



# FERTILISING GOLF COURSES NEW SOUTH WALES & QUEENSLAND

This Fact Sheet contains brief, general information. A more detailed Agritopic is available on this topic.

Fertiliser programs may need to be varied depending on the grass species being grown, the soil's fertility, and cultural practices.

Avoid loss of nutrients to waterways.

## FAIRWAYS

Couch fairways respond well to fertiliser, particularly over the warmer months of the year. Responses will be slower over winter when the cooler temperatures slow grass growth. The vigour and colour of the grass can be used as a guide to when it is necessary to reapply fertiliser. Nitrogen deficient grass will have a pale green colour and be slow to grow.

Any one of the following fertilisers, depending on which products are available locally, can be used on fairways. Incitec Pivot Shirleys No 17 Lawn Food (S) and Multigro are formulated at Newcastle, while CK 88® is formulated at Brisbane, Mackay, Townsville, and Cairns. Granulock® Blue, an imported compound fertiliser, is available from all these supply points.

Table 1.

Product	Nitrogen % N	Phosphorus % P	Potassium % K	Application Rate	
				kg/ha	kg/100 m <sup>2</sup>
Shirleys No 17 Lawn Food (S)	9.1	3.8	4.9	500 – 600	5 - 6
Multigro	13.1	4.5	7.2	300 – 400	3 - 4
CK 88	15.1	4.4	11.5		
Granulock® Blue	12.0	5.2	14.1		

The chosen fertiliser can be applied at these rates three or four times per year, e.g. in September, December and March, the interval between applications being extended during the winter months when growth is slowed.

It is best to water the fertiliser into the soil. Where possible, this should be done soon after fertilising and on the day of application. Fertiliser granules and dust that lodge on plant leaves may dissolve in overnight dew and burn the foliage.

Applying fertiliser when rain is forecast may avoid the need to water the fertiliser in, provided enough rain falls to wash the fertiliser from the foliage into the soil. 10 mm of rain in the one fall should be adequate for this to occur. Light rain or showers will have the same effect as dew, enough to dissolve the fertiliser but not enough to wash it off the leaves and into the soil. The risk of leaf burn is

increased if fertiliser is applied to wet grass, causing the fertiliser to stick to rather than fall through the foliage, and no further rain is received.

## GREENS AND TEES

Regular, monthly application of fertilisers to greens and tees is recommended. This allows fertiliser requirements to be matched to grass growth, keeping greens and tees in good order and minimising loss of nutrients through leaching. Given the nature of soils used in greens and tees and the shallow rooting depth of the grasses, nutrients can easily be lost through leaching.

While dry granular fertilisers can be used, the application of fertilisers in solution (dissolved in water) is ideally suited to greens and tees. Solutions provide evenness of fertiliser application, which is important on greens and tees, and are a convenient way to apply fertiliser if it can be applied with the irrigation water.

When preparing fertiliser solutions, soluble fine (solution grade) fertilisers should be used. Granular fertilisers such as Incitec Pivot CK 88 and Granulock® Blue should not be used for this purpose, as they contain insolubles, which will settle to the bottom of mixing tanks, and block filters.

Except for Liquifert N, a urea fertiliser with a smaller granule size than Granular Urea, Incitec Pivot no longer markets a complete range of solution grade fertilisers. The products mentioned in the following programs will need to be sourced elsewhere.

Incitec Pivot presents this information as a reference for greenkeepers. Either of the following programs can be used to supply nitrogen, phosphorus, potassium, and sulphur monthly, over an area of 100 square metres.

Table 2: Monthly fertiliser requirements (grams/100 square metres) for Greens and Tees.

Product	Program A	Program B
Urea (Liquifert N)	400 g	300 g
Ammonium sulphate		100 g
MAP	100 g	100 g
Potassium nitrate		275 g
Potassium sulphate	250 g	

The programs are for both greens and tees. The latter often miss out, and their treatment should be tied in with the greens schedule for watering, mowing, topdressing, and fertilising.

The ingredients should be dissolved in water, e.g. in a 50 L drum, the contents of which can be injected into the irrigation line or applied by a Venturi sprayer to provide even application over tees and greens. If applied as a spray, water the green or tee immediately after application, to wash the fertiliser solution off the leaves. This avoids the risk of leaf burn.

Over summer, during the wetter months of the year when the turfgrasses are growing most actively, it may be best to apply nitrogen on a more regular basis at lower rates, so that cumulatively a little more nitrogen is applied. Rather than apply urea once a month, as detailed in the above programs, reduce the amount of urea applied by 150 g per 100 square metres (to 250 g in Program A and 150 g in Program B), and two weeks later, in between the monthly NPKS applications, apply an additional 250g urea per 100 square metres on its own.

## FURTHER READING

This Fact Sheet contains brief, general information. A more detailed Agritopic is available on this topic.

## SAFETY DIRECTIONS

Refer to the Safety Data Sheet (SDS) for more detailed safety advice. Before use, read the Product Label and the SDS. Use safe work practices and avoid contact with the eyes and skin. Avoid ingestion and inhaling dust. Protective clothing, eyewear and dust masks should always be used when dealing with this product. Observe good personal hygiene, including washing hands after use. Avoid loss of fertiliser to waterways.

## WARNING

This document contains information of a general nature. Before using fertiliser seek independent agronomic advice. Fertiliser programs may need to be varied depending on the plants being grown, climatic and soil conditions, application methods, irrigation, agricultural and livestock management practices, the soil's fertility, and cultural practices. ('Unforeseen Elements')

Fertiliser may burn and/or damage crop roots or foliage. Foliar burn to the leaves, fruit or other plant parts is most likely to occur when fertilisers are foliar applied at high concentrations and/or on a regular basis, different products are mixed and sprayed together at cumulatively high rates, the water is of poor quality, or the spray is applied under hot dry conditions, e.g. in the heat of the day.

Fertiliser and supplements may affect animal health. Seek independent advice before using any supplements in livestock rations.

## DISCLAIMER

As Unforeseen Elements are beyond the control of Incitec Pivot Pty Ltd, in no event Incitec Pivot Pty Ltd and its related bodies corporate be liable or accept any responsibility whatsoever for any direct, indirect, punitive, incidental, special or consequential damages (including but not limited to loss of revenue, crops and livestock), in respect of the illness, injury or death of a person, damage to property (including of a third party), or any other loss whatsoever arising out of or connected with the use or misuse of this fertiliser, or its transport, storage, handling or application. Where Incitec Pivot Pty Ltd and its related bodies corporate's liability cannot be lawfully excused, it and its related bodies corporate's liability shall be limited to the replacement of, or cost of the fertiliser supplied. The buyer accepts and uses this product subject to these conditions.

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