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New DuPont Landscape Fabric lets water pass through, reduces wash-away of mulch while it impedes weed growth. So you get healthier, more attractive plant beds with less maintenance work and cost.

Everything you apply for bed care gets to plant roots in the amount you want, where you want it. Water, fertilizers, herbicides and pesticides seep down through this chemically inert fabric to nourish and protect every plant in your bed.

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Ever-Green's client list is more than 40,000 strong.

Another related venture is Ever-Green's liquid organic soil builder, Revive, which is sold commercially as well as used extensively in Miller's lawn maintenance business. Last winter Ever-Green purchased Revive from Amesco of Denver. Miller's company had been using the soil builder Revive, composed of plant bi-products, decomposition extracts, and fulvohumates, extensively to improve water penetration into Colorado's hard clay soils for some time.

The truck and Revive ventures are in line with Ever-Green's do-it-yourself, take-control reputation, evident

Ever-Green is looking at a gross of about \$7 million in 1984.

in the Golden sales and production office which, besides the usual array of offices, is equipped with a full-service garage and paint room, printing office, and conference room.

Pivotal year

This year marks Miller's tenth year in the lawn care business and unquestionably a pivotal one. He became aware of the industry as an agricultural sales consultant for Dow

Chemical, came to Denver in 1974 with two partners to start the business as part of Ever-Green of St. Louis and Kansas City, and in 1980 Ever-Green Lawns Corporation in Colorado separated itself completely from the other Ever-Green. The two are not related now.

Miller remembers his step into the lawn care business 10 years ago. "I had a career decision to make. I could have moved to New Jersey, gone back to the farm, or..." The rest is history.

Starting out on what had been a small truck farm in the nearby community of Welby ("you needed strong legs and a loud voice to communicate," one associate recalls) Miller's business grossed \$170,000 that first year. Ever-Green, with branches in Aurora, Golden, Colorado Springs, Littleton, and Windsor, is looking at a gross of about \$7 million in 1984.

Pattern for success

"A couple of things allowed us to grow," Miller explains. "The largest thing was just being locally owned and being able to respond to the needs of the Denver area. We were perceptive enough to figure out the differences in this area as opposed to others. With our continuous irrigation throughout the year we have to apply heavy amounts of fertilizer all year long. We got that under control with sulfur-coated urea."

Ever-Green started buying sulfur-

coated urea from Canada in 1976 ("it meant you could put down more fertilizer in the summer and reduce the risk of burning," he explains) and the lawns maintained by Ever-Green looked better. Miller is convinced it is better to "put down more, charge more and give the customer a lawn that beats the hell" out of the neighbor's lawn.

"Our success is due to our employees," Miller emphasizes. "I've got a

This year marks Miller's tenth year in the lawn care business and is unquestionably a pivotal one.

bunch of neat people. A lot of them have been around here for ages and I guess I feel it's been the growth of the entire organization that has made it successful."

Perhaps the most visible member of Miller's management team the past five years has been staff horticulturist Herb Gundell who was extension agent 30 years for Denver County prior to joining Ever-Green. In addition to putting together three weekly radio spots, Gundell's weekly television show about lawns and gardens is the longest-running television program in Denver. "Anytime you get that kind of run you're very visible," Miller says. "He's a very important part of our organization."

Miller feels the big growth in the Denver lawn care market has peaked, "maxed out," as he puts it. "We'll swap customers and we'll either increase or decrease depending upon the degree of service we provide."

Future plans for Ever-Green?

"There's potential expansion into the tree and shrub business," Miller reflects. "Maybe lawn care in other areas, other states, Dallas maybe. Our expansion plans are kind of in limbo."

As for Miller, with his business now bigger than most of the others in the Denver area combined and the new lawn maintenance truck ready to make its mark on the industry, the farm will have to wait.

"I guess you could probably say I am involved in farming in a way," he reflects.

WT&T

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The Black Box

An Iowa contract applicator has improved his company's image and his spraying accuracy by using a sprayer controller. This "black box", Rod Foster thinks, could change the lawn care industry.

The sprayer controller "black box" may become to the turf market what it has become to agriculture, more a necessity than a luxury.

Rod Foster is partner with his father, Verne, in Turf Control, based in Waterloo, IA. The younger Foster started the business three years ago. The company now employs six people.

Turf Control's client list includes schools, hospitals, churches and residential accounts covering about 2,000 acres. Foster says he does about 75 percent commercial work and 25 percent residential.

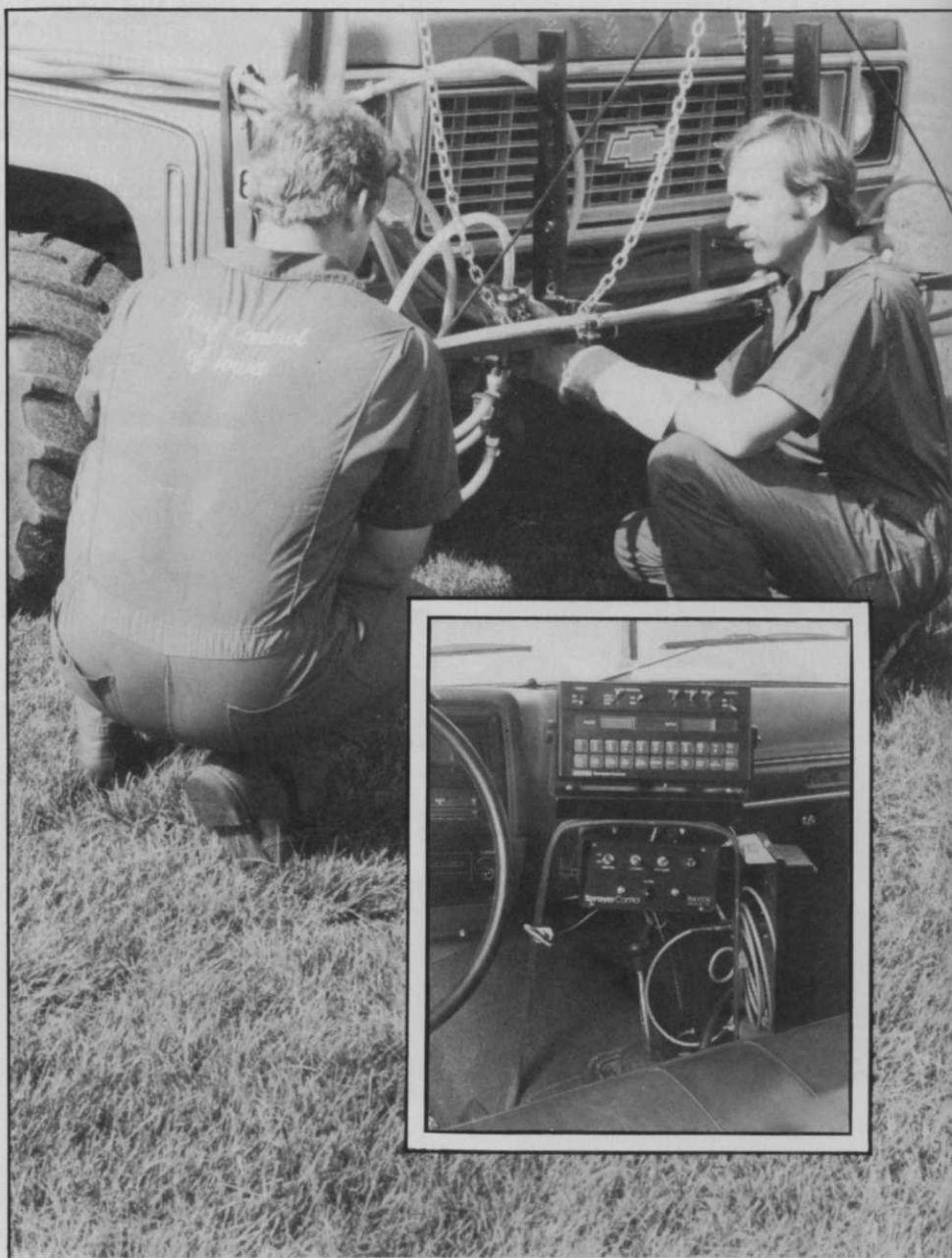
Foster's company is involved in several turf care markets, including residential lawn care, football field maintenance in Eastern Iowa, care of commercial properties such as hospitals, schools and local businesses, custom application for golf courses and many other accounts.

He contends the application accuracy he achieves with his controller is helping build a reputation of high competence for his company.

"I'm in exact compliance with the label and minimize application errors caused by inaccurate equipment calibration," Foster explains. "With the kinds of results possible, I think more people in the turf care industry may soon be using them.

"With this guaranteed accuracy, Foster says he can project a more professional image, he is able to maintain better cost control and he can even serve the environment by guarding against misapplication.

Foster, left, and Mike Wienands adjust the pneumatic no-drip nozzles on their unit. In inset, controller system is mounted within easy reach in the cab of the pick-up sprayer.





Foster's unit sees most of its use on commercial accounts of one to one-and-a-half acres.

In the two seasons Foster has used the electronic sprayer controller system, his average percentage of application error has been just less than three percent.

"On level terrain with few or no obstacles such as a football field, I can come within .03 percent of the target rate," he claims. The University of Nebraska says that application errors of plus or minus 10 percent are considered acceptable for any spray application.

"The accuracy I achieve with the controller assures the results I demand when I bid the job," Foster says. "I can guarantee my work with confidence. There have been times when I have bid jobs higher than the competitors, but the accuracy sells the job."

Foster used a Raven SCS 400 system in 1983 before upgrading to the SCS 440 this season. Both units are controllers, providing automatic control of application rates, maintaining the target flow regardless of vehicle speed.

Virg Huebner, chief engineer for Raven Industries explained the dif-

ference between monitors and controllers.

"The monitor only determines what is happening and tells the operator, usually with a digital display showing the gallons per acre (GPA) being applied, what it sees. The monitor does not adjust the flow rate for the operator.

"The controller, however, meas-

... his average percentage of application error has been just less than three percent.

ures what is happening and uses a motor-driven control valve to adjust spray pressure and compensate for changes in ground speed," Huebner said. "These units thereby maintain the selected application rate at all times."

Controller systems basically con-

sist of only four components:

- a console keyboard, the "brains of a system
- a flow meter, measuring actual flow vehicle speed
- a speed sensor, measuring actual vehicle speed
- a control valve, motorized for fast pressure adjustment.

"The accuracy I achieve with the controller assures the results I demand when I bid the job."

The flow meter and speed sensor send their information to the console, which relays the proper adjustment information to the control valve.

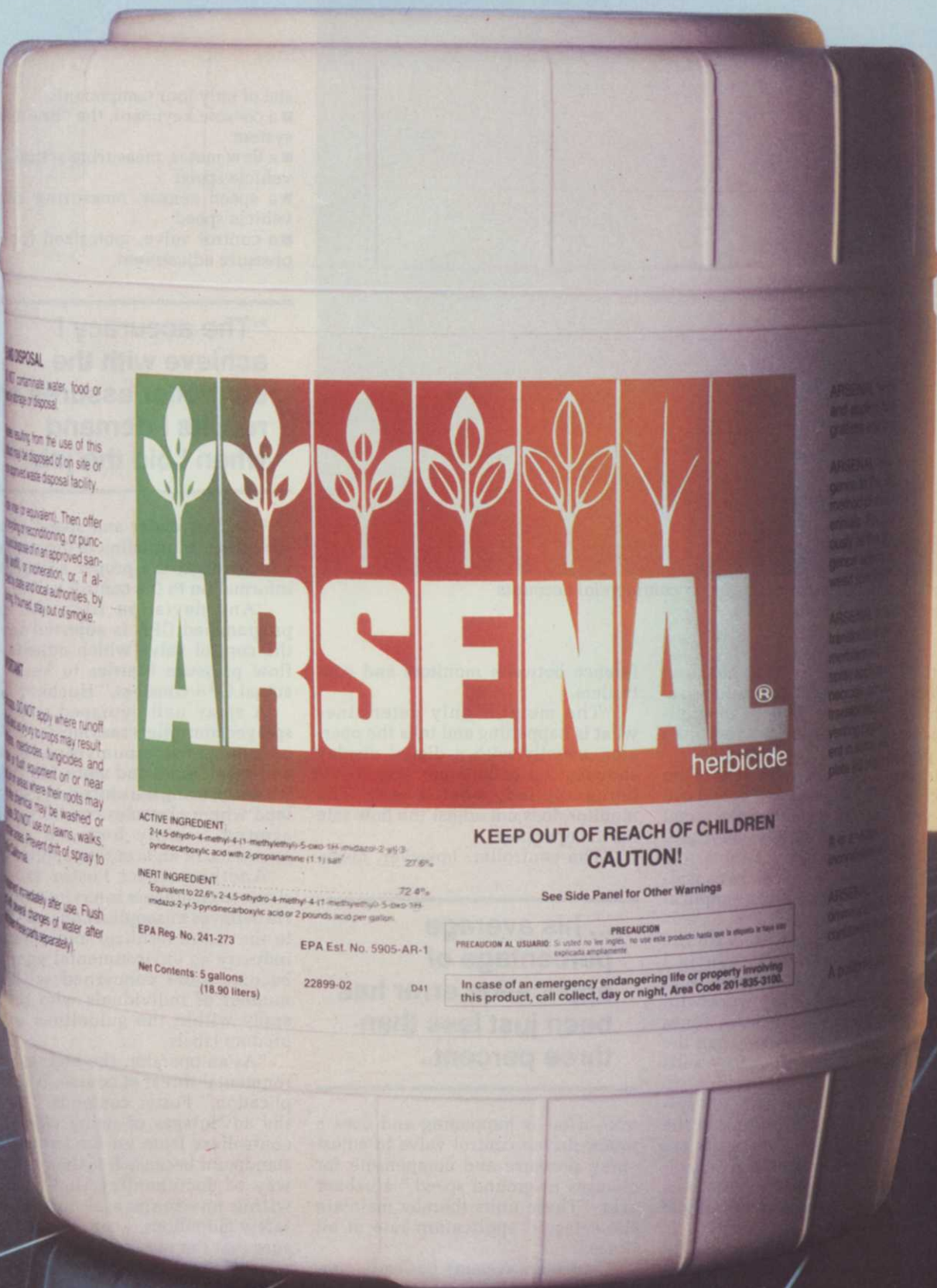
"Any deviation from the pre-programmed GPA is adjusted for by the control valve which adjusts the flow pressure in order to keep the actual GPA constant," Huebner says.

A spray unit equipped with the sprayer controllers sees most of its use on commercial accounts of one to one-and-a-half acres and more. He thinks it's worth using the unit on any tract of land where obstacles can be worked around, simply because of the assurance of an accurate application.

Another aspect Foster tries to stress to customers is environmental. He believes misapplication is a threat to the entire fertilizer and chemical industry as environmental agencies become more concerned with the number of individuals who do not apply within the guidelines of the product labels.

"As an operator, the biggest environmental threat of course, is misapplication," Foster contends. "I push the advantages of using electronic controllers from an environmental standpoint because it is the only sure way of documenting that you are within environmental and labeled safety guidelines. I can be positively sure that I'm putting on legal labeled rates at the proper intervals." **WT&T**

Introducing . .



DISPOSAL
Do not contaminate water, food or feed by storage or disposal.
Residue from the use of this product is to be disposed of on site or at an approved waste disposal facility.
Do not reuse or equivalent. Then offer for recycling, reconditioning, or puncturing and disposal in an approved sanitary landfill, or incineration, or, if allowed by state and local authorities, by other means. Stay out of smoke.

PRECAUTION
DO NOT apply where runoff may occur. Runoff from applications to crops may result in injury to crops, ornamentals, and aquatic life. Do not apply to areas where their roots may be washed or leached. Do not use on lawns, walks, driveways. Prevent drift of spray to other areas.
Wash thoroughly after use. Flush thoroughly with water after each use (rinse parts separately).

ARSENAL[®]

herbicide

**KEEP OUT OF REACH OF CHILDREN
CAUTION!**

See Side Panel for Other Warnings

ACTIVE INGREDIENT
2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazo[2-y]-3-pyridinecarboxylic acid with 2-propanamine (1:1) salt 27.6%

INERT INGREDIENT 72.4%
Equivalent to 22.6% 2-(4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazo-2-y)-3-pyridinecarboxylic acid or 2 pounds acid per gallon.

EPA Reg. No. 241-273 EPA Est. No. 5905-AR-1

Net Contents: 5 gallons (18.90 liters) 22899-02 D41

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PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le expliquen lo que dice explicada ampliamente.

In case of an emergency endangering life or property involving this product, call collect, day or night, Area Code 201-835-3180.

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Read and follow label directions carefully.



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Circle No. 242 on Reader Inquiry Card

Fine fescues are an under-utilized, often ignored group of grasses that have great diversity and much greater turfgrass potential than generally recognized.

They are basically cool-season grasses, but they are found growing readily throughout much of the temperate region of our continent, from the mountains of New Mexico and coastal marshes of Georgia to the colder regions of our hemisphere.

Creeping red fescue seed from the

Pacific Northwest, Canada and Europe, and Chewings fescue from New Zealand and the Northwest have been marketed since the 1940's. A Rhode Island Agricultural Experiment Station lawn seed mixture, formulated in the 1930's, listed Chewings and creeping red fescues as a major ingredient.

Attributes

The improved fine fescues, as a group, have many remarkable attributes that

make them first-rate lawn grasses. In general usage they are used in mixtures with other grasses, such as Kentucky bluegrass, perennial ryegrass or bentgrasses. They produce beautiful turf in pure stands but their versatility and desirable attributes may be enhanced in mixtures.

The versatility of general seed mixtures containing fine fescue is greatly broadened because of the wide adaptability of the species. Fine fescues will tolerate a wide range of

Landscape Manager's Guide to: **Fine Fescues**

by **C. R. Skogley**, Professor, Turfgrass Management, University of Rhode Island, Kingston, RI



Chewings fescue survives shade where Kentucky bluegrass in home lawn failed. Extensive rhizomes in older creeping red fescue plants prove its spreading nature. (See inset)

light conditions, from full sun to fairly dense shade. They grow well on soils too light and sandy, infertile and acidic, for most cool-season lawn grasses and grow even better on good soils. They tolerate dry soils but do poorly on wet soils. They perform well on roadsides with infrequent high mowing yet some of them will perform well on golf course fairways at a height of 1/2 to 3/4 inches.

Under turf conditions, fine fescues are of delicate texture. They can form dense stands with brilliant shades of green and, because of texture and color, they also blend well with most other cool-season grasses.

Seed of fine fescue is of medium size, ranging from 500,000 to 800,000 seeds per pound. They are small enough to be a bargain by the pound yet large enough to pack sufficient reserves for good seedling vigor.

Germination of fine fescue seed, under favorable soil temperature, requires from 5 to 12 days, almost as rapid as perennial ryegrass. This is a significant plus when used in mixtures with slower establishing Kentucky bluegrass. Because of the very fine leaf texture of these grasses, they are not overly competitive in the seedling stage.

Fine fescue seed for domestic use is currently grown primarily in the Pacific Northwest and in the Canadian Provinces of Alberta and British Columbia. The improved varieties currently being marketed are grown almost exclusively in the U.S. Pacific Northwest.

Improvement in 60's

The first significantly improved turfgrass was Merion Kentucky bluegrass, released in the 1950's. Improved fine fescues did not appear until in the late 1960's.

Fine fescue trials containing 23 cultivars were established at the Rhode Island station in 1968. Results obtained over the next five years clearly demonstrated genetic improvement over any material commercially available at that time.

Common Chewings fescue such as Cascade and the Pennlawn variety of creeping red fescue were the best materials available during the 1960's. Astonishing differences were noted between these standards and some of the new cultivars included in those 1968 trials.

Table 2 contains quality score data from three Rhode Island trials. It is interesting, and important, to note that the improvement occurred with Chewings and hard fescue and not with creeping or spreading types. Note also that many of the cultivars performed as well in these trials at a 3/4-inch cutting height as they did at 1 1/2 inches.

These were irrigated trials receiving 2-3 pounds of nitrogen per 1,000 square feet annually. The three trials encompassed a period of 15 years. The 53 varieties listed are only some of those tested and those with experimental designation were not included in Table 2.

We currently have a single trial, established in 1983, that includes 85

named and experimental cultivars of fine fescue. This is an indication of the increasing interest among plant breeders and demonstrates a strong feeling for the potential of these grasses.

Because of the heterozygous nature of the fescues it is possible to observe greater differences within a variety than between varieties. Under turf conditions, it is often difficult to see clear-cut differences among many varieties at any given time. Differences in cultivar performance throughout season and over a period of years can be documented.

Creeping and spreading fescues are generally coarser than the other fescues and are capable of greater lateral growth through the production of short rhizomes. Stands tend to be more open than with Chewings or hard fescue.

Improved Chewings and hard fescues develop dense stands through the production of numerous basal tillers. Hard fescue often has a slightly duller hue than Chewings but may hold its color through periods of high summer temperatures better than other grasses. Hard fescue also seems to be more tolerant of high salt concentrations in the soil than creeping, spreading or Chewings fescues.

Seed production of hard and sheeps fescue has been more difficult and costly than with Chewings or creeping red fescue, thus making seed more expensive. Efforts are underway to minimize this added cost.

Sheep's fescue, *Pseudovina* and

TABLE 1
Characteristics of Fine Fescues

Type	Species	Height	Spread	Leaf Texture	Chromo. No.	Hour of flower	Typical Varieties	Color
Chewings	<i>F. rubra</i> L. subsp. <i>commutata</i> Gaud.	low	v. little	fine	42	6 a.m.	Highlight Jamestown Banner	lt. green dk. green med. green
Creeping	<i>F. rubra</i> L. subsp. <i>trichophylla</i> Gaud.	med.	little	med.	42	2-4 p.m.	Dawson Golfrood	med. green lt. green
Spreading	<i>F. rubra</i> L. subsp. <i>rubra</i>	mod. tall	good	broader (like Ky. bluegrass)	56	3-5 p.m.	Fortress Ruby Boreal	dk. green dk. green dk. green
Hard	<i>F. longifolia</i> Thuill.	low	v. little	fine	42	6-8 a.m.	C-26	dk. green
Sheeps	<i>F. ovina</i> L.	low	v. little	wiry	28,42	12 noon	none available	blue-green
Pseudo-vina	<i>F. pseudovina</i>	low	v. little	f. wiry			Vendome	v. lt. green
Fine-leaved sheeps	<i>F. tenuifolia</i> Sibth.	low	v. little	v. fine	14		Barok	lt. green

Compiled by R.W. Duell and R.M. Schmit, Soils and Crops Dept., Cook College, Rutgers University, 1974.

BUNTON: WHEN YOU KNOW ONE...

