



NOW, THE FIRST NAME
IN FUNGICIDES IS
THE LAST WORD
IN CONVENIENCE.

INTRODUCING
NEW CHIPCO®
26019 FLO.

FUNGICIDE

The easy way to stop major
turf diseases for up to
four full weeks.

Thousands of golf course superintendents have discovered one important fact. You just can't beat Chipco 26019 fungicide for controlling turf diseases.

And now you can get all the advantages of Chipco 26019 wettable powder in a convenient flowable formulation. New Chipco 26019 FLO.

Like the wettable powder, new Chipco 26019 FLO offers unsurpassed protection against major turf diseases, including Helminthosporium Leaf Spot and Melting Out, Dollar Spot, Brown Patch, Fusarium Blight, Red Thread, Fusarium Patch, plus Gray and Pink Snow Molds.

Chipco 26019 FLO also delivers the same long-lasting residual control. In fact, both Chipco 26019 formulations protect your turf for up to 28 days.

With Chipco 26019, you also get the added benefits of convenience, no phytotoxicity, pesticide compatibility, low toxicity and no corrosiveness.

Wettable Powder or new FLO, it's easy to see why Chipco 26019 is the Number 1 name in turf disease control.

Rhone-Poulenc Inc., CHIPCO
Department, P.O. Box 125,
Monmouth Junction, NJ 08852.



CHIPCO®
26019

FUNGICIDE

Please read label carefully and use only as directed. CHIPCO® is a registered trademark of Rhone-Poulenc Inc.

Circle No. 138 on Reader Inquiry Card

Even when they're all dressed up, there's still nowhere they can't mow.



With a John Deere hydrostatic tractor you don't have to take off attachments to take on other jobs.

That's because our compact diesels give you separate controls for separate functions.

For instance, a flip of a lever runs either PTO (rear or mid) independently. So

Independent control lets you engage mid or rear PTO action at the flip of a lever. For convenience, either 540-rpm rear or 2100-rpm mid PTO can be engaged on the go.



you can go from breaking ground with a tiller to maintaining turf with a center-mounted mower.

A mid-mount rockshaft control (optional) lets you lower the mower without raising problems with a 3-point hitch tool.

And if you're going from mowing to loading, our frame-built design draws the deck up and out of the way. Giving you up to 8-inches of clearance. So you can load up without hanging up.

Add to these conveniences a simple system of pins and brackets that makes changing attachments as easy as changing your mind. A choice of three diesel powered models to choose from—16, 20 and 24 horsepower. Plus a full range of work-saving





attachments, to keep your tractor dressed for success in any application.

Up to 8 inches of under deck clearance allows you to do loader work with mower in place.



Ask your dealer for all the facts on the John Deere hydrostatic compacts. Find out how their lack of dedicated performance is one of their strongest features.

Optional mid-mount rockshaft control lets you raise and lower mower deck without disturbing 3-point hitch mounted tools.



Nothing Runs Like a Deere®



1837-1987
150

Circle No. 110 on Reader Inquiry Card

SHORT CUTS

DIFFERENT GROWING...Four companies from the green industry made it into *Inc. magazine's* recently-published 1985 list of the 500 fastest growing private companies in America. Barefoot Grass Lawn Service, Worthington, Ohio, placed 224th. Suburban Landscape Associates, Davenport, Iowa, entered at 312th place. Ford's Chemical and Service, Pasadena, Tex., placed 447th, while the golf course construction firm Landscapes Unlimited, Lincoln, Neb., placed 473rd. The magazine bases its selection on a company's growth percentage over five years, with a sales ranging from no less than \$100,000 the first year and no more than \$25 million the last year. In addition, each company must be independent and privately owned.

COMMEMORATIVE COLORS...As part of the bicentennial celebration of the September 17, 1787 signing of the U.S. Constitution, Bicentennial Chairman Warren Burger is encouraging communities to plant "Constitution Gardens." They are intended to be a lasting tribute to the freedom the Constitution has brought the country.

Bedding Plants, Inc. is offering a free brochure to help design and plan the garden. The organization is encouraging garden planters to use red, white and blue flowers. The brochure lists 10 or more varieties of flowers of each color, as well as tips on planting. For a copy of the brochure, send a self-addressed, stamped business-sized envelope to Bicentennial, Bedding Plants, Inc., 210 Cartwright Blvd., Massapequa Park, NY 11762.

MAKING A GRADE...A new 16-page, four-color bulletin titled "Athletic Field Construction and Maintenance" is being made available to the green industry by the University of Minnesota Agricultural Extension Service. The booklet was written by D. H. Taylor, G.R. Blake and D.B. White. For copies, send \$1 to: Distribution Center, Extension Service, Coffey Hall, University of Minnesota, St. Paul, MN 55108.

PULLING OUT THE RUG...Howie Newman, a Boston-area sports writer, wants to get rid of artificial turf. He's started a nation-wide campaign called "Pull Out The Rug," to get support for doing away with synthetic surfaces. He's even distributed the song "Astroturf" to radio and television stations upon request. To support his efforts, "Pull Out The Rug" kits (bumper sticker and newsletter) are available by sending \$2.50 (three kits for \$6) to Howie Newman, 20 Hartshorn St., Malden, MA 02148 or call (617) 397-0384.

SHOP-AT-HOME?...A growing trend in the green industry is shop-at-home services being offered by some distributors. One New York company, Landscapers Supply, sells power equipment, engines, parts and accessories by phone. For more information, see the "Miscellaneous" heading in this month's classified section.

SCHERY from page 8

clopeida Britannica," "Encyclopedia Americana" and the "World Book."

During and after his employment as botanist for the Monsanto Co. and O.M. Scotts & Sons, he was a member of many professional organizations.

Schery spent five years in retirement from The Lawn Institute before dying of cancer at age 70.

CHEMICALS

Spraying moratorium does harm, not good

A month-long moratorium on spraying for aquatic weeds on Lake Okeechobee in south Florida imposed last August did more harm than good, says Kenneth R. Tefertiller, Ph.D., of the Institute of Food and Agricultural Sciences.

The moratorium was not based on known research data, he said at a recent Florida House Appropriations Subcommittee hearing. Tefertiller, vice president of agricultural affairs at the University of Florida, was speaking on behalf of IFAS during budget hearings.

The moratorium was imposed over concerns about blue-green algae blooms on the lake caused by too much phosphorus. Spraying had killed hyacinths, which, when dead, sink and release phosphorus back into the water.

Halting the spraying did not reduce the levels, Tefertiller said, but instead allowed hyacinth growth the chance to get a head start. He added that more chemicals would be needed to control the hyacinth, at an added cost of \$100,000.

A grant from the South Florida Water Management District, which manages spray programs on the lake, to the IFAS Center for Aquatic Weeds will be used to write a white paper on "lessons learned from the moratorium," Tefertiller said.

ASSOCIATIONS

Video shows benefits, safety of lawn care

A nine-minute video about the safety and benefits of professional lawn care service has been produced for the Professional Lawn Care Association of America by the Ciba-Geigy Corp.

"Common Sense Answers to Turf Care Questions" is intended for use by LCOs to be presented at local community group meetings of regulators, chambers of commerce and other such groups.

The video features PLCAA's Jim Brooks and Gary Clayton, Virginia Tech professor John Hall, III and commercial real estate expert John McCracken of McCracken and Associates, Inc.



The Toro 570C Fixed Spray Series. Enhanced Performance Through Advanced Design.

The "C" in 570C stands for Conilip,[™] Toro's exclusive new seal and cap configuration. It improves sealing and reduces flush action for outstanding performance in virtually any soil condition. While other fixed spray sprinkler seals tend to trap dirt and debris which can cause stick-up problems, the Conilip seal enables the 570C pop-up sprinklers to operate smoothly every time.

And because our Conilip seal is made of UV-resistant black rubber, it's less susceptible to drying and cracking than seals made of plastic.

Available in 3", 4", 6" and 12" pop-up models, the complete line of 570C series pop-up sprinklers can be fitted with your choice of 75 interchangeable nozzles to give you greater flexibility in irrigation system design.

Many other features of the 570C series make it the outstanding choice for all your fixed



Toro's Conilip seal and cap configuration improves sealing and reduces flush action.

spray needs. Cycolac[‡] construction offers strength, durability and corrosion resistance. A stainless steel retraction spring provides positive pop-down. And a screw on cap allows easy access for service from the top.

Also, Toro offers the widest range of fixed spray nozzles and accessories on the market today. The innovative line of Pressure Compensating Spray Nozzles regulate water flow, thereby

eliminating fogging and water waste that can occur with fixed spray sprinkler heads. New Pressure Compensating Flood and Stream Bubbler Nozzles combine the advantages of pressure compensation with the ability to install bubbler nozzles on a pop-up sprinkler.

Other accessories include risers, shrub adapters, micro spray adapters, extenders and funny pipe fittings. Toro's check valves minimize low head drainage and puddling after the sprinkler system is turned off.

All in all, Toro's new 570C sprinklers and accessories provide the ultimate in versatility, reliability and efficiency. Try the 570C Series on your next job—for enhanced performance through advanced design.

If you'd like more information on the 570C Series, please contact your local Toro dealer, or Toro directly at 5825 Jasmine St., Riverside, CA 92504. (714) 688-9221.



[‡]Cycolac is a registered trademark of Borg-Warner

Excellence in Irrigation[®]





Covers a lot of ground for less.



Its low cost looks good on paper. And its long-lasting turf disease control looks good on your fairways. BAYLETON turf fungicide. For the long haul. Mobay Corporation, Specialty Products Group, Box 4913, Kansas City, Mo. 64120



BAYLETON is a Reg. TM of Bayer AG, Leverkusen. 6-2256

Bayleton.

Circle No. 127 on Reader Inquiry Card

GOING WILD

by Heide Aungst, managing editor



The Vintage Club uses wildflowers in "desert scenes" bordering the golf course.

Each spring an earthly rainbow of wildflowers sweeps across fields renewed with life. Walking into a blooming meadow compares only with opening a new 64-crayon Crayola box as a child.

But while those mystical hues have spell-bound nature-lovers for centuries, they've only recently sent seed companies in search of the pot of gold. Wildflower mixes have become popular, and profitable, in the last few years.

Superintendents use the mixes in roughs; home-owners cultivate wildflower gardens; and highway departments scatter the seed on low-maintained rights-of ways. But despite their popularity, naturalists argue that mixes don't offer a crayon-box color solution in low-maintenance areas, but open a Pandora's box of problems.

"There is a potential for the local gene pool to become polluted," says

Brian Parsons, naturalist at the Holden Arboretum in Cleveland, Ohio. "That's one argument for each state to develop its own nurseries as far as roadsides are concerned."

Natives vs. mixes

Native wildflower varieties demand less water, Parsons explains. "Using native wildflowers in the landscape conserves energy and fuel by reducing mowing," he says. "Many mixes use European species which aren't regionally adapted. It's a quick show, but color won't persist in the landscape after the first couple of years."

"Very few people know which species grow in what areas," says Crystal Rose Fricker, plant breeder with Pure Seed Testing, Inc. "We're doing research on natives. With grasses you know what's a cool-season or warm-season grass. But there are many species of wildflowers widely adapted to different areas. I think we're just

learning."

Most seed companies market mixes to regional areas. Lofts and Jacklin share the name and advertising for their Pinto wildflower mix, but Jacklin markets only a Northern mix. Loft's research agronomist Marie Pompei says the company has five different mixes: Northern, Southern, Canadian, Tropical and Texarkana.

Applewood Seed Co. in Arvada, Col. has nine regional mixes. Pickseed West, in Tangent, Ore., custom mixes seed depending on what distributors want, says Jerry Pepin, Ph.D. Most seed companies are willing to custom-mix large orders.

Despite the regionalization of mixes, the real controversy persists over what the mixes contain. The myth is that a mix will bloom full color year after year. But whether that will happen depends on how many annuals and perennials are in the mix. Both Parsons and Fricker agree that

Wildflower mixes are a popular low-maintenance alternative on rights-of-ways, golf courses and home gardens. But before you go wild with color, seed companies say it's important to learn about the mixes.

it's a matter of public awareness.

"If a mix has 25 species, it's not realistic to think that all 25 species will bloom," says Annie Paulson, resource botanist at the National Wildflower Research Center in Austin, Tex.

Annuals vs. perennials

"It depends on what the customer wants," Fricker says. "With an all-annual mix, you'll get color the first season, but it will die out. With an all-perennial mix, you won't have annuals dying out, but you won't get color until after the first winter."

Fricker explains that perennial wildflower seeds must *vernalize*, which means the seed must go through short day length and cold temperatures. "It's the plant's way of saying, 'I know if I flower too soon, the seed won't make it through the winter.'"

A solid wildflower mix will include annuals, perennials, biennials and tender perennials, which are annuals that can survive mild winters. "It's advisable to see a species list and it's possible to ask for a percentage breakdown," Paulson says.

Loft's and Jacklin's Pinto mix is primarily composed of annuals. Tee-2-Green's Bloomers and most of Applewood's mixes are about 50-50. Pickseed West's Flowers 'N' Flowers is about 60 percent annuals, 40 percent perennials.

"Using more annuals holds the cost down and gives the customer something the first year," Pepin says. He adds that some annuals will re-seed if the wildflower area is mowed in the fall.

A compromise

Illinois has reached a compromise between mixes and native species. The state is one of the few to use native prairie grasses and wildflowers along its highways. It also is home to the Association for Use of Native Vegetation in Landscaping (ANVIL).

LaFayette Home Nurseries is one of several Chicago-area nurseries which markets both mixes and native species. Sales manager Roger Lemke, who is also on ANVIL's board of directors, says mixes serve a purpose despite their problems.

"We use those mixes and include them with our mixes," Lemke says. "The annuals give color until the native perennials start coming on."

continued on page 20



Weeds can be a problem in wildflower mixes.

A BLOOMIN' SUCCESS

Green. Golf courses are just too green. But the solution is merely a rough away: wildflowers.

Wildflowers add the needed touch of color and touch of class to any golf course. But superintendents are using them in different ways.

One perspective

The Vintage Club in Indian Wells, Calif. has used wildflowers on the golf course's edges since it was built in 1979. Of the 360 acres on the 36-hole course, about 15 are wildflowers.

Don Pakkala, director of turfgrass



Members at Onwentsia Club enjoy the native prairie and wildflowers in the roughs.

management, says he usually buys individual seed and mixes it on site. Last year, however, he used Lesco's Southwest mix.

The mix includes both annuals and perennials. But he finds it necessary to re-seed annually. "Some years the pe-

continued on page 20

Low maintenance?

Another myth concerning wildflower mixes is that once planted, they need no further maintenance. "How wildflowers are maintained does make a difference," Fricker says. "Some weedy species can take over."

Because of this, Fricker is working closely with chemicals companies on herbicides which kill weeds, not wildflowers. For the past three years, Pure Seed has been looking at about 50 different chemicals and hundreds of wildflower species. "We also have 15 trials going on throughout the U.S.," she says. "We want to see which species will be hurt and which will survive."

Of some 25,000 species of wildflowers, only a fraction have been seriously studied.

Fricker has researched wildflowers for five years. Pure Seed Testing has 250 acres of more than 300 varieties.

The National Wildflower Research Center has been researching wildflowers since 1982. Lady Bird Johnson founded the non-profit center for the purpose of promoting wildflowers in public and private landscape design.

Of some 25,000 species of wildflowers, only a fraction have been seriously studied.

Current research includes looking at various seeding techniques, such as a modified drill seeder, and putting together a seedling identification booklet. The center also serves as a clearing house for information, such as fact sheets done by state. Last year, more than 24,000 inquiries poured into the center.

"We're often the first place someone will turn to," says Paulson. The center won't endorse mixes, but will give recommendations concerning what to look for in a mix.

Popularity blossoms

Popularity of wildflowers has more than blossomed over the past five years. "We've gone from selling a few *continued on page 22*"



Jerry Pepin: Sales are booming



Marie Pompei: People want to be different



Onwentsia superintendent Paul Boizelle says using wildflowers in the rough takes planning.

A BLOOMIN' SUCCESS from page 19

rennials are weaker and we re-seed," Pakkala says.

Pakkala uses the wildflowers in beds he calls "desert scenes," bordering the golf course. The flowers bloom during the winter, but the hot dry Palm Springs summers make it difficult to keep them alive.

The beds all contain manual irrigation heads for water. "In the spring we slowly cut back the water so as to not shock the plant," Pakkala explains. "We have other desert plants, such as cacti, in the same beds, and they can't handle the water."

Weeds are another constant problem. "Our members and guests are purists. Sometimes we get a bed so weed-infested that we have to eradicate the whole bed," he says. "Weeds germinate with the wildflower seed. It's quite a job keeping them out."

If weeds aren't taken out, clover and thistle can shade the flowers, stunting their growth. He uses the herbicide Fusilade which gets rid of grassy weeds without damaging the flowers, but his crew must hand-weed other types.

"It's a tough situation," he says. "I

need to do more research and find out what types of wildflowers will grow naturally here."

Despite the problems, Pakkala whole-heartedly recommends wildflowers to other superintendents. "By all means do it," he says. "They are low-maintenance in other areas of the country. In non-use areas, you don't have to mow as often."

A different perspective

The Midwest, unlike the Southwest, is known for its native prairie and wildflower species. Paul Boizelle, superintendent at the Onwentsia Club in Lake Forest, Ill. has used prairie and wildflowers in his roughs for five years.

Boizelle has experimented with three different techniques to plant the wildflowers. About 13 acres of the 200-acre course are planted in prairie.

The first year Boizelle let the rough grow wild. "Lo and behold we had wildflowers volunteer which had been there since the course was built in 1894," Boizelle says. "We were so excited about it."

The species had not had a chance

to thrive because of the maintenance of the rough area.

"We started with five acres," Boizelle explains. "In the fall, we mowed the area using a large woods-rotary mower. Then we hydroseeded a wildflower mix on top of the stubble. We knew the seed had to find its way into the soil."

In the spring of the third year, Boizelle went in and burned the area. Controlled burning shocks the plant to provide renewed growth. It also eliminated vegetative competition of

continued on page 22