

Guidelines for Sport-Field Management

by: L.L. Burpee
The Guelph Turfgrass Institute

Annette Anderson
OMAF Turfgrass Extension Specialist

The development of a strategy for sports field management is influenced by many environmental and economic factors. Therefore, it is impossible to develop a single set of recommendations that will result in acceptable playing surfaces on all sports-fields. The following guidelines are based on what we believe to be sound techniques for turfgrass management. Although specific modifications of these guidelines may be adopted, the key to successful sports-field management is to apply cultural practices on a consistent and regular basis.

TIME	CULTURAL PRACTICE	COMMENTS
15 April to 15 May	Core aerification	Core in two directions: North-South and East-West.
	Redistribute soil cores	Use drag mat, brush, or harrow in 2 directions.
	Overseed with turf-type perennial ryegrass if turfgrass is thin	Seed in 2 directions at a rate of 140 - 180 kg/ha (3-4 lbs./100 sq.ft. or 131-174 lbs/acre) in each direction.
	Apply "starter" fertilizer* (15-30-15 or similar 1:2:1 ratio). Apply 25-5-10 or similar 4:1:2 ratio if not overseeding.	Apply in two directions at a rate of 12 kgN/ha (0.25 lbsN/sq.ft. or 11 lbsN/acre) in each direction.
	Broadleaf weed control	Accomplished best in September or October. However, spring treatments of 2,4-D, mecoprop and/or dicamba may be applied 1-2 weeks before overseeding or 4-6 weeks after seedling emergence. See labels for rates.
15 June, 15 July 15 August	Apply fertilizer* (25-5-10 or similar 4:1:2 or 5:1:2 ratio)	Apply in two directions at a rate of 12kgN/ha (0.25 lbsN/1000 sq. ft. or 11 lbsN/acre) in each direction. At least half of the nitrogen should be in slow release form.
1 September to 15 September	Repeat core aerification	Core in two directions, then use drag-mat in two directions.
	Overseed with turf-type perennial ryegrass	Use rates that are recommended for spring seeding. Fall seeding is not recommended for poorly drained areas or areas north of 50° latitude.
	Apply "starter" fertilizer* (15-30-15 or similar ratio). Apply 25-5-10 if not overseeding. Broadleaf weed control.	Use rates that are recommended for spring application. See recommendations for spring application.
30 September <u>and</u> 15 October	Apply fertilizer* (25-5-10 or similar ratio)	Use rates that are recommended for summer applications.
After 20 November	Apply "dormant" fertilizer (25-5-10 or similar ratio)	Apply in two directions at a rate of 24 kgN/ha (0.5 lbsN/1000 sq.ft. or 22 lbsN/acre) in each direction.

*The application of phosphorous and potassium to turf areas should be based on soil test results. Soil samples should be taken to a depth of 15 cm.

Fertilizer recommendations are often based on pounds of actual (elemental) Nitrogen applied. By using the following calculation you can determine the application rate of any Nitrogen fertilizer formulation.

To apply 1 pound actual N/1000 sq.ft. (0.5kgN/100m2)

$$\frac{100}{\% \text{ nitrogen in the fertilizer}} \times 1 \text{ lb.N/1000 sq.ft.} = \text{lbs. fertilizer/1000 sq. ft.}$$

or

$$\frac{100}{\% \text{ nitrogen in the fertilizer}} \times 0.5 \text{ kgN/100m}^2 = \text{kg fertilizer/100 m}^2$$

Example:

How much 25-10-10 fertilizer would be required to apply 0.5 lbsN per 100 sq ft?

$$\frac{100}{25} \times 0.5 \text{ lbsN} = 2 \text{ lbs. 25-10-10}$$

(to convert this to lbs./acre, multiply by 43.56. $2 \times 43.56 = 174.24 \text{ lbs/acre}$ 25-10-10 are required.

TO OBTAIN 1 LB.N (0.5 KgN)

% Nitrogen in Fertilizer	LBS /1000 FT ² (KG/100 M ²)	LBS/ ACRE (KG/HA)
5	20.0 (9.75)	871 (975)
6	16.7 (8.14)	727 (814)
7	14.3 (6.98)	623 (698)
8	12.5 (6.1)	545 (610)
9	11.0 (5.36)	479 (536)
10	10.0 (4.88)	436 (488)
11	9.0 (4.39)	392 (439)
12	8.0 (3.91)	349 (391)
13	7.7 (3.75)	335 (375)
14	7.0 (3.42)	305 (342)
15	6.7 (3.27)	292 (327)
16	6.3 (3.07)	274 (307)
17	5.9 (2.88)	257 (288)
18	5.6 (2.73)	244 (273)
19	5.2 (2.54)	227 (254)
20	5.0 (2.44)	218 (244)
21	4.8 (2.34)	209 (234)
22	4.5 (2.20)	196 (220)
23	4.4 (2.15)	192 (215)
24	4.2 (2.05)	183 (205)
25	4.0 (1.95)	174 (195)
26	3.9 (1.90)	170 (190)
27	3.7 (1.80)	161 (180)
28	3.6 (1.76)	157 (176)
29	3.5 (1.700)	152 (170)
30	3.3 (1.61)	144 (161)

Report on Second Annual Turfgrass Research Field Day

The second annual Turfgrass Research Field Day was held at the OMAF Horticulture Research Station at Cambridge on August 27, 1987. This event was sponsored by the Ontario Turfgrass Research Foundation (OTRF), The Guelph Turfgrass Institute (GTI), and the Ontario Ministry of Agriculture and Food (OMAF).

The field day was started at noon with a barbeque lunch, which was followed by a tour of the turfgrass research plots and several equipment demonstrations. A large caliper tree was also planted on the site by Douglas Woods Large Tree Sales Limited.

According to Annette Anderson, OMAF's Turf Extension Specialist, over 250 people had been registered to attend the field day. This event attracted people from all sectors of the

turfgrass industry, including athletic field managers, golf course superintendents, sod growers, lawn care professionals, and parks and recreation personnel.

Participants were invited to view the plots at their own leisure after a welcome from GTI Director Lee Burpee. All research plots were numbered and participants were given a corresponding book which outlined the objectives, methods and observations of each experiment. Individual researchers were also on hand to answer more specific questions.

Photo: GTI Director Dr. Lee Burpee welcomes delegates to the second annual turfgrass research field day, held in Cambridge on August 27. Article and photo courtesy of Horticulture Review.

