

School IPM 2015

Reducing Pest Problems and Pesticide Hazards in Our Nation's Schools

School IPM 2015 Newsletter: October 2012

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Greetings from School IPM 2015!

Every day, 49 million children attend school in the United States, served by nearly seven million teachers and staff. But they're not alone. Schools are also frequented by a number of pests including cockroaches, mice, dust mites and more. Asthma is epidemic among children, impacting nearly 6% of school children nationally with rates as high as 25% in urban centers. Cockroaches are potent asthma triggers.

Integrated Pest Management (IPM) is a prevention-based, highly effective approach proven to reduce pest complaints and pesticide use by up to 90% in schools and other public buildings. IPM practices such as sanitation and exclusion also improve food safety, fire safety and energy conservation. Our newsletter highlights real-life examples of IPM in practice and can help you start an IPM program in your school district. For more information, visit www.schoolipm2015.com.

➔ Fall is the Perfect Time to Overseed in Northern Climates

By: Chip Osborne, Dr. Thomas Green, Jodi Schmitz and Caitlin Seifert

Overseeding, or adding grass seed to established turf, can improve the health and attractiveness of lawns and the playability of athletic fields. Overseeding also promotes thick turf that can outcompete most perennial broadleaf weeds and eliminates bare spots where weeds can gain a foothold, reducing reliance on herbicides.

Assess your turf first

The two most important variables to evaluate before overseeding are the number of grass plants growing in a square foot (density) and the level of soil compaction. No bare ground should be visible in turfgrass areas, although natural density will vary by grass type. Turf varieties with a lower density and coarser leaf texture can require a higher mowing height and more regular overseeding to produce better quality turf. Additionally, some varieties such as fescue do not produce runners, making periodic overseeding more necessary.

Soil compaction is an ongoing challenge in athletic fields. Compaction occurs when air around soil particles, called pore space, is squeezed out. Overseeding a field that is compacted will have little or no long-term benefit; there is simply no room for new turf roots to grow. Compaction can be alleviated mechanically by core aeration, solid tine aeration or slicing to create air space. Additionally, compost top dressing, organic slow-release fertilizers and aggressive overseeding will over time build

What's New This Month

US EPA funded the development of new training modules to help directors and staff in childcare centers manage pests in their facilities. Module topics include an introduction to IPM, mice and rats, cockroaches, bed bugs, flies, ants and head lice. They are available to [download as PDFs](#).

Upcoming Events

October 23, 2012

Indiana IPM Schools Coalition Meeting and Workshop, hosted by Improving Kids' Environment
Bloomington, IN

[More Information](#)

November 13-15, 2012

TIPMAPS/TASBO Second Annual Facility Masters Conference
San Marcos, TX

[More Information](#)

March 1, 2013

California DPR School IPM Workshop
Antioch, CA

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April 27-30, 2013

National School Plant Managers Association Meeting
San Antonio, TX

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soil organic matter and biomass including roots and beneficial organisms such as earthworms, improving resistance to compaction.

Other problems that should be addressed prior to overseeding to ensure seedlings germinate and remain healthy are poor drainage, insufficient or too much water, poor soil fertility and excess thatch. Be sure to note where turf is doing poorly and consider sun and shade. Grasses that need full sun may not thrive in shade and shade-tolerant varieties may wilt in too much sun. In a non-athletic field situation, keep in mind that tree roots compete with grass roots for water and nutrients. Grass growing around trees may have a harder time becoming established. The right plant in the right place is the rule for turf and other plants.

Timing

In northern regions of the US, the fall is the best time to grow grass. The genetics of cool-season turf grasses are such that shorter, cooler days in fall are ideal for seeding and establishment. If an herbicide is to be used, delay treatment for four to six weeks after the new grass seed germinates. Herbicides can be harsh on seedlings and can be a major cause of poor seedling establishment. In southern regions, the best time to overseed is when the warm-season grass is slowing down, or about two weeks prior to the first frost. Deep southern regions can overseed into November and December.

Choosing the right variety

Seed choice is largely determined by the area's climate. Western, northern and eastern areas of the US generally need cool season grasses such as Kentucky bluegrass, perennial rye grass and fine and tall fescues. In these regions, bentgrass is preferable for golf courses and tennis and croquet courts. Warm season grasses such as Bermuda grass, centipedegrass and Bahiagrass are better suited to the Southern regions of the US.

Purchase good quality seed native to your area whenever possible. Mixtures of two or more species of grass can help reduce losses in the event of disease. Avoid buying seed with a high percentage of weed seeds. Check the label; any less expensive mixtures contain a high percentage of weed seeds. Consider looking at national and local turf trial results, which should be available for most seed species and cultivars.

Proper watering for good seed-soil contact

The most important factor governing seed germination is seed to soil contact. A heavy watering immediately after seeding will help achieve this contact. Water lightly on a daily basis until the grass seed germinates, which is generally about ten to twenty days. After germination, water less frequently but soak deeply to encourage deeper root growth. After the seedlings become established, water at the recommended level for the type of grass used.

Overseeding technique

Before seeding, rake and dethatch the turf if necessary. Then, simply broadcast the seed by hand or with a spreader, or use a "slit seeder" which opens a small furrow in established turf by cutting through the thatch layer. Slit seeding offers better seed to soil contact, so less seed may be needed than with broadcast seeding. To avoid a striped appearance when the new grass grows, consider making two passes, each at 50 percent of the recommended rate, and at 45 degree angles to each other. This diamond pattern will more evenly distribute the new seed over the turf area.

If you broadcast the seed, aerate the turf several times before seeding to expose more soil. Core aerating tines that remove soil plugs are best. After seeding, water heavily right away. Seeds can get stuck in the thatch layer or grow only in the aeration holes, giving the turf a spotted look. Grasses such as Kentucky bluegrass have a creeping growing method that can deter clumping.

Regardless of how you overseed, keep records of your pre-assessment, the methods you use and your results. Those records will be invaluable to help you learn what works best for your climate and sites.



Calculate Your School District's IPM Budget and Pest Risk

Texas AgriLife Extension school IPM extension specialists Mike Merchant and Janet Hurley have created an online [IPM cost calculator](#) to help schools estimate pest risk and IPM costs. The calculator includes an online questionnaire that leads the user through an IPM inspection, much like the inspection Hurley conducts when she visits a school.

After data from the inspection are entered, the calculator generates a "pest risk report card" with a letter grade from 'A' to 'F'. A graph indicates the top five possible sources of pest entry, food, water or harborage that need to be addressed, such as exterior garbage areas, external doors or windows.

"The calculator teaches you why each problem contributes to the pest problem," says Merchant. "For instance, the distance of the dumpsters from the building can affect the proximity that rodents have to the doors. So it's a teaching as well as a data collection tool." A score is also given for each predominant pest in the area, such as rats, mice, cockroaches and mold, along with a comparison of the school's score to the probability of each pest in that zip code.

The budget tool allows IPM coordinators to enter items needing repair or replacement, and cost per item. Because IPM costs can be higher initially and decrease over time, it is vital for school officials to get an accurate picture of long-term costs and benefits.



Outdoor and Field School IPM

IPM isn't just for school buildings. In August, US EPA Region 2 hosted Outdoor and Field School IPM, a webinar on incorporating IPM into outdoor management routines. The webinar was geared toward school administrators, IPM coordinators, grounds maintenance staff and contractors.

Challenges for school outdoor environments include limited budgets, weather, variability among sites, and a wide variety of pests including insects, diseases and weeds. Benefits of outdoor school IPM include a healthier environment, better long-term control of pests, reduced liability, lower costs and reduced pesticide use.

Tips from the webinar:

- Designate an IPM coordinator to spearhead development and implementation of turf and landscape IPM plans. Gaining buy-in

from school administrators helps achieve long-term success. An IPM coordinator can be a key liaison between field staff and management.

- Develop site-specific management plans appropriate for intended use, pest tolerance levels and maintenance standards. A hierarchy might include:
 - Highest care - high visibility grounds, varsity and practice fields
 - Moderate care - playground areas, multipurpose fields and common grounds
 - Lowest care - low use, utility areas, property lines, ditches and natural areas
- Establish a monitoring and recordkeeping system. Follow tolerance levels for specific pests set by Extension to limit interventions to when they are truly needed, reducing costs.
- Accurately identify any pests and learn pest life cycles to improve timing and efficacy of any intervention. The webinar identifies common insect pests, plant diseases, weeds and vertebrate pests.
- Identify problem areas. Walls, fence lines, tables, benches, picnic tables, bleachers and other objects often provide harborage for insect pests and complicate vegetation management. Mowing strips and underlayments can be created using concrete or brick surfaces under landscape features or next to fences, eliminating the need to apply herbicides or trim where mowers cannot reach. Standing water in playground equipment, especially tire swings, is a breeding ground for mosquitoes.



Mowing strip used to reduce pesticide use on areas that are not easily reached by mowing.

Turf varieties and landscape plants have unique pH, soil type and sunlight exposure requirements. Many problems can be avoided simply by putting the right plant or variety in the right place. Fertilize plants according to soil or foliar analysis results. Irrigate deeply and less frequently to encourage deep rooting. Increase turf mowing height to reduce stress. Spot treat problem areas to save time and reduce costs. Keep records of plant locations, planting dates, irrigation, fertilization, aeration or other cultural interventions, and any problems. Evaluate results to identify opportunities for improvement.

For more information on turfgrass IPM click [here](#) and for IPM on lawns and landscapes click [here](#).