

# Phosphorus Reduction Scheme

## Arable reversion to legume fallow

Funding is offered for reverting whole or part fields from arable use (including maize growing) to legume fallow. This measure should be used for fields or areas of fields that regularly flood / get waterlogged or that experience surface runoff and soil erosion. As well as improving water quality this measure should also provide food for farmland wildlife and reduce blackgrass. Arable reversion which is funded by any other scheme (such as Countryside Stewardship) or future schemes such as the Sustainable Farming Incentive are not eligible.

**Key requirements summary:** Establish the legume mix immediately after harvest (unless following maize), cutting regularly in the first year and at least once before between 1<sup>st</sup> March and 15<sup>th</sup> May in years 2 and 3. You can also include grasses such as cocksfoot, perennial ryegrass or timothy in the seed mix to help smother blackgrass and other competitive grass weeds. Key requirements are not to apply any fertiliser or manure or to cut or graze.

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### Length of agreement available

2½ to 4½ year agreements available starting in either Spring or Autumn 2023<sup>1</sup>. *Longer term agreements may also be available. Please contact the project team for details.*

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### Where to use this measure

- Across whole or part fields. This measure may be used strategically across slopes and at the bottom of slopes to slow the flow of water and encourage water infiltration. The first 2 metres from the centre of a watercourse or field ditch (or for larger watercourses the first 1 metre from the top of the bank into the field) is **not** eligible for this measure.
- On cultivated land that has been arable cropped (this can include maize) for the past 3 or more years.
- On land that is adjacent to a watercourse (including ditches) or has high connectivity to a watercourse via a road, track, or any other flow pathway.

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### Where this measure cannot be used

- **Do not** use this measure where evidence exists for rare arable plants / weeds.
- **Do not** use this measure on fields / parcels / strips that have already been taken out of arable production.

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### Requirements

Establish and manage plots according to the specification set out in the project agreement relevant to each plot. This specification will be specific to each farm and location but will be based on the following:

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<sup>1</sup> *Spring destruction may be prescribed for fields within the Shapwick/Sturminster Marshall drinking water catchments, rather than late-summer destruction.*

## Establishment

- Assess whether there are any issues of soil compaction and, if necessary, plan appropriate timely cultivations such as subsoiling to resolve these before establishing the new sward.
- If there is a heavy weed burden, spray with a herbicide such as glyphosate before cultivation.
- Sow a legume mix:
  - Before 15<sup>th</sup> September 2023 if following a combinable crop.
  - If following maize then an overwinter cover crop should be grown and the legume fallow established in the following spring/summer.
- Broadcast or drill seed into a firm, consolidated and clean seedbed and then roll or harrow to help ensure good seed to soil contact, retain moisture, and reduce movement of slugs within the soil profile. Direct drilling into stubble is permitted as long as it results in an adequate level of establishment (i.e. approx. 80% groundcover by 1<sup>st</sup> December 2022).
- Sow the species mix and seed rate specified in the project agreement relevant to each plot. General requirements will be:
  - **Establish a mixture of legume species (based on the suggestions below) and if desired grasses such as cocksfoot, perennial ryegrass or timothy.**
  - Sow the seed mix at 15-20kg/ha - with the lower seed rate appropriate to lighter / medium soils and the higher seed rate on heavier soils.
  - Suggestions for legume species and % inclusion rate:
    - 50% common vetch
    - 15% red clover
    - 15% lucerne
    - 10% alsike clover
    - 6-7% birdsfoot trefoil
    - 4-5% black medick

## Cutting and topping

- To control weeds and to ensure that a dense sward that reduces runoff is established, in the first 12 months after establishment:
  - plots should be cut or topped at least twice during the growing season.
- After the first 12 months and once established, cut the sward at least once each year between 1<sup>st</sup> March and 15<sup>th</sup> May. Farmers are encouraged, but not required, to leave small refuge areas uncut (5% of plot area) to provide overwintering habitat for invertebrates.
- Top or spot-spray any undesirable plants, such as nettles, bracken, injurious weeds, or invasive non-native species as soon as practically possible to avoid them becoming established.

## Inputs and management

- Applications of organic manures are not permitted.
- Applications of inorganic fertilisers (N, P, K) are not permitted.
- Applications of lime are permitted.
- Grazing by livestock is not permitted.
- Pesticide applications are not permitted except for spot-spraying of injurious weeds.

## Returning the land to agricultural production at the end of the agreement

- Spray the legume fallow mix with a non-selective herbicide if needed, before the area is cultivated for the next crop.
- Return the area to the farm rotation from 15<sup>th</sup> August<sup>2</sup>.
- Terminate and cultivate the legume fallow at a time of year when nutrient loss via leaching and/or surface runoff from the bare soil will be minimised (i.e. in spring, summer / early autumn, and when ground conditions are suitable).
- Establish the following crop as early in the autumn as possible. This is to:
  - ensure that the maximum amount of nutrient released by the legume fallow is taken up by the following crop/s. This could involve using cover crops to retain nutrients in following winters.
  - provide maximum over-winter ground cover to reduce surface runoff.

## Restrictions

- **Do not** use plots for vehicular access to other fields. Other than essential field operations, plots should never be driven on for access, turning at headlands or any other purpose.
- **Do not** apply any organic manures or inorganic fertilisers to the reverted area, or prior to its establishment.
- **Do not** use pesticides, except for herbicides to spot-treat or weed-wipe to control nettles, bracken, injurious weeds, or invasive non-native species.
- **Do not** allow pesticides and fertiliser to drift into the legume fallow area.
- **Do not** allow the soil P index to rise during the duration of the agreement.
- **Do not** graze at any time with any type of livestock.
- Once established, **do not** plough, cultivate or re-seed until the end of the term of the agreement.

## Record keeping and payment terms

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

- Photographs of the plots before establishment (only required for first payment claim).
- Photographs of each reverted area (submit annually).
- Invoices showing the seed mix used to establish the sward (only required for first payment claim).
- Soil analysis results (pH, P and K as a minimum) for the relevant fields dated within the past 3 years (only required for first payment claim).
- 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 project. This will include farm data relating to livestock numbers, crop areas and fertiliser and manure inputs.
- Self-declaration that the terms of the project agreement have been adhered to (submit annually - *key terms are listed above*).
- Successful applicants are required to sign a declaration confirming that:

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<sup>2</sup> Spring destruction may be prescribed for fields within the Shapwick/Sturminster Marshall drinking water catchments, rather than late-summer destruction.

- 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



*Legume fallow in flower*

*Image credit: John Hawkins*