

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

Cultural practices	Highest Care	High Care Grounds	Moderate Care Grounds	Lowest Care
Examples of sites	<ul style="list-style-type: none"> • Athletic game fields • Athletic practice fields 	<ul style="list-style-type: none"> • Multipurpose fields • Playground fields • High visibility grounds 	<ul style="list-style-type: none"> • Common ground areas • Low use areas 	<ul style="list-style-type: none"> • Utility areas, slopes, ditches • Natural areas • Fence lines/ property edges
Turf goal and expectation <i>On a scale of 1-10:</i> 10 = best turf quality & operation 5 = lowest acceptable quality 1 = poorest turf quality	Turf rating of 9-10 <ul style="list-style-type: none"> • Receives intense human contact and high visibility • Protective cover of grass, thatch, and mat of primary concern for player safety • Turf color is less important, but patrons desire mower pattern striping • Very routine schedule of turf management activities 	Turf rating of 7-8 <ul style="list-style-type: none"> • Moderate human contact and visibility • Primarily viewed from a distance; pleasant and neat appearance is key • Some routinely scheduled turf maintenance activities with many used only as needed 	Turf rating of 5-6 <ul style="list-style-type: none"> • Limited human activity • Primarily viewed from a distance • Limited turf maintenance activities 	Turf rating of 1-4 <ul style="list-style-type: none"> • Primary function is to maintain adequate vegetative cover to prevent erosion • Occasional mowing
Turf quality	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
Irrigation	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
Weed tolerance Tolerance is dependent on weed species present	Weed level < 10%	Weed level < 20%	Weed level 20-50%	Control only undesirable or noxious weeds
Aeration <ul style="list-style-type: none"> • Solid tine • Hollow core • Shatter 	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>Fertilization</p> <ul style="list-style-type: none"> • Combination of slow and quick release nitrogen (N) • 0.5 to 1.5 lbs N/1000 sq.ft. per application depending on N source and application date. • Phosphorus and potassium only as per soil test 	<ul style="list-style-type: none"> • 0.5 to 0.75-lb N/1000 sq.ft. / growing month from May through November • Phosphorus and potassium only as per soil test • Sand based fields may require additional fertilizer 	<ul style="list-style-type: none"> • 2-4 lbs N/1000 sq.ft. /yr with 2/3 annual N in the fall and 1/3 in the spring • Phosphorus and potassium only as per soil test 	<ul style="list-style-type: none"> • 1-2 lbs N/1000 sq.ft. /yr with 2/3 annual N in the fall and 1/3 in the spring. • Phosphorus and potassium only as per soil test 	Seldom to never
<p>Mowing height & frequency</p> <p>Do not remove more than 1/3 of plant height each time grass mowed</p>	1 to 3 inches depending on the type of sport and required playing schedule	2 to 3 inches	Not less than 2.5 inches	As needed to maintain function of area
<p>Pre-emergent herbicide use</p>	<ul style="list-style-type: none"> • Develop specific program for crabgrass, knotweed, and broadleaf weeds as needed • Must be coordinated with annual overseeding program so desirable turf seed not damaged 	Apply pre-emergent herbicide in spring primarily for crabgrass if needed; based on weed monitoring during the previous year	Early spring as needed	Usually not applied
<p>Post-emergent herbicide use</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"> • 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 • 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 	<ul style="list-style-type: none"> • Broadleaf applications spring or fall every 2-3 years, only as needed • 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 	Broadleaf weed control only as needed from monitoring reports	Usually not applied

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<p>Insect Control</p> <p>White grubs are the primary insect problem for Iowa. Damage is often site specific & 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"> • Beginning of football season coincides with peak turf injury from white grubs • Preventative grub control may be necessary on fields that have a history of injury from grubs • Our grub scouting and turf injury survey for athletic fields indicates that 1-4 grubs/sqft is the threshold level for pesticide treatment (based on 28 samples evenly spaced over a football field). • Irrigate as needed to promote grass root growth in mid to late summer 	<ul style="list-style-type: none"> • A grub monitoring program in August can indicate if curative insecticide applications are needed (grub threshold level 9/sqft. • Irrigate as needed to promote grass root growth in mid to late summer 	<ul style="list-style-type: none"> • A grub monitoring program in August can predict if curative insecticide applications are needed • White grub adults often avoid low maintenance non-irrigated turf • Treatment seldom needed 	<p>Never</p>
<p>Overseeding</p>	<ul style="list-style-type: none"> • August – November as needed • March – May to repair worn turf areas 	<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>Topdressing</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>

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<p>Trouble shooting</p> <ul style="list-style-type: none"> Bare soil – thin turf 	<p>Maintain vegetative cover by repeated seeding or sodding any time soil is exposed. This may be 4 to 8 seedings per year. Seeding strategies include: drill seeding in 2 to 4 directions, use pre-germinated seed and sand as divot mix to fill worn areas and divots, allow players or solid tine aerifier to “cleat-in” seed that is broadcast before each game. Areas such as soccer goals and between the hash marks of football fields require resodding every 1 to 3 years. A field assessment and traffic control strategy should be specifically developed for each field.</p>	<p>Drill seed or broadcast seed and drag in combination with aerification. Seed from Aug 20 through Sept 30.</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>