McCord Flotation Tires can eliminate costly tire rutting.

Golf Course Superintendents country-wide have proven that ***McCords*** Flotation Tires are essential during the following delicate operations:

• **Top Dressing • Spraying • Mowing • Back Filling Traps • Aerating**

The large contact area of the flotation tire effectively distributes load over a broad area. This produces lower unit ground pressure resulting in minimized soil compaction.

Our custom built tire and wheel combinations will convert your golf course equipment into the most productive tools you will ever own. For further information call our toll free number today.

McCORD

Terra-Tire Sales and Service

US 24 West, Box 743, Monticello, IN 47960 • In the United States and Canada 800-348-2396 FAX: 219-583-7267

Circle **105** on Postage Free Card

FOR PRODUCT INFO FAXED TO YOU NOW! DIAL: 1(800) 817-1889

Mowing Tips

continued from page 10

Cool-Season Grasses

According to Wayne Klostermann of Klostermann & Associates in Dubuque, IA, the newly installed football field at the University of Dubuque uses a combination of bluegrass cultivars mowed to a height of 2 inches with a reel mower. Mowing directions are alternated to produce 5-yard patterns.

The University of Wisconsin at River Falls women's soccer field was seeded with NK Athletic Pro II, a blend of bluegrasses and perennial ryegrasses. According to Tom Foley, this turf is maintained at 2 to 2.5 inches during the summer. Turf height is gradually reduced to 1.25 to 1.5 inches for the playing season to produce a "faster" surface.

Jeff Thompson, varsity coach in charge of the field at Genoa High School — the 1993 High School Diamond of the Year — uses a rotary rider mower up to three times a week to keep the infield turf — a combination of bluegrass and perennial ryegrass cultivars — "a shade" under 2 inches. The outfield turf is cut at 2 to 2.5 inches.

Dale Getz, athletic-facilities manager for the University of Notre Dame in South Bend, IN, uses perennial ryegrass for the multiuse fields and a combination of bluegrass and perennial ryegrass on the high-profile fields. The newer cultivars of perennial ryegrass take abuse better, giving the turf toughness. The bluegrass has better recuperative qualities, extending field life. The specific combination of cultivars used have proven most adaptive to both field and environmental conditions.

Game fields at the University of Notre Dame are mowed with a reel mower to produce the pattern and striping effect. The practice and intramural fields are mowed primarily with a rotary mower because it's faster. If the blades are kept sharp, the rotary mower delivers a smooth, decent cut.

Des Moines' Sec Taylor Stadium, home of the AAA Iowa Cubs, is a field of bluegrass cultivars. Mike Andresen reports that during drought conditions mowing height was raised to 2.25 inches for the infield and 2.5 inches for the outfield, to reduce water use and provide better cooling for the grass roots. During the extremely wet season, infield heights were lowered to 1.75 inches with a walk-behind reel mower. The outfield was mowed to 1 7/8 inches with a ride-on reel mower. After the severe flooding of the field, water was at field capacity. Mowing heights were lowered to 1.5 inches to allow better drying and only walk-behind mowers were used to reduce compaction.

Fitton Field is the varsity gridiron of the College of Holy Cross in Worcester, MA. The superintendent of grounds, James D. Long, keeps the field in a combination of bluegrass cultivars and an improved cultivar of Manhattan perennial ryegrass. Turf is cut to 2.5 to 3 inches during the summer to develop a strong root system. In late August and early September, the grass is cropped down to 1.5 inches for seasonal play.

Jesse Cuevas of Johnny Rosenblatt Stadium in Omaha, NE, keeps the field in a combination of bluegrass and perennial ryegrass cultivars. Mowing height is maintained at 1.5 inches. Crews mow every day to keep the height consistent and encourage vigorous root growth.

Warm-Season Grasses

Mike Hurd is grounds superintendent of McKechnie Field in Bradenton, FL, game field for the Pittsburgh Pirates' spring training, site of the 1995 STMA annual meeting and 1993 Professional Diamond of the Year. The basic infield and outfield grass is Tifway II Bermudagrass. Both infield and outfield are kept at a height of 5/8 inch. The entire field is mowed daily; the infield is mowed twice on game days. The field is overseeded in mid-November with Ph.D. perennial ryegrass at the rate of 12 pounds per 1,000 square feet.

Richard Gonzales of the Rose Bowl in Pasadena, CA, kept the newly sodded Tifgreen Bermudagrass at an initial height of 1/2 inch in May. Game height options ranged from 1/2 up to 5/8 or 7/8 inch.

Transition Zone

The transition zone is too far north for the warm-season grasses and too far south for the cool-season grasses. Sports turf managers generally must work with both grass types to maintain a decent, playable cover.

Tony Burnett, chief groundskeeper of RFK Memorial Stadium in Washington, D.C., has developed a formula that's workable; but it still is a constant battle with the weather. He uses the warm-season Bermudagrass (Tifway 419) as a base for its strong root structure, then overseeds it with a blend of perennial ryegrasses to give late-season color. Because Washington winters consistently wipe out 70 to 80 percent of the Bermudagrass, it's replaced with fresh sod each year.

The Bermudagrass is mowed at 3/4 inch while the sod takes hold. During football season, the mowing height is lowered to 5/8 inch. Then, as the perennial ryegrass comes in, the mowing height is gradually raised to 1 inch. That's a "pretty close" grooming down for ryegrass, but with the underlying Bermudagrass base, it provides an excellent playing surface.

Monte McCoy is baseball field superintendent at the University of Oklahoma's L. Dale Mitchell Field, the 1993 College Diamond of the Year. Here, the common Bermudagrass turf is overseeded the first week of October with a blend of perennial ryegrass cultivars. During the spring, the ryegrass is mowed nearly everyday, and double-cut on game days. The outfield is maintained at a height of 1.5 inches with a triplex reel rider mower; the infield at 1.25 inches with a walk-behind reel mower. Mowing direction is rotated with each mowing from home to third, home to first, and home to second to keep the grass growing vertically, combat tire compaction, and create a striking "checkerboard" pattern.

In May, mowing heights are lowered to 1 inch in the outfield and 3/4 to 7/8 inch in the infield, to discourage the perennial ryegrasses and allow the Bermudagrass to regain control. Following the transition, the infield mowing height is moved up to 1 inch.

Bucky Trotter of the University of Kentucky in Lexington uses Vamont Bermudagrass in Commonwealth Stadium and the baseball infield; Quickstand Bermudagrass in the soccer game field, and mixes of bluegrasses and perennial ryegrasses in the practice football and soccer fields and baseball outfields.

During spring and early summer, Bermudagrass fields are mowed at 1/2 inch to promote lateral growth. Starting two or three weeks before the kickoff of the football and soccer seasons, the height of cut is gradually raised to the game height of 1 inch. The Bermudagrass

FOR PRODUCT INFO FAXED TO YOU NOW! DIAL: 1(800) 817-1889

can go dormant by mid-October, so it's necessary to retain as much in-season leaf surface area as possible. The Vamont Bermudagrass is coarser than some of the other hybrids. Athletes' footing on Vamont at the 1-inch height is comparable to that on a 3/4-inch height on the finer-textured Bermudagrass.

Fields are overseeded with a mix of bluegrass and perennial ryegrass cultivars as temperatures cool. The baseball outfields receive a mix of grasses higher in bluegrass than perennial ryegrass. On the football fields, perennial ryegrasses stand up better to the heavier traffic and lack of moisture. Areas of wear on the cool-season fields normally are filled in with perennial ryegrass because it germinates and establishes faster.

Sturdy cool-season turf is needed to withstand spring's heavy practice schedule. Cutting heights are adjusted to cope with the level of play and fluctuating weather conditions. During stressful conditions, the turf reacts best at a 1.5-inch cut. When possible, that height is lowered to 1.25 inches to better accommodate play.

Mowing Patterns

A mowing pattern can be a means of marking dimensions on a field, as with the alternating mowing direction to accent 5-yard intervals on a football field. It can also be a means of adding to the aesthetic appeal for on-site fans and TV spectators. The distinctive patterns developed by their sports turf managers have become a "signature" of some fields.

Though patterns add much to the look of a field, playability depends on "straight up grass" and turf vigor. Cuevas and crews alternate mowing directions each day to keep the turf healthy, vibrant and upright.

On Day One, the outfield is mowed from north to south. On day two, it's mowed across at an angle from northeast to southwest. On day three, mowers run from east to west. On day four, crews mow in a cross pattern again, this time running from southwest to northeast. Starting points are varied, too. For example on the north-south swipes, mowing starts at the warning track one time, at the infield the next. The infield is mowed in a circular pattern, alternating from north to south, east to west, south to north, and west to east. The starting point also varies each day. Foul territory is mowed in a "U" pattern, starting at the third-base side mowing toward the first-base side one day; then mowing from the first-base side toward the third-base side the next.

Sports turf fields are always "on display." When it comes to mowing, it takes keen observation of growth patterns and weather conditions, along with a well-planned but flexible schedule, to keep turf safe, highly playable and "looking good." ❑

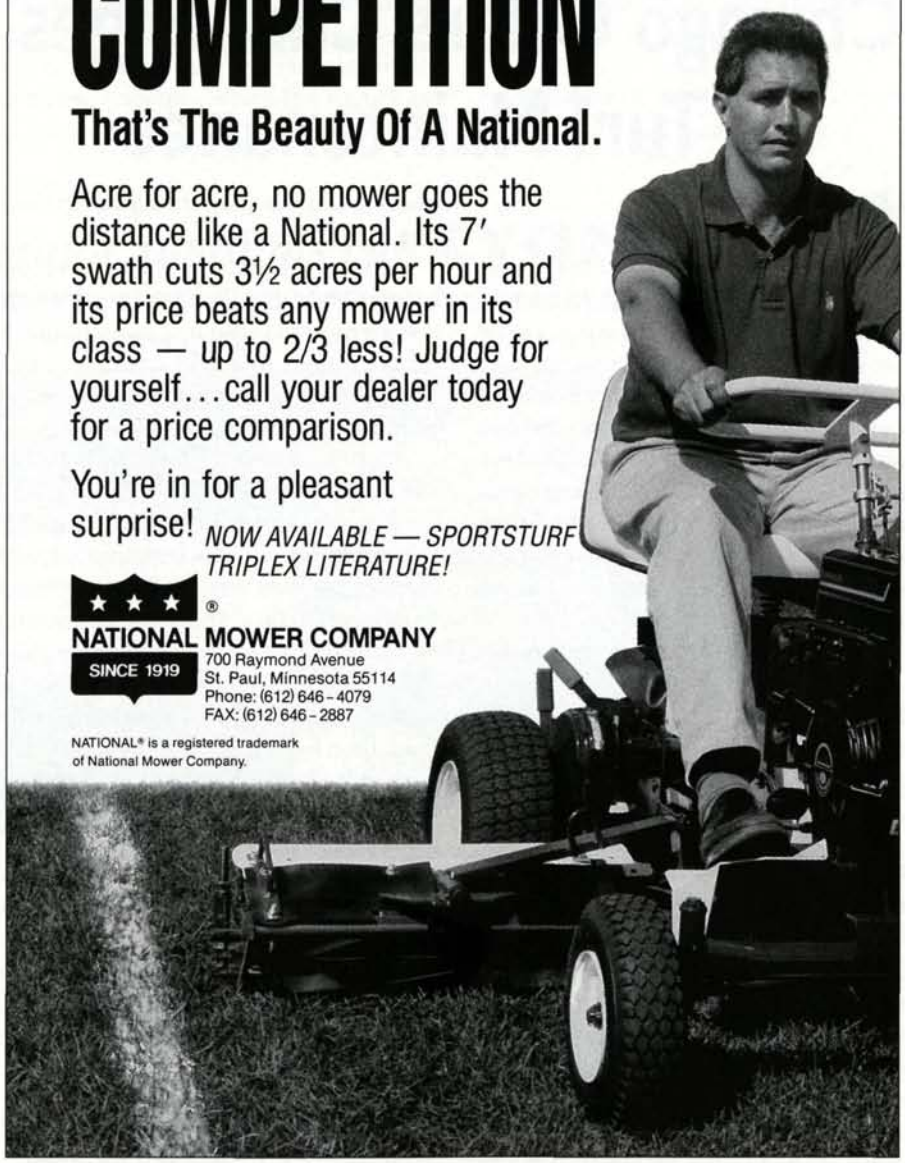
Steve and Suz Trusty are partners in Trusty & Associates, Council Bluffs, IA. Steve is assistant chair of the Sports Turf Managers Association's Public Relations Committee.

OUTRUNS THE COMPETITION

That's The Beauty Of A National.

Acre for acre, no mower goes the distance like a National. Its 7′ swath cuts 3½ acres per hour and its price beats any mower in its class — up to 2/3 less! Judge for yourself...call your dealer today for a price comparison.

You're in for a pleasant surprise! *NOW AVAILABLE — SPORTSTURF TRIPLEX LITERATURE!*



NATIONAL MOWER COMPANY
SINCE 1919
700 Raymond Avenue
St. Paul, Minnesota 55114
Phone: (612) 646-4079
FAX: (612) 646-2887

NATIONAL® is a registered trademark of National Mower Company.

Call 1(800) 817-1889 use **Fast Fax #1060295** and/or Circle **106** on Postage Free Card

With this schedule, the field doesn't have much time to grow grass. What do we do? Punt? Kneel down with the ball? No way! At fourth and one, we go for it!

Ken Mrock manages the turf for the Chicago Bears with a year-round regimen of seeding, fertilizing, mowing and irrigating.

Chicago Offers Challenges to Turf Maintenance

By Ken Mrock

I have to manage turf that takes one of the hardest beatings in sports turf. During the past nine years here, I've seen the demands on our turf increase dramatically. The players have become bigger and faster. The Chicago Bears' coaching staff and management advocate a year-round training regimen. This is tough because the Midwest has such a short growing season. Essentially, we have to grow grass when it doesn't *want* to grow.

This past season, we had five mini-camps, several twice-a-day practices in addition to the normal four practices per week. On top of this, the Bears share Soldier Field with the Lake Forest College football team for five homes games.

Seeding in March

Starting at the end of March, we pre-germinate seed — a mixture of blue, rye and *Poa supina*. As soon as the field is workable, we will aerify with a Ryan GA-30 or Toro Greensaire. We try to bring up as many plugs per square foot as possible. We have found this speeds germination and establishes the growth of the plant a little lower in the turf surface, somewhat protecting the plant when the players try to rip them out with their cleats.

After aerification, we allow the plugs to completely dry. We then broadcast the pre-germinated seed mix over the entire practice field and add another 7 to 8 lbs./1,000 square feet of dry-seed broadcast, mainly between the numbers.

Starter Fertilization is Key

Since we have no internal drainage and the practice field was constructed with Turface calcined clay, we have continued to apply Turface and our topdressing soil to the practice field. This process is done with a Turfco meter-matic topdresser. We apply this mix across the entire field, then lightly drag all the material in with a draft mat. The next step we take is to fertilize with a starter fertilizer. I prefer a 13-24-12. This formulation offers potassium nitrate for the established turf, quick-release nitrogen that works well in cool-soil conditions and phosphorous for seed germination and root establishment. Next, we apply pythium control and cover the entire field with a frost blanket.

April Mini-Camp and May Fertilization

Mini-camp begins in late April — three days of twice-a-day practices with about 80 players. I call this our *opening day*—the coaches' first chance to see what the Bears look like. After this inauguration, the field is available to the team until January. With all the traffic on the field, daily maintenance is quite aggressive. Divots must be replaced after every practice. The ones that can't be "found" are replaced with a mixture of seed, topsoil and Turface. It's the same process that's done on tee boxes at golf courses.

In early May, the next fertilizer application is made in conjunction with a spot-herbicide treatment for broadleaf weeds. This time I use a 12-0-42 formula. This ratio helps toughen the grass plants for our next two mini-camps. I've experienced the benefits of 12-0-42 and highly recommend it. I've seen less disease, fewer clippings and a much more turgid turf stand. Our ballplayers have complimented me on the sturdiness of the turf.

The irrigation is done using a Kifco B-140 water reel. Watering is usually done well before dawn to allow the least amount of plant wetness in the evening. Under our normal late-spring and early-summer conditions, I like to irrigate about twice a week putting down 3/4 to 1 inch of water per application.

In the middle of June, an application of 12-0-42 is done about 1/2 to 1/3 rate. This

enhances what might have been depleted and strengthens the field for the last two mini-camps when the rookies arrive.

Around mid-July, the field gets a break from the rigorous practice schedule when the entire football operation moves to the University of Wisconsin at Platteville for four weeks. This time of year in Chicago is sometimes tough for seed development. But it's our only window. We completely aerify the turf in two diagonal directions, overseed, topdress and make another application of 12-0-42 at 1/2 rate. Fungicides and insecticides are part of our maintenance program, but are used sparingly. We also do another spot spraying with herbicide for broadleaf weeds, usually dicamba for knotweed and clover control.

August — The Toughest Stretch

As the team prepares for the season with training camp, August is the toughest stretch of our turf-management program. With the grind of twice-a-day practices with 80 players, we mow daily, sometimes twice a day, to allow a light rolling. We maintain the turf at 1 3/8 to 1 5/8 inches with a Jacobsen Tri-King 84-inch reel type. This is a lightweight mower and allows us to pattern the turf in opposite directions between the 5-yard lines. The players like the close-cut turf. They play better on it.

As with golf courses, aesthetics are important at a football field. The Bears always have five to 10 TV outlets and 10 or so print-media outlets. We have to maintain game-ready conditions at all times. The proper ratio of potassium produces the excellent turf we need. We also topdress and pre-germinate seed daily.

Cold Weather Means a Shift

In September, temperatures fall and there is less sunlight. We shift our fertilization program to 18-3-18. Some of this application will release quickly, the rest will be stored for the crucial cold-weather weeks to come. When the nights get down to 35 degrees, we pull out the frost blankets as needed. This raises the soil temperatures and kicks in the fertilizer — the turf stand is excellent. We also use our rain/snow field covers as needed, covering 140 by 65 yards in seven sections that zipper together to form one solid cover. This is important because, other than during a Bears practice or a college game, no rain or snow is allowed to accumulate on the practice field.

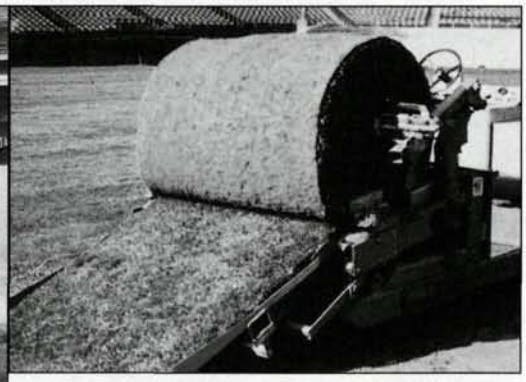
As the season progresses, we pump 4 million BTUs via kerosene-fired heaters under the tarps to keep the field from freezing. The only time the field is uncovered is for practice during November, December and (we hope!) January playoffs. The increased levels of potassium allow us to literally beat up this field — and it gets up for more. In mid-November, an application of 12-0-42 at full rate is made, which will take us through spring. Then the fun starts all over again. ❑

Ken Mrock is the grounds superintendent for the Chicago Bears.

Wonder why major stadiums call* CYGNET *when they need emergency repairs or new installations?

(It must be our rapid response and quality installations!)

48" ROLLS 2" THICK INSTALLED AT CLEVELAND STADIUM



KAUFFMAN STADIUM, KANSAS CITY
48" ROLLS - 3/4" THICK

CYGNET is able to harvest 48" WIDE ROLLS consistently from very thin to over 2" thick. We can install these rolls without pulling or pushing them along the ground (no stretching or tearing). Our patented machines carry the rolls, turn them at ground speed, and install down a c ontrollable slide for tighter seams.

NO ONE ELSE CAN MAKE THIS CLAIM
U. S. Pat. #5,215,248 & 5,307,880

CONSISTENT 2" CUT YOU CAN'T INSTALL TURF BETTER

FOR ***fewer, tighter seams stability and performance when you are ready to install give*** **CYGNET** ***a call!***

4111 Insley Road
North Baltimore, Ohio 45872

CYGNET TURF & Equipment
Phone: (419) 345-1112
Farm: (419) 655-2020
Fax: (419) 352-1244

Circle **107** on Postage Free Card

It's been said you can assess the "heart" of a community by its parks. And looking at Garner's parks, this is a community with a great heart.

Crew member preparing the infield for a game. Jim Robinson (inset) by a Garner parks vehicle.

Community Effort Maintains Parks and Fields

By Bob Tracinski

One would expect Garner, NC, a town of 16,000, to lie quietly in the shadow of nearby Raleigh. After all, population growth in the last few decades came mainly as city jobholders sought calm and comfortable dwellings safely removed from the urban crunch. But the energy of the residents, the charm of the setting and lots of hard work jelled into a thriving, vital community with much to offer.

It's been said you can assess the "heart" of a community by its parks. And looking at Garner's parks, this is a community with a great heart.

Jim Robinson joined Garner in 1989 as parks superintendent. As use of facilities — and his responsibilities — expanded, the title also grew to parks, landscape and grounds manager.

Robinson brought an extensive background to his position. His love of plants was instilled early. His mother and grandmother were dedicated gardeners, with extensive planting of annuals, perennials and bulbs. Tobacco farming was the prime occupation of many family members. Although he entered college as a sociology major, by his early 20s, he was drawn by the lure of plant-related jobs. He put formal studies on hold to work for various landscaping and nursery operations, then moved to Raleigh to enter North Carolina State University, where he concentrated on landscape horticulture.

After graduation, he stayed in the Raleigh area, first working for other landscaping firms, then operating his own landscape contracting business. Intrigued by the possibilities, he moved into the position with the town of Garner. And those possibilities keep growing.

"The opportunities for me as a professional have been amazing in this actively growing community. The town's interest and use of facilities have grown hand in hand with community and park improvements," he says. "We're constantly seeing more commercial development — and business involvement in community activities. As one segment moves forward, the others follow suit. I thrive on that challenge.

"We converted a 66-acre tract from an old strawberry field to Lake Benson Park, which opened officially in late 1993. We term it a 'passive' recreation site since no organized sports take place there, but it's full of activity. A large picnic center is now in place and a community center is scheduled for construction in the next two years. There are 44 acres of grassy meadow, which we mow. The rest of the site is filled with trees and trails. A popular feature is the walks organized by our part-time naturalist — bird-watching and wildflower

walks and even a nighttime owl-watching walk. The town's 1994 Independence Day celebration, featuring the North Carolina Symphony, was held in the park's meadow."

The extensive recreational facilities gave Robinson an additional challenge. Sports-field management and maintenance hadn't been included in his formal studies or hands-on experience. He quickly keyed into major sources of assistance: the staff at North Carolina State University, the extension service, the NC Turfgrass Association and the Sports Turf Managers Association. "The interaction with other professionals has helped tremendously — and is something I really look forward to," he says. Trade publications and the STMA compendium became additional resources.

Recreational activities are booming in Garner. "We have approximately 122 softball teams, ranging from youth T-ball to adult leagues and mixed leagues. A girls' fast-pitch softball league started last year. We have 42 soccer teams, two youth football leagues and 11 cheerleading squads that use our facilities. There are tennis courts, recreational facilities at the senior center and playgrounds in the parks."

Garner has two main complexes for organized sports competition. The largest site holds a multipurpose soccer/ football fields, three baseball/softball fields and the tennis courts. The second site has two baseball/softball fields.

The town's school system also has facilities for all these sports, which handle the school-related practices and competitions. Care of the school's fields is contracted to a private maintenance company. There also are some private sports facilities within the town.

Garner's third complex will open in March. Robinson says, "Credit goes to the town management for their progressive attitude. Because of the open communication within our management system, and the shared spirit of community improvement, they were not only aware that the fields couldn't continue to handle the high level of use and remain in good condition, but were determined to find a solution. That led to the development of the new complex.

"The town acquired the land in late March 1994, and we originally hoped to be up and running by May 1994. But the area was an old tobacco farm that hadn't been worked for 10 years. We had to clear away seedling trees, broom sedge, blackberries and lots of other underbrush just to determine what we had," Robinson explains.

"We formed a long, rectangular area that will serve as three multipurpose practice fields. We developed a slight crown, from end to end, rather than by field, and slit-seeded that section with common Bermudagrass. Coverage was good. We've fertilized, aerated, topdressed with sand and overseeded in the fall with annual ryegrass.

"At the end of the grassed fields we developed a baseball/softball field with a skinned infield and 185-foot fences. The outfield also is common Bermudagrass overseeded with annual ryegrass. We've landscaped the complex to provide screening. So, when the weather breaks, we'll be ready for play.

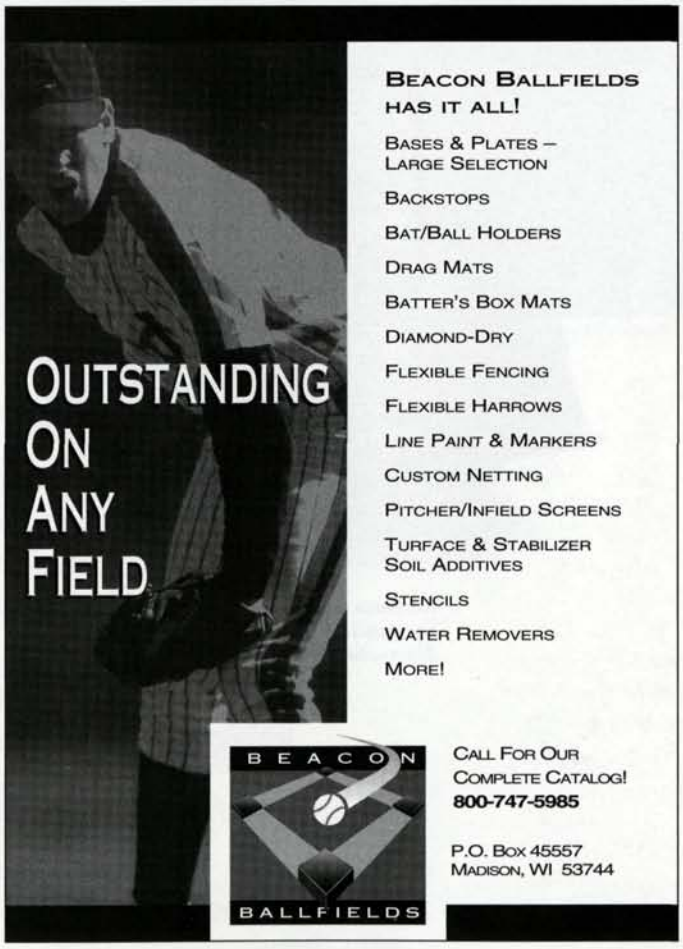
Organization is key to Robinson's management scheme. "I've divided the parks maintenance and development division into five segments. Horticulture handles the landscaping and outside maintenance of the high-visibility city buildings, the 8.5 miles of street medians, the signage areas, and the park landscaping, including seasonal color change-outs. The Lake Benson Park crew handles everything at that site. The parks maintenance crew tackles the large-scale mowing, using rotary mowers. The ballfield crew handles the prep work on the fields, including striping and the infield-skinned area maintenance. They also draw the trash and restroom-cleanup detail. Our last segment is termed the 'rover.' This crew performs the reel mowing, tractor work, aeration and fertilization.

"Staff levels fluctuate a bit overall and within each of the division's segments. During the busiest season we have 10 full-time and five part-time employees. I try to identify each employee's strong points and specific areas of interest and match them with the most suitable positions. Each department has a working supervisor who keeps a daily log of activities, including personnel assignments, materials used, work performed and anything needing special attention." Robinson meets with the supervisors at least daily. They radio in anything that needs immediate action.

Robinson divides the workload seasonally and then by priorities. He develops an overall schedule — usually with Plan A for expected conditions and a "very flexible" Plan B for whatever changes occur.

During his five years on the job, Robinson has become increasingly adept at identifying problem areas and working toward

continued on page 22



Circle **108** on Postage Free Card

You have to start pretty early to get the pick of the crop at the orchard.

5:30...5:20...5am. *Course Superintendent, Ted Woehrle, couldn't believe it. But shortly after the Workman® arrived at The Orchards Golf Club in Washington, Michigan, his staff started coming in earlier and earlier to get the Workman for the day. "We had other work vehicles," recalled Ted, "but everyone wanted the Workman."*

Why's the Workman® vehicle so popular? Turf managers and their crews keep telling us the same story.

"It'll never be outdated. It can do anything."

It's always the first thing we hear: no other work vehicle puts in a harder day. The Workman vehicle's extra-big box must have something to do with that. It can haul 25% more weight and bulk than other work vehicles you're used to. And whether you use our attachments or yours, no other work vehicle can be configured to perform as many different tasks.

Workman vehicles now available in 2 or 4-wheel-drive.

"Less back strain after riding it all day."

Take it from those who start and end their days with the Workman vehicle: its smooth ride is second to none. Its standard roll-over protection package and the added stability of four wheels with the maneuverability of three, are other features crews can't say enough about.

"Our mechanics love it."

One mechanic said, "servicing the Workman is a breeze–everything's so easy to get to." Just what we like to hear. Because that means the