

Need a big spreader for big jobs? Dakota 440 might be for you.

## THE RIGHT SPREADER

Do you need a broadcast or drop spreader? There's a place for both in turfgrass management.

By CURT HARLER

Nothing messes up a fertilizer application as much as a streaky job which leaves behind alternating rows of dark green and yellow-green grass.

Marker wheels or slight overlapping of rows can eliminate the fertilizer streaking problem in most cases. It is a bit trickier, however, when spreading a herbicide. Nothing is more vexing than seeing a sloppy spreading job near a flower bed. The solution is to use the right tool for the right job. A broadcast spreader is fine for jobs where pinpoint accuracy is not required. A flail-style broadcast spreader will cover a lot of ground in a hurry. But it lacks something in accuracy. A drop spreader, while much slower in terms of coverage, is less likely to be the culprit causing less precise application.

Regardless of the type of spreader used, be certain the hopper and other parts which come into contact with fertilizer and chemicals are quite

resistant to corrosion. Be sure spreaders are thoroughly rinsed (and dried) after each use. The boss won't be happy if some residual 2,4-D from last week's herbicide application is applied to the flower beds along with the fertilizer required today.

AGRI-FAB 217-728-8388 Circle No. 270

A full line of tow-behind spreaders are available from Agri-Fab, Sullivan, IL. Broadcast models are available in 75,125 and 175 pound broadcast, and 100 pound drop or broadcast versions. Spread widths range from four to eight feet to 10-12 feet. Smaller unit has a poly hopper, nylon gear drive and one-half inch axle.

BEFCO 800-334-6617 Circle No. 271

The Turbo Hop pendular spreader from Befco, Rocky Mount, NC, is de-



Gandy spreaders feature stainless steel bottoms which snap off for cleaning.



Lely Corp. offers eight models of spreaders, from the budget 9.4 cubic foot unit to the Model 4000 with 75 cubic foot capacity.

### At least she insists

There are times when it is critical to know that you're getting the real thing. Like when you're buying Dursban\* insecticide. No Dursban wannabe can give you the same level of confidence. performance and support that you get from Dow AgroSciences. Not to mention the superior control of over 140 insects, including worms, ants, fleas, ticks, mole crickets, aphids and chinch bugs. The only way to get the real Dursban is to buy Dursban. So always look for the Dursban trademark on the label, whether you buy from Dow AgroSciences or one of our formulator partners. For more information, call us toll-free at 1-800-255-3726 or visit our

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Always read and

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If it doesn't say Dursban, it's not.

signed for precision application.
Swath width can be adjusted from 20 to 66 feet. Has multiple flow settings, with instant or/off control. Hopper is polyethylene and sizes range from 14 to 32 cubic feet.
Units require at Cat I or II hitch. Heat treated anti-corrosive paint resists corrosion.

#### DAKOTA PEAT & EQUIPMENT 701-746-4300 Circle No. 272

The Turf Tender 440 from Dakota Peat & Equipment, Grand Forks, ND, has spread width ranges from six to 36 feet. Spinners are 24 inches in diameter and easily removable for cleaning. Unit requires a 40 hp tractor with 4-10 gallons hydraulic flow. All work is controlled from the tractor. Only one operator is required.

#### JOHN DEERE 800-537-8233 Circle No. 273

The 40-inch aerator/spreader from John Deere's Commercial Equipment Division, Raleigh, NC, does two jobs at once. It perforates the soil while the calibrated dropspreader follows with seed, lime or fertilizer. It can be adjusted to aeration only, with a 2-inch penetration for aeration.

#### FINN CORPORATION 800-543-7166 Circle No. 274

The B70 Series mulch spreader from Finn, Fairfield, Ohio, will broadcast up to 7 tons of hay or straw per hour. Powered by a Kubota V1505 33.5-hp 4-cylinder water-cooled diesel engine, it has a range of 60 feet in still air. The blower is a 21-inch diameter fan with six blades developing a discharge velocity over 150 mph.

#### GANDY COMPANY 800-443-2476 Circle No. 275

A full line of drop spreaders from Gandy, Owatonna, MN, includes push-behind and two models. The Model 36 and 24 are 36-inch and 24-inch units which are easy to maneuver around ornamentals and small lawn areas. They hold 120 and 78 pounds respectively, and feature stainless steel bottoms which snap off for quick cleaning. They completely disassemble without tools.

#### JONATHAN GREEN 800-526-2303 Circle No. 276

New for 1998 from Jonathan Green, Farmingdale, NJ, are two spreaders. Drop model has a 21-inch hopper and 12-inch wheels which provide four-inch ground clearance for fast, uniform application and proper agitation. Rotary spread model has an 8-foot reach with tapered overlay to help reduce striping. Heavy-duty 8-inch hard rubber tires provide stability, traction, and proper impeller plate activation.

#### GROUNDTEK MFG. 407-877-7473 Circle No. 277

The EBS 100/200 Detachable Spreader Unit from Groundtek, Ocoee, FL, takes just seconds to mount or dismount from most utility vehicles, mowers or tractors. Built on a stainless steel frame, it has a Lexan safety shield on the rear of the spreader to protect the operator and vehicle from the spreading action of the material. The unit hopper holds 100 pounds of fertilizer.

#### HERD SEEDER CO. 219-753-6366 Circle No. 278

Specially designed for tricky jobs like spreading fire ant bait, the Herd GT-77 broadcaster is accurate enough to handle very small rates — like the typical 1.5 pounds per acre used on ants. Made in Logansport, IN, it mounts on an ATV. Hitches for most ATVs and other vehicles are available. The unit's low-amp electrical pull is perfect for vehicles with small charging systems.

#### LELY CORPORATION 252-291-7050 Circle No. 279

Eight models of spreader are available from Lely Corp., Wilson, NC. Units range from the 9.4 cubic foot Budget model to the 4000, with its 75-cubic foot capacity. In between are 11.5 cubic foot ground-drive or pto drive units and 19, 13.6 and 32.5 cubic foot models. Budget unit spreads to 36 feet.

#### A.M. LEONARD 800-543-8955 Circle No. 280

Built to the company's standards, this large-capacity push-behind model from A.M. Leonard, Piqua, Ohio, has a spread width of eight to 12 feet. Fingertip controls allow on-the-go adjustment of spread pattern without stopping or stooping. Unit has huge 100-pound capacity polyethylene hopper. Deflector kit or shower cap available.

#### LESCO 800-321-5325 Circle No. 281

The Mark II Rotary features a three-position handle assembly for ease of use. The 100-pound capacity polyethylene hopper on a stainless steel frame holds more product and saves time. Lesco, Rocky River, Ohio, has added a new 5:1 sealed gear box and two pattern adjustment

slides for even distribution of a wide range of products. Unique cam-operated oscillating agitator sweeps beyond the hole openings in both directions to help eliminate bridging and minimize product damage.

# d a new 5:1 sealed 285 NO

#### MILLCREEK MANUFACTURING 909-620-6061 Circle No. 282

The Millcreek
Topdresser/Spreader is perfect for
spreading a variety of materials. It is
made in Bird in Hand, PA, and distributed by firms like Gearmore. The
75TD holds 33.7 cubic feet and requires a 24-hp pto-drive tractor. Its
spread ranges from 8 to 12 feet.

#### RYAN 800-228-4444 Circle No. 283

The Vicon 888401 spreader from Ryan, Lincoln, NE, has a spread width up to 45 feet with a variety of spouts available. The unit can carry up to 7000 pounds and its rotary agitator keeps sand and other products flowing freely. The hopper is noncorrosive, made of molded, glass fiber reinforced polyester.

#### SPYKER 800-972-6130 Circle No. 284

TORO

612-888-8801

Circle No.

Professional model spreader from Spyker is designed for seeding, fertilizing, spreading granular or pelleted pesticides, ice melters, bait, pelleted lime etc. Accuway Spread Pattern Evener assures consistent spread and reduces streaking. Unit has a stainless steel rotary agitator which throws product five to eight feet. This push-behind unit holds up to 40 pounds.

The topdresser 5000 from Toro, Bloomington, MN, covers large areas fast. It has 50-cubic foot capacity (4,500 pounds) and its large, soft track tires provide a cushioned ride and only 12.9 psi turf pressure when fully loaded. Hopper sides are sloped to ensure free flow of material to

the adjustable metering gate. Spinning disk distributes material at a rate of 1350 pounds per minute over a 15-foot swath.

#### TRYNEX INTERNATIONAL 800-725-8377 Circle No. 286

The SP-575 Mini-Pro spreader from TrynEx, Royal Oak, MI, is designed specifically for light duty trucks, sport utilities and other vehicles. Its low-profile hopper is made of high-density polymer. Form-fitted, dual latching lid protects its 5.75 cubic foot capacity. Direct drive, 12-volt DC motor is part of the exclusive, maximum torque drive assembly. Uses a light weight 10-inch poly spinner. The on/off actuator has a built-in circuit breaker. Optional mountings include a Reese hitch, utility mount, 3-point hitch or fixed mounting. LM



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performance. Plus, they're backed by in-depth research, agronomic expertise and timely delivery. Terra's high-quality seed and excellent selection of turf care products make Terra the one-stop shopping place for your turf needs. Talk to your Terra Professional Products representative today.



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# SEED INDUSTRY

# sprouts big changes

The seed industry held its field days this past June, and LANDSCAPE

MANAGEMENT was there, to get the latest news on

what's happening in the world of turfgrass seed research

and production.

by TERRY MCIVER / Editor-in-Chief



The turfgrass seed industry—which used to move so quietly you could hear the grass grow while you watched it—has, over the course of the 1990's, become a highly competitive arena for product research and development.

Our vistit to seed country in mid-June

was a 400-mile week of field tours, fast lunches and exclusive interviews with seed industry experts who were happy to talk to us about the state of this changing industry. We couldn't include every bit of news, but here's a good sampling of what lies ahead for the industry.—ed.

he seed supply is reported to be in average supply for 1998-99, with enough supplies of most varieites, due to supply/demand/carry-over scenarios.

"We're going to see an average crop across the board," says Dave Nelson of the Oregon Fine and Tall Fescue Commissions. "Nothing big, however the quality of the seed is very good. You never have a loss, occasionally you have a bumper crop. It's all relative to what you're comparing it to. We're halfway along combining, nobody's fired up the cleaners yet. We'll know what yields are [by mid-August]. We're running about 10-days behind due to weather."

"I have heard is the price is strengthening for Oregon turf type

tall fescue due to Missouri weather," says Nelson.

More perennial ryegrass acreage industry-wide is going under the thresher than ever before, reports Myron Lightbody of Jacklin Seed.

"The tall fescue and perennial rye look good," says Don Woodhull of Burlingham Seeds. "The fine fescues look average. We're going to have a good year, with a lot of acreage. The industry continues to grow and need more seed, with the march of urbanization," says Woodhull. "We're bound to get into situations where for whatever reason our internal plans have not kept up with urbanization, but this year we've planted more

acres; now we've probably got a few acres too many."

Don Woodhull: In-

dustry has to keep

pace with, not pass,

urbanization.

"We're still building 250 golf courses a year, and ryegrass overseeding is like a built-in annuity. What's hurt us lately is the lack of weather-related stress in a lot of the high use areas in the midwestern, Atlantic and northeast regions."

"It looks like a big seed crop, but our carryover is really not that great, says Jerry Pepin of Pickseed. "We have such a potentially big crop coming. The fall business will be fine, but the next spring's business, if there's a big carry-over, will have weakening in prices."

"I'm not so sure the perennial ryegrass yields are going to be very high, but there are so many acres, that we're going to have a good amount of seed."

Pepin thinks positively about potential market gluts, and says companies are watching for overproduction scenarios.



Jerry Pepin: Nitrogen use increases seed yields.

"I think a lot of companies have tried to balance supply and demand, rather than thinking there's an open-ended demand out there. We've been pretty careful as far as balancing what we think we can sell."

# Comments on industry consolidation:

The business of seed research and the scramble by AgriBioTech to capture market share has brought an added element of anticipation to the seed industry.

It's apparently a buyer's market, and ABT is the only one doing the buying. We asked some seed industry observers to comment on the growth of ABT.

ABT has acquired 26 companies since January 1995. The company wants to acquire 45% of the forage and turfgrass seed market by 2000, with annual revenues of \$500 million.

**Q:** If Agri BioTech becomes the sole seed industry giant, with a handful of smaller companies, what does it mean for the industry?

A: Tom Stanley, Turf-Seed, Inc.: "I think overall it's healthy for the industry to have this consolidation, to get a great number of seed companies under one roof, and one management. I think it will go a long way to help stabilize pricing. Hopefully we can get out the situation where we have 20 companies overproducing. Some companies plant seed that they don't have markets for. They speculate that they will have a home for the seed down the road. Hopefully a large organization like ABT isn't going to do that, they're going to be responsible with the approach that they will take to seed production, and I think they will."

**Bill Rose**, Turf-Seed, Inc.: "This venture has reached a size that certainly is to be reckoned with. ABT's path is still not clear, but we hope they can blend the many companies into a unit that is efficient and stabilizing to the industry.

"The future of this industry will see varieties tolerant to herbicide, much greater disease resistance, improved turf performance, all with higher seed yields. With marker genes available and gene transformation, the era of VNS (Variety Not Stated seed) may finally end."

Craig Edminster, International Seeds: "We're all a little surprised that it's happened. We're all wondering when the profitability is going to come. Stockholders need return on their equity. Most of them are looking for 15-16-17 percent, and this seed business has never really managed itself on those kind of margins. You just wonder how it's all going to come out in the wash," says Edminster, reminding that external and internal forces will continue to affect every company, big or small. We've gone through many years



Craig Edminster: Industry price drops could be drastic.

of good prices for growers, and for companies, and you just wonder how long it's going to last."  $\ \Box$ 



Dennis Combs, left, and David Lundell: Believe in coming acceptance of *Poa supina* for sports fields, tee boxes.

One new varieties for Pickseed this year is elite Sunshine ryegrass. "It has real high seed production," says Pepin. "It's quality is good, first page NTEP."

"It seems like our growers are constantly using more nitrogen,

#### KEY (AVAILABILITY):

A=expected surplus; B=adequate supply; C=limited supply.

#### KEY (PRICE):

H= higher price than last season; S= stable, equal to last season; L= lower prices than last season; NR = no response

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Kentucky Bluegr	rass		
1757	Lofts	В	S
Adelphi	Advanta	В	L
Arcadia	Burlingham	С	S
Belmont	Lofts	В	S
Blacksburg	Turf-Seed	В	5
Blue Star	Pennington	В	NR
Cannon	Advanta	В	L
Champagne	Lebanon	C	5
Chateau	Fine Lawn/Penningtor	n B	S/NR
Cobalt	Turf Merchants	В	5
Cynthia	Advanta	В	L
Eagleton	Lofts	В	5
Fortuna	International Seed	В	L
Gnome	Turf Merchants	A	S
Haga	Burlingham	В	5
Chateau	Fine Lawn Research	C	L
Classic	Peterson	C	5
Dawn	Lesco	В	S
Dragon	Zajac Performance	С	L
Eagleton	Lofts	В	5
Fortuna	International Seeds	C	5
Geronimo	Advanta	A	L
Gnome	Turf Merchants	A	L
Haga	Burlingham	В	5

to get the yields higher. That's one of the reasons the yields are so fantastically high now. And the varieties have been selected for high seed yields."

"We are pleased to see a really good use of turf-type perennial rye this year," says Ronnie Stapp, Pennington Seed. "The supply of seed was very adequate for a strong demand, but we are selling out on most of our top varieties. The acres are there, in Oregon, for an adequate supply again, but with the strange El Niño-driven weather we have experienced, the yields may not be up to par.

"We expect to have a good supply of our Morning Star, Shining Star and Wind Star perennial ryegrasses. Our supplies of our newest varieties, Wind Dance and Sonata, will be less than anticpated.

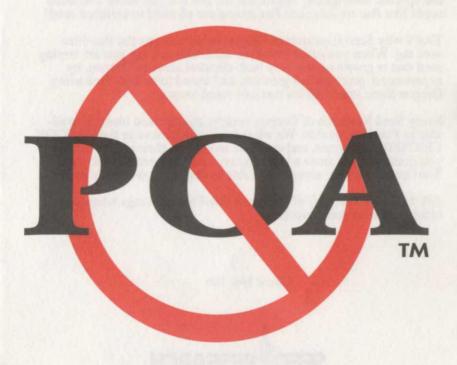
"We have a nice production acreage in of Winterplay *Poa trivialis* which looks good presently, but as fickle as *Poa trivs* are, we will have to wait and see how that one turns out.

"We expect usage of perennial rye and *Poa trivialis* to grow again this year. As a result, the demand for seed will be strong and the expected supply should be about equal to last year."

#### Rethinking Poa supina

"Poa supina is our big story," reports Dennis Combs, AG, from

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Huntington	Lofts	В	5
Midnight	Turf-Seed	A	L
Misty	Pennington	В	NR
Nassau	Lofts	В	S
Preakness	Lofts	В	S
Princeton 105	Lofts	С	S
Ram I	Lofts	В	5
SR 2000	Seed Research	С	5
SR 2100	Seed Research	В	L
SR 2109	Seed Research	С	5
Unique	Turf-Seed	C	5
Viva	Turf Merchants	В	S
Washington	Burlingham	В	5
Perennial Ryegra	ss		297
Affirmed	Lebanon	В	5
Affinity	Turf Merchants	A	S
ASP 400	Advanta	C	5
ASP 410	Advanta	C	S
Blackhawk	Turf Merchants	В	S
Brightstar II	Turf-Seed	C	S
Catalina	Turf-Seed	В	5
Charger II	Turf-Seed	A	L
Churchill	Lebanon	C	5
Derby Supreme	International Seed	В	L
Dimension	Advanta	C	5
Essence	International Seed	С	S
Evening Shade	Turf Merchants	В	S
Exacta	Lebanon	В	5
Excel	Burlingham	C	S
Gator II	International Seed	C	5



Tested to be Poa-Free using Oregon State
 Standards for Noxious Weed Exams

#### It's Time to Set the Record Straight

Don't be confused! OREGON CERTIFIED BLUE TAG seed is not guaranteed to be crop and weed free. That blue tag sewn on to your bag of seed is a statement of *genetic purity only*. Yes, certification has specific seed quality requirements. But did you know that weed seeds like *Poa trivialis* and *Poa annua* are allowed in certified seed?

That's why Seed Research of Oregon is introducing the Poa-Free seed tag. When you order Poa-Free seed with this tag you are buying seed that is grown on the very best, cleanest acres in Oregon, by experienced, professional growers, and tested to be Poa-Free using Oregon State standards for noxious weed exams.

Every Seed Research of Oregon variety, mixture and blend is available in Poa-Free quality. We wholeheartedly believe in the OREGON CERTIFIED program, and continue to support their efforts. But if you demand more from a bag of grass seed, you need to ask for it. Seed test results are always available to confirm a seed lot's purity.

Ask for Seed Research of Oregon's Poa-Free seed tags when you order your next seed shipment.

Circle No. 106



27630 Llewellyn Road • Corvallis, OR 97333 1 (800) 253-5766 • (541) 757-2663 • Fax: (541) 758-5305 Fine Lawn Research, Inc. The product, also known as supina bluegrass, has held up well in research in England and at Michigan State University, where it survived under 5% sunlight under indoor stadium conditions. Trey Rogers is counted among supina's major domestic supporters.

Poa supina —first used in the United States in 1989— is becoming more recognized as a viable turfgrass for sports fields. Recommended uses for Poa supina include tee boxes, soccer and football fields.

"It's becoming more mainstream," adds Fine Lawn's **David Lundell**. "It's being used more in mixtures that require shade tolerance, wear tolerance and quick recovery."

The most appealing aspect of *Supina* is that it appears to be able to offer both shade and wear tolerance, which you don't often find in a turfgrass, they say.

"Usually, the closer a variety gets to shade tolerance, the more you lose of the wear tolerant characteristic," Combs explains. *Poa supina* is the most shade tolerant and wear tolerant grass that anybody knows of. It's more unique than anything else."

"It also recovers from injury better than anything else," says

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Laredo	Turf Merchants	В	S
Manhattan 3	Turf Merchants	Α	S
Morning Star	Pennington	В	NR
Palmer III	Lofts	В	S
Paragon	Turf Merchants	С	S
Pennant II	Burlingham	В	5
Phantom	Lofts	C	S
PhD	International Seed	В	L
Prelude	Lofts	В	S
Radiant	Burlingham	C	S
Repell III	Lofts	В	S
Rodeo II	Turf Merchants	В	S
R2	International Seed	В	L
Secretariat	Lebanon	В	S
Sonata	Pennington	В	NR
Shining Star	Pennington	В	NR
SR 4200	Seed Research	В	5
SR 4330	Seed Research	В	5
Precision	Advanta	C	L
Premier II	Barenbrug USA	В	L
Prizm	Zajac Performance	В	L
Riviera II	Roberts	С	S
SR 4010	Seed Research	В	Н
SR 4100	Seed Research	В	Н
SR 4200	Seed Research	В	Н
SR 4400	Seed Research	C	S
Stallion Select	Fine Lawn	В	L
Stallion Supreme	Fine Lawn	В	L
Top Hat	International Seed	В	L
Wind Dance	Pennington	В	NR
Wind Star	Pennington	В	NR

#### Research reports

Poa annua good

**Dr. David Huff**, turfgrass plant breeder at Penn State University, is working to improve *Poa annua* (annual bluegrass) for use on golf course greens. (This at the recognized 'home' of many of the best bentgrass varieties.)

Huff is working with the greens-type *Poa annua*, which he describes as "wild and weedy," and the one most superintendents face on golf greens.

Huff wants to produce a uniform commerical product with a good seedhead production.

"We are working to correct this Poa's disadvantages, primarily it's low seed production," says Huff, who spoke at the Advanta Seeds Pacific field day.

"It already has an upright growth and good shoot density," says Huff. "The green-type poas are 10 times as dense as the new bent-grasses. You can find 1300 tillers in a square inch, vs. 200-250 in the new bents. What that allows you to do is mow the greens types Poas very close."

Huff's work has inspired other Penn researchers to take on Poa projects, such as micronutrient uptake and use; herbicide resistance and control; and disease resistance.



Dr. David Huff explains characteristics of bentgrass (top plugs) and *Poa* annua (bottom plugs).

"Golf course superintendents around the state encouraged me. [They told me] if they didn't have it on their golf course currently, they had worked with *Poa annua* at other courses; they are very supportive of the program," says Huff."

Many superintendents don't like *Poa annua* and try like mad to keep it from establishing on their courses. Others will nurture it as they would a creeping bentgrass green, and are very happy with the results. Huff believes superintendents "don't care about color," when it comes to greens management. "A light colored green—which is *poa's* usual tint—is acceptable to them."

#### Poa annua bad

Poa annua, Poa trivialis and native bentgrass contamination will occur in much of this year's turfgrass seed crop due to mild, wet winters, which favor grassy weed growth. Growers says herbicide failure due to wet weather is another factor. Some weeds have developed resistance to chemical controls, say growers. The elimination of field burning is also a factor.

"1998 is the worst year I've ever seen [for Poa annua contami-

cont. on page next page

nation]," says researcher Kevin Turner of O.M. Scotts.

Scotts has recently planted several thousand acres of perennial ryegrass in the Columbia basin in Washington and along the Columbia river.

"It's an area where we haven't grown lots of grass," says Turner.

"Poa annua and some of the other real problematic weeds don't do
well there. We can get better seed quality, free of contamination."

Weed-free seed is best assured through careful analysis of the whit tag on each bag of seed, or you can request a copy of the seed test from your distributor, advises Seed Research of Oregon.

#### **Brown patch resistance improves**

Turf-Seed, Inc. reports progress in brown patch resistance in tall fescue. The severe brown patch, heat and drought conditions present at the company's Rolesville, NC location have provided an excellent area to uncover germplasm sources with improved summer turf performance, reports **Dr. Melodee Fraser**. The first variety to be released from this cooperative program is Tar Heel, which has a NTEP brown patch rating of 8+, out of a perfect 9.

"We are also developing varieites of tall fescues for arid areas, such as the Western U.S., where dwarf varieties that are dense and dark are desired," says Fraser.

"Two of these varieties are Matador and 5LMD. Our experience has been that these dwarf varieties will not perform well in severe humid summer climates."

"We now have seed stock increases of two [Roundup resistant] varieties; PST-4RU hard fescue and PST-5DU tall fescue," reports **Crystal Rose-Fricker**, research director, Pure Seed Testing, West. "These varieties can tolerate applications of 1 pint of Glyphosate per acre...when the plants are sprayed in the fall. Turf trials with these varieties were also sprayed this spring for weed control with little yellowing and stunting while *Poa annua* was eliminated," says Fricker.

Jacklin's Arabia tall fescue has been bred specifically for disease resistance (net blotch and gray leaf spot). Arid 2 was bred for high resistance to browh patch, reports **Dr. Doug Brede** of Jacklin. The company's Pixie E has endophyte enhancement, and was a top variety in the latest NTEP trials.

Kevin Turner of O.M. Scotts, says the company hopes to have a brand new variety of herbicide resistant bentgrass seed available for the golf course market in 2002. Commercial fields will be planted in 2001. 400,000 lbs. are expected from that first planting.

The company hopes to have herbicide resistant St. Augustinegrass available in 2000; herbicide resistant Kentucky bluegrass in 2002 and herbicide resistant perennial ryegrasss in 2004.

International Seeds continues work in high endophyte hard fescue combining dark green color with high seed yield, says researcher **Steve Johnson**. "We'll have three or four new hard fescue varieties in the upcoming NTEP."

The company's Tiger colonial bentgrass has done well in the latest NTEP trials, with high fusarium patch resistance.

"Tiger's going to go a long way in overseeding and permanent turf," says **Craig Edminster**, director of research for International Seeds.

Lundell. "Ryegrass and tall fescue are both bunch-type grasses. You're going to have some tillering with ryegrass, but it's not going to creep out from where you plant it. *Supina* will; if it's not completely beaten down, it will keep coming back."

The species' four to five-day germination rate is also an impressive characteristic.

Its light green color is considered a weak point, and some are afraid *supina* is too aggressive once established.

#### European outreach

Turf-Seed, Inc. plans to increase its presence abroad with the formation of Turf-Seed Europe, Inc.

Company President Bill Rose made the announcement during Turf-Seed's field day activities in June.

"The world continues to shrink and the seed industry in the U.S. becomes closely tangled with seed production in Europe and the rest of the world," says Rose.

"The structure Turf-Seed Europe is not really set up yet or decided. There are a lot of questions we need to ask ourselves on how it's going to work, what the processes are going to be," says Marketing Director Tom Stanley.

CULTIVAR	MARKETER	AVAILABILITY	PRICE
Wizard	Burlingham	В	S
Yorktown III	Lofts	В	S
Turf-Type Tall Fe	scue		Lie Lie
Adventure II	Turf Merchants	В	L
Apache II	Turf-Seed	В	L
Avanti	Turf Merchants	Α	L
Aztec II	Turf Merchants	В	L
Bonsai	Turf Merchants	В	L
Bonsai 2000	Turf Merchants	С	Н
Coronado	Turf-Seed	В	L
Dixie Green	International Seed	В	L
Duster	Pennington	В	NR
Falcon II	Burlingham	В	L
Finelawn Petite	Fine Lawn	В	L
Finelawn 5GL	Fine Lawn	C	L
Finelawn 88	Fine Lawn	В	L
Houndog	International Seed	В	L
Houndog 5	International Seed	В	L
Marksman	Burlingham	В	L
Masterpiece	Lebanon	В	S
Millennium	Turf Merchants	В	Н
Picasso	Lebanon	C	S
Pride	International Seed	В	L
Rebel Jr.	Lofts	В	L
Rebel Sentry.	Lofts	C	L
Rebel III	Lofts	В	L
Rebel 2000	Lofts	С	L
Regiment	Advanta	В	5
Rembrandt	Lebanon	С	S
Renegade	Burlingham	В	L