

Undersowing grass into maize

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 bare or down to stubbles 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. Forage crops grown for grazing (such as stubble turnips or kale) and cash crops grown to be harvested are **not** eligible. Cover crops funded by any other scheme (such as Countryside Stewardship) or future schemes such as the Sustainable Farming Incentive (e.g. the intermediate level of the SFI Arable & Horticultural Soils Standard) are not eligible

Length of agreement available

May / June 2023 until 31st March 2024.

Where to use this measure

On land where maize is being grown and that will be followed by another spring crop the following year.

Where this measure cannot be used

Cover crops cannot be funded in situations where the management of the field is in breach of the Farming Rules for Water or Nitrate Vulnerable Zone rules (if applicable). Successful applicants are required to sign the declaration described in the record keeping section below.

Undersown grass cannot be funded in high-risk fields which are not appropriate for growing maize in. Please note that if your application for this measure is successful, your scheme advisor can assess the risk of soil erosion and run-off on your maize ground and can make recommendations on how to mitigate these risks. Scheme advisors are also able to provide site specific advice on maize variety maturity group selection to help ensure the deadlines below are met. Please contact your scheme advisor to discuss. Also see record keeping section below.

Requirements

- Sow a grass cover crop between rows of maize by 10th July to provide dense groundcover and protect the land from overwinter soil erosion and nutrient runoff / leaching.

- Retain the cover crop until at least *15th January* if the following crop is combinable and until at least *1st March* if the following crop is maize. Once destroyed, aim to establish the following spring crop within 6 weeks.
- Grass may be used as a cover crop but only where it will be kept no longer than *31st May* in the year after establishment.
- 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 scheme advisor. If soil compaction has not been remediated upon inspection, funding may be withdrawn or reduced.
- 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.

Choice of cover 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.
- 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.
- 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.

How to establish the cover crop

- Sow at a suitable seed rate to provide a dense groundcover and to prevent soil erosion (see seed rates above). The undersown cover crop must be interrow drilled and not broadcast.
- 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

Buffer strip requirement

- A grass buffer strip of at least 6m width must be in place against all watercourses (including ditches), roads, tracks and neighbouring properties, or where there is an identified run-off flow pathway. If a buffer strip is not already in place it must be established by the time that the cover crop is drilled. Where buffer strips do not currently exist, establishment and retention of new buffers to accompany cover crops may be eligible for funding through the Arable Reversion option of the scheme.

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, especially grass weed herbicides, are applied to the maize crop, 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.

Do not:

- **Do not** graze the undersown crop without the prior agreement of a scheme advisor.
- **Do not** apply any organic manures or artificial fertiliser for the benefit of the undersown crop, either after its establishment or after the maize has been harvested. No organic manures for the following spring crop should be applied before *14th February*.
- **Do not** cultivate the field after the maize has been harvested unless the undersown grass has failed to establish or if areas of soil compaction need to be remediated.
- **Do not** establish the following crop without calculating the nutrient content of soil, any manures applied and the available nutrients from the cover crop residue. Apply no more nutrients than the crop requires.

Record keeping and payment terms

Agreement holders will need to keep the following records and supply them with *the payment claim*. Payment will only be made upon satisfactory receipt of all of the following records:

- Photographs of each cover cropped field taken on any day in *December 2023*.
- Soil analysis results (pH, P and K as a minimum) for the relevant fields dated within the past 3 years.
- Farm and field information needed to run a phosphorus loss tool for the farm and calculate the reduction in phosphorus loss to water arising from this work. This will include farm data relating to livestock numbers, cropping areas and fertiliser / manure inputs.
- Self-declaration that the terms of the project agreement have been adhered to (*key terms are listed above*).
- Successful applicants are required to sign a declaration confirming that:
 - reasonable precautions are taken to prevent nutrients and soil from the relevant field entering watercourses or from being leached to groundwater - to an extent that could cause pollution.
 - the relevant fields have not been (i) the source of a recorded pollution incident which could have been prevented by the farmer taking reasonable precautions to prevent that pollution and/or (ii) the subject of a warning, fine, prosecution or BPS deduction issued to the farmer by the Environment Agency or RPA for a breach of NVZ rules or Farming Rules for Water in the past 5 years.
- It is expected that to support and inform the above declaration, successful applicants will complete the Environment Agency's Agricultural Compliance Tool (ACT) by 31st December in each year of the agreement and submit it when completed to Wessex Water (who will hold it in confidence) and address any actions identified by the ACT. For agreements involving annual payments of more than 5 years duration and/or with a value in excess of £5,000 of annual payments, this is a requirement.
- Agreement holders are required to complete a Wessex Water supplier application form in order to receive their first payment. A copy of this is available on the scheme website.
- Agreement holders will need to keep the following records and supply them *on request*:
 - Field operations at the field parcel level, including associated invoices



*Italian Ryegrass drilled
into a maize crop near
Lyneham, Wiltshire at the
4-6 leaf stage with no
reduction in maize yield.*