

Undersowing Maize

Combat nitrogen loss and soil erosion on maize fields

Why sow grass beneath maize?

As maize matures in late summer and early autumn, it takes in fewer nutrients. That's when you risk losing precious nitrogen to the ground water below. But not when you have a well-established catch crop of grass beneath your maize. Grass reduces the nitrogen loss and provides a level of erosion control after your maize harvest.

Undersown maize crops have less over winter soil and nutrient leaching losses and will improve the future output of the ground. Undersowing a maize crop should be considered where there are no plans for a post harvest cover crop establishment or cultivations during the winter months.

Benefits

- More forage
- Increased uptake of surplus nitrogen
- Reduced risk of soil erosion
- Early spring grazing



Risks

- Over wintered catch crop can use up moisture that the maize may need later
- Maximising the yield of the catch crop for silage can result in late drilled maize.
- Rapid grass growth if sown too early can lead to competition with the maize crop.

Grass Species

Many grasses struggle to grow in the shade cast by maize.

Recommended grasses	Maize development stage
Tall fescue, cocksfoot	3-4 leaves
Late perennial ryegrass, cocksfoot	7-8 leaves

Less competitive grasses (fescues) should be used for the early sowings and more aggressive grasses (perennial ryegrasses) for the later sowings.

TOPGRASS Undersown Maize Mix
 45% HIPAST Fescue Plus
 20% DONATA Cocksfoot
 35% TOWER Tall Fescue

Timing and method

Timing your grass catch crop is essential for success. Sow too early and you hold back the development of the maize or restrict your ability to use chemical weed controls. At least six weeks should be left between maize drilling and grass undersowing. The following two approaches produce excellent results:

- Sow your grass at the time of the second weed control, typically when your maize has 3-4 leaves.
- Or sow at the time of the third weed control, when your maize has 7-8 leaves.



Undersowing Maize

The seed rate of the grass should not be too high. Recommended rates are 4-6kg/acre. Higher levels could create competition for the maize crop.

You can broadcast your grass seed with a simple electric spinner, but that risks low germination levels because the seed rests on the soil surface. You get better results if you follow up with a light harrow or row tiller.

The best result comes from row seeding at a distance of 18-20cm from the maize crop. The grass germinates well and competition with your maize is limited.

After Harvest

The maize needs to be harvested under good conditions. If the field becomes rutted then the benefit of the undersown grass will be largely lost. There should be nothing to do to the undersown grass after the maize harvest. The availability of light and the potential for the grass to scavenge for any nitrogen with result in a rapid 'greening up' of the field and can provide a 'grazing bite' by the end of November.

