Inside:
Annual Grass Weed Control
How to Get the EQUIPMENT YOU NEED
Traction on Turf
How Do We Measure It?
...and more!

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KAFMO would like to thank Hummer Turfgrass Systems Inc. and Turf Trade for becoming the first companies to become a KAFMO Cup Scholarship Partner. The Partner program is a way for KAFMO’s sponsors to increase their support for the organization’s efforts. All proceeds from the Partners program go directly into the Waddington/Harper Scholarship Fund. Because of sponsors such as Hummer and Turf Trade, KAFMO has contributed $500 scholarships to 37 turfgrass students since 2001. Turf Trade’s Jim Byrne explains their support by commenting, “We enjoy giving back to the industry. Supporting KAFMO and its activities ensures that KAFMO can support its members. That’s what it is all about!”

On The Cover...
One of the “crown jewels” of Pennsylvania athletic turf, the hallowed ground of Beaver Stadium in University Park shines bright. Photographer and athletic field supervisor, Herb Combs, CSFM, says the Kentucky bluegrass sod was placed in 2005 and consisted of P-105, Apollo, and Midnight II varieties. It has since been overseeded multiple times with different types of bluegrass and a hint of perennial ryegrass now and then during the season to fill in the wear from the games, said Combs.

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The Keystone Athletic Field Managers Organization was formed in 1994 by a small group of individuals who were concerned about the quality of the athletic fields in Pennsylvania. In 1997, KAFMO became incorporated as a chapter of the Sports Turf Managers Association. Today, KAFMO is over 300 members strong and each individual is committed to enhancing the professionalism of athletic field managers in the Keystone State.

Our goals are to improve the safety, playability and appearance of all athletic fields in Pennsylvania. As an organization we strive to accomplish our goals through seminars, field days, publications and networking with other professionals in the sports turf industry.

Any individual, institution, organization, vendor or supplier who has sincere interest in athletic field maintenance is welcome to become a member. Our members represent a wide range of professionals in the sports turf industry. From high school, collegiate and professional athletic facilities, to parks and recreation departments, municipalities, educators, youth leagues, contractors, and commercial vendors, our membership base is made up of a broad range of individuals who pool their knowledge together for the good of our craft.

Annual Events include:
• Summer - Field Days(s)
• October - KAFMO Cup Open golf tournament – proceeds benefit the Awards Fund
• January - Eastern Pennsylvania Turf Conference
• January - Northeastern Pennsylvania Turf Conference
• February - Annual KAFMO conference featuring seminars, exhibits and the annual awards program
• February/March - Western Pennsylvania Turf Conference
• March - Northwestern Pennsylvania Turf Conference

Educational Grants and Research
KAFMO has donated over $47,000 for educational grants and sports turf research since 2001. KAFMO provides scholarships for sports turf education and sponsors collegiate teams in the Sports Turf Managers Association’s Collegiate Challenge at their annual national conference. Research beneficiaries include: Sports Turf Managers Association’s Foundation for Safer Athletic Field Environments (SAFE); Pennsylvania Turfgrass Council’s fund for sports turf research at Penn State University and the Pennsylvania Turfgrass Research Fund, Inc.

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The magazine will be free to KAFMO members.
Annual grass weed control

By William E. Pound & John R. Street, Ohio State University Extension

Annual grass weeds are grass weeds that germinate from seed, grow vegetatively, produce seed and die within a 12-month period. A number of annual grass weeds routinely invade turfgrass areas including crabgrass, goosegrass, foxtail, barnyardgrass, fall panicum and annual bluegrass. The crabgrass (Digitaria sp.) are the most common annual grass weeds. Both the smooth and hairy types of crabgrass are classified as summer annual weeds. These grass weeds are considered undesirable contaminants in high quality turf because of the lack of compatibility with the desirable turfgrasses. These annual grass weeds are usually lighter green in color, have wider leaf blades and possess more spreading growth habits than the cultured cool season turfgrasses.

To ensure crabgrass and other annual grass weeds do not establish in your turf, both important preventive and control programs must be implemented. The invasion of crabgrass and other annual grass weeds can be prevented to a large degree by maintaining a dense, healthy stand of grass. High quality turf will develop a highly competitive canopy that will shade the soil surface and discourage the germination and establishment of seedling annual grass weeds. Most annual grass weed seeds germinate in the top 1/2 inch of the soil.

Preventive control

One of the first steps in successful preventive programs is to seed or sod a properly adapted turfgrass species on your fields. Following establishment, adequate fertilization programs and cultural practices facilitating the maintenance of a dense canopy including proper mowing practices, good watering practices, and insect and disease control programs are important.

In newly established fields, thinly covered fields, or other areas where adequate density is not present to provide formidable preventive control, annual grass weed establishment should be anticipated. The crabgrass seeds in the soil begin to germinate in the spring once the soil temperatures warm to nighttime minimum temperatures of 52 to 54 degrees F for at least 5 consecutive nights under conditions of moist soils.

Preemergent herbicide control

If you cannot satisfactorily address the control of annual grass weeds in a preventive manner with strictly cultural controls, the best way to stop annual grass weeds from establishing is through the use of preemergent herbicides. Preemergent herbicides are chemicals that prevent the germinating weeds from establishing in the lawn. These herbicides control annual grass weeds by inhibiting cell division in the young root system. Failure of the root system to develop results in the death of young seedling weeds shortly after germination. Turf with thin stands of grass that do not provide 100 percent cover may require yearly applications of a preemergent herbicide to prevent the invasion of crabgrass and other annual grass weeds. Dense, high-quality fields may not need yearly applications since crabgrass only occasionally establishes in turf with good density.

A number of preemergent herbicides are available for annual grass weed control. All of these herbicides have been tested at the Ohio State University for several years. These approved herbicides are listed in Table 1.

Table 1. Preemergent Herbicides For Annual Grass Weed Control

<table>
<thead>
<tr>
<th>Common Names</th>
<th>Trade Names</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benifin</td>
<td>Balan</td>
<td>Good</td>
</tr>
<tr>
<td>Bensulide</td>
<td>Betasan, Pre-San</td>
<td>Good to Excellent</td>
</tr>
<tr>
<td>DCPA</td>
<td>Dacthal</td>
<td>Good to Excellent</td>
</tr>
<tr>
<td>Pendimethalin</td>
<td>Pendimethalin</td>
<td>Excellent</td>
</tr>
<tr>
<td>Oxadiazon</td>
<td>Ronstar</td>
<td>Excellent</td>
</tr>
<tr>
<td>Siduron</td>
<td>Tupersan</td>
<td>Good</td>
</tr>
</tbody>
</table>

All of the listed products can be safely used on Kentucky bluegrass, perennial ryegrass, tall fescue and most fine fescue cultivars. Bensulide is the safest annual grass control material for creeping bentgrass. If preventive annual grass weed control is desired in new seedings or where young, desirable seedling grasses are developing, Siduron is the only herbicide that will provide control of the annual grass weeds but not injure or antagonize the development of the desirable seedling turfgrasses. Siduron may be applied at the time of seeding.

Preemergent herbicides are generally only effective if applied before the annual grass weeds emerge. Therefore, early spring applications are essential if satisfactory weed control is to be achieved. Herbicide applications should be completed and the herbicide watered-in at least 7 days before the initial germination date to allow time for the herbicide barrier to be established in the soil.

Preemergent herbicide applications for annual bluegrass control should be made in late summer or early fall.

Postemergent herbicide control

If preventive or preemergent control strategies fail to satisfactorily limit the establishment of annual grass weeds, herbicides are available that will kill crabgrass after it germinates and begins to grow. These products are referred to as “postemergent herbicides.” Postemergent herbicide applications should be made as soon as the crabgrass is seen in the turf. In Pennsylvania, this is usually between late May (southern PA) and mid-June (Northern PA). Occasionally one, but generally two applications are needed to control crabgrass. Make applications 1 to 2 weeks apart until the crabgrass is killed. The success of these treatments will be greatly improved if the crabgrass is in the 3 to 5 leaf stage of development. Once the crabgrass begins developing tillers (numerous new stems), control is much more difficult to achieve. Repeat applications may only provide partial control. If additional crabgrass germinates after the applications, another series of treatments will be necessary.

The most common postemergent crabgrass control products available are products that contain methanearsonate. This material may slightly discolor Kentucky bluegrass, but no serious injury should result if used at the rate and under the conditions described under “Directions for Use.”

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Sunshine greets 17th Annual KAFMO Athletic Field Conference

Mike Dickert of Manor Township, Lancaster County was presented with the 2013 Fowler Founder’s Award to cap off a successful 17th Annual KAFMO/PRPS Athletic Field Conference in Grantville February 15. Dickert has been active in KAFMO since the organization’s inception as an event organizer, a Board of Directors member for a decade, conference presenter, grant writer, fundraiser, scholarship fund developer, and, in his most visible role, supervising the putting contest at the annual KAFMO Cup golf tournament. Dickert used his BS in plant science from Penn State to tirelessly work to improve playing surfaces for Manor Twp residents, work that continues today.

“I have always felt that I got more from KAFMO than I gave,” Dickert said upon receiving the award. “I encourage everyone to put as much as you can into your work and do the best you can with the tools you are given. Keep plugging away and eventually you will get where you want to be.”

The Fowler Founders Award is named in honor of Donald Fowler, retired Penn State extension agent, who is credited with organizing the event, his long service to KAFMO and the Pennsylvania Recreation & Park Society, and made possible through the support of kind in the country. The event was co-sponsored by the Pennsylvania Field Conference in Grantville and the Athletic Field Conference, one of the longest-running meetings of its kind in the country. The event was co-sponsored by the Pennsylvania Recreation & Park Society, and made possible through the support of conference sponsors (see list below) and 44 exhibitors.

Field of Distinction Winner

KAFMO honored Flannery Field of the Wyoming Area School District with its Field of Distinction Award. Field of Distinction awards are given annually to facilities that have demonstrated a dedication to providing safe and playable conditions for their users regardless of the level of play.

Jon Yorgey, grounds foreman, and Dave Steinmetz, groundkeeper, accepted the award. The field is named after Staff Sgt. Sean Michael Flannery, a Wyoming grad who was killed in action while serving our country in Afghanistan.

FOD Committee Chairman Dave Anderson of the Hempfield School District said his committee looks for fields that have been dramatically improved despite perhaps having limited budgets or small, even one-man, crews. He said he was disappointed with the number of applications this year after a number of years with increased applications. Winners receive a plaque, KAFMO jackets, complementary Conference registration, and local media coverage.

Scholarships

KAFMO presented its Waddington/Harper Scholarships to two students who are near graduation and plan careers in turf management. The scholarships are named in honor of Dr. Donald Waddington and Dr. John Harper (deceased), two retired Penn State turfgrass professors. Dr. Waddington was in attendance this year to personally award the scholarships. Scholarship Chair Kevin Bevery from Penn State-York introduced this year’s winners: Jeff Cuthbertson from Penn State, who interned with the Reading Fightin’ Phibs last summer; Jordan Gleim, who begins an internship with Philadelphia Eagles this May; and Mike Gurcsik, who will intern in Reading this summer.

KAFMO President Dan Douglas of the Reading Phillies also reported that the organization had donated:
• $4,000 to the Pennsylvania Turfgrass Council and Penn State for sports turf research.
• $500 to the Pennsylvania Recreation & Parks Society’s Resource Branch
• $500 to national STMA’s SAFE Foundation
• $2,000 to help support three teams of Penn State students to travel to the national Sports Turf Managers Association Conference in Daytona Beach, FL and take part in the Student Challenge. One PSU 4-year team finished 2nd overall and one 2-year team finished 3rd overall in their respective categories.

Education sessions

Victoria Wallace, associate extension educator for the University of Connecticut, shared the experiences of turf managers who have been working under a pesticide ban in that state since July 2010. “You need to think about this because it could happen here in Pennsylvania sooner or later,” she said.

Wallace urged the crowd to be proactive, especially in their record-keeping, and to begin to consider why they might be having weed problems first rather than just having a “go-to strategy of using pesticides” when weeds appear. “Your goal should be safety and turf quality; your first strategy should be to prevent weed problems before they happen.”

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Mike Dickert, the Fowler Founder’s Award winner, left, with the award’s namesake, Don Fowler. Dickert was honored for his long service to KAFMO and the Pennsylvania sports turf industry.
Wallace said, “A second strategy is allowing your turf to compete with the problem, before the third option of having to eradicate the weeds.”

Wallace urged attendees to start recordkeeping now and offered a Field Assessment Form developed by the UConn turf program (www.turf.uconn.edu). “I know you guys hate this part of the job,” she said, referring to recordkeeping. But you’ll be much better off if the time comes when you can no longer use pesticides. Weeds will be the number one problem for you following any bans; you know they will take advantage of any voids in your turfgrass.”

She went on to address areas of turf management in relation to fewer inputs, including fertility programs, using compost as topdressing, fall fertilization, and overseeding.

KAFMO Board member Jim Cornelius of Fisher & Sons presented his thoughts on synthetic turf maintenance as only Jim can—shooting straight from the hip. His main message included the need to groom the fibers on the synthetic fields; the need to clean the turf regularly; to test for hardness via Gmax at least once a year; and the need to maintain the infill material at proper depths at all times.

Cornelius offered photos of good, bad, and ugly synthetic turf field examples and shared his personal experiences in repairing synthetic fields, along with the horror stories he’s seen of botched repair jobs. He also referenced new maintenance guidelines recently issued by the Synthetic Turf Council, produced by a committee of which Cornelius was a member (www.syntheticturf council.org).

Penn State soil scientist and all-around turf guru Dr. Andy McNitt once again took the stage at the KAFMO Conference to discuss misconceptions about managing natural turf fields. Always entertaining as another straight shooter, McNitt first shared research that helps answer the age-old question: What species of turfgrass is most wear-resistant? Of course there is no simple answer, he said, as your situation and specific needs will dictate which grass is best. For example, if you have the luxury of time, meaning two cool seasons of growth (fall/spring or spring/fall) then Kentucky bluegrass is your best choice. But, since few PA turf managers have that kind of time available, perennial ryegrass or a newer, 3rd generation turf-type tall fescue will work better.

McNitt also tackled fertilizers — saying “It’s not that damn complicated!” and telling the crowd not to get too hung up on the amount of boron or other micronutrients in their soil, and not to fret over small differences in the pH of their soil. “It is important and you might need to adjust your pH, but 6-anything is good; if yours is 6.4 to 6.8, [don’t bother trying to make changes].”

Dr. Mike Fidanza of Penn State spoke on sustainable water issue in sports turf, Rick Carbo, director of buildings and grounds for Plymouth Township, addressed the challenges of maintaining multiple fields, and turf mover-and-shaker Steve LeGros finished up the education sessions by sharing how he assisted in constructing the sustainable turf now in place at the National Mall in Washington, DC.
Winter is time to do what you don't have time for otherwise

Once we have tucked our fields away for what should be a long winter's sleep we can take a sigh of relief, until the snow starts flying. I have found that although the pace is slower than the rest of the year I am busying studying the data and researching information that is out there such as in Between the Lines, SportsTurf and attending as many conferences and seminars as possible. I have the time that I yearned for the rest of the year and now I try to make the most of it.

As part of our management program I take soil samples in the fall and then from the results adjust the turf applications for the upcoming year. As you know no matter how much you work at your fields there are always going to be variations in your soil analysis. I feel the timing could not be better to investigate and discuss with others what is out there and how it is performing for our peers. Don't get me wrong we don't revamp my whole management program; I adjust it slightly to see what improvements can be made.

We are getting bombarded by so many products that it can make your head spin. There are some intriguing products that have come out recently, such as Tenacity and Acepyren, that are what we have been looking for since the beginning of time. I also found it is a great time to research the new varieties of grass seed that are being offered. Barenbrug's Turf Blue with Yellow Jacket coating and Amazing GS perennial ryegrass from Ampac Seed Company are just a couple of newer seeds on the market. The National Turfgrass Evaluation Program (NTEP) trail results are a good place to start. From there it is helpful to speak with other people that maybe using a variety of grass that you are interested finding out how it is performing.

So if there is anything that I would like you to take away from what we do to prepare for the rush of the spring start-up, it is to get your hands on as much information that is out there, talk with your vendors and what I feel is most important, network with others to get feedback from people that may have just the answers you are looking for. The answers are out there, take the time to find them and along the way you will enhance your skills and network with great people.

— Randy Haffling, General Services Manager, Moravian College

What is important now?

Are you expecting to have your field budget reduced this year? How would you prioritize necessary practices and spending on turf product? Are you going to lose any crew members?

The time to start planning is before your budget is reduced. No person knows more about fields than the field manager that manages them, so you are the perfect person to prioritize practices and purchases needed to keep the field safe and useable.

If your fields were properly designed and constructed, received good maintenance in the past, and had controlled use during the season, you should be good shape this spring. Remember the ultimate goal of a good sports field is a safe field. Keep this in mind as you make management decisions, and keep reminding your supervisors that this is your priority when you are considering management and purchasing decisions.

Most field managers only have several variable expenses under their control. These generally include: labor, equipment purchases, equipment maintenance, fertilizer products, pesticides, paint, top-dressing sand, and sod/seed expenses. Energy (fuel, electricity, etc.) expenses are often not as easily controlled.

I believe the number one item that must stay in a management program in terms of field impact is nitrogen fertilization. Use your soil test to modify your non-nitrogen nutrient needs (e.g., phosphorus, potassium, calcium, etc.) so you do not buy something you do not need. Your field will need nitrogen fertilizer. It will maximize turf density and a denser field is a safer field. Plus it will recover from damage faster and density discourages weeds encroachment. The rule of thumb is one pound of nitrogen per 1,000 square feet per growing month.

Price out your fertilizer products per pound of nutrient rather than per pound of product. And if you have available labor, you can often get better results by splitting the fertilizer applications and going out more frequently (e.g., half pound rates twice a month).

After fertilizer, keep a good mowing program. The more frequent you mow bermudagrass when it is actively growing the better the turf density. For bermudagrass keep the height of cut below 2 inches. For hybrid bermudagrass closer to 1 inch is much better. Too high and it will shade itself and density will begin to thin. Regular mowing also discourages broadleaf weeds from getting a foothold. And if you do have some weeds, the mowing makes them less noticeable.

The next most important item on the list should be weed control. You want to hear complaints about your field condition, have a weedy field. With the loss of MSMA herbicides, our inexpensive post-emergence grassy weed control options are now more limited. I think this swings the pendulum toward more emphasis on pre-emergence programs. Using a good pre-emergence program combined with a post-emergence broadleaf herbicide as needed, will maximize your maintenance dollars and will help ensure you have an attractive, safe field.

Do not forget aerification. A playable field is not rock-hard. An aerification can also reduce some weeds, discourage spring dead spot, reduce thatch, increase water infiltration, and improve plant stress tolerance. So, use whatever you have available for core aerification and do it as often as possible. I do not believe you can core aerify too often.

I think all the other management practices and products are secondary after these three. So be sure the resources are available and
Infields; however, none of the products are specifically labeled for cropland that can effectively remove and prevent weeds on skin areas. The same product used in a turf area may react differently in crop areas they are not specifically cited for use on baseball infield or imazapyr are often recommended in turf, ornamental, and non-skin areas. The same product used in a turf area may react differently in crop areas they are not specifically cited for use on baseball infield or imazapyr are often recommended in turf, ornamental, and non-skin areas.

Always be looking for inexpensive ways to save money. For instance, with soccer fields, move the sidelines and goals in or out to redistribute wear areas. Have open communication with the field user groups so they understand how they can improve the fields by moving their drills around the field. Look at leasing equipment. This can reduce downtime and allow you to use newer equipment with less capital outlay.

My last piece of advice is to go to meetings and learn how others are dealing with reduced budgets. Local, state, and national STMA meetings may be your greatest resource in solving your problems. I believe attending them is time and money well spent. ~ Grady Miller, professor of crop science, North Carolina State

Weeds in baseball infield dirt

Is there a good chemical strategy for control of unwanted vegetation on baseball infields? This is a good question where careful consideration should be given when herbicides are being used. Yes, there are herbicides labeled for use in turf, ornamentals, and non-cropland that can effectively remove and prevent weeds on skin infields; however, none of the products are specifically labeled for use on skin infields.

Remember that pesticides are granted registration partially on how they are used. I have yet to find a pesticide specifically used for baseball skin infields. From my perspective I suggest that you do not use any pre or post emergent herbicides, except glyphosate, on the infield skin because of the intimate contact that players have with the infield dirt surface. Glyphosate offers a quick burn down with no residual soil affects so I still consider it a low-risk pesticide for use on infield skin areas.

Even though preemergence herbicides like oryzalin, prodiamine, or imazapyr are often recommended in turf, ornamental, and non-crop areas they are not specifically cited for use on baseball infield skin areas. The same product used in a turf area may react differently in a baseball skin because there is no organic matter in the infield dirt to tie up the herbicide or to break it down by feeding microbes.

Another group of herbicides that provide total vegetation control are often considered for skin areas but should be avoided. Casoron (dichlobenil) can move with surface water so I would also exclude it from my baseball infield skin list because of its potential to run off the skin area and damage the surrounding turfgrass. Pramitol (prometon) is labeled for use around buildings, storage areas, roadways, airports, highway medians, lumberyards, pipelines, fences, recreational areas, and similar areas where total weed and grass control is needed. It is described as a bare ground herbicide and it will allow nothing to grow for a year. It has a danger signal word and has the potential to be washed from the dirt area and damage the surrounding grass. It is another one I would eliminate from my infield skin management program.

So what can you use to keep weeds out of the infield skin? For existing weeds use glyphosate herbicide. As an alternative vinegar and essential oil-based products seldom have a place for weed control in lawns, but they are ideally suited to quickly burn down the bare soils found on baseball infields. A 20% vinegar solution applied during the heat of the day will kill just about any plant it touches.

The real key to keeping weeds out of the infield is to not neglect field grooming. Unfortunately, many fields are abandoned at summer’s end and weeds take over. Field grooming once a week until frost begins is a good way to keep the fields from turning to weeds. More silt and clay equals more weed growth. Avoid blowing weed seeds into the infield skin. Infields in the Midwest constructed with 4 inches of ag lime help reduce weeds because of the unfavorable alkaline growing condition, but when grooming completely stops weeds like crabgrass, goosegrass, foxtail and knot weed can establish. Young weeds can be rouged out by the tines of various dragging and ball field rakes, however once the weed is past the seedling stage and begins to tiller or make a more aggressive root then it is more difficult to remove with a light weight nail drag. As weeds mature and begin to flower they are extremely difficult to remove.

Grass like weeds such as goosegrass and nutseede, and broadleaf weeds such as knotweed and purslane are especially troublesome on skin infields; don’t let them get big or you will be spending the better part of a day cleaning them out of the infield. A few large weeds can be removed by hoeing or hand pulling; they are easier to pull by hand when the infield is wet. If the field has totally gotten away from you and it is full of weeds then consider killing the weeds with a non-selective herbicide such as Roundup. Scalp mow the dead weeds to minimize plant debris. Try the most aggressive infield groomer you can find on baseball infields. A 20% vinegar solution applied during the heat of the day will kill just about any plant it touches.

(continued on page 10)
have on hand to see if it will remove the clumps of dead weeds.

Some groomers such as the Infield Rascal are designed to remove overgrown infields by cutting the grass clumps and raking them into piles. I prefer cutting the weeds off about a half inch below the surface so the crown and top of the weed is dislodged from the roots. When the roots stay attached to the top of the plant it creates clumps that dislodge a lot of infield dirt making the operation more difficult and just removes dirt during clean up.

If your equipment can’t do the job then try a sod cutter followed by a York or Harley rake. It takes about 6 hours to clean up an overgrown infield and I prefer doing the operation when the field is totally dry and powdery. Sometimes a little moisture helps remove the weeds but don’t schedule this type of work when the field is wet. Operate the equipment slowly to windrow weeds for easy clean up. Many high school coaches that have to manage their own fields are switching to grass between home and first and home and third; less dirt to manage and fewer lips in the critical section of the field.

Players come into intimate contact with the dust and wet soils found on baseball/softball infields. Unnecessary exposure of players to pesticides is what causes mistrust among concerned parents. If you think you are doing something wrong then you probably are! Some vinegar and a good grooming machine go a long way to making safe and attractive infields. – Dr. Dave Minner, professor, Iowa State University

Tips: Training, ideas...
(From page 9)

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How to Get the Equipment You Need – Secrets to Success  
By Jeffry White

The budget challenges facing grounds and turf managers today require skills and knowledge beyond those found in most of our job descriptions. In order to meet fiscal challenges and justify funding needed for new equipment and resources, we must use personal attributes, professional knowledge and business relationships.

For many of us, gone are the days when a manager could simply go to his or her boss, banker, or CFO and state the need for equipment and expect the request to be fully funded. Today we are held accountable for every dollar and even the most necessary or justifiable expenditures are often denied. We are presented with a professional and personal challenge: How do we continue to meet our customer expectations and our own desire to succeed and perform at a high level when faced with likely rejection of capital purchase requests?

Purchasing equipment requires a well-thought-out plan and process. It’s important to remember that you are competing for a slice of your organization’s budget pie and the others are hungry for it, too. Developing a plan, solid talking points based on demonstrable needs, and an effective sales pitch are critical to success. Here are the steps to help achieve your goals.

Define the problem
Make a list of your equipment needs and what these tools are needed for. For example, if you have sand-based fields and no topdresser, a host of problems will result that can affect turf health, quality, playability and player safety. If you have old equipment, or difficult-to-maintain equipment, and no regularly scheduled maintenance, your costs, downtime, crew moral and ability to meet customer expectations will be greatly diminished. Be as specific as possible as to condition, cost, and long-term consequences for continuing to use these items. Remember that you are building a case to ask for funding from stakeholders who must make difficult but sound decisions.

Evaluate
The next important step is to gather information from the people who know your equipment needs best, your crew. Ask them for feedback. Observe their work habits and assess their knowledge, skills and use of equipment. This is particularly important if you are new to the organization. Observe current cultural and maintenance practices as well. Establish rapport with the people you work with and supervise. This demonstrates that you value their opinions and experience, and that you respect their input in making important decisions about equipment purchases. Whenever possible, operate the equipment yourself for an accurate assessment of how things work. At times there is no substitute for a hands-on assessment.

Key questions
Ask yourself and your crew the following questions. You will be asked these same questions when you make your sales pitch for new equipment: Will repairs solve the problem? Are maintenance, personnel, tools and shop facilities adequate? Will used equipment do the job? Is service and parts available? Would leasing be more cost-effective? If purchased, can the equipment be used to benefit other areas or groups in your organization? Those who will be asking you these questions need to justify approval of capital expenditures and need to have clear answers before making financial decisions.

Another important point to consider is one that many groundskeepers and turf professionals are truly gifted at: Can you innovate and create in a way that will reduce cost and still achieve your goals? For example, at Marietta College we were fortunate to be able to purchase much needed equipment using these steps, but we still wanted to stripe our baseball field and did not have a reel mower we could dedicate to the job. However, by purchasing simple stripping kit attachments at little cost, which we attached to our rotary mowers, we were able to creatively pattern our field.

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How to Get the Equipment...

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Budget and cost

Grounds and turf managers are also budget managers. Although you may not make the final decision on purchasing equipment, it’s vital to have an understanding of your role in the budget process. This begins with tracking and recording maintenance costs, especially deferred maintenance. Good records can show that pouring money into old equipment is less cost-effective than purchasing new or good-quality used equipment. This is one of the most effective tools you have. Be sure you understand your budget and its place in the organization’s overall budget picture. Demonstrating a good working knowledge of the budget is important.

The path to purchasing can be smoothed if you partner with another division within your organization. For example, if equipment can be used by the athletics department and general grounds, two budget sources can partner to make the purchase. If the purchase must be delayed, another strategy is to work to have the funding built into the next fiscal year budget. It may be worth the wait. Remember, too, you will likely be required to seek competitive pricing. Make sure your vendors have accurate information for proper costing and fairness. You don’t want to lose a good business relationship by appearing to shop prices while favoring one vendor over another.

Demonstrate return on investment

The final step before making your sales pitch is to list the specific ways your organization will directly benefit from the equipment. Key talking points are: (1) increased productivity, (2) reduced maintenance costs, (3) improved user safety and playability, (4) increased profits, (5) reduced subcontractor costs, (6) more customer referrals, and (7) enhancement of turf grounds to aid in student, staff and faculty retention. It’s important to remember we are in the business of creating attractive environments that lead to positive experiences for all our customers.

The sales pitch

After gathering information and taking the above steps, a meeting should be scheduled with stakeholders. Understanding and using chain of command is important when engaging decision makers. If you have one or more direct reports, be sure to have them on board before a group meeting. They can be your best advocates. Other key players who should be at the table are the CFO or VP for finance, the athletic director, the facilities director, coaches, board members and field managers.

One of the critical components in our success at Marietta College was to engage a sports turf specialist from The Ohio State University Sports Turf Extension program, Pamela Sherratt. With an analysis of our sports fields in hand and an expert at the table, we were able to explain why the proper equipment was needed to maintain our athletic fields. Stakeholders understood that if equipment needs were not addressed, the investment made in our athletic fields, player safety and player performance could be adversely affected. Being well prepared, demonstrating return on investment, and having an advocate were keys to success. Be sure to thank all those involved for their support, too. Expressing gratitude will pave the way for future success.

Education

Finally, it is important to demonstrate professionalism by continuing to educate yourself, your staff and those who use your fields and grounds. Ours is an ever-changing business. New technologies, science, techniques and information are constantly coming into play. As an old hand at grounds management, I can attest that the school of hard knocks is a touch teacher. The knowledge gained from being actively involved in KAFMO and the STMA and the many excellent educational opportunities provided by Penn State and others can make all the difference to you. As professionals it is our responsibility to use all of our resources to build a team of people committed to the vision of great fields and grounds.

Jeffry White is former supervisor of grounds at Marietta College, Marietta, OH who now resides in Maryland.
Athletes interact with a playing surface through falling on it or through complex athlete to shoe to surface interactions. The shoe to surface interaction is referred to as traction. An athletic field should provide a level of traction that benefits the player’s actions without causing excessive stress to joints or ligaments. As a result, we measure traction for two reasons: performance and injury risk. Imagine a wide receiver pushing off at the beginning of a play. What happens at the shoe sole–surface interface is “linear traction.” As linear traction increases, agility and speed increases.

Injury risk is often evaluated by measuring the amount of resistance to shoe rotation. Researchers have proposed that as resistance to rotation increases, the potential for lower extremity injuries increases because a player’s cleats will not “release” from the surface. Another term for this phenomenon is “foot fixation.” Most ACL injuries are due to high rotational torque in the joint. Certainly a “shoe-surface-player” weight combination that produces high rotational resistance is not preferred, but researchers are reporting that non-contact ACL injuries are the result of a complex set of variables including speed to peak rotational resistance, surface hardness, and knee flexion at the time of quad muscle firing to name a few.

While it is clear that many factors can lead to knee injuries, it is not uncommon for the playing surface to be blamed when an athlete injures a knee. Research has shown knee injuries to be more common on traditional (non-infilled) AstroTurf than on natural grass, most likely because of high rotational traction and the resulting “stickiness” of the surface. In general, both natural grass and today’s infilled synthetic turf allow for an easier cleat release, thus reducing strain on the knee. In fact, multiple research studies have shown no difference in injury risk (including knee injuries) between natural grass and infilled synthetic turf.

As you can imagine, measuring traction is not a simple task. The preferred method to measure traction is human performance tests where athletes in designated footwear run time trials or perform other maneuvers where the forces involved are measured. Due to the myriad of shoe and surface types, and player weight and strength variables, it can become expensive and time consuming to measure traction characteristics using human subject tests.

In order to more efficiently measure the shoe to surface interaction, material tests have been developed where a machine is used to imitate human movement and collect traction data. While these machines provide valuable insight concerning the shoe-surface interface, the lay person should not read too much into injury risk predictions generated by material tests. Remember, the complex movements and subtle adjustments made by an athlete are not included when measuring traction using material tests.

At Penn State’s Center for Sports Surface Research, we have developed a traction testing device named “Pennfoot.” Pennfoot’s artificial leg and foot assembly allows us to measure both linear and rotational traction with any shoe on any surface. Additionally, we can simulate various player weights, giving us the opportunity to compare traction measurements for athletes from the Pop Warner league to the NFL. Beginning in 2003, we have been measuring traction on multiple synthetic turf products and publishing the results on our website: http://ssrc.psu.edu. Here you will find traction information from research plots that have been exposed to simulated heavy use for the past 8 years.

There is much more research to be done before definitive traction safety and performance levels can be established. In the meantime, we will continue to produce and disseminate research results that benefit athletes, trainers, and coaches at all levels.

Tom Serensits is Manager of Penn State’s Sports Surface Research Center in University Park. For the latest information from Penn State’s Center for Sports Surface Research, check out our website: www.ssrc.psu.edu. Also, “Like” us on Facebook (Penn State’s Center for Sports Surface Research) and follow us on Twitter @PSUsportsturf.
Meet your peers in KAFMO

DAN FICK  
Northeast Regional Manager, Profile Products

What are your current job responsibilities?
Fick: As a regional sales manager, I manage sales and distribution from Virginia to Maine plus eastern Canada. I am responsible for all sales for four product groups including TURFACE Products, Profile Basic Mulch Products & Accessories, Profile Golf Products, & Profile Engineered Specified Products.

What is the best part of your job?
Fick: The best part of my job is the diversity that I have working for a manufacturer that makes different products; that diversity gives me optimism when some things out of my control come along. There is always “hope or opportunity” to sell product somewhere along the roads I travel. Just meeting the clients we have in distribution that want to sell our products is the best part of my job.

What is the worst part?
Fick: The worst part of my job is the constant travel that I do; it can make for long days and weeks. But it is part of the job that I signed on for. Maybe it’s just the I-95 corridor that wears me down!

Give an example of how being a member of KAFMO has helped you professionally.
Fick: KAFMO has helped me professionally plenty since its inception. I remember Dan Douglas saying that everyone who was “involved” in selling sports field-type products to “get involved” with KAFMO trade shows and educational meetings. And I was probably was one of earliest commercial members to join KAFMO years ago while at Northern Nurseries Professional TURF Division. While working as a manufacturer’s rep with TURFACE Athletics, I have gained even more knowledge along the way. I also get to meet some great groundskeepers who have helped me realize that good information can be shared all the up to the professional level. Simply put, all of us in the sports turf industry have benefitted for organizations like KAFMO because of the sharing of information.

JERRY GEORGE  
Grounds Manager, Shippensburg University

What are your current job responsibilities?
George: As grounds manager at Shippensburg University my job responsibilities are specific to all areas of grounds maintenance of a 200-acre campus. Direct management of grounds and support crews and the varied responsibilities required of them from equipment and product needs to landscape design, plant procurement and installation, and general grounds maintenance activity. In addition directly responsible for maintenance of natural and synthetic D-II athletic and intramural field surfaces, track and field and special event preparation, and camp and conference support.

What is the best part of your job?
George: Plants and people. Here at Shippensburg University, I’ve been fortunate to have had a tremendous amount of opportunity over the years to work with both on a number of projects. It is very rewarding when full scale landscape installation projects or field installations and renovations are

KAFMO MEMBER GIALLORETO JOINS WALKER SUPPLY

Walker Supply Inc. is proud to announce and welcome Nicholas Gialloreto as its new Territory Manager covering the Turf and Ornamental Market specializing in Facility and Field Maintenance. He is based in Pittsburgh, but will also cover PA, WV, OH as well as other areas.

Gialloreto brings extensive experience in field maintenance. He comes to Walker Supply from the Pittsburgh Pirates where he served as a Field Maintenance Supervisor to ensure PNC Park exceeded professional standards. Before joining the Pittsburgh Pirates, he served as a Horticulturalist for the Philadelphia Eagles.

Gialloreto graduated from The Pennsylvania State University with a Bachelor’s degree in Turfgrass Science and holds Pennsylvania Pesticide Applicator Certification. While at Penn State, he completed internships with the Pittsburgh Steelers and at Chartiers Country Club in Pittsburgh. We are very pleased to have Gialloreto on board and look forward to a prosperous future with him.

Rudy: I would have to say the worst part of my job is the unpredictability of the weather and with that unpredictability come variables in our work that is not consistent.

Give an example of how being a member of KAFMO has helped you professionally.
Rudy: Being a member of KAFMO has helped me in so many ways. The greatest example that helps me year after year is learning and networking with fellow members of KAFMO via email, conferences, and other events.

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completed successfully and on time thanks to sound planning and hard work from those involved.

What's the worst part?
George: Although seasonal I suppose campus snow/ice removal. Fortunately the crews are very well equipped for almost any blend of winter weather and the campus community continues to recognize the hard work required annually. But for me, attempting to plan in advance for the proper amount and timing of manpower based on a number of forecast predictions, requires my close attention before and during each event and at times for me removes the beauty of a snowfall until the removal process is complete.

Give an example of how being a member of KAFMO has helped you professionally.
George: Trade-specific vendors and KAFMO membership contacts comes to mind quickly. Trade organizations continue to be a very important tool in any stage of a profession. Quite honestly for some time now I have been a dues-paying but inactive KAFMO member. Having said that I realize just how fortunate I have been over the years thanks to organizations like KAFMO and the business relationships collected from years past as I continue to reference their expertise, product knowledge, and friendship on a regular basis.

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For more information contact Bruce Hoffman:
bruce@martininfieldmix.com
610-367-2011

An Organization Committed to Enhancing the Professionalism of Athletic Field Managers in Pennsylvania.

For Membership information, see pages 12 of this publication, or visit www.KAFMO.org.
### Turfgrass Management Calendar

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Can perform management practice or control at this time. Optimum time to perform management practice or control procedures.

Technical information provided by Dr. Andrew McNitt, Penn State University