

## Turf Maintenance Schedule School IPM Program, Iowa State University

<b>Cultural practices</b>	<b>Highest Care:</b> <ul style="list-style-type: none"> <li>• Athletic game fields</li> <li>• Athletic practice fields</li> </ul>	<b>High Care Grounds:</b> <ul style="list-style-type: none"> <li>• Multipurpose fields</li> <li>• Playground fields</li> <li>• High visibility grounds</li> </ul>	<b>Moderate Care Grounds:</b> <ul style="list-style-type: none"> <li>• Common ground areas</li> <li>• Low use areas</li> </ul>	<b>Lowest Care:</b> <ul style="list-style-type: none"> <li>• Utility areas, slopes, ditches</li> <li>• Natural areas</li> <li>• Fence lines/ property edges</li> </ul>
<b>Turf goal and expectation</b>  <i>On a scale of 1-10:</i> 10 = best turf quality & operation 5 = lowest acceptable quality 1 = poorest turf quality	<b>Turf rating of 9-10</b> <ul style="list-style-type: none"> <li>• Receives intense human contact and high visibility</li> <li>• Protective cover of grass, thatch, and mat of primary concern for player safety</li> <li>• Turf color is less important, but patrons desire mower pattern striping</li> <li>• Very routine schedule of turf management activities</li> </ul>	<b>Turf rating of 7-8</b> <ul style="list-style-type: none"> <li>• Moderate human contact and visibility</li> <li>• Primarily viewed from a distance; pleasant and neat appearance is key</li> <li>• Some routinely scheduled turf maintenance activities with many used only as needed</li> </ul>	<b>Turf rating of 5-6</b> <ul style="list-style-type: none"> <li>• Limited human activity</li> <li>• Primarily viewed from a distance</li> <li>• Limited turf maintenance activities</li> </ul>	<b>Turf rating of 1-4</b> <ul style="list-style-type: none"> <li>• Primary function is to maintain adequate vegetative cover to prevent erosion</li> <li>• Occasional mowing</li> </ul>
<b>Turf quality</b>	Uniform to good turf density, relatively weed-free surface, no bare soil	Uniform to good turf density, relatively weed-free surface, no bare soil	Good to moderate turf density, some weed species, some bare soil	Moderate to poor turf density, weed species and some bare soil present
<b>Irrigation</b>	Mandatory to promote active growth and recovery	As needed to promote active turf growth and prevent summer dormancy	Not required, allow summer dormancy to occur	Natural rainfall only
<b>Weed tolerance</b> Tolerance is dependent on weed species present	Weed level < 10%	Weed level < 20%	Weed level 20-50%	Control only undesirable or noxious weeds
<b>Aeration</b> <ul style="list-style-type: none"> <li>• Solid tine</li> <li>• Hollow core</li> <li>• Shatter</li> </ul>	2-6 times/ year at a depth of 3 inches using a combination of hollow core, solid tine, or shatter aerification  Deep tine or shatter to a depth of 8 inches at least once per year.  Intense traffic areas such as practice fields require the most aeration	1-2 times/ year as needed  A combination of hollow core, solid tine, or shatter aerification suggested	Once every two years or as needed	Never

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<p><b>Fertilization</b></p> <ul style="list-style-type: none"> <li>• Combination of slow and quick release nitrogen (N)</li> <li>• 0.5 to 1.5 lbs N/1000 sq.ft. per application depending on N source and application date.</li> <li>• Phosphorus and potassium only as per soil test</li> </ul>	<ul style="list-style-type: none"> <li>• 0.5 to 0.75-lb N/1000 sq.ft. / growing month from May through November</li> <li>• Phosphorus and potassium only as per soil test</li> <li>• Sand based fields may require additional fertilizer</li> </ul>	<ul style="list-style-type: none"> <li>• 2-4 lbs N/1000 sq.ft. /yr with 2/3 annual N in the fall and 1/3 in the spring</li> <li>• Phosphorus and potassium only as per soil test</li> </ul>	<ul style="list-style-type: none"> <li>• 1-2 lbs N/1000 sq.ft. /yr with 2/3 annual N in the fall and 1/3 in the spring.</li> <li>• Phosphorus and potassium only as per soil test</li> </ul>	<p>Seldom to never</p>
<p><b>Mowing height &amp; frequency</b></p> <p>Do not remove more than 1/3 of plant height each time grass mowed</p>	<p>1 to 3 inches depending on the type of sport and required playing schedule</p>	<p>2 to 3 inches</p>	<p>Not less than 2.5 inches</p>	<p>As needed to maintain function of area</p>
<p><b>Pre-emergent herbicide use</b></p>	<ul style="list-style-type: none"> <li>• Develop specific program for crabgrass, knotweed, and broadleaf weeds as needed</li> <li>• Coordinate with annual overseeding program so desirable turf seed is not damaged</li> </ul>	<p>Apply pre-emergent herbicide in spring primarily for crabgrass if needed; based on weed monitoring during the previous year</p>	<p>Early spring as needed</p>	<p>Usually not applied</p>
<p><b>Post-emergent herbicide use</b></p> <p><i>Goal:</i> to produce a healthy, thick turf that out competes broadleaf weeds</p> <p>Broadleaf herbicides should be applied based on monitoring reports; to reduce weed population to acceptable levels</p>	<ul style="list-style-type: none"> <li>• Broadleaf weed control in spring or fall is more effective but applications may be more desirable during the summer when school is not in session</li> <li>• Effective post-emergent crabgrass control is available and may be used as an alternative to routine pre-emergent crabgrass applications when areas of crabgrass are limited</li> </ul>	<ul style="list-style-type: none"> <li>• Broadleaf applications spring or fall every 2-3 years, only as needed</li> <li>• Effective post-emergent crabgrass control is available and may be used as an alternative to routine pre-emergent crabgrass applications when areas of crabgrass are limited</li> </ul>	<p>Broadleaf weed control only as needed from monitoring reports</p>	<p>Usually not applied</p>

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<p><b>Insect Control</b></p> <p>White grubs are the primary insect problem for Iowa. Damage is often site specific &amp; therefore a site-specific strategy should be practiced</p> <p>Turf injury from white grubs occurs from late August through mid-October</p>	<ul style="list-style-type: none"> <li>Beginning of football season coincides with peak turf injury from white grubs</li> <li>Preventative grub control may be necessary on fields that have a history of injury from grubs</li> <li>A grub monitoring program in August can indicate if curative insecticide applications are needed</li> <li>Irrigate as needed to promote grass root growth in mid to late summer</li> </ul>	<ul style="list-style-type: none"> <li>A grub monitoring program in August can indicate if curative insecticide applications are needed</li> <li>Irrigate as needed to promote grass root growth in mid to late summer</li> </ul>	<ul style="list-style-type: none"> <li>A grub monitoring program in August can indicate if curative insecticide applications are needed</li> <li>White grub adults often avoid low maintenance non-irrigated turf</li> <li>Treatment seldom needed</li> </ul>	<p>Never</p>
<p><b>Overseeding</b></p>	<ul style="list-style-type: none"> <li>August – November as needed</li> <li>March – May to repair worn turf areas</li> </ul>	<p>Primarily September through Mid-October or April as needed to renovate old areas or establish new grass areas</p>	<p>Without irrigation seed only from September to Mid-October</p>	<p>Never</p>
<p><b>Topdressing</b></p>	<p>Apply topdressing in combination with aerification to prepare seed bed, modify soil, and smooth field.</p>	<p>Never</p>	<p>Never</p>	<p>Never</p>
<p><b>Trouble shooting</b></p> <ul style="list-style-type: none"> <li>Bare soil – thin turf</li> </ul>	<p>Maintain vegetative cover by repeated seeding or sodding any time soil is exposed. This may involve 4 to 8 seedings per year.</p> <p>Seeding strategies include:</p> <ul style="list-style-type: none"> <li>Drill seeding in 2 - 4 directions</li> <li>Use pregerminated seed and sand as a divot mix to fill worn areas and divots</li> <li>Allow players or solid tine aerifier to “cleat-in” seed that is broadcast before each game</li> </ul>	<p>Drill seed or broadcast seed and drag in combination with aerification. Seed from Aug 20 through Sept 30.</p> <p>A field assessment and traffic control strategy should be specifically developed for each field.</p>	<p>Seldom to never. Seed in September when water adequate moisture is anticipated.</p>	<p>Seldom to never. Only if turf cover is lost and erosion or other problems are anticipated. Seed in September when adequate moisture is anticipated.</p>

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<p><b>Trouble shooting (cont.)</b></p> <ul style="list-style-type: none"> <li>Bare soil – thin turf</li> </ul>	<p>Areas such as soccer goals and between the hash marks of football fields may require resodding every 1 to 3 years.</p> <p>A field assessment and traffic control strategy should be specifically developed for each field.</p>			
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