

Got Thatch?



GET A THATCH MASTER

60"/72" (Fairways/Athletic Fields)

Turf Specialties, Inc.
800-201-1031
www.turfspecialties.net



The Shindaiwa EB630 is the ultimate backpack blower. Reduces clean-up time by 50%.

- Incredible output: 613cfm, 201 mph
- Giant airfilter extends run times
- Ideal for toughest blowing jobs

We offer 4 commercial-grade models from the hand-held EB240S up to our most powerful blower, the EB630.

To find a dealer nearest you, call (800) 521-7733, or visit www.shindaiwa.com

shindaiwa
 FIRST TO START. LAST TO QUIT.

Shindaiwa Inc.
 11975 SW Herman Rd.
 Tualatin, OR 97062

Circle 181 on card or www.oners.ims.ca/2916-181

Trac Vac Lawn Care Equipment

Trac Vac has added a new vacuum to its long line of products. The Model 655 is a semi-rigid mounted vacuum designed to mount to most mid-mount zero turn riders. The 655 are fully castered with large pneumatic tires for easy handling around trees, shrubbery, driveways and other obstacles.



Palmor Products, Inc.
 5225 Serum Plant Road
 Thorntown, IN. 46071
 800-872-2822
www.trac-vac.com

Circle 182 on card or www.oners.ims.ca/2916-182

ADVERTISER INDEX

Advertiser	Page	RS#
AerWay	32	168
Bannerman	Cover 2	146
Beacon Athletics	39	171
BLEC	39	173
Bobcat	17	154
Covermaster	9	150
Covertch	7	149
Diamond Pro/TXI	28	163
Diversified Sports Specialties	40	175
Dixie Chopper	39	170
DuPont/TMSG	25	161
Earth & Turf	39	172
First Products	32, 40	185, 176
GreenOne	36	184
GreensGroomer	15	153
Jacobsen	Back Cover	187
JDR Enterprises	40	177
K Rain	5	148
LR Nelson	29	164
Lands Expo	34	151
Laser Leveling	19	156
Lebanon Turf	33	167
Newstripe Inc.	40	178
Pacific Earth Resources	30	165
Partac Peat/Beam Clay	40	179
Peat Inc.	39	169
Pennington Seed	18	155
Pennington Seed	40	180
Pioneer Manufacturing	20	157
Shindaiwa	41	181
Reel Rollers	41	183
Southern Athletic Fields	41	188
Sports Turf Managers Association	3, 21	147, 158
Suntec Paint	39	174
TIF 94 Growers Associates	26-27	162
Trac Vac	41	182
Turico Manufacturing	31	166
Turf Specialties	41	
Turf Seed Inc.	23	160
Varicore Technologies	Cover 3	186
West Coast Turf	13	152
World Class Athletic Surfaces	22	159



STIFF DRAG

Southern Athletic Fields, Inc.

800.837.8062
www.mulemix.com

SAF offers a full line of FIELD ACCESSORIES, CUSTOM MADE STIFF DRAGS, COCOA MATS, FIELD CONDITIONERS, MOUND CLAYS, INFIELD MIXES and WARNING TRACK MATERIALS.



COCOA MAT

Circle 188 on card or www.oners.ims.ca/2916-188

REEL ROLLERS

A Revolutionary New Attachment for Reel Type Lawn Mowers



- Adds weight to the front of the mower
- Creates stripe effect on lawns
- Rides to the highest contour of the yard
- Bolts up with original mower hardware
- Height adjustment & level of height is same as the original caster wheels



We Have Roller Kits For
 20", 25", 27" Tru Cut Reel Mowers
 20", 25" Trimmer Reel Mowers
 20", 25" McLane Reel Mowers
 Get the Reel Roller Advantage Today!
 770-867-5442 or reelrollers@alltel.net
www.reelrollers.com

Manufactured and marketed by Reel Works in Winder Georgia

Circle 183 on card or www.oners.ims.ca/2916-183

If you can't take the heat . . .

Nearly all age levels for organized sports are now using rubber-infill fields (RIF). Those that manage both synthetic and natural grass surfaces observe substantial improvement in their grass fields because of the option to move some activities onto the synthetic turf, especially during wet conditions.

Even though RIF fields are constructed with very repeatable materials they react differently as climate, season, and environmental conditions change. Just as with grass fields, temperature, rainfall, and humidity can effect the playing conditions on and above RIF fields. In most cases rainfall improves the playing surface conditions of RIF fields, yet most fields are constructed without irrigation systems that could be used to maximize playing quality.

I spent 20 days in August measuring temperature and humidity on RIF fields in Iowa, Colorado, Maryland, Oklahoma, and California. The footing and playability of RIF fields may remain consistent throughout changing seasons and regions; however the heat generated at the surface and in the playing space above the surface can substantially increase during the summer. Heat load to players is a concern among trainers especially during two-a-day practices in July and August. To reduce player heat load morning practice is usually held on the RIF field while afternoon practice is held on grass. Schedules often change, however, to fit weather conditions and coaching desires. In all cases it is best to have a synthetic option and a grass option to maintain flexibility in choosing the best playing surface for changing conditions.

Summer temperatures usually peak from 12-5pm. Three things were apparent from these summer observations: 1) Grass surfaces are much cooler than non-irrigated RIF surfaces; 2) non-irrigated RIF surface temperatures can be as high as 177°F; and 3) surface temperature of RIF fields can be reduced by 33 percent with proper use of irrigation cycling. Data in the table was collected at a high school athletic facility in San Diego. The Bermudagrass practice field had not been watered for five days before data collection and it was just beginning to show signs of moisture stress.



puddles disappeared in less than a minute, a real advantage of an RIF field. It was surprising, however, to note that some of the sand and rubber appeared to be hydrophobic and did not wet. The heavily watered test area soon dried out on the surface and temperatures quickly increased as the sun heated the dry surface.

For cooling to occur a film of water needs to be on the surface. Lick your finger and blow on it to get the idea of cooling the surface. There is much to learn about RIF fields and the January 2005 STMA conference in Phoenix has six hours of instruction dedicated to this topic.

After taking data on an RIF field for four hours it became evident that there is an undeniable heat load issue during the summer. At the professional, college, and high school level where trainers are involved it is likely that RIF field use will be limited when heat is a problem. A greater concern is for youth programs, summer camps, and contracted tournaments where events are less likely to be canceled and participants could dangerously overheat.

The heat load problem on RIF fields is manageable with irrigation, the problem is that most fields have been constructed without irrigation. The market is competitive and the cost of an irrigation system is not an attractive selling point by RIF contractors, but consumers need to know that synthetic turf without irrigation is an inferior product and in some situations a dangerous and liable commodity.

I spent my summer vacation watering rubber, sand, and fibers; it didn't grow but it

did provide a better playing surface. If you are putting in a new RIF field listen to the companies that are trying to sell you irrigation, they are looking out for your bottom line. **ST**

Acknowledgement: Thanks to all those who assisted with data collection at their facility: Troy Smith Denver Broncos Training Facility; Vince Patterozzi Baltimore Ravens; Ron Hostick San Diego State University; Steve Wightman, Patrick Henry High School, San Diego; Ted Thorn, University of Iowa; and Bob Weibel and Bob Shipley, University of Tulsa.

Measured field conditions from noon to 3pm on Sept 4, 2005 San Diego, CA

Location relative to surface	Non-irrigated RIF		Irrigated RIF		Bermudagrass	
	Temp F	RH%	Temp F	RH%	Temp F	RH%
2ft above	92	20	87	23	89	21
1inch above	102	21	94	45	93	46
Surface	163	—	108	—	104	—
0.5 inch below in rubber or soil	138	—	102	—	84	—

At the Denver Broncos training facility the cooling effect of grass was even more noticeable. On a day when the local weather reported a high of 80 degrees, the measured peak surface temperatures for non-irrigated RIF, irrigated RIF, and well-watered Kentucky bluegrass were 150, 105, and 83 degrees, respectively. Watering the RIF reduced surface temperature by 30 percent while grass reduced surface temperature by 45 percent.

The best cooling effect occurred when 0.10 inches of water was applied each hour from 11 AM until 4 PM. Increasing wind and decreasing humidity enhanced the cooling effect but it also required more irrigation water. It shouldn't be too difficult to develop an irrigation strategy that will cool the field if you have an irrigation system that supplies multiple cycles during the day.

On one trial area we thoroughly soaked the RIF by running a hose on it for more than an hour. The water rapidly drains through the synthetic surface and

QUESTIONS? Send them to Dave Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011, or email dminner@iastate.edu. Or, send them to Grady Miller at the University of Florida, PO Box 110670, Gainesville, FL 32611, or email gmliller@mail.ifas.ufl.edu.

Do it once.



Multi-Flow Drainage Systems

Use the best drainage product, and you won't be returning to replace it. Multi-Flow systems are designed and built to last. Multi-Flow collects and carries water rapidly, and won't crush or block. You can't buy or build a better drainage system.

Do it once, do it right, drain it with Multi-Flow.

Multi-*FLOW*
WATER MANAGEMENT

• Varicore Technologies, Inc. • 800-978-8007 • service@varicore.com •
• www.varicore.com •

Circle 186 on card or www.oners.ims.ca/2916-186