

# LANDSCAPE

News from page 8

faces higher energy costs and a lower supply of water—and they can expect to command higher salaries.

This outlook was presented by Dr. J.B. Beard, professor of turf and crop physiology at Texas A&M University, at the 1981 Nebraska Turfgrass Conference and Show held January 12 to 14 in Omaha, Nebraska. The annual event is sponsored by the Nebraska Turfgrass Foundation, the Nebraska Cooperative Extension Service, and the University of Nebraska Department of Horticulture.

With high energy costs, conservation will be a high priority, Beard told the 575 turf professionals attending the conference. Trends to selective mowing of certain areas, use of more energy-efficient reel mowers, and increased use of large equipment are on the horizon, he stated.

Since nitrogen costs are higher, he said, "there is a need to accept a less deep green color in some areas and develop varieties that will hold their green color at lower nitrogen levels." He predicted more research on growth regulators to develop grasses which require less frequent mowing.

Water quality may decline, Beard warned, as salt and boron levels build up with increased use of effluent. And the quantity of water available for turf also will be reduced. "We have far too many intensively managed turf areas that are overwatered."

## MEETING

### Weed science meeting held in Philadelphia

The 35th Annual Meeting of the Northeastern Weed Science Society, held January 6-8 at The Philadelphia Sheraton Hotel, drew more than 400 members.

About 140 scientific papers were presented on horticulture, ecology, agronomy, ornamentals, and forestry. "There was a lot of enthusiasm at the meeting because of the current nature of the papers," said Garry Schnappinger, NWSS president. "They discussed new chemical compounds and those that would be on the market in a year or so."

The keynote speaker, Dr. Jack D. Early, president of the National Agricultural Chemicals Association, spoke on "Pesticide Regulation: How Much Is Enough?" Dr. Early criticized the "unscientific handling of scientific data by regulatory officials," citing the recent recall of the proposed nitrite ban

*Continues on page 14*

# CONTRACTOR NEWS

## Landscape costs increased 14% over 1979

A recent management survey conducted by the National Landscape Association reveals that all costs of plant materials, supplies, and services have risen overall 14 percent from 1979 to 1980.

The survey asked members from all regions of the country to indicate the percent of increase (or decrease) they experienced in landscape costs for 1980. The particular categories included trees, shrubs, evergreens, ground covers, fuel, fertilizer, mulch, freight, and labor. Fuel was by far the largest area of increased costs, rated at 30 percent on a national basis. Freight, fertilizer, and labor also rose a high percentage.

In regional variations, it was interesting to note that for most items the greatest increases as a region were experienced in the Southeast, while the smallest increases were noted in the Great Lakes area.

LANDSCAPE COST COMPARISONS 1980 vs 1979  
(% Change from 1979)

Region	Trees	Shrubs	Evergreens	Ground Covers	Fuel	Fertilizer	Mulch	Freight	Labor	Overall
Northeast	+12	+11	+13	+8	+27	+16	+13	+12	+13	+10
Southeast	+8	+13	+13	+8	+43	+22	+14	+18	+24	+19
Great Lakes	+6	+5	+7	+7	+28	+9	+8	+24	+15	+9
Plains	+10	+10	+11	+7	+25	+10	+12	+16	+13	+15
Others	+18	+13	+11	+8	+19	+17	+13	+23	+11	+15
National	+12%	+10%	+11%	+7%	+30%	+15%	+12%	+18%	+13%	+14%

## Behnke installed as president of ASLA

William Behnke, a landscape architect from Cleveland, was installed as president of the American Society of Landscape Architects at the group's annual meeting last November.

To prepare for his service to ASLA, Behnke invited landscape architects from all over the U.S. and Canada to Cleveland to discuss how they might have more control over their economic destiny. After the meeting, he said, "Improvement of our financial potential need not lessen or endanger our professional ethics. Both improvement of the long range economic future and the need to maintain high standards of professionalism are possible."

Calvin Bishop, a Houston-based member, will serve as president-elect of the group. Vice presidents elected for 1981 include Donald Fox of Yosemite National Park and Brian Kubota of Kansas.

Also at the meeting, ASLA awarded their highest honor to William Grant Swain, president of GWSM, Inc., Landscape Architects, of Pittsburgh.

## ALCA Field Day planned for Milwaukee

The student event of the year sponsored by the Associated Landscape Contractors of America and their student chapter at Milwaukee Area Technical College occurs April 3-5 at MATC in Milwaukee.

This event represents a chance for college students throughout the country to meet and compete in activities directly related to the skills necessary in the horticulture industry. It is also a time to meet with prospective employers in the landscape industry to discuss full or part-time employment.

Activities include identification of insects and plants, operating equipment and designing landscapes, and basic horticulture work with plants. For more information, write Milwaukee Area Technical College, North Campus Center, 5555 West Highland Rd., Mequon, WI 53092.



LANDS

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### **CAST asks EPA to dispose silvex by use**

The president of the Council for Agricultural Science and Technology (CAST), R W Fogleman, has made the latest request to the Environmental Protection Agency to consider disposing of silvex by use rather than by incineration and burial.

Fogleman offered seven points to EPA Administrator Douglas Costle to consider. These include:

- The TCDD in silvex products would decompose in one day if they were applied to foliage as an herbicide or to soil as a fertilizer top dressing.
- TCDD in the solid products may last a long time if buried. Almost all of the TCDD in liquid silvex is decomposed if the incineration temperature is sufficiently high.
- Disposal of the silvex products by use would be a less expensive, more responsible use of public funds than disposal as hazardous wastes.
- If EPA goes ahead with the disposal of silvex as hazardous wastes, it "will be spending more than \$26 million to dispose of less than 0.03 pound (one-half ounce) of TCDD."
- "To destroy at great cost and as hazardous wastes the silvex-bearing products that could otherwise be used to improve societal welfare without constituting a significant hazard is a waste of the valuable resources used to produce, transport, and dispose of them, as well as a misrepresentation of the character of the products to the public."

### **U.S. Government promotes tree planting**

The government is encouraging home owners to plant trees around their homes to save energy and money.

"The trees can easily pay for themselves in fuel savings in a matter of a few years," says a USDA representative. The agency says that a row of trees can cut down wind and reduce home heating bills by as much as 20 percent.

The government's basic premise contends that trees help cool the home in summer, cut wind and cold air in the winter, increase the value of the home, attract birds, and clean the air.

### **Trucking deregulation bill is passed**

A new trucking deregulation act makes it easier to obtain certification by the Interstate Commerce Commission. The act retains agricultural exemption (which includes nursery stock) and also eliminates the gateway requirements and circuitous route limitations imposed on motor carriers. Carriers now are permitted to carry mixed loads of both regulated and exempt commodities. Nursery stock may still be transported by nonregulated carriers.

AAN Traffic Consultants have published a booklet entitled "Trucking Deregulation: How Far It Actually Goes," available from Bohman Industrial Traffic Consultants, 335 East Broadway, Gardner, MA 01144. Prepaid orders are \$8.95 each.

### **Government regulation will be curtailed**

Government regulation will decrease in the Reagan Administration, owing to protests against the cost of government paperwork by the business community. No new regulations will be issued by agencies until the new Administration has had the opportunity to review them and determine whether they are needed.

### **Crop insurance amendment covers nurseries**

The Federal crop insurance program has been amended to cover nursery crops. The amendment was requested by the American Association of Nurserymen and introduced by Representatives Panetta and Coehlo (D-Calif.). Under the provisions of the act, participation in a program is voluntary, and the Federal government will pay 30 of up to 65 percent of normal crop yield.

News from page 11

and the suspended use of the herbicide 2,4,5-T. Such actions, he said, have sparked anti-pesticide sentiment in many local areas and helped influence a growing trend by some states to out-regulate the federal pesticide law.

To reverse this trend, the NWSS has recently launched a plan to offer expertise and advice to state pesticide associations in dealing with legislative issues. This plan includes legislative workshops and an enlarged media tour program for the coming year. Dr. Early also called for "an increased level of cooperation between state pesticide associations and allied agricultural and scientific groups."

On Wednesday, January 7th, a special symposium was held on biological weed control with the use of plant pathogens. Dr. D.S. Kenney of the Abbott Research Center, and Dr. S.W.T. Batra and Dr. Bob Enge, both of USDA, discussed this alternative method of control.

At a business meeting, Tom Watschke, weed control turf specialist at Pennsylvania State University, was elected vice president. The 1980 president-elect, R.B. Taylorson, automatically became president during 1981, and the new president-elect is Steve Dennis.

#### PEOPLE

### **Golf course builders elect new officers**

The Golf Course Builders of America, an association of golf course contractors and industry suppliers, has elected Frank A. Underwood of Bowie, Texas, president. Mr. Underwood, who served as president in 1974 and 1975, succeeds Nick A. Siemens of Fresno, CA.

Robert Ryan, vice president of Moore Golf, Inc., in Culpeper, VA, was chosen vice president. Carl Hedlund and James J. Kirchdorfer were re-elected secretary and treasurer.

#### ACQUISITION

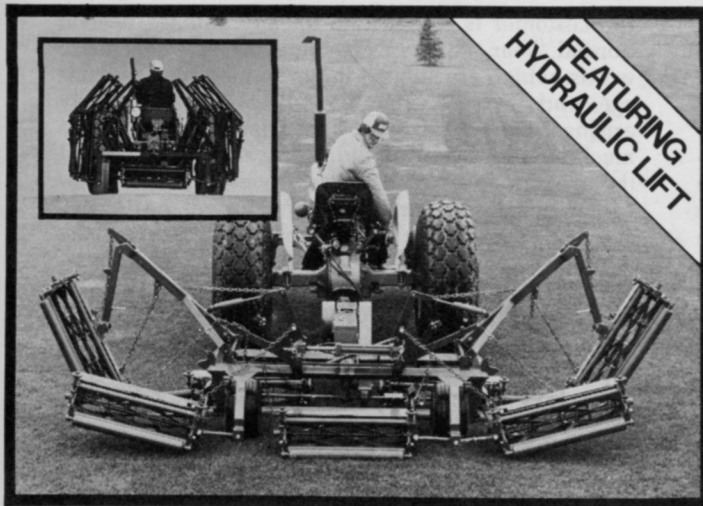
### **Florida nurserymen buy plant exposition**

The Florida Nurserymen and Growers Association has purchased The Tropical Plant Industries Exposition held annually in January at the Diplomat Hotel in Hollywood, Florida.

Terms of the sale call for FNGA to continue the annual exposition as a high-quality foliage show with at least a

*Continues on page 82*

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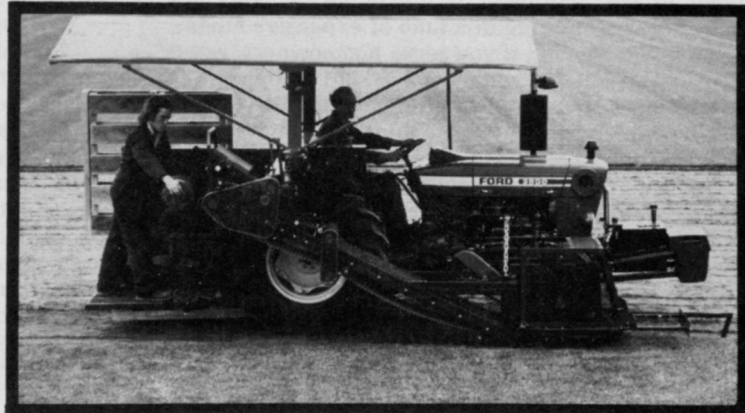
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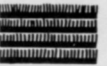
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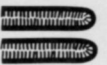
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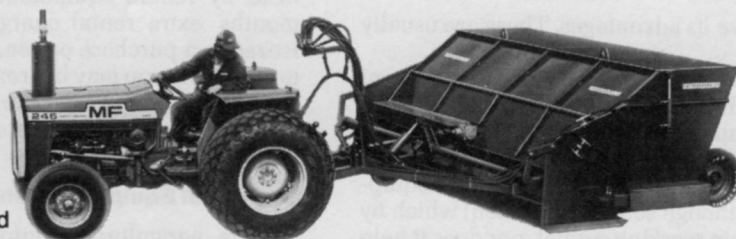


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# SHORT-TERM RENTALS MAY HELP YOU MATCH EQUIPMENT TO MARKET

New monthly feature to assist the landscape market with equipment purchase, rental, maintenance, and business management.



**Dave Johnstone** has more than 15 years experience in the construction equipment market. He has managed product information to the construction and rental equipment markets and has worked for a rental industry association. He has hands-on experience with nearly all types of outdoor equipment. If you have topics you would like Dave to address, you may write him at 267 Willow St., New Haven, CT 06511.

You can blame computers and the U.S. Postal Service for it: market segmentation is increasing. Advent of the nine-digit ZIP code, which is being implemented this year and will spread to most parts of the country over the next couple of years, means that markets can be defined down to carrier routes, that is, to major buildings, to industrial parks, to high-rise residences. This probably means greater promotion expenditures. The curious thing about all this is that people on the whole are thinking more and more alike, but they believe their own positions to be unique, which is just as bad as if they were actually unique.

If you bid on a maintenance or installation contract, you may have your equipment specified for you by someone who has consulted a computer or who has a friend with that equipment. In any event, you're likely to have to field a lot more questions about completion time and equipment capacities than in the past. The time you spend on site preparation from the standpoint of your customer is downtime, a word that has a threatening ring in a time of expensive money. Even a homeowner, if you serve homeowners, wants you in and out fast without that kind of damage to fences that is too minor to prosecute, too irritating to forget—which again means equipment appropriately sized.

You can't very well go out and buy new equipment for each job or you would soon be bankrupt, and so you must find an alternative means of acquisition. It's not leasing, because leasing involves a longterm commitment, generally of a year or more.

It's renting, a concept that you may not have thought about recently. The disadvantage of renting is that you cannot depreciate the equipment (depreciation is a source of capital) but must treat the equipment as a straight expense.

## Advantages of Renting

Renting does have its advantages. These are usually promoted as:

1. Conservation of capital. Renting equipment frees money for other uses. As such, it's relied on by many large corporations and public works people, especially at the end of budget periods. Renting does not really increase ease of borrowing money, since equipment is an asset (although somewhat frozen) which by depreciation frees up working capital, nor does it help contractors of any kind to obtain performance bonds.

2. Provided maintenance. Rental rates include full maintenance, but before committing yourself to an equipment source, you had best check out service capacity and willingness. Rental contracts specify that

the customer is responsible for any damage beyond normal wear and tear (specified in precisely those words, which are subject to definition), for tire damage, and for safe operation (disclaimer of liability arising from operation of an intrinsically dangerous machine is probably invalid; if the rentor has modified the machine in any respect, as by welding controls together, he is treated as the manufacturer of the device). Ask to see the rentor's liability policy. Make certain the equipment is covered by his insurance, your insurance, or both. Many rentors offer a damage waiver, which usually adds 5 percent to the rental rate.

3. Savings in storage space, which only applies if the rental equipment is kept working.

4. Inventory control. Cost of theft (conversion) is usually borne by the rentor's insurance carrier. This has recently become a major reason for renting equipment.

5. Mobility. Regardless of job location, there is probably a rental facility in the near neighborhood.

6. Disposal cost is eliminated by renting.

7. Matching equipment to task—probably the most important reason—is made possible by rental.

8. Idle equipment time is minimized by rental.

9. Costs of personal property taxes and licenses are eliminated.

10. In many cases, you will be able to exercise a purchase option if you indicate your desire to do so at check-out of the equipment. Where purchase options are available, terms are variable. Following are some typical arrangements: If purchased within 30 days, renter recaptures 80% of rental charges; if within 60 days, 70%; if within 90 days, 60%; if within 120 days, 50%; if within 150 days, 40%; if within 180 days, 25%. Limit, 90 days; if purchased within 90 days, 85% of rental charges recaptured; if purchased within six months, 80% of rental charges. If cost has been amortized by rental, equipment is sold for "one or two months' extra rental charges." You are usually not frozen to a purchase option, if you say you may be interested; but you may be frozen out of one, if you do not express interest at sign-up time. Not all equipment dealers have rental plans; not all rental plans are available with purchase options.

## Sources of Equipment Rentals

Some agricultural equipment dealers may offer rentals, but they would be in the minority (for rentals as opposed to longterm leases). Your primary sources will be construction equipment dealers and specialty rental yards. Of specialty rental yards, you may find your best sources among construction/industrial

equipment yards. Lawn & Garden specialists are sometimes helpful but concentrating on homeowners as most of them do, their equipment may be too light. Specialty rental yards don't usually advertise extensively beyond Direct Mail and the Yellow Pages.

#### **Not Too Early To Promote Industrial Contracts, Even in Snow Belt**

In fact, it's probably a little late but better late than never. Some people just can't be coerced into thinking Spring until Spring happens.

The key to industry (as you've already found, if you're doing industrial business) is offered by the purchasing agent in combination with whomever is responsible for building and grounds. If you don't know the latter, ask the switchboard operator. It's as easily learned as that.

In today's less than certain business climate, investment in grounds has probably been cut back (unless the industry is involved with the prospering computer field, all segments of which are marching merrily onward and can't be sold with a recession appeal).

You might score some points by breaking the approach formula and directing your promotion to the Chief Executive. Your "copy platform": an exterior beauty treatment by a professional at the start of the season will boost employee morale and enhance customer relations.

The contrast between the booming computer industry and other elements of the economy which are somewhat sagging is a perfect illustration of increasing market segmentation. Mismatched promotion can be as ineffective as mismatched equipment.

If you haven't planned a promotion program for the rest of the year, it's time to get going on it. First decision to make is where you want to be at the end of the year and then you have to allocate budget to get there. It's really no good to set your own budget by the competition or even according to last year's performance. You have to budget by this year's objective. And considering inflation, if you want to stay where you are, your business will have to increase by 12 to 13 percent. Your promotion budget should be boosted accordingly.

All other factors being equal, it's probably easiest to grow from your present customer list. Think for awhile about where most of your business comes from and concentrate on prospects who most resemble your current "customer profile."

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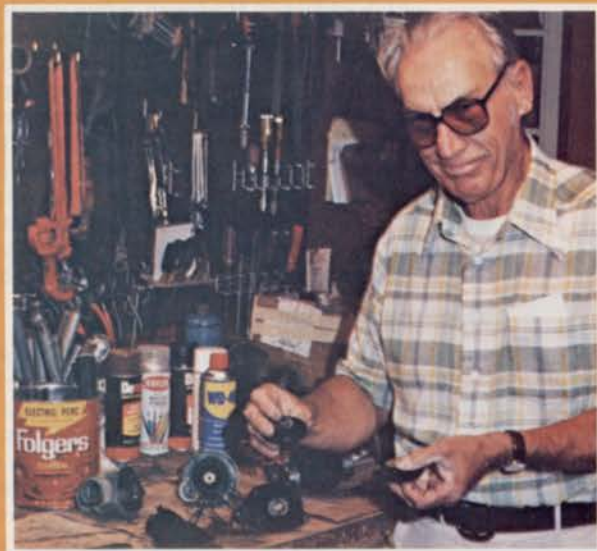
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# HERBICIDES FOR DIFFICULT WEEDS IN COOL SEASON TURFGRASSES

By John A. Jagschitz, Associate Professor in Turf, Rhode Island Agricultural Experimental Station, Kingston, RI

Most weeds can be controlled selectively in turfgrass areas with herbicides. However, a few weeds are extremely difficult to control. When turf becomes weak and thin these weeds invade and take over. Therefore, vigorously growing, competitive turf will help reduce weed problems and this is extremely important when the invading weeds are those which are difficult to control. To make grass grow at its best use adapted and improved turfgrasses, properly fertilize, mow and water, control insects and diseases, reduce traffic, etc. To have a successful weed control program, you must couple good management with the use of herbicides.

## Sterilization of Soil

Weeds which are extremely difficult to control selectively might best be controlled before grass is established. These could include such weeds as annual bluegrass, bentgrass, nimblewill, quackgrass, velvetgrass, veronicas, etc. There are soil fumigants that will kill vegetative material and weed seed in the soil. Most weeds in turf come from seed already present in the soil. Some of the fumigants presently in use are: metham (VAPAM, VPM), methyl bromide (DOW-FUME), and methyl-isothiocyanate (VORLEX). Depending on the material used and weather conditions, seedings have to be delayed for a few days to three weeks. Use of fumigants may be costly and should be handled carefully as they can be harmful. However, they can accomplish the job more quickly than employing tillage and fallowing techniques which may require several months or more to reduce weeds and weed seed in the soil.

## Renovation Chemicals

There are chemicals that are not selective and will kill all vegetation on contact. Those herbicides which persist in the soil for only a short time or do not interfere with grass seedings are helpful for turf renovation. This technique is especially valuable for areas

containing those weeds which are extremely difficult to control selectively. Materials such as glyphosate (ROUNDUP) and paraquat (PARAQUAT CL) are useful for this purpose. These chemicals are also useful for spot treatment of weeds. Glyphosate has provided consistent and complete kill of most grasses and broadleaf weeds and does not interfere with the establishment of grass from seed. Seedings made within a week after the use of paraquat, especially in a thatchy area, may produce a slightly reduced grass stand.

## Specific Difficult Weed Problems

**Goosegrass** — This annual grass is not as easily controlled as is crabgrass. Since it germinates a few weeks later than crabgrass, better results might be obtained with preemergence herbicides if they are (1) applied later in the season and closer to the time of goosegrass germination so that a higher chemical concentration is present and (2) applied at the normal rate and time used for crabgrass control followed by a half-rate applied about six weeks later or just before the expected period of germination. We have found oxadiazon (RONSTAR) to be the most effective herbicide for preemergent control of goosegrass. However, oxadiazon is presently suggested for use only in Kentucky bluegrass turf. One can expect considerable bentgrass injury if used on putting greens.

**Annual bluegrass** (*Poa Annua*) — There is no simple or easy method of control. The best approach will include proper management, use of correct grass species or varieties, and the aid of chemicals as a tool for the elimination of annual bluegrass. Preemergent herbicides such as benefin (BALAN), bensulide (BETA-SAN, PRE-SAN, etc.), DCPA (DACTHAL) and oxadiazon (RONSTAR) are suggested for use in preventive programs. We have had good results with bensulide. These preemergent herbicides are only effective if applied before annual bluegrass germi-



**Sterilizing soil and reseeding** after weeds have been removed can make a big difference in the appearance of turf. Background, left, is sterilized soil; background, right, shows growth after weed-free seeding; and foreground shows normal weed cover.



**Patch-like appearance** of annual bluegrass in this Kentucky bluegrass lawn works its way into turf stands throughout the northern half of the country. *Poa annua* is the bane of many turf managers.



nates. They do not kill established plants.

Since some annual bluegrass plants live for several years, one can easily see why preemergent herbicides will show good results only if used in a preventive program where the initial amount of annual bluegrass can be tolerated. Annual bluegrass seed can germinate from spring through fall, although peak germination usually takes place in late summer. For the preventive program to be successful, a herbicide barrier must exist in the turf during the entire germination period. A full herbicide rate is suggested for late summer (August) with a half-rate in early spring (March-April). If crabgrass and other annual summer grasses are a problem, then a full spring rate should be used or an additional half-rate should be applied in late spring. Other materials such as maleic hydrazide and chlorflurenol (MH + CF, PO-SAN) are used in an attempt to prevent annual bluegrass seed production and reduce the plant population. This technique has had some success but it depends upon (1) the amount and longevity of viable seed already present in the soil and (2) seed yields being eliminated during the entire growing season.

Endothal (ENDOTHAL) and linuron (LOROX) are two herbicides suggested for postemergence control of annual bluegrass. With these compounds, one can expect some turfgrass discoloration or injury. Usually the injury is temporary and the grass recovers. Linuron is only suggested for use in Kentucky bluegrass turf since other grasses (bentgrass, fescue, and ryegrass) can be seriously injured. These postemergent herbicides might provide the best results if used at low rates and at frequent intervals so that a gradual removal of annual bluegrass takes place. This would be especially true in turf areas where the annual bluegrass population exceeds 15 percent. One could tolerate 15 percent brown turf, as dead annual bluegrass plants, but could you tolerate half your turf being dead because half of it was annual bluegrass. If turf contains more than 50 percent annual bluegrass, you might consider renovation chemicals as discussed earlier. A postemergent program will require proper management to encourage the perennial grasses to fill in and the use of a preemergence herbicide to prevent the establishment of bluegrass plants from seed. As can be seen, there is no simple or easy method for annual bluegrass control.

**Bentgrass as a Weed** — Under some situations, bentgrass can be considered a weed. It is very difficult to control selectively. As was discussed for postemergence annual bluegrass control, endothal or linuron in Kentucky bluegrass turf might offer the best chance of success. Others have suggested the use of endothal or silvex (presently banned from use) at high rates in Kentucky bluegrass during the hot summer. Some suggest control by the use of leaf herbicides accompanied by very close mowing of the bentgrass - Kentucky bluegrass turf in the fall.

**Nutsedge** — Selective control of nutsedge in cool-season grass areas can be obtained by using bentazon (BASAGRAN) or the methanearsonates, such as: AMA, DSMA, MAMA, MSMA, etc. Two applications of either material at low rates and at a 10-day interval are more effective than a single high rate. Control is usually more complete when treatments are made in early summer rather than late spring. Possibly this is related to timing the herbicide application with the emergence of most plants from nutlets (tubers). The methanearsonates are used at the same rates and with

the same techniques suggested for their use in postemergence crabgrass control. Some turfgrass discoloration can be expected. However, if crabgrass is present, then one should choose these materials to obtain control of both crabgrass and nutsedge since bentazon does not control crabgrass. However, if no crabgrass problem exists, the material of choice should be bentazon. It is more effective and most grasses are more tolerant of it. It can also be used in seedling turfgrass (not perennial ryegrass) and will provide some control of annual broadleaf weeds.

**Broadleaf Weeds** — To control most weeds, use a mixture of 2,4-D with either one or two of the following: dicamba (BANVEL), dichlorprop (2,4-DP), or mecoprop (MCP). With difficulty to control broadleaf weeds, one can make a second application about three weeks later and probably achieve better results. In putting green turf to control clover, chickweed, or pearlwort, one might consider dicamba or mecoprop. Knotweed or red sorrel may best be controlled with mixtures containing dicamba while oxalis may best be controlled with mixtures containing dichlorprop.

**Creeping speedwell** — Researchers in New York and Pennsylvania have obtained good control of this weed by using DCPA (DACTHAL). They applied DCPA at the rate of 12 pounds active ingredient per acre in the spring to established stands of creeping speedwell. They had slightly better results with 6 pounds in May and another 6 pounds in June. Check the label or consult recent recommendations as to the need for follow-up treatments. Endothal has been used in the past for control but some turfgrass discoloration can be expected and some weed regrowth will usually occur.

**Prostrate Spurge** — Earlier trials in California and more recent ones in Rhode Island have shown that DCPA (DACTHAL) will provide preemergent control of spurge. Siduron (TUPERSAN), another preemergent herbicide, also provided some spurge control but the results were not as consistent as those obtained with DCPA. The rates and timing of these preemergent herbicides were similar to those used for crabgrass control. In trials with postemergent treatments, the most effective material with the least potential for injury to cool season turfgrasses, especially putting green bentgrasses, was bromoxynil (BROMINAL, BUC-TRIL). This herbicide is generally used for seedling broadleaf weed control in new grass seedings. The optimum rate appears to be 1 to 2 pounds per acre which

*Continues on page 62*



**A slicer-seeder** does renovation seeding after vegetation has been killed by herbicides.

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