Restoration works for habitat restoration

1. Selecting a donor site

When selecting a donor site for a specific receptor site EcoSeeds will assess:

- Whether the vegetation type of donor site matches the target vegetation and soil type
- If site conditions are compatible
- The species richness and diversity donor site
- The distance between donor and receptor site.

2. Brush harvesting

We collect seed by brush harvesting – EcoSeeds pioneered this methodology in Ireland in 2000 – This uses a gently rotating brush that leaves the donor plant intact. This method causes minimal disturbance to the existing habitat and allows the area to still be cut for hay. Typically we use GPS to measure and harvest a maximum of 80% of an area for no more than three consecutive years – based on ENSPA code of conduct.



Brush Harvester - can collect from a range of habitats (e.g. meadows, heathlands, wetlands etc)

3. Seed processing and storage

After the seed has been harvested it must be dried. This is critical to reduce seed moisture level and is done with specialised technology. Further seed cleaning and processing includes the use of air streams, screens, and gravity separation.

Our brush harvested meadow and grass mixed are stored in a dry-room that is designed to keep the relative humidity at a low steady rate to preserve the seed for several years.

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4. Disc-seeding

Disc seeding is the process of introducing seed by creating grooves or slits in the ground with a disc. Our purpose built machine uses this method of over seeding. It opens up the sward to allow air and moisture to penetrate and sows seed accurately into slits at the correct depth for germination. The machine then rolls the sward or seed bed to endure good seed/ soil contact.



5. Hydro-seeding

Hydroseeding is a unique method of seed sowing that creates the ideal environment for germination and growth. It typically uses a blend of water, paper/wood and biodegradable bonding material ("tackifier") to suspend the seed in a 3D matrix. Hydroseeding mixes can be tailored to the specific needs of each site. This method creates optimum growing conditions to ensure successful germination and establishment.

Advantages include:

- Faster, more reliable germination
- Constant mixing ensures even distribution of seeds of various sizes
- Application at almost any time of the year
- Moisture retaining properties of the mix permit application during very dry conditions
- Can be used in areas that are difficult or impossible for conventional machinery to access
- Erosion control effective on steep gradients, slopes, riverbanks etc.



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6. Site assessment and monitoring



Ensuring you have native and local origin seed

EcoSeeds brush harvests grass and meadow seed from many sites across Ireland for use in seminatural grassland restoration.

When assessing a site for grassland restoration projects EcoSeeds will ensure that:

- Vegetation type in the donor site matches target vegetation in the receptor site;
- Site conditions are compatible;
- Donor seed originates in the same zone of provenance as the receptor site:
- Donor and receptor sites are located as close to each other as possible;
- The most appropriate brush harvest mix for each project is provided.

In 2023 seed from XY sites across Ireland was harvested ensuring a good geographical spread of donor sites.

In our experience, the first year of establishment of a restoration project is the most critical phase of its development. At key stages during the first year we recommend monitoring visits be conducted by an EcoSeeds consultant:

- An initial visit would ensure that the area is ready for sowing and is accurately measured, including the area of sloping or otherwise inaccessible land;
- Several weeks after sowing, an establishment visit assesses the germination of "brush Harvested" species and the presence of bracken and soft rush species;
- Throughout the growing period, several further visits are usually carried out to determine target species growth, weed burden, and any consequential remedial management required.

Remedial action is sometimes required. For example, where there is on-going construction activity which could cause damage to previously sown areas. We typically hold some harvested seed in reserve to enable any damaged areas to be repaired or over-sown.



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