

Wales Enclosed Farmland Ecosystem Group Priority Action

Pembrokeshire Arable Priority Area

Pembrokeshire boasts a high proportion of the rare arable plants in Wales partly due to the range of substrate in the county from sandy soils prone to wind erosion to clay soils. The farms supporting the notable species are spread throughout the county near the villages of Lawrenny, Angle, Camrose, Marloes, Newgale, Pwllcrochan and St. Nicholas and feature S42 species including Cornflower, Annual Knawel and Small-flowered Catchfly. Between them, these farms support 60% of all known arable populations of these species in Wales.

Arable plants are one of the biggest declining and most threatened groups of plants in Wales (Dines, 2005). Their decline is related to a) the increase in pasture and maize production coupled with a decline in cereal crops, b) the increased use of herbicides, c) the increased use of fertilizers, d) an improvement in seed-cleaning technology, e) the use of high density cropping with modern cereal crop varieties. Although figures do not exist for Pembrokeshire, the decline in arable farming and consequent increase in pasture is well documented for neighboring Ceredigion, where 15% of farmland was arable at the start of 20th century, but this fell to 3% by end of century; in the same period, sheep numbers increased by 275% and cattle by 182% (Chater, 2010). Currently, there is about 14000 ha of arable land within the Pembrokeshire LBAP area, representing 24% of the total resource in Wales (Jones *et al.*, 2003). This is by far the largest proportion of arable habitat for any LBAP area in Wales.

Pembrokeshire is well known as a classic area for arable plants. Most arable cultivation today is most frequent near or close to the coast, with crops including winter and spring barley and wheat, maize, some rape and small-scale production of root crops including potatoes. Due to the mainstream use of herbicides and fertilizers, the better arable plant communities are generally restricted to field entrances and headlands. Tir Gofal has, however, encouraged farmers to undertake more sympathetic management, such as growing unsprayed root and cereal crops and leaving winter stubbles. However, despite the large area of arable land in the county, uptake of these options is not high, with just 252 ha of land under prescriptions beneficial to arable plants (11.7% of the land in Tir Gofal in Pembrokeshire, Morris *et al.* 2008). Of this area, though, just an astonishing 6 ha is under the most beneficial prescription for arable plants, fallow field margins. Some “arable” options, such as undersown cereals, establishment of grass headlands and wildlife cover crops can be damaging to arable plant populations, and these account for 264 ha of land in Ceredigion (12.2% of Tir Gofal land in the county, Morris *et al.* 2008).

Despite the challenges of the modern, intensively farmed landscape, some farms and fields in Pembrokeshire retain rich arable plant communities. The best examples can be found on the Angle and Marloes peninsulars where large numbers of species of arable plants have been recorded; these fields are probably of sufficient quality to score as Important Arable Plant Areas (Byfield & Wilson, 2005). While many of these sites are maintained in good condition by private management (e.g. National Trust land) or through Tir Gofal agreements, but the main challenges remain the intensity of high-input arable cultivation in the county and the high proportion of permanent pasture still in place in the surrounding landscape.

Action required

1. Agree targets for proportion of unsprayed and fallow arable in the project area (15% is suggested) and identify and minimize potential impacts on Cough (particularly on the Angle and Dale Peninsulas).
2. Publicise the importance of the farms that fall within or near to Important Plant Areas (even if arable plants are not part of the criteria for designating the IPA) and status of the notable

species present and the benefits of increased low-input arable for plants and other wildlife to the local public and landowners.

3. Liaise with private landholders, estates and National Trust to increase the amount of low-input arable on their land holdings at Marloes, Newgale and St. Nicholas through entry into Glastir. Encourage the production of detailed management plans.
4. Lobby WAG for mandatory arable prescriptions and a higher weighting for Arable Special Project Areas. This should increase the number of agreements in the areas and ensure they all include appropriate arable prescriptions.
5. Collate survey records of S42 and other notable arable plants on the holdings. Improve species and arable community monitoring on the specified farms and increase the surveys to the surrounding land.

Whilst action may be focused on the priority arable habitat, it is important to maintain the full range of semi-natural habitats at a landscape level, especially some component of grassland pasture and coastal habitats for Chough, which have breeding and feeding sites along this coast. Coastal heathland and sand dune habitat of varying quality is present near some holdings. It may be necessary to manage these habitats appropriately, particularly if they are notified SSSIs, as these are important in their own right they should be maintained at the landscape scale. A long-term framework is therefore needed for whole farm management in a landscape context which includes a mosaic of arable habitat, low-input grazed pasture, coastal heathland and grassland, and to encourage farms to operate economically more intensively farms land parcels such as lay-back as well as farm diversification where appropriate based on the network models developed to link and optimize species and habitats.

This project area comprises nine scattered sites (farms) where priority S42 species occur. The aims of this project are to ensure appropriate arable habitat is available on these farms for the species to occur, and to encourage appropriate habitat is available on neighboring farms to maximize the potential for the priority species to spread. New sites will be added into the project area should they be found to host populations of S42 priority species.

Species Interest

Key Section 42 species

Cornflower	<i>Centaurea cyanus</i>
Small-flowered Catchfly	<i>Silene gallica</i>
Annual Knawel	<i>Scleranthus annuus</i>

Other notable arable plants recorded from these sites

Bugloss	<i>Anchusa arvensis</i>
Stinking chamomile	<i>Anthemis cotula</i>
Corn marigold	<i>Chrysanthemum segetum</i>
Sharp-leaved fluellen	<i>Kickxia elatine</i>
Cut-leaved dead-nettle	<i>Lamium hybridum</i>
Corn mint	<i>Mentha arvensis</i>
Weasel's-snout	<i>Misopates orontium</i>
Common poppy	<i>Papaver rhoeas</i>
Cornfield knotgrass	<i>Polygonum rurivagum</i>
Wild radish	<i>Raphanus raphanistrum</i>
Field madder	<i>Sherardia arvensis</i>
Charlock	<i>Sinapis arvensis</i>
Corn spurrey	<i>Spergula arvensis</i> (Near Threatened)
Field woundwort	<i>Stachys arvensis</i> (Vulnerable)
Narrow-fruited cornsalad	<i>Valerianella dentata</i> (Endangered)

References

- Chater, A.O (2010). *Flora of Cardiganshire*. Chater: Abersytwyth
- Byfield, A.J. & Wilson, P.J. (2005). *Important Arable Plant Areas: identifying priority sites for arable plant conservation in the UK*. Plantlife International: Salisbury
- Dines, T.D. (2008). *A Vascular Plant Red Data List for Wales*. Plantlife International: Salisbury.
- Jones P.S., Stevens, D.P., Blackstock, T.H., Burrows, C.R., Howe, E.A. (2003). *Priority habitats of Wales: a technical guide*. Countryside Council for Wales: Bangor.
- Morris, A.J., Smart, J., Lamacraft, D., Bialynicki-Birula, N., Luxton, K-J., Haysom, K., Rasey, A., Williams, C., Hobson, R., Dines, T.D, Parry, R.J., Wilberforce, E.M., Chapman, C. (2008). *Potential for Biodiversity Delivery by Welsh Agri-environment Schemes*. RSPB: Cardiff.

Pembrokeshire Arable Farms

-  Pembrokeshire Arable Target Farms
-  Pems Arable Farms 2km Buffer Dissolve



Contains Ordnance Survey data © Crown copyright and database right 2011

