

Guide to Fertilising Bowling Greens

Soil testing

How often?	Generally soil testing should be carried out every 3-4 years, unless: <ul style="list-style-type: none"> ▪ A nutrient deficiency has been previously identified on the green ▪ The green is not responding to your present fertiliser programme
When?	Soil testing should be carried at the same time of the year (typically this is best completed 6-8 weeks prior to renovation)
How?	Approximately 20 plugs should be taken to a depth of 50mm (or the same sampling depth previously used) randomly across the green
Fertiliser programme	Your NZSTI advisor is presently able to provide an interpretation and specific fertiliser plan for your greens

Seasonal fertiliser objectives

SEASONAL FERTILISER OBJECTIVES			
Season	Cotula dioica	Cotula maniototo	Starweed
Autumn	<ul style="list-style-type: none"> ▪ Correct the pH ▪ Correct phosphorous levels ▪ Correct magnesium levels ▪ Frequent applications (approximately fortnightly) of nitrogen to quickly reinstate a complete cover following renovation 		<ul style="list-style-type: none"> ▪ Correct the pH ▪ Correct phosphorous levels ▪ Nitrogen is unnecessary on pure Starweed greens. ▪ For mixed greens, discuss the nitrogen programme with your NZSTI advisor.
Winter	<ul style="list-style-type: none"> ▪ Nitrogen can be applied if required to achieve full cover (in regions where growth still occurs). ▪ Correct magnesium deficiencies 	<ul style="list-style-type: none"> ▪ Discontinue nitrogen once a full cover is achieved or the maniototo changes to its winter leaf. ▪ Correct magnesium deficiencies 	<ul style="list-style-type: none"> ▪ Correct magnesium deficiencies.
Spring	<ul style="list-style-type: none"> ▪ Unless essential, nitrogen fertilisers should be avoided as they will encourage disease and a soft, wear prone playing surface. Contact your NZSTI Advisor before applying nitrogen fertiliser ▪ Correct magnesium deficiencies 		<ul style="list-style-type: none"> ▪ Correct magnesium deficiencies
Summer	<ul style="list-style-type: none"> ▪ Applications of potash to assist with maintaining a hard wearing playing surface. 		<ul style="list-style-type: none"> ▪ Applications of potash to assist with maintaining a hard wearing playing surface and encouraging seeding during the following autumn.

Contact your NZSTI advisor for a fertiliser programme specifically tailored to your greens.

Common growth related problems managed with fertiliser use

Problem/situation	Playing Surface			Comment
	Dioica	Maniototo	Starweed	
Weak turf cover present in spring	X	X		<ul style="list-style-type: none"> Insufficient nitrogen applied during autumn – early winter.
Colobanthus content is increasing within the green	X	X		<ul style="list-style-type: none"> Cotula was very dormant prior to renovation. Pre renovation applications of Nitrogen will address this.
Green is very susceptible to <i>Sclerotinia minor</i> or Brown patch	X	X	X	<ul style="list-style-type: none"> Applications of Potash will reduce severity of disease. Use of either nitrogen or soil (due to its fertilising effect) during spring – playing season.
Poor Cotula vigour in spring Yellowing (even after nitrogen applications), variable or stunted growth and is more common on recently planed greens.	X minor	X		<ul style="list-style-type: none"> Possible magnesium deficiency. Discuss your latest soil test results with NZSTI advisor.
Winter leaf maniototo		X		<ul style="list-style-type: none"> Apart from new sowings, nitrogen is not required by maniototo when it is in its winter leaf stage.
Fertiliser burn on the turf	X	X	X	<ul style="list-style-type: none"> Fertiliser applied in hot or dry conditions. Fertiliser not washed in adequately. During the playing season, fertilisers should ideally be dissolved, sprayed onto the greens and syringed off the leaf with 2-3 rotations of the sprinklers.

Additional information

The “Establishment & Management of Natural Bowling Greens in New Zealand” manual.

NZSTI SPORTS TURF ADVISORS – CONTACT DETAILS			
Alex Glasgow 09 529 5064 027 496 2486 alexg@nzsti.org.nz	Everett Darlington 09 529 486 027 232 4545 edarlington@nzsti.org.nz	David Ormsby 07 846 7698 027 442 8053 davido@nzsti.org.nz	Megan Cushnahan 06 355 7021 027 220 9957 mcushnahan@nzsti.org.nz
Andrew Mitchell 06 356 8090 ext 722 027 662 0148 amitchell@nzsti.org.nz	Brendan Hannan 06 355 7024 027 442 8046 bhannan@nzsti.org.nz	Chris Gribben 06 355 7026 027 552 4488 cgribben@nzsti.org.nz	Jaymie Batchelor 03 323 8010 027 446 2874 jbatchelor@nzsti.org.nz
David Howard 03 477 7333 027 446 2875 dhoward@nzsti.org.nz	www.nzsti.org.nz		