

Undersowing Maize with Grass

Funding is offered to establish a grass cover crop between rows of maize (before the maize canopy closes) to reduce nutrient runoff and leaching from land that would normally be left as bare stubble during winter. When the maize is harvested the grass continues growing providing overwinter ground cover and reducing surface runoff and the risk of potential pollutants, such as sediment, pesticides and nutrients, being leached to groundwater or carried to nearby watercourses. Cover crops also improve soil health and increase water infiltration.

Payment rate:

- £200/ha if more than 80% ground cover by December 2024 – subject to adviser visit
- £150/ha if less than 80% cover by December 2024

Length of scheme

An annual one-off scheme from May/June 2024 – March 2025

Benefits

- Helps to reduce soil damage at harvest due to ground cover
- Reduces Autumn field operations to establish a cover crop
- Reduces risk of soil erosion, especially in high-risk fields
- Reduces nitrate leaching
- Grass can be used for early grazing or an early silage cut
- Increases soil organic matter, improves soil structure and soil health
- Reduced fertiliser inputs and costs to the following crop
- Trials have shown no significant effect on yield, ME or starch
- Trials have shown greater reductions in nitrate leaching through undersown maize compared to autumn established cover crops after maize



Figure 1: Undersown grass in August. Photo source: Wessex Water



Figure 2: Bare soil versus undersown grass in October after maize harvest. Photo source: Wessex Water

Eligible areas

- On land that is planted to maize due to be harvested in Autumn and followed by another Spring crop
- Land in the Shapwick & Sturminster Marshall Safeguard Zone

Non-eligible areas

- Fields that have cover crops which are funded by any other scheme (such as Countryside Stewardship, Sustainable Farming Incentive, Biodiversity Net Gain or nutrient neutrality) are not eligible.

Requirements

Establishment

- Grass may be under sown when the maize crop between the 4 – 8 leaf growth stage, latest sowing date 10th July
- Grass seed is drilled in between the rows of the maize crop
- For best results an undersowing drill may be used (fig 3), there are contractors locally that have this specific equipment, for more information please contact your Wessex Water catchment adviser
- If the undersown grass fails to establish, or is patchy, then additional grass seed or another cover crop must be established (at the farmers cost) within 2 weeks of the maize being harvested.



Figure 3: An undersowing drill establishing grass between the rows. Photo source: Wessex Water

Choice of cover crop and seed rates

- For undersowing before the 6-leaf stage of maize growth, fescues such as creeping red fescue and tall fescue are recommended as they are less likely than Italian ryegrass to compete with the maize crop.
- If undersown at or after the 6-leaf stage of maize growth, the main grass species used should be **Italian ryegrass** but other species such as perennial ryegrass, fescues, festulolium, vetch and clover may also be included in the mix.
- Sow at a suitable seed rate to provide a dense overwinter groundcover and to prevent soil erosion. For Italian Ryegrass sown in June this will be in the range of 10-20kg/ha.

Post harvest management

- If severe soil compaction has occurred at the time of harvest, for instance if there are deep wheel ruts in places, those areas of the field should be assessed to determine whether post-harvest cultivation should be carried out and a post-harvest sown cover crop established, instead of leaving the undersown grass with areas of soil compaction. In this situation please contact your catchment advisor. If soil compaction has not been remediated upon inspection, funding may be withdrawn or reduced.

Corn borer

- For effective control of the corn borer pest the maize stubble should be intensively shredded or flail topped after harvest. This will also encourage tillering of the undersown grasses, thereby increasing sward density and growth.

Herbicides

- Where herbicides with residual activity, are applied to the maize crop, especially grass weed herbicides, growers should consult their agronomist to determine the suitability of those fields for undersowing as there may be a risk of poor establishment of the undersown grass.
- Growers should target a minimum 4-week gap between application of a grass weed herbicide and undersowing.

Destruction

- The grass sward may be destroyed from the 15th January the following year if the following crop is a cereal and destroyed from 1st March if the following crop is maize
- Grass should not be retained after the 31st May. This date can be varied by agreement with a Wessex Water catchment adviser.
- Estimates of the nutrients released by the cover crop should be used in nutrient planning for the following crop to ensure there is no over application or excess availability of nutrients, which may subsequently leach or runoff.

Application process

- Complete the [online application form](#) – filling out farm details, field details and expected drilling times.
- Submitting an online application is not confirmation of funding.
- Once you have submitted your online application, it will be reviewed by a Wessex Water catchment adviser.
- If your application is successful a contract will be issued for signing between the farmer and Wessex Water.

Record keeping, validation and data collection

- In entering the scheme, you are agreeing to allow a Wessex Water adviser to visit land in a scheme for visual inspection before, during and after the implementation of the scheme.
- In entering the scheme a Wessex Water catchment adviser may request farm records from you demonstrating fertiliser rates, the change in cropping, stocking rates etc.
- In entering the scheme Wessex Water may carry out soil sampling, porous pots, grain samples and crop tissue samples for nutrient analysis. Any data collected will be shared with the farmer. Wessex Water will store data on an internal Wessex Water database and may be used to contribute to a larger aggregated and anonymised data set.

Payment terms

- Payment will be made annually.
- To claim payment for the scheme your Wessex Water adviser will request you to send an invoice to be sent directly to them.
- Wessex Water payment terms are end of the month plus 30 days
- The invoice should be submitted between the 1st – 31st January to guarantee payment by 31st March.
- You may be required by the Wessex Water payments team to be registered as “suppliers” to Wessex Water Services Limited, please ensure paperwork is filled out and returned.