

Cover Cropping

A cover crop is a non-cash crop grown primarily for 'protecting or improving' the soil in between periods of regular crop. Cover cropping has the following soil and water related benefits:

- Helps to maintain cleaner surface and groundwater.
- Cover cropping including a legume mix will help fix Nitrogen from the atmosphere, making it available to following crops (it is important to note that legumes become most effective at fixing Nitrogen when the soil temperature is over 8°C).
- Will help reduce leaching of Nitrogen when soil is left bare for any period, particularly over the winter when rainfall is high.
- They prevent erosion, improve soil physical and biological properties, supply nutrients to the follow-on crop, suppress weeds, improve soil water availability, and break pest cycles.
- Some cover crops break into compacted soil layers, making it easier for the following crop's roots to develop.

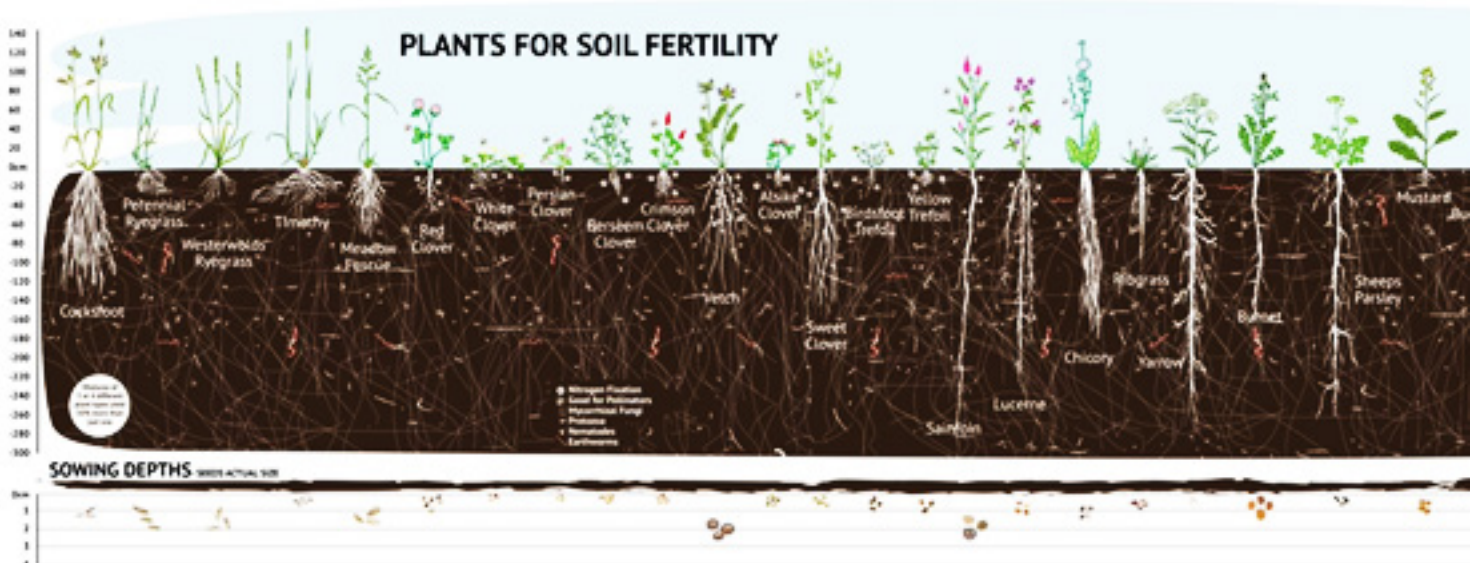
Other benefits include:

- Increase soil organic matter (and hence Carbon levels)
- Assist in air and rain filtration through the soil through improving structure
- Cover crops help maintain high populations of mycorrhizal fungi spores during the fallow period between main crops
- Nematode control: Eg. Specific varieties of Oil Radish can reduce certain plant-parasitic nematodes by up to 90%. The roots secrete pheromones which lure the larvae from their cryptobiotic state in the cysts - once in the roots, the larvae die due to the plant secretion.
- Enhanced and increased levels of Biodiversity, habitats and species across the farmed area through more diverse planting, sward and herb layer

Understanding Cover Cropping

	Guidance
Where	<ul style="list-style-type: none"> • Identify and prioritise soil erosion risk sites • Implement after cereal harvest and before re-seeding • Can be used as Bio-fumigation - process of using plant chemicals to suppress soil-borne pathogens, nematodes, insects and weeds • In low Organic Matter (OM) fields to boost levels
What	<ul style="list-style-type: none"> • Alternative means of increasing Organic Matter yields in fields • Contributes to preventing soil erosion through improved soil structure and infiltration • Increasing Nitrogen levels without need/expense for chemical inputs • Range of cover crops (see plants for fertility table below)
How	<ul style="list-style-type: none"> • Using a seed drill • Via area/revenue payment (Note: CPES project 1-year duration only as trial)
When	<ul style="list-style-type: none"> • Spring - September is a good time to plant cover crops; plant / drill any time after the soil warms up enough to work and up until mid-summer

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Management for Water Quality

Cover crops benefit the physical soil structure, breaking up compaction and encouraging water uptake and filtration. Species such as Oil Radish produce deep, penetrative roots, lateral root growth from Mustard and fibrous root networks from Black Oats and Linseed, which all effectively relieve compaction in different layers of the soil. This root structure combined with the leaf canopy also prevent soil erosion, resulting in cleaner water corridors around the farm.

Consents and Licences

- Common Agricultural Policy (CAP) in 2014 and 2015 means that the Basic Payment Scheme now consists of Cross Compliance and 'Greening' – which is worth 30% of the total payment. The three pillars of 'Greening' are Permanent Grassland, Crop Diversification and Ecological Focus Areas (EFAs).
- Ecological Focus Areas (EFAs) are areas or features that the EU has decided are beneficial for the climate and/or environment.
- If a farmer has more than 15 hectares of arable land, they will need EFAs.
- If a farm does need EFAs, the areas and features used must be equivalent to at least 5% of the total arable area declared on their BPS application.
- Catch and cover crops are proving popular as farmers look to take advantage of the incentive to experiment with cover crops and improve soil quality for the long-term.
- Greening mixtures may contain species currently covered by Seed Regulations and those that are not (these include Black Oats, Niger, etc.). Regulated species must be fully certified to the standards in the Seed Marketing Regulations – having achieved purity and germination standards.
- Mixtures containing any certified species should have percentages of these species declared on a green label, and any uncertified species should be listed

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