over.

Many accidents occur in mixing and filling sprayers, he said. He noted two procedures that create safer conditions:

1. Use a pump or pressure-operated system to transfer material to the mixing tank.

2. Make drive control your number-one priority. Do this by buying the correct size sprayer.

Smith also says that proper clothing protection is crucial. Here are the precautions he listed:

1. Always wear a full face shield. The forehead absorbs chemicals four times faster than the forearm.

2. Wear a rubber apron, not a synthetic apron. The groin area absorbs chemicals 12 times faster than the forearm.

Though Smith didn't touch on them, here are some tips for keeping respirators safe:

- Each person must have and be responsible for an individual respirator.

- Keep respirators stored in the original box or a plastic container.

- Different pesticides require different types of respirators.

- Wash respirators after every use, and change filters frequently.

- All employees should know the local telephone emergency numbers.

- If a co-worker must be taken to the hospital, the doctor will need to know vital information on the chemical involved. Take the label to the hospital.

- First aid kits should be kept in the truck at all times.

- At least one person on every crew should be trained in first aid and CPR.

PESTICIDES

On communicating product safety

Dr. Terry Witt, manager of public relations for North American products at Dow Chemical USA, predicts the future of communicating product safety to the customer. Here is what he says:

First, there will be pressure at all governmental levels, from local to federal.

Second, there will be an increased

emphasis on right-to-know from workers, the community and customers.

Third, there will be an increased number of liability lawsuits, more health surveys, and groundwater concerns.

Dr. Witt also outlined lessons that landscape managers who deal with pesticides should have learned by now:

- It is everybody's problem in the landscape industry.

- Science is not the problem—public opinion and politics are the

name of the game.

- Benefits must be explained.

- Coalitions at all levels are a necessity.

- The public's concerns must be addressed.

- Media is not the enemy; the industry must learn to work with the media.

- There is also a need to work with public interest groups.

CONFERENCES

Warning: be ready to anticipate problems

Because of the drought conditions that prevailed in much of the country last year, landscape managers are going to have to anticipate problems with some of the plantings they did on projects last year, says Ethyl Dutky of the University of Maryland.

"Suspect problems with plants that were transplanted," she says. "Die-backs and declines from borers and root diseases will point out plants that will be problems. You should be anticipating buying some replacements."

Dutky offered her comments at Maryland's Turfgrass '87.

CULTIVARS

National Arboretum develops new cultivars

The United States National Arboretum has introduced several new cultivars, including four species of Crape-Myrtle.

The Shoshni is a dwarf viburnum more suited for residential landscaping than its larger relatives. It produces smaller flowers, a longer-lasting scarlet-red fruit and purple-red foliage along its distinctive horizontal branches. A dense growth habit makes it adaptable to varied landscape uses.

The four new varieties of Crape-Myrtle are Acoma, Hopi, Pecos and Zuni. All four are semi-dwarf cultivars combining mildew resistance, dark green summer foliage and autumn coloration. Their flowers range in color from white to lavender, making them excellent for landscaping, as the larger varieties are in the South.

Another introduction from the Arboretum is a triploid cultivar of hibiscus called Minerva. They are tolerant to pollution and light frost, have a compact growth habit, are sterile and will bloom for four months or more.

continued on page 16

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SHORT CUTS

HURRY-UP...OR LEAVE...Not long ago, the Los Angeles Recreation and Parks Department proposed a rule that would limit golfers to 4½ hours to play 18 holes on municipal courses. According to the department, some golfers take as long as six hours. Martin Tregman, president of the L.A. Municipal Golf Association foresees troubles, though. "I don't think they (golfers) can be put off forcibly without real problems," he observes. One golfer who was asked to leave a course (for not having proof he paid his greens fee) clobbered the course employee with a golf club, fracturing the employee's skull. "We don't want people getting killed," Tregman says.

THANKS TO FRED...Upon recommendation of its turfgrass division, the Crop Science Society of America's board of directors has approved as a C.S.S.A. award the Fred V. Grau Turfgrass Science Award. The award will be presented in recognition of significant career contributions in turfgrass science. Grau, 85, has devoted most of his life to turf and is presently executive director of the Musser International Turfgrass Foundation.

WINTERTIME BLUES...Many portions of the country had particularly cold winters, especially in the mid-South. Horticulturists know that if there's wind and low humidity, there's little danger of frost. But in 40-degree temperatures with no wind and high humidity, there's a good chance of frost that can result in damage to delicate ornamentals. "It's an art and a science to escape cold-weather damage," says Norm Freel of Florida's Cypress Gardens. "We work closely with the National Weather Service. Wind direction, cloud formations, humidity and air pressure are also taken into consideration." As guard against loss of plant materials, the Gardens have installed a series of ground pipes to which heaters can be attached and raised as high as the treetops, if necessary.

'THAT'S A BIG TWINKIE'...In just one year, American industry produces between 70 billion and 90 billion pounds of hazardous waste, according to information from Georgia Tech. That's 300 to 400 pounds for every person living in the U.S. And by the year 2000, Georgia Tech says, that number could double. It's no wonder the EPA has taken a hard look at the problem of disposal.

NEVER TOO LATE...An event which escaped these pages was the presentation of the first "Excellence in Turf Grass Research Award" at the 1986 GCSAA show. It went to Dr. C. Reed Funk of Rutgers University. In making the presentation, Mike Robinson of Seed Research of Oregon said, "His tireless and unselfish dedication to the improvement of turfgrasses has produced the tremendous array of outstanding varieties available for the demanding needs of today's turf manager." WT&T apologizes for the oversight. We'll have announcement of the second annual award next month.

NEW VARIETY...To honor the memory of Peter Selmer Loft, a new tall fescue variety, "Tribute," will be introduced by Lofts, Inc. late in 1987. The company also honors its former president with annual scholarship presentations.

CULTIVARS from page 12

Naragansett is a variety of crabapple introduced by the Arboretum. It has multiple disease resistance and excellent landscape characteristics.

For further information on these and other cultivars, contact horticulturist Donald Egolf at the U.S. National Arboretum, Agricultural Research Service, USDA, Washington, DC 20002.

ATHLETIC TURF

Don't throw away those valuable blue tags!

Blue tags from some named varieties of certified turfseeds are worth money. The Musser International Turfgrass Foundation (MITF) and National Sports Turf Council (NSTC) are collecting the blue tags to raise money for turfgrass research.

Dr. Fred Grau, executive director of MITF, says the money raised from donated tags will train students in turfgrass science or be used for research and education for better turf and safer sports turf.

Don't throw the tags away. Donate them to the MITF/NSTC.

Send tags to: MITF/NSTC, 4604 Amherst Rd. (for UPS), P.O. Box AA (for mail), College Park, MD 20740.

ACQUISITION

Barefoot Lawn acquires Tempo 21

Worthington, Ohio-based Barefoot Grass Lawn Service has acquired two branches of Tempo 21, based in Wheeling, Ill. By merging Barefoot's three Chicago-area branches with the two from Tempo 21, the company will increase its national customer base to about 150,000.

According to Barefoot's Don Nichols, the Tempo 21 merger nearly doubles the market share and customer base in the Chicago area, adding 15,000 customers. This makes Barefoot the second largest lawn care company in the area, Nichols said.

He added that the acquisition brings a number of services that Tempo was performing that Barefoot has not done in the past. Included in this is Tempo's mower repair service. Nichols said the company is still considering whether to continue this service. One service Barefoot is continuing is the telemarketing functions brought with Tempo, Nichols said.

Barefoot has branches serving 23 states, and made *Inc. Magazine's* 1986 list of the nation's fastest growing pri-

vate corporations. Nichols adds that while no more acquisitions are planned, "should the right match come along, we'll certainly take a look at it."

RESEARCH

Certain ornamentals resist salt water

Certain varieties of popular landscape plants are more tolerant to saltier irrigation water than previously believed. This according to research

done by water management scientist George Fitzpatrick of the Institute of Food and Agricultural Sciences' Research and Education Center in Ft. Lauderdale, Fla.

The research was prompted by conditions in Florida at certain times of the year resulting in freshwater shortages and saltwater intrusion.

Fitzpatrick's research was done on areca and paurotis palms, buttonwood and orange jasmine using varying saline levels in the water. Levels ranged in concentration up to 10,000 milligrams per liter. (Tap water on the

average has 100 mpl.)

Buttonwood showed no adverse effects up to the highest saline level. Paurotis showed effects at 5,000, while arecas made it to 2,400. Orange jasmine had the lowest tolerance, dying at 1,200 mpl.

Fitzpatrick is continuing tests on other varieties of ornamentals in hopes of providing some guidelines for landscapers in the lucrative Florida market.

GOLF COURSES

Calesthenics do the trick here

The golf course that does calesthenics together suffers fewer accidents together.

At least that's what D.J. Pakkala says.

Pakkala has had the employees of The Vintage Club in Indian Wells, Calif. doing calesthenics together first thing in the morning, and he reports a notable decrease in on-the-job accidents.

"You do it after they punch in—on company time," Pakkala told visitors to the GCSAA conference and trade show in Phoenix, Ariz. "It's also a good time for a pep rally."

"It really gets the blood and juices flowing. They leave at 6:10 and they're ready for the day."

AWARDS

NRVMA award series presented for first time

The National Roadside Vegetation Management Association presented its first annual excellence awards to individuals from academia and the government. The Excellence in Roadside Vegetation Management awards for 1986, presented in conjunction with Monsanto, went to nominees from state transportation departments, county highway departments, university researchers and custom applicators nationwide.

Indiana Department of Highways director John Isenberg won in the state category, and Jim Erwin, Douglas County (Oregon) Road Department, won in the county category. North Carolina State University professors Joseph DiPaola, William Gilbert and William Lewis shared the academic honors.

A five-person committee representing management, academia, media, government and industry evaluated all nominations with respect to innovation, environmental impact, economics, safety and aesthetics.

Nomination forms for the second



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annual awards series can be obtained from: NRVMA Awards Program, c/o Dorf & Stanton Communications, 111 Fifth Ave., New York, NY 10003.

TOURNAMENTS

John Deere sponsoring pro/super tournament

The Golf Course Superintendents Association of America and John Deere & Co., have combined to participate in a golf tournament created by Deere.

The John Deere/PGA Profes-

sional-Superintendent Championship will feature four-man teams composed of a club's PGA professional, the course superintendent, club president and manager.

Teams will compete in a scramble format beginning with qualifying rounds held regionally from June until September at the 41 PGA sections nationwide, and ending with a two-day, 36-hole championship set for November. Exact dates and locations will be announced later.

"This program provides an opportunity for the club pro and superin-

tendent to play together on a team with other club officials," said Gary Gottschalk, golf and turf manager for Deere.

"This will be a tremendous impetus in bringing together the key people who run the nation's golf clubs," added Micky Powell, 1986 PGA president.

INDUSTRY

Industry Task Force questions 2,4-D study

An interim report summarizing research by the Industry Task Force on 2,4-D has thrown doubt on the National Cancer Institute's study on possible links between 2,4-D and increased risks to certain forms of cancer.

The report questions the validity of figures presented in the Kansas Study, as the NCI report has become known.

In an effort to distribute information from the Task Force study, the Pesticide Public Policy Foundation (3PF), headed by Dave Dietz, has been distributing copies of the Task Force summary to foundation members and other interested parties.

continued on page 22

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In a letter accompanying the report, Dietz said, "After careful review of this information, I believe you will be able to make an informed decision about this issue of impact on 2,4-D."

Dietz has appealed to green industry members to speak up on the benefits and safety of 2,4-D before "unwarranted and precipitous actions prevail, circumventing a just conclusion," he said.

"If we do not make ourselves heard at the state or provincial and federal levels of government, those who regulate our industry will have little

choice but to act according to input from those who have," Dietz said. "We can sit back and let our future be dictated by others, or we can make the voice of the 'silent majority' be heard."

CHEMICALS

Diazinon still in use after ban appealed

The insecticide diazinon will be available for use on golf courses and sod farms at least until this summer.

The product's status is on "hold" because of appeals by the chemical's manufacturers to the EPA. Hearings are not expected until late summer or fall, according to information from Ciba-Geigy.

"As the nation's largest supplier of diazinon, we're taking the lead to defend the product," says Dick Feulner, Ciba-Geigy director of regulatory affairs. "We have years of research data on the safe use of diazinon."

There had been some confusion concerning the status of the chemical. In an effort to inform the public of diazinon's status, Ciba-Geigy held a press conference January 31, during the Golf Course Superintendents Association of America conference in Phoenix, Ariz.

At the press conference, Ciba-Geigy officials said they conducted a biolife investigation and found that four of the 40 birdkills were the result of deliberate misapplication. Twenty-two were intentional misapplication, one was not the result of diazinon use, and just two were apparent proper applications. Circumstances were unknown in the remaining 11 instances.

The EPA proposed cancellation of diazinon in December, 1986, after receiving reports of bird kills allegedly resulting from exposure to the chemical. The company maintains that diazinon is safe when applied properly. Ciba-Geigy intends to present research at upcoming EPA hearings verifying the product's safety.

Nonetheless, the company has adjusted its labeling rates to four pounds of active ingredient per acre, down from six. The company maintains that the effectiveness will only drop off slightly as a result of the change.

RESEARCH

Fungicide combinations effective in control

A more effective control of some turf diseases can be accomplished using certain fungicides in combination. This was the recommendation made by Dr. Anna Marie Pennucci at the GCSAA Show in Phoenix, Ariz., in January.

In a talk concerning tank-mixing, she suggested that by mixing the fungicides, rates could be reduced, adding that alternating fungicides produced the best results.

Pennucci, a professor at Southern Illinois University, Carbondale, conducted her research in the Northeast, and, she added, her research applies only to cool season climates.

continued on page 27



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Combination	Ounces/ Square Feet	Percent of Disease in Turf After Treatment
Tersan 1991 + Chipco 26019 + Daconil + Dyrene + Vorlan	2 + 2 2 + 4 2 + 4 2 + 2	0-2 0-0 0-2 0-0
Bayleton + Chipco 26019 + Daconil + Dyrene + Vorlan	1/2 + 2 1/2 + 4 1/2 + 4 1/2 + 2	trace-1.5 0-1 0-1 0-0
Rubigan + Chipco 26019 + Daconil + Dyrene + Vorlan	1/2 + 2 1/2 + 4 1/2 + 4 1/2 + 2	0-2 0-trace 1.5-3 0-0
Banner + Chipco 26019 + Daconil + Dyrene + Vorlan	1/2 + 2 1/2 + 4 1/2 + 4 1/2 + 2	0-1/2 0-trace 0-1/2 0-0

Fungicide Combinations for Control of Brown Patch

Tersan + Chipco 26019 + Daconil/Dyrene + Vorlan	0-2 0-1 0-1
Banner + 26019 + Daconil/Dyrene + Vorlan	0-1.5 0-3 0-2
Rubigan + Chipco 26019 + Daconil/Dyrene + Vorlan	0-1 0-1 0-2

FUNGICIDE from page 22

"There are things to consider when mixing more than one at a time," she said. Considerations include compatibility, phytotoxicity and clumping in the tank. But, she said, "For cool season climates, the best control is by tank mixing."

She pointed out a number of benefits from using two fungicides at once. They result in better control, longer residual (21-60 days), less chance of resistance, and the ability to eliminate more than one disease.

Using tank mixes, she said, is good for controlling diseases with short intervals between spore generations, and those with persistent, long-lived mycelium, such as dollar spot.

Pennucci's studies show that Vorlan in combination with either Tersan, Bayleton, Rubigan or Banner, gave the best control (see chart). Other combinations provided adequate control.

She noted, however, that there seemed to be no combination that would provide total control of brown patch. "There was no constant control of brown patch in 1986," she said.

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GRUB CONTROL

New approach taken in controlling grubs

Dr. Daniel A. Potter, an entomologist at the University of Kentucky, has been studying the one-year life cycle and living habits of grubs in hopes of using biological rather than chemical control on the pests.

He has found that grub eggs absorb water, requiring a minimum of 10 to 11 percent soil moisture to grow. "I was interested in how zero moisture

would affect these eggs," Potter comments. During a drought-stressed period in 1983, soil moisture content dropped to eight to 10 percent, with soil temperatures in the top inch reaching 109 degrees Fahrenheit. "We found no egg survival in non-irrigated drought-stressed areas," Potter comments. In irrigated areas with moisture at 21 to 24 percent, egg survival rate is 75 percent, he adds.

Also, in naturally drought-stressed turf, survival rate for newly-hatched grubs was just 1.7 percent; it was 70 percent in irrigated turf.

Unfortunately, the turf's tolerance to grub damage lowers if it is not irrigated, able to handle only eight to 10 grubs per sq. ft. before showing signs of injury. The irrigated turf can handle 15 to 20 grubs per sq. ft.

"There is a direct inverse relationship between the problems people are having with white grubs and the amount of rainfall occurring in the late summer and early fall," Potter says. Potter has also studied other means of control.

"Females are extremely attractive to males," Potter comments. "They're really turned on by the smell that appears to be coming from the female beetle." By putting females in a trap, Potter says, he caught "lots and lots of beetles." He has also rinsed the females with a solution, which has also been used to catch the males.

Potter believes his research will carry a number of benefits. "The most interesting prospect is perhaps in risk assessment," he says. "If a cheap knock-down cardboard trap can be made for about a dollar, this could be used by homeowners, by lawn care applicators, by golf course superintendents to hang out for the purposes of risk assessment. If you don't catch any beetles, you don't have to spray."

Potter spoke on the subject at the Virginia Turfgrass Conference.

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INDUSTRY

Deere thrusts 12 products on market

With a campaign that started two months ago, John Deere has energetically entered the professional turf market, introducing 12 new products designed specifically for the market.

"We want our sales force to have a good package of products so they can develop a relationship with the golf course superintendent," says Gary Gottschalk, Deere's manager of golf and turf products. "The 12 categories we have will be enhanced. We'll introduce another dozen this year yet; we hope to have 45 to 50 new products for the turf market by five years from now."

The products introduced at the beginning of the year are a walk-behind greens mower, four hydraulic reel mowers, a utility vehicle, a boom mower and five aerifiers.

"Because we have such a wide range of equipment, we're able to get into manufacturing specialty equipment for the golf and turf market," Gottschalk says. "It's a natural extension of the technology and components already in our system."

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