YOU KNOW THEM ALL.



Turf Quality Scores of Fine Fescues in Three Regional Trials at the Rhode Island Agricultural Experiment Station from 1969 - 1982

ection and Type	1968 Trial 5 Yr Mean 3/4" cut 1 1/2" cut		4 Yr M	1972 Trial ¹ 4 Yr Mean 3/4" cut 1 1/2" cut		1977 Trial ¹ 5 Yr Mean 1 1/2" cut	
Jamestown - C ²	7.0	5.6	5.3	5.8	11/2	10070	
Atlanta - C	6.7	5.8	5.5	5.0	India.	5.9	
Koket - C	6.1	5.8	3.8	5.1	100	5.8	
Biljart - H	5.8	5.5	5.0	0.1	-	6.7	
Barfalla - C	6.0	5.4	5.8	5.1	10000	5.8	
Halifax - C	5.3	5.4	3.0	3.1	1000	0.0	
Erika - C	5.8	5.3	AND DESCRIPTION OF		1000		
Cascade - C	4.5	4.9			A STATE OF THE PARTY OF THE PAR		
Highlight - C	5.5	4.9	5.2	5.2	-	6.1	
Pennlawn - CR	4.7	4.4	4.2	3.6	1333	-	
Chewings - C	4.1	4.3	-	_			
Oasis - C	4.2	3.9			BUNG!		
Oregon D - C	3.4	3.6	THE RESERVE OF				
Barbantia - C	4.5	3.5		. 39	-		
Wintergreen - C	4.2	3.4			177		
Bargena - CR	3.1	3.1	NUA II		1979		
Tjelvar	3.1	3.1					
Agio - CR	2.3	3.0					
Novorubra - CR	2.4	2.8	3.4	3.4			
Ruby - CR	3.3	2.8	-	0.4	No.		
Barenza - S	2.1	2.2					
Durlawn - CR			3.2	4.0			
Jade - C			5.3	6.3		6.4	
Barok - S			2.9	3.4	NO.	0	
Menuet - C			6.1	6.7	- District	6.4	
Encota - C			4.4	4.6	100000	5.3	
Flavo - C			4.0	4.3	- Indian	0.0	
Banner - C			6.8	6.0	TO SECURE	5.8	
Oregon K - C	_		5.1	5.5	- Dates		
Dawson - CR	_	_	3.8	5.1	- North		
Scaldis - H	_		4.0	4.5	UNIDER	6.3	
Waldorf - C	_		5.1	5.5	TO STATE OF	6.	
Scarlet - C			3.4	6.2	- 100000	_	
Roda - CR	100 - Val		3.8	2.7	- Edward	_	
Boreal - CR		-	3.0	3.4	1000		
Duraturf - CR	_	_	3.1	4.0	100120		
Polar - C	0 _	_	5.6	4.0	10000	5.	
Ilona - C		_	_	_		6.3	
Famosa - C	-			TRAIN_	- RUNNIE	5.9	
Agram - C	-			_		6.4	
Grel - C	7 -	_		_	1000	6.	
Sonnet - CR	_		_	_	1000	4.5	
Kensington - CR	-	_	_		-	5.1	
Silyana - H		-	_	_		6.	
Waldina - H		_		_	TO MAKE	7.	
Tournament - H			1000 E 100			5.	
Engina - CR					1 2201	2.	
Enzet - CR						3.	
Gracia - CR					93930	4.	
Reneva - S	THE PLANT			8 1 1 1	- 80000	4.	
Reptans - CR		_	THE STATE OF		10 P W	3.	
Creeping Red - CR		_			BURNE	3.	
Ensylva - CR			1207		-	5.	

1 Scoring system used is 9 for perfect quality and 1 for dead turf or bare ground. 2 C = Chewings, CR = Creeping Red, H = Hard, S = fine-leaved sheep's.

fine-leaved sheep's fescue, although adapted to extremely difficult and infertile conditions, tend to provide a more clumpy turf of less attractive color. Great varietal improvement still has not occurred, but there is promise for these materials in particularly difficult or infertile situations such as reclaimed lands.

Seeding and establishment

In mixtures with Kentucky bluegrass and/or perennial ryegrass, as much as 50% creeping or spreading fescues by weight appears proper. With Chewings or hard fescues, 20% is often adequate as these grasses become much more competitive. Greater amouunts of fescue seed may be used for shade mixes

Methods of establishment are similar to those for most turf grasses. Seedlings respond well to establishment fertilizer.

Maintenance

The fine fescues generally mow cleanly and require less management when mowed at heights above one inch than when cut to lower heights. During periods of heat or drought stress, the grasses mow less cleanly and stand appearance may decrease in quality.

Improved varieties are similar to modern Kentucky bluegrasses in their response to heat, dryness and cold. They may go into semi-dormancy during periods of summer or winter stress, but recover readily when growing conditions improve.

The fescues are tolerant of normal summer heat, if moisture is available, and they are extremely winter hardy. Improved varieties hold their color into the winter and are among the earliest of turf grasses to green-up and resume growth in late winter and early spring.

Fine fescues will tolerate drought and persist on much drier soils than will most other cool-season turf grasses. This is a valuable attribute in a time when water is becoming more precious.

Fine fescues are among the most shade tolerant of our lawn grasses but they do not persist long on wet soils whether in sun or shade. When grown in the shade, cutting height should be above two inches and stands should not be fertilized during the warmer months. In fact, feeding once a year, during September or October may be adequate and even optimum for fes-

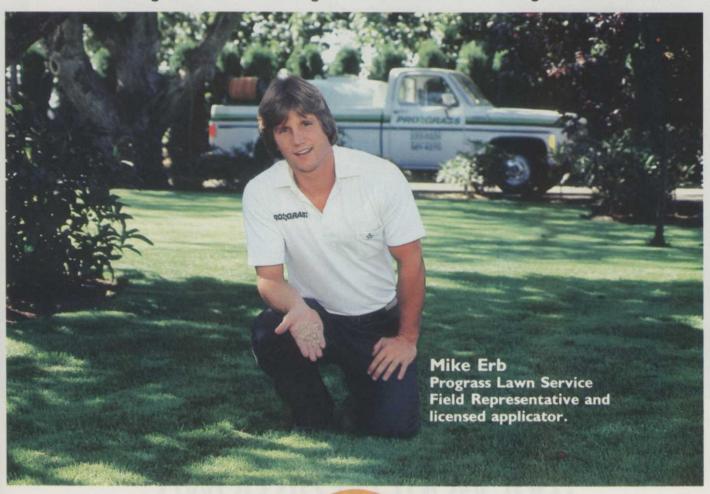
cues grown in the shade. Fertility requirements of the fine fescues in all locations are minimal. Once established, one to three pounds

continued on page 56

The pros chose SHADOW

"As professional lawn care specialists, we want our customers' lawns to advertise for us. One of the major problems we find in many of our customers' lawns is stressed areas under and around shade trees. We formulated our Prograss lawn overseeding

mix to remedy these difficulties. For our shade mix we chose 90 percent Shadow Chewings Fescue and 10 percent A-34 bluegrass. We see exceptional results when proper overseeding procedures are followed. Shadow makes us look good, too."



Shadow is a new variety of Chewings type fine fescue developed for improved shade tolerance and resistance to powdery mildew. Breeding for these attributes was a long and tedious job, but the results were better, stronger turf than the old line fescues. Insist on the seed the pros choose for your shade mix.

"The hottest shade tolerant





Introducing a mower that won't break down every few yards.

The problem with most in our commercial riding mowers. mowers is they spend too much For instance, we gave them time in the shop and an actual 4not enough time on speed transmisthe job. R sion with You won't neutral and find that with reverse. So they Toro's new 36" and won't lock into 52" commercial walk rotary a single speed like some variable mowers. Because we build them speed pulley systems. with the same durability we build And, knowing the continual

problems you have with belts breaking, we added a much wider

traction belt that's designed to last the life of the machine. We also eliminated an idler pulley on the deck drive belt, to make it last longer, too.

Even the



cutting spindles are engineered and protected to better withstand the shocks and jolts of everyday cutting.

While we were making our new commercial mowers tougher, we decided to make them more productive, as well.

We gave them a floating deck, same as our Grounds-masters, so they'll follow the contours of the terrain while minimizing scalping.

We made it possible to change the height of cut in a minute by simply moving four pins. mowers

begin-

ning to

sound like no other

walk rotary mowers you've

are

And we came up with a

new steering design that makes it ever seeneasier to maneuver around trees. maybe it's shrubs and other obstacles. You because simply push the steering bar to they are. mow, and release it Visit your to stop. Toro If our commercial walk tributor soon. He can fill rotary you in on all the details. Whichever one you choose, it'll keep you cutting yard after yard, year after year.

The professionals that keep you cutting.

TORO:



Circle No. 144 on Reader Inquiry Card



FINE FESCUES from page 52

of nitrogen per 1,000 square feet annually is normally adequate for good growth and color. Fertilizers are best applied during cooler periods of spring or fall.

These grasses remain healthier and more stress tolerant during summer months when they are somewhat hungry. Summer feeding creates a

TABLE 3 _ **Available Fine Fescues**

	variety	Producer Circle	No.
Creeping Red	Dawson	Northrup King	190
	Flyer	Turf Seed	192
	Ensylva	International Seed	191
	Fortress	Turf Seed	192
	Pennlawn	public	000
	Ruby	Northrup King	190
Chewings	Agram	Pickseed	193
	Atlanta	Northrup King	190
	Banner	Scotts	194
	Highlight	International Seed	191
	Jamestown	Lofts	195
	Koket	Burlingham	196
	Shadow	Turf Seed	192
	Waldorf	Pioneer Hi-Bred	197
Hard and Sheeps	Aurora Hard	Turf Seed	192
	Azay Sheeps	Pickseed	193
	Biljart Hard	Scotts	194
	Reliant Hard	Lofts	195
	Scaldis Hard	Northrup King	190
	Tournament Hard	Pickseed	193
	Waldina Hard	Turf Seed	192

soft or lush condition that makes the grass much more disease susceptible.

While these fescues are fairly resistant to many lawn diseases, they are most frequently injured by red thread or pink patch and leaf spot. Red thread or pink patch are more serious when fescues are underfed and leafspot may be more serious when the turf is over-fertilized. A modest, but not excessive and properly timed fertilizer program provides the best insurance against serious disease problem.

The fine fescues are subject to injury by all of the normal turfgrass insects: including beetle grubs, chinch bugs, sod webworms and cut worms.

Since the most improved of the group are Chewings and hard fescues which do not spread by rhizomes, insect injury can be serious. Damaged areas are very obvious and recovery is slow. This is one reason why fescues are best mixed with sod-forming grasses such as Kentucky bluegrass.

continued on page 92

Fine Lescut for Sure



Alone or in a mixture, Oregon fine fescue rates another look

When a turf area thrives around trees; requires relatively little water, fertilizer and sunlight, yet maintains a picture perfect appearance, it's fine fescue. If it germinates and performs better than imported varieties, it's Oregon grown fine fescue. If it's found in parks, golf courses, home lawns, industrial campuses and anywhere a fine textured turf is desired, it's Oregon grown fine fescue for sure!

For a series of eight tech sheets on Oregon grown chewings and creeping red fescues, call or write



OREGON FINE FESCUE COMMISSION

2140 Turner Road SE Salem, OR 97302 503/585-1157 The golf car is becoming somewhat more than what its name implies as several manufacturers, in a convincing show of optimism, unveil new top-of-the-line models aimed at getting from Point A to Point B (and not necessarily from tee to green) in style.

1985 looks like a good time, several manufacturers are betting, to enter markets created by the growth and increased popularity of retirement and planned communities.

Joining longtime luxury car maker Elmco with eye-catching models are Yamaha with its sleek Sun Classic and American Continental with its scaled down version of the classic Model T, the Mini T.

"The market seems very strong and we just viewed it as another opportunity. The timing seems good for a variety of applications for our new cars," Gary Jones, manager Leisure Products Division of Yamaha, says. "The market is becoming more segmented and basically its hard to cover all the different kinds of demands with just two models."

Manufacturers realize there is a limited but potentially lucrative market in planned, self-contained residential and resort communities built around golf courses and shopping complexes.

American Continental's Mini-T comes complete with such amenities as an oak dash, AM/FM radio, horn, lights, and turn signals. Available in four colors and in either gas or electric models, the Mini-T has been in full production for almost a year. With a base price of \$5,900, the Mini T is definitely not your run-of-mill golf car.

"Some of the golf car market is not

affected as much by economics as much as by the weather," one industry spokesman explains. "It's something like owning a boat. If you can afford to own a boat, you don't worry about buying gas for it."

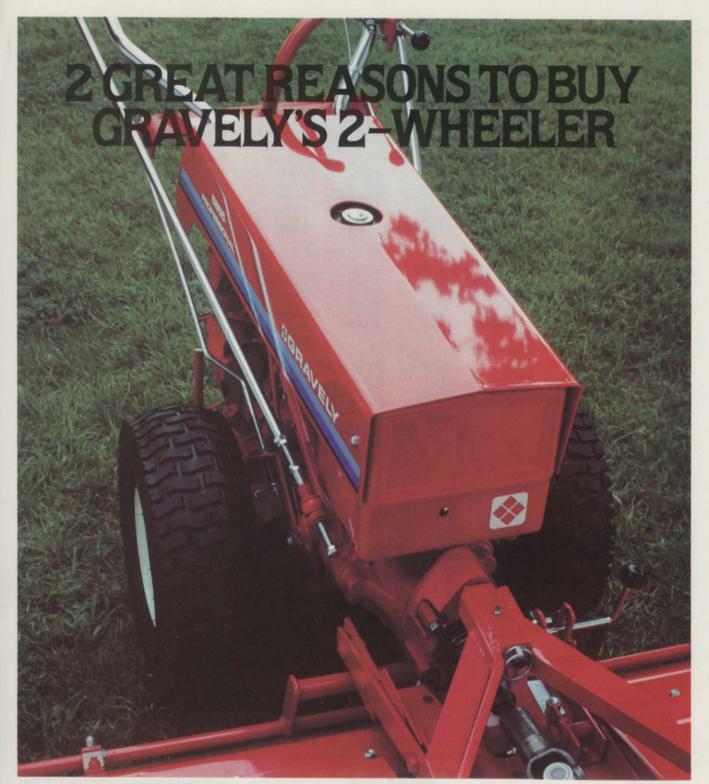
Prestige car maker Elmco is picking up new distributors in its quest for more effective marketing strategies, company spokesman Ed Rutkowske says, and that Illinois-based company is looking forward to a "fantastic" 1985.

But, with an estimated 75,000 new golf cars being sold annually, the bread and butter of the industry will obviously continue to be the utilitarian fleet vehicle; and manufacturers continue to tinker with the design and mechanics of their best selling models to make them both more eyeappealing and efficient.

Turf Vehicles Spurred by Healthier Market, Demand for Luxury Cars

by Ron Hall, assistant editor





Great Versatility. Start with a 30", 40" or 50" mower specially designed to give a smooth quality cut. Then choose from over 20 attachments custom engineered to give year-round professional results, whether you're mowing grass, cutting high weeds, or removing deep snow. You can get a steering brake kit to increase maneuverability and add a sulky to cover the big jobs in comfort.

Great Durability. You'll get season after season of reliable performance. Our 2-wheel tractors are built with all-gear direct drive transmissions, rugged Kohler engines and strong castiron transmission housings. Stop at your Gravely dealer for a hands-on demonstration. Or for more information, contact Rick Murray, VP, Marketing, Gravely International, Inc., One Gravely Lane, Clemmons, NC 27012. 919-766-4721. Telex: 6971451 ARGRA.

THE 2-WHEEL GRAVELY SYSTEM

	Model	Engine	Payload	Notes
American Continental Inc. Box 280 Willmar, MN 56201 (612) 235-1752	ACG 400 ACG 4000 ACE 400 ACE 4000	4-cycle 4-cycle electric electric	2,000 lbs. 2,000 lbs. 2,000 lbs. 2,000 lbs.	3-wheel 4-wheel 3-wheel 4-wheel
Club Car P.O. Box 4658 Augusta, GA 30907 (404) 863-3000	DS Electric DS Gas DS Villager DS Villager DS Carryall DS Carryall	electric 4-cycle electric 4-cycle electric 4-cycle	750 lbs. 750 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs.	4-wheel 4-wheel 4-wheel 4-wheel 4-wheel 4-wheel
Columbia Car Corp. P.O. Box 1 Deerfield, WI 53531 (608) 764-5474	Classic G3T Classic G3S Classic E3T Classic E3S Cruiser G4S Challenger	2-cycle 2-cycle electric electric 2-cycle electric	615 lbs. 615 lbs. 523 lbs. 523 lbs. 716 lbs. 641 lbs.	tiller, 3-wheel steer, 3-whee tiller, 3-wheel steer, 3-whee 4-wheel 4-wheel
E-Z-Go/Textron P.O. Box 388 Augusta, GA 30913 (404) 798-4311	X440 X444 GX440 X500	electric electric 2-cycle electric	500 lbs. 500 lbs. 500 lbs. 500 lbs.	3-wheel 4-wheel 3-wheel 4-wheel
Melex USA 1201 Front St. Raleigh, NC 27609 (919) 828-7645	152 252	electric electric	500 lbs. 500 lbs.	3-wheel 4-wheel
Ross Products 145 NW 20th St. Boca Raton, FL 33431 (305) 395-4414	Legend RV3 Legend RV4	electric electric	750 lbs. 750 lbs.	3-wheel 4-wheel
Yamaha Motor Corp. 6555 Katella Ave. Cypress, CA 90630 (714) 761-7300	G1-AM5 G1-EM5 G2-A5 G2-E5 SunClassic	gas electric 4-cycle electric electric	1,000 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs. 1,000 lbs.	4-wheel 4-wheel 4-wheel 4-wheel

Yamaha is introducing its first 4cycle gasoline engine model, the G2-A5, which will be available in April. "We're trying something different and we want to monitor its performance very closely," Yamaha's Jones explains.

Club Car's introduction of a 4cycle engine car in 1984 met with an "excellent" response, a company

spokesman reports.

Melex redesigned its electric cars this past year, coming out with slightly narrower (for easier storage) Turtle 152 and 252 models. In addition to the styling changes, the Melex cars feature a more efficient electrical system and self-adjusting rear wheel brakes. The Raleigh, NC, company is expected to introduce a new car at the PGA show in January.

"We're definitely finding it a pretty

good year," C.W. Sharek, executive vice president of Melex USA tells WT&T. "Sales are up somewhat and we're pleased with the second half. I have no reason to believe that it's not going to hold."

New golf course construction definitely figures into the marketing plans of manufacturers such as Ross Products, producers of the Legend RV3 and RV4 cars. The Boca Raton, FL, company is located in enviably attractive Palm Beach County where 45 new courses are being added to more than 100 others. Ross had a big year in 1984 and expects sales to be strong at least through 1985.

Lease option

In addition to outright sales, manufacturers, dealers, finance companies, and leasing firms offer cars by lease, often with some type of maintenance agreement written into the contract. The popularity of leasing varies from region to region, and the exact terms of maintenance provisions can be different from course to course.

John Moore at Industrial Leasing, Portland, OR, explains that this segment of the market is subject to ups and downs as well.

"As a third party lessor, we have found our business in turf and golf down the past two years for a number of reasons," he points out. "The first is aggressive leasing programs at very



Daihatsu introduces a four-wheel maintenance vehicle

competitive rates from the manufacturers and the dealerships. They see a profit from the sale of equipment and can therefore offer a more competitive rate for leasing. A third party lessor makes his money strictly on the lease.'

Moore adds that dealerships are adept at arranging attractive rates from local banks or from manufacturer programs, and that leasing or buying decisions are often made by golf professionals. "We have had problems with their credibility".

George Wooley, vice manager of Great Lake Golf Cars, Cleveland, tells the advantage a dealer has in maintenance and service over a third party lessor. "We call on each course once a week to take care of small maintenance items. Then, once per year, we take the cars into our shop for renovation," he says. "The course doesn't have to worry about maintenance and we have as good idea of how the cars are being treated. This also takes the burden of maintaining golf cars off the superintendent's mechanics.'

No matter who provides the cars in a leasing agreement, the lessor can reap big savings by making sure the cars are handled properly.

"Some courses really take care of them and some turn them into junk before we get them back," Melex's Sharek notes. "If they have pride in their cars and in what they're doing, they'll be better off and so will we.'

Utility market heats up

The introduction of a spate of new products in the utility vehicle market