

An aerial photograph of a lush green sports field, likely a soccer or football pitch, with white yard lines clearly visible. The field is the central focus of the cover.

# ***Guide to Winter Oversowing***





## Why oversow?

### COUCHGRASS

There is no doubt that couchgrass (*Cynodon dactylon*) provides an excellent, drought-resistant sports field surface. It requires little or no irrigation, as shown by its excellent performance during the 1997-2009 Australian drought, when irrigation on many community-level fields was prohibited. As well as its excellent summer performance, the right couchgrass variety can provide many

other advantages, such as herbicide and salt tolerance, the ability to creep by rhizomes and stolons, and excellent performance under low inputs.

Couchgrass is dormant over winter, losing growth and green colour. The loss of colour is purely a visual, aesthetic problem. Players shouldn't worry about it, as long as the playing quality is still good, but the loss of growth is a more serious problem. The lack of recovery means that wear

and tear accumulates over the winter months. On high-use grounds and high-use zones, this leads to unsightly denuded areas with poor playing quality. Player safety might also be compromised due to the variability in hardness and traction across the ground. Denudation can also lead to high-wear areas such as goal squares being completely kicked out, leaving dangerous depressions that require turfing after the football season.

## ADVANTAGES AND DISADVANTAGES

The presence of a winter-active grass can prevent or reduce the denudation problem, and provide other advantages as well, such as better visual quality. It can even lead to drier winter surfaces, as the oversown couchgrass sward has an ET rate around 2mm/day (13mm/week) higher than a pure couchgrass sward (see the report '*Winter ET rates of couchgrass and oversown couchgrass*' for trial data on this). The winter grass could simply be a natural invasion of *Poa annua*, although it has very shallow roots that are easily divoted. A better practice is to oversow the couchgrass with perennial ryegrass.

A potential disadvantage of oversowing with perennial ryegrass is that it is very competitive, and if left in too long it can thin out the couchgrass content. It is not known if this is simply due to competition, or if a phenomenon called allelopathy is involved. Allelopathy is where a plant exudes biochemicals that inhibit other plants. In the past, it was claimed that high-endophyte ryegrasses were more allelopathic on couchgrass than low-endophyte ryegrasses, but a recent trial showed that the high-endophyte perennial ryegrass AvaneX® Colosseum had superior establishment and winter quality compared to a nil-endophyte ryegrass

blend, with no measurable difference in couchgrass coverage or recovery in the spring (see the report '*Assessment of football surface quality and couchgrass recovery with or without winter oversowing with perennial ryegrass*').

## PGG WRIGHTSON TURF RYEGRASSES

AvaneX® Colosseum perennial ryegrass carries the latest unique endophyte, which has been selected especially for the alkaloids it produces. It is capable of deterring many of the important turf insect pests, and possibly nematodes, as well as several birds and mammals (see the report '*Endophytes in turf-type perennial ryegrass*').

Whether from allelopathy or simply from competition, it is true that unwise practices in perennial ryegrass oversowing of couchgrass can cause loss of couchgrass from the sward. Our research and reading suggests the problems are mainly due to the perennial ryegrass being in the ground too long. Conventional wisdom from the US suggests that couchgrass should be on its own for at least 100 days in the summer, but PGG Wrightson Turf recommend that this period be increased to 140 days (20 weeks). This means that perennial ryegrass should be sown no earlier than mid-March, and be

chemically removed no later than mid-October. Natural transition of perennial ryegrass is highly dependent on weather conditions, and the perennial ryegrass might not die out until December. Chemical removal using one of the effective herbicides available ensures a precise removal of the perennial ryegrass with no damage to the couchgrass.

If the decision is made to oversow with perennial ryegrass, it is important to differentiate between Mediterranean ryegrass cultivars and Continental ryegrass cultivars. Mediterranean cultivars such as AvaneX® Colosseum or the Sports Oval blend have a much higher winter activity than Continental cultivars. This means they can germinate successfully at lower temperatures, and their growth rate in the May-August period is double or even triple that of Continental types (see the report '*Winter activity of perennial ryegrass cultivars*'). The Mediterranean perennial ryegrasses are mid-green, whereas the Continental cultivars such as Soprano or the TrioPro blend are a darker green. So the choice of ryegrass cultivar will depend on the need for good winter growth, compared to the preference for a dark green turfgrass sward.

With all these facts in mind, PGG Wrightson Turf has formulated a winter oversowing guide for Turf Managers.



# The PGG Wrightson Turf Winter Oversewing Programme:

## AUTUMN:

1. Consider the playing schedule for the field for the upcoming season and lock in all necessary dates.
2. The couchgrass sward should be fully covered and in good condition before oversewing.
3. One week before oversewing, apply trinexepac at label rates to the couchgrass. This will retard couchgrass activity and ensure a faster and more complete ryegrass strike.
4. Sow the PGG Wrightson Turf perennial ryegrass that has been decided on (either Avanex® Colosseum, Sports Oval, Soprano or TrioPro) using a turf dimple seeder or disc drill. It can be beneficial to do a light coring before sowing, especially if the ground can't be spelled for the two weeks suggested under point 6. However, it is not necessary,

and probably counter-productive to scarify the couchgrass before or during oversewing.

5. Oversew at a rate of 370kg/ha. It is possible to use a higher sowing rate, but don't go lower.
6. The ground should be out of play for at least two weeks. Irrigation should be applied if necessary to maintain a moist seedbed.
7. Apply a balanced fertiliser at a nitrogen (N) rate of at least 15kg N/ha per month through winter.

## SPRING:

8. In September or October, transition the perennial ryegrass out using a suitable herbicide. Several sulfonylurea herbicides do an excellent job, although the soil temperature needs to be over 17°C or so for them to work properly.

Some of the older, non-sulfonylurea herbicides work well in cold soils, so they should be used if an early removal of ryegrass is required.

9. Two or three weeks after herbicide application, as the perennial ryegrass is dying, the sward should be mown lower (approx. 12 mm) and an application of N.P.K fertiliser with iron should be applied to encourage couchgrass growth and recovery. An application of gibberellic acid can also enhance spring recovery.
10. At this time of year couchgrass will be experiencing spring root decline, where the old root system dies off and is replaced. It is best to avoid disruptive practices such as renovation at this time (defer this until after December).

**References:** The following reports are available on the PGG Wrightson Turf website

1. The winter Evapotranspiration (ET) Rate of pure Couch in comparison with Couch oversewn with Perennial Ryegrass or *Poa trivialis*
2. Assessment of football surface quality and couchgrass recovery with or without winter oversewing with perennial ryegrass
3. Winter activity of perennial ryegrass cultivars
4. Endophytes in turf-type perennial ryegrass

## **About PGG Wrightson Turf**

PGG Wrightson Turf is part of PGG Wrightson Seeds Ltd, Australasia's largest proprietary seed business. PGG Wrightson Turf has been breeding turfgrass seed specifically for the Australasian environment for over 30 years and has established itself as an innovative market leader in turfgrass breeding, and turf research and evaluation. Our aim is to supply Australasian Turf Managers with high performance turfgrass solutions for the unique challenges faced by the Australasian turf industry.

Given the Australasian love for outdoor pursuits, it is imperative that our natural turf surfaces are able to perform in a range of climatic conditions throughout the year. To achieve this, PGG Wrightson Turf operates its own turfgrass breeding and product evaluation programme based from our research facility, Kimihia Research Centre on the outskirts of Christchurch, which is supported by additional trial sites throughout Australasia. We also supply the professional turf market in New Zealand with world leading non-seed products such as fertilisers, pesticides, line markers, machinery and mulch products, many of which have also been evaluated at Kimihia Research Centre.

Our philosophy is simple - we base the offering of turf products upon scientific principles derived from a number of local and overseas suppliers in order to utilise the leading technological advancements in turfgrass solutions. Products sold by PGG Wrightson Turf undergo a rigorous testing and screening process from our local and international research partners, including STRI UK, NTEP USA, ANTEP Australia, University of Sydney turfgrass programme, and NZSTI New Zealand. This ultimately enables us to provide our customers with turf solutions that are tailored to meet their specific requirements.

PGG Wrightson Turf has invested heavily into the Australasian sports turf industry and built a strong technical sales team that is backed by our scientific research group who ensure the right selection for your specific requirements.

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## **Recommended oversowing products**

### **AVANEX® UNIQUE ENDOPHYTE TECHNOLOGY: A POTENTIAL TOOL FOR SPORTS FIELDS**

AVANEX® Unique Endophyte Technology may assist in reducing the number of birds and insects on sports fields. The alkaloids produced by the endophytes not only reduce the number of insects but can also reduce the number of birds on sports fields.

In trials, grasses with AVANEX® have been shown to reduce insect numbers and as a result the area is less attractive to insect feeding birds, in turn this may also reduce the reliance on pesticides for the control of damaging insects. Grasses with AVANEX® Unique Endophyte Technology also reduce bird populations through post digestion feedback (where birds that feed directly on the grass feel ill after feeding and learn to avoid the area).



### **COLOSSEUM TURF RYEGRASS**

Colosseum is a medium-fine, mid-green, perennial ryegrass that incorporates Mediterranean genetics. The Mediterranean genetics gives the turf active winter growth in cold weather and rapid germination in cold temperatures, down to 5°C.

Colosseum is ideally suited to winter sports grounds, golf tees, golf fairways and lawns receiving heavy wear, especially in the winter. Its mid-green colour helps to mask the invasion of *Poa annua* and other grassy weeds.

