TANK S WINTER ATTACHMENTS

Cub Cadet Commercial is making it easier to complete all tasks regardless of season by introducing winter attachments for the innovative TANK S. Complete with cab enclosure system, snow blade and salt spreader, the TANK S can now handle even the heaviest snowfall. To protect the operator from the elements simply secure the cab enclosure and climb inside. For increased control, the TANK S uses its Synchro-Steer Technology giving the operator full directional control of the front casters for superior handling in rough terrain. Add on a durable snow blade and salt spreader capable of holding 80 lbs. and the TANK S transforms into the perfect all-season product.
www.CubCadetCommercial.com

FRONT-MOUNTED SNOWBLOWER FOR BOBCAT COMPACT TRACTORS

A front-mounted snowblower with a 72-inch cutting width is now available for Bobcat compact tractors (models CT 225 to CT450). The new snowblower joins front-mounted models with 49- and 62-inch cutting widths introduced last year. Features include quarter-inch-thick steel endplates, a half-inch-thick replaceable steel cutting edge, a 20-inch-diameter six-blade fan with adjustable opening, a 24-inch-tall snow intake and 230 degrees of chute rotation.

Tractors must be equipped with a mid-PTO as well as a loader joystick and control valve. A lift kit controlled by the loader joystick hydraulically raises and lowers the snowblower. The loader joystick also hydraulically controls the chute rotator so that the operator can easily redirect snow as needed.
www.bobcat.com/utility_machines/tractors

HONDA HS928 SNOWBLOWER

The HS928 employs a specially designed, heavy-duty, height-adjustable serrated auger to slice through icy snow build-up deposited by snowplows. Features include:

- Honda OHV Commercial Grade Engine
- Infinitely variable speed control hydrostatic drive train
- 28" Clearing Width, 20" Clearing Height
- Self-propelled, Wheel drive
- Automatic Decompression for Easy Starting
- Adjustable Snow Deflection
- A Single Lever Accurately Adjusts Ground Speed without Affecting Auger Rotation Speed
- Ice Breaking Serrated Auger
- 210º Adjustable Discharge Chute Easily Controlled From Operating Position
- Interconnected Drive/Auger
- Convenient Control Levers
- Metal Auger Housing
- 3 Year Residential / Commercial Warranty

www.hondapowerequipment.com

Developing an environmentally sound industry (and letting people know about it)

RECENTLY AN STMA FRIEND called me a treehugger, and meant it as a compliment. I've been figuratively hugging trees for years, but it wasn't long ago that environmentalism and turfgrass management seemed worlds apart. It's wonderful to see us moving steadily toward closing that gap as our industry evolves.

The attitudes of society are also changing. Bluntly stated, as our civilization has grown and spread, environmental degradation has followed. Our generation has recognized that this trend cannot continue. We want to mend the dysfunctional relationship between the human population and the rest of the natural world. (It's a pity clean air and water have become political kickballs.)

We must deal with humankind's dirtier habits and the danger they present to the planet's life-supporting capacity. On March 20, 1987 the Brundtland Commission of the United Nations signaled this commitment to sustainability when it lucidly stated, "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This means rethinking how we do things, including managing sports turf. [The inimitable Dr. Robert Carrow of the University of Georgia published an excellent overview of the issues, including the need for our industry to be proactive, in the July 2010 issue of this magazine, p. 18.]

We've entered a new age of stewardship in the world of sports. Rainwater recycling, solar panels, waterless toilets, recycling bins, LEED certification, and the MLB/NRDC initiative are just a few examples of this exciting new momentum. But as sports turf managers, we are the front line of facility operations. No field, no game. As we embrace a cleaner future, the Sports Turf Managers Association should represent the face of environmental stewardship in sports.

Following the lead of golf course management, we have embarked on the journey of honest reappraisal and systems overhaul. [I have addressed this process previously in *SportsTurf* articles detailing Environmental Turf Craft in October 2006 and January 2008 issues.] As stewards we've been busy learning to fine tune our operations to reduce waste and conserve resources. We are rethinking our N and P fertility programs and implementing other ecologically compatible management strategies to improve efficiency and prevent pollution. It's a labor of love and a work in progress with much to learn and lots to do.

ORGANIC FUNDAMENTALIST JIHAD

We have grown especially prudent in the use of pesticides. For ecological, social and/or economic reasons, there are a growing number of facilities now being managed with little or no pesticide use. To us as turf managers, the difference between "pesticide-free" and "almost pesticide-free" appears very slight. But to some activists and critics, the difference remains ideologically central.

In this modern age of extreme polarization, dialogue is needed more than ever but has never been more difficult to initiate. Websites across cyber space are actively converting soccer moms into internet toxicologists, implying that children are being recklessly exposed to toxins. Regrettably, the general public's grasp of science continues to weaken, leaving them vulnerable to confusion and misinformation.

We need to continue to set the record straight regarding our commitment and our commanding sense of responsibility as sports turf professionals (and as parents ourselves).

Consider the document called "Pesticides and Playing Fields," posted on the website of a prominent anti-pesticide group. This document, (ironically called a "fact sheet") states, "The typical soccer field is deluged with a mixture of poisons designed to kill fungus, weeds, and insects." Evidently, facts are of little significance in the jihad of some organic fundamentalists. It should be possible for the author to promote organics without slinging this kind of manure. We must work harder than ever to counteract this type of inflammatory deception. Ultimately, extremists impede progress.

We need to continue to set the record straight regarding our commitment and our commanding sense of responsibility as sports turf professionals (and as parents ourselves). As American humorist Will Rogers said, "Even if you're on the right track, you'll get run over if you just sit there." We need to be actively involved in separating fact from fiction. As working professionals we recognize that, outside of utopia, compost tea won't solve every problem. Science and the sensible middle ground of IPM are under attack, but they're not dead. We have to stay visible, vocal and accessible as the genuine experts in the field of environmentally compatible turfgrass management.

We also need to be circumspect. Greenwashing (the use of environmental themes to whitewash environmental shortcomings) could create irreparable damage to our mission, integrity and image and must be guarded against. Too many industries are already succumbing to the sleazy temptation of misrepresenting their environmental achievements in order to win public approval. We also must not automatically call ourselves "environmentalists", convinced of our own green credentials, strictly because of our association with a product that is inherently green—grass. It's a title that needs to be earned.

Yes, science has demonstrated that turf provides obvious environmental benefits but our management decisions will determine if these benefits are realized, or negated by debits to the ecological balance sheet. We are responsible for finding the balance to maximize these benefits

while minimizing the negative impacts from chemical and fertility mismanagement and yesterday's equipment and procedures. It may also be time for our industry to confront unrealistic, situation-inappropriate expectations. Major league perfection in Little League settings will not prove sustainable.

There are exciting developments and prospects to report about. The Global Sports Alliance (GSA) was very pleased to sign a Memorandum of Cooperation with the STMA in March 2009 indicating the two organizations' shared commitment to promote environmental stewardship among sports enthusiasts. To launch the agreement, a document providing useful guidelines for planning 'Green' sports events was collaboratively issued and is posted on the STMA's outstanding Resources/Environmental Stewardship page. [Kudos to STMA's Education Manager, Kristen Althouse, for developing this Resource section.]

Additionally, several sports turf managers are currently serving as GSA Team Captains, actively promoting environmental awareness and action in the world of sports and advertising their green accomplishments by flying GSA's Ecoflag. Also, in an important step this year, the STMA kicked off an Environmental Task Group to tackle the issue of sustainability and our role in environmental stewardship in the 21st century. And in another noteworthy development, there is growing interest in exploring collaboration with Audubon International and the potential for designing a sports facility program based on their enormously successful Cooperative Sanctuary Program. Stay tuned (and show your support at the state and national STMA levels).

Environmentalist Paul Hawken has written, "It has been said that environmentalism failed as a movement, or worse yet, died. It is the other way around. Everyone on earth will be an environmentalist in the not too distant future, driven there by necessity and experience." The fouling of air and water and the destruction of habitat and loss of biodiversity threatens all life on earth, including our own. Future generations will live with the choices we all make today. STMA members have an opportunity to lead by example. ■

Kevin Trotta BS, MA, is the New York Team Captain of the Global Sports Alliance and the principal proponent of Environmental Turf Craft. He can be reached at turfIPMguy@aol.com.

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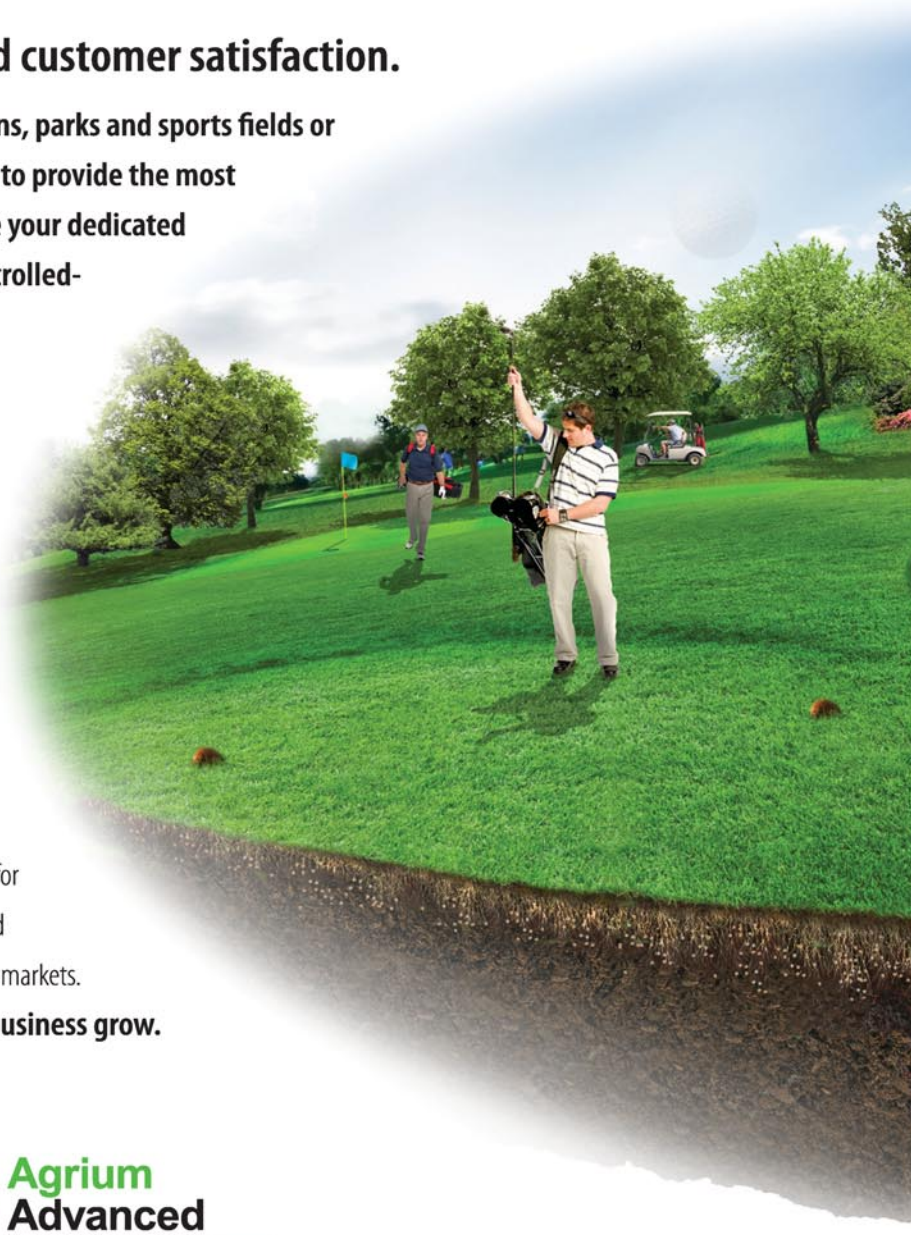

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By **Joel Simmons**

Photos courtesy of Jim Doyle

THE WELLESLEY FIELDS are used for a host of sporting events including club teams, high schools, senior soccer teams, summer camps and some higher profile events. One major event that Wellesley supported was a soccer match between the Celtic United Team and Lisbon who both used the fields for practice before an event in nearby Fenway Park this past spring.

The soil profile: WELLESLEY COLLEGE

The Soil Profile is a quarterly interview series that will be accompanied by soil test audits of a selected field from all corners of the sports turf world. Our goal is to evaluate the soil and water tests from a selected sports field and build a fertility program based on the soil profile. We would like to encourage all sports field managers who would like to be interviewed for this piece to contact the magazine. Agronomist Joel Simmons has been building soil-based programs for more than 20 years. Along with Logan Labs he will provide free soil test work and consulting to the selected site.

WELLESLEY COLLEGE was established back in 1870 in Wellesley MA and to this day is one of the premier women's colleges in the country. The college is situated on a pristine 500-acre campus that includes the majestic Lake Waban and a host of stately evergreen and deciduous trees. Wellesley enrolls approximately 2300 students and participates in 13 varsity sports in the NCAA Division III's New England Woman's and Men's Athletic Conference.

In April 2006 John Ponti took over as the Sports Turf Specialist; "Ponti" manages the three sand-based fields, one native soil field and the synthetic field. The three sand-based sites, a softball, multipurpose and what John calls his premier field, were all built by his predecessor, Chris Kneale, in 2003. (Chris has since moved onto a position as an Athletic Turf and Grounds Consultant for the Tom Irwin Company, a New England based sales and consulting firm.) The fields were constructed using a 70:20:10 mix of sand, peat moss and soil which may explain the stronger than normal cation exchange capacities (CEC) on these fields. Typically a sand-based field of this age will have CEC readings anywhere in a range from 2-6 depending on its construction.

Between the construction and the amendment programs that John has implemented these fields are ranging from a 7 to 12 CEC which is exceptional and allows John to push the fields a little more and recover a bit better. "We are very proud of our recovery ability on all of our fields and it gets noticed by the coaches and players and has allowed us to move beyond the varsity sports," reported Ponti.

The Wellesley fields are used for a host of sporting events including club teams, high schools, senior soccer teams, summer camps and some higher profile events. One major event that Wellesley supported was a soccer match between the Celtic United Team and Lisbon who both used the fields for practice before an event in nearby Fenway Park this past spring. According to Ponti "both the Celtic

United and the Lisbon teams loved our fields and that makes all of our hard work well worth the time." He also hosted the USC and Stanford women soccer teams and "they too had a great time and were very complementary of our fields and you can't get much better than that," Ponti said.

John has been testing the soils on all of his fields for as long as he has been at Wellesley using Logan Labs in Ohio. John comments, "It is amazing how well you can grow grass on well balanced soils. I have learned so much since I have been here on how to read a good soil tests and I have to say I know of the base saturation controversy but I don't understand it. There is no controversy of the results we get."

As can been seen on his soil tests the balance of the basic cations are pretty good; the desired values are pretty close to the values found with only some slight potassium deficiencies. "Our native field was pretty tight and as you can see in this soil test taken a year ago, we needed some limestone which we were able to apply along with some flowable gypsum and we use a good humic acid based calcium liquid product in our spray tank every 2 weeks and this field has responded incredibly well. The rooting is better, recovery is great and the soil has opened up physically which has created better drainage. This field is great!" Ponti said.

One of the agronomic concerns that the soil tests do indicate is a buildup of sodium especially on the sand-based fields. Ideally sodium levels are lower than 25 pounds per acre on the colloidal test and lower in percentage than potassium on the water soluble paste extract. If sodium is higher than these ideals it will typically mobilize quickly into the plant cell and create a wilting of the plant. John is well aware of this situation on his property and is aggressively managing the situation with a quality liquid organic program rich in humic acids combined with flowable gypsum and liquid calcium products as part of a monthly flushing program. "Our flushing program works and we can see the difference almost immediately, the grass stands up and it just doesn't have the stress that we use to fight before we initiated this program," Ponti said.

The aerification program on the fields includes two core aerifications in spring and fall and on deep tine aerification in the middle of the summer when they can get on the field.

Soil Report

			Softball	Recreation	Varsity	Upper
Sample Location						
Sample ID						Fld
Lab Number			11	12	13	14
Sample Depth in inches			6	6	6	6
Total Exchange Capacity (M. E.)			9.47	7.89	10.27	12.61
pH of Soil Sample			6.70	6.70	6.40	5.90
Organic Matter, Percent			3.35	3.06	3.47	7.46
ANIONS	SULFUR	p.p.m.	30	26	30	79
	Mehlich III Phosphorous:	as (P_2O_5) lbs / acre	1113	1081	1191	1122
EXCHANGEABLE CATIONS	CALCIUM: lbs / acre	Desired Value Value Found Deficit	2576 2766	2146 2280	2793 2846	3430 2758 -672
	MAGNESIUM: lbs / acre	Desired Value Value Found Deficit	272 301	227 253	295 304	363 495
	POTASSIUM: lbs / acre	Desired Value Value Found Deficit	295 200 -95	246 179 -67	320 227 -93	393 401
	SODIUM:	lbs / acre	80	83	73	75
BASE SATURATION	Calcium (60 to 70%)		73.00	72.22	69.28	54.67
	Magnesium (10 to 20%)		13.24	13.36	12.33	16.35
	Potassium (2 to 5%)		2.71	2.91	2.83	4.08
	Sodium (.5 to 3%)		1.84	2.30	1.54	1.29
	Other Bases (Variable)		4.70	4.70	5.00	5.60
	Exchangable Hydrogen (10 to 15%)		4.50	4.50	9.00	18.00
TRACE ELEMENTS	Boron (p.p.m.)		0.52	0.49	0.62	0.43
	Iron (p.p.m.)		281	312	324	157
	Manganese (p.p.m.)		31	21	26	6
	Copper (p.p.m.)		5.98	4.82	6.06	3.21
	Zinc (p.p.m.)		8.61	6.96	8.62	7.26
	Aluminum (p.p.m.)		881	735	794	1276
OTHER	NH4-N (p.p.m.)		0.8	1	0.8	1
	N03-N (p.p.m.)		12.9	6.5	13.1	28.4
	Silicon		75.13	32.09	53.57	48.24

Figure 1

"The goal mouth is everything in sports turf and keeping grass there is something we work very hard at and we get a lot of compliments," Ponti said.

John noted, "Summer is a very busy time of year here and finding the room for anything let alone an aerification is tough but we really see the difference when we get this summer deep tine done." They also run a SEEDAvator in August and topdress straight sand behind all the aerifications. This also allows them to constantly introduce newer seed varieties which he typically chooses for color and density. "I like a lot of the PickSeed varieties such as Moon Shadow, Blue Velvet and American Kentucky Blue," said Ponti.

"The fertility program at Wellesley does include a lot of organics, we start the season with a 10-2-5 ammonium sulfate spiked organic in April which helps us to jump start into the spring. Then we use a 5-4-5 organic in small shots every month starting in May and going through the fall. That really helps us with recovery and water holding capacity and really helped in what was probably the worst year we have seen in years," according to Ponti.

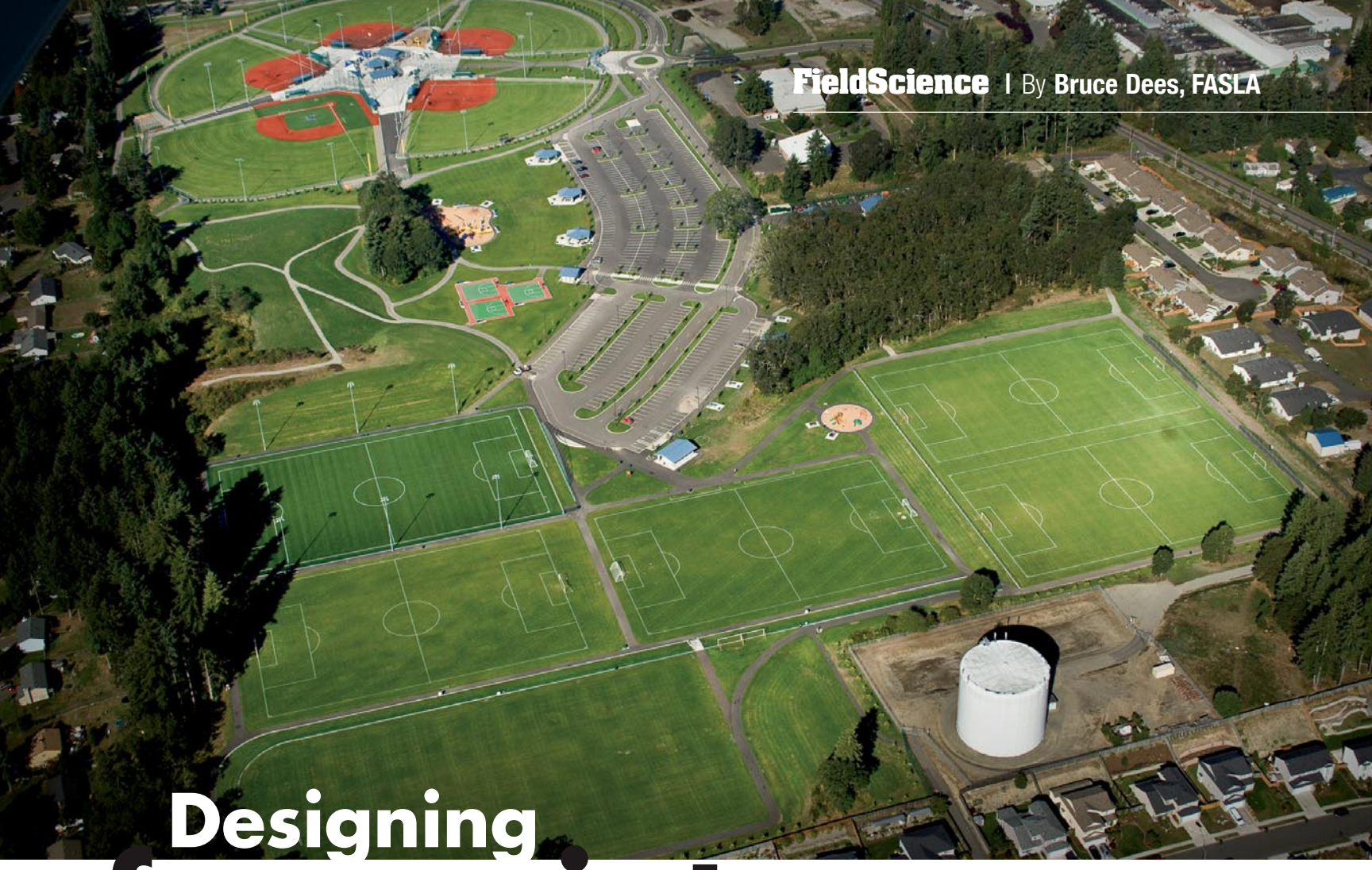
The organics are supplemented with a strong liquid program that includes an 18-3-6 liquid and a couple of good trace packages in the spay tank on a bimonthly basis. He supplements that program with wetting agents, growth regulators, liquid organic fertilizers and fungicides as needed. One program that John spoke very proudly of was the one he uses for his goal mouths. "The goal mouth is everything in sports turf and keeping grass there is something we work very hard at and we get a lot of complements," Ponti said. "We pitchfork and Multi-Pro the area and topdress with an organic amendment called Renovate Plus, an organic 5-4-5 fertilizer, a granular calcium silica and seed. I'm excited to see how well they do especially in a year like this one." ■

Joel Simmons is the President of EarthWorks Natural Organic Products and Soil First consulting and teaches the Soil First Academy all across North America. He holds a Masters Degree from Penn State University and is a former Penn State County Extension Agent and Instructor of Soils at Rutgers University. He may be reached in front of his computer at joel@soilfirst.com most likely working on yet another client's soil test.

Saturated Paste Report

			Softball	Recreation	Varsity	Upper
Sample Location						
Sample ID						Fld
Lab Number			22279	22280	22281	22282
Water Used			DI	DI	DI	DI
pH			6.7	6.7	6.4	5.9
Soluble Salts		p.p.m.	76	97	132	123
Chloride (Cl)		p.p.m.	5	10	8	15
Bicarbonate (HCO3)		p.p.m.	93	85	127	66
ANIONS	SULFUR	p.p.m.	2.76	5.51	10.8	16.81
	Phosphorous:	p.p.m.	0.23	0.32	0.45	0.1
SOLUBLE CATIONS	CALCIUM:	p.p.m. meg/l	9.64 0.48	12.36 0.62	22.4 1.12	12.13 0.61
	MAGNESIUM:	p.p.m. meg/l	2.12 0.18	2.74 0.23	5.01 0.42	4.81 0.40
	POTASSIUM:	p.p.m. meg/l	9.46 0.25	12.35 0.32	21.94 0.57	20.22 0.53
	SODIUM:	p.p.m. meg/l	9.7 0.42	16.28 0.71	23.14 1.01	11.98 0.52
PERCENT	Calcium		36.35	32.96	35.97	29.54
	Magnesium		13.31	12.17	13.41	19.52
	Potassium		18.53	17.11	18.30	25.58
	Sodium		31.81	37.76	32.32	25.37
TRACE ELEMENTS	Boron (p.p.m.)		0.12	0.13	0.12	0.12
	Iron (p.p.m.)		0.46	0.83	1.26	0.81
	Manganese (p.p.m.)		0.02	0.04	0.09	0.03
	Copper (p.p.m.)		0.04	0.07	0.1	0.03
	Zinc (p.p.m.)		0.02	0.02	0.02	0.02
	Aluminum (p.p.m.)		0.66	1.16	1.75	1.57

Figure 2



Designing for maintenance

THE THURSTON COUNTY/CITY of Lacey Regional Athletic Center (RAC) is not just a sports complex. Already regarded as one of the finest outdoor sporting venues in Washington state, the 100-acre complex features six regulation soccer fields, including one with all-weather turf and lighting: four regulation softball fields with synthetic turf infields and lighting; one minor-league-rated baseball field with synthetic turf infield and lighting; electronic score boards; two concession buildings; five large group picnic shelters; spectator seating; parking for 500 vehicles; three playgrounds; two miles of walking and jogging paths; a kite-flying hill; three half-basketball courts; and a six-acre outdoor event and festival area. In addition, nearly 20 acres have been preserved to protect native oak savannahs.

The project was developed jointly by the City of Lacey and Thurston County. It was designed by the Tacoma landscape architecture firm Bruce Dees & Associates and constructed by Ceccanti, Inc. With its second phase reaching completion just last year, the award-winning complex has filled a major void in the recreational needs of the community. A central element in the design of the RAC was a focus on maintenance. To help achieve this, maintenance personnel played an active role in the design.

The intent to "Waste Nothing" became the spirit of the RAC project. Strippings from all graded areas were screened and recycled for topsoil.

The intent to "Waste Nothing" became the spirit of the RAC project. Strippings from all graded areas were screened and recycled for topsoil. Tailings from the screenings were then used to shape the west side of "Kite Hill," a natural feature of the site. To accommodate the massive earthwork, two of the six fields that lay on a naturally raised elevation were

used as a dynamic soil reservoir for balancing cut and fill and as borrow after discoveries of unsuitable soil left behind by the previous land owner. As excavation revealed buried deposits of unsuitable soil, the material was removed and used as non-structural fill to enhance the shape of Kite Hill and the two field areas provided structural replacement fill. By recycling material on site, economic and ecologic savings were realized through eliminating the need for exporting or importing soil, thus reducing fossil fuel consumption as well.

Pre-design geotechnical studies were used to influence layout of activities and support facilities. Areas with high infiltration rates became locations for the athletic fields, while less intensive uses were placed on areas of lower permeability. The majority of the two miles of trails are pervious asphalt, and the pervious concrete ball field complex plaza allows infiltration directly under it. As a result, the cost of expensive storm water facilities for collection and conveyance is avoided. With direct infiltration of the fields and pervious paving, storm water infiltration pond size was minimized while active recreation space was maximized.

All infields and one of the soccer fields were constructed with synthetic turf to extend use throughout the year, virtually eliminating rainouts and maximizing field rental revenue. Since no watering or

mowing is required and no infield prep necessary before each ball game, daily operational costs are kept to a minimum.

Ease of maintenance of the natural grass areas was considered as well. For grass fields and passive-use locations, the majority are accessible by gang mowers with mow strips provided adjacent to fences and structures. Furthermore, preserving the native white oak savannahs and their under story was a key design precept and avoided potential maintenance.

Minimizing water and power use was carefully considered. Irrigation master valves help avoid water loss by shutting down the system in the event of leaks. All lines are the requisite purple pipe to allow the use of reclaimed water from a future sewage treatment plant north of the park. Floodlighting of all the ball fields is state-of-the-art 1,500 watt shielded metal Halide luminaries with reduced reflecting surfaces to reduce off-site light spill.

Maintenance is supported by a 2,100SF maintenance building with shop, storage, office, restrooms, and lunch room for staff. Equipment wash-down and material storage are contained within the 20,000SF fenced yard. The park manager and support staff are adjacent in the 1,630SF events building, which includes a reception area, staff offices and meeting rooms.

All these cost saving features enhance the overall design and the park is recognized as one of the finest athletic complexes in Washington. The park received the 2009 Washington Recreation & Park Association's Best Sports Complex Award, the 2010 International Northwest Park and Recreation Association Design of the Year, and the Washington Concrete & Aggregates 2010 Pervious Concrete Design Award. "This is a tremendous facility and a great place to bring the family," says Lacey resident Jay Rasmusson, "Before this our options were quite limited. The RAC is an amazing addition to our community."

Discussions for designing an additional 20-acre Phase III are in progress. ■

Bruce Dees is the principal partner at Bruce Dees & Associates (www.bdassociates.com), a landscape architecture, urban design, site planning and recreational facilities design firm in Tacoma, WA.