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| **Developing a Wild Orchid Meadow** |   |

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|  | **"Developing a wild flower and native orchid meadow from existing grassland:...”**Before embarking on such a project you must firstly realise the basic requirements of the wild flowers and orchids you wish to establish.  All  of these species have a number of basic requirements that enable them to thrive.They do not like rich soils, preferring starved impoverished soils. Hence developing an existing agricultural field may take some time if fertilizers have been regularly used in the past. Because of their nature of growth many cannot survive and thrive if the competition from more dominant species is too great. This is particularly so in swards of modern ryegrasses. Some species are rather short lived and rely on self seeding for regeneration thus making cutting times important.  The first step in developing a meadow is to examine the soil and the existing sward and find out the previous use of the area. When developing wildflower meadows in urban parks was the vogue the late 1980’s many local authorities followed the advice that the only way to develop such site was to completely strip off the top soil and sow into the underlying subsoil.This was a time consuming and expensive process and in most instances is now not carried out. The existing sward will often reveal much about the area and the likelihood of success for the project and particularly some of the species you might wish to grow. The main problem is that good fertility means the grasses and fast growing wild flower species will dominate. If this is the case and you want to use the existing sward it may take a year or two of regular cutting to use up the residual nutrients and weaken the existing sward. Alternatively, the whole area can be cultivated and re-sown. Initial Preparation for a complete reseed To remove the existing sward the most effective method is to spray with glyphosate. This will kill all the grasses and the “weeds” such as nettles and docks which you most probably will not want in your meadow as they are invasive. This weedkiller becomes inactive once it hits the soil and is safe to use. The area should then be cultivated to produce a fine tilth. If possible leave the soil to allow the dormant seeds to germinate than cultivate again. This reduces the number of unwanted weed seeds which would otherwise provide competition for the new seedlings. Seed sowing If both grasses and flower seeds are to be used then sowing should take place in either the spring, as the soil warms up or in September, to allow some establishment before winter sets in. It must be noted that sowing orchid seed is unlikely to achieve a population of any consequence. This is because the orchid seed has no food reserve and requires to achieve a symbiotic relationship with a specific mycorrhiza which provides its food needs until a green leaf develops. With orchids in the wild the period from germination to flowering may be between 4 and 10 years depending on the species and habitat. Autumn planting  after grass seed sowing is particularly useful for establishing wintergreen orchid species. As they have low rosettes the surrounding grass will protect the orchids during the winter but will not swamp them. This can allow younger plants to be grown rather than having to use mature tubers. Wildflower and grass seeds can be sown in the early spring once the soil has begun to warm up. However, it is unlikely many of the species will flower in the first summer. Alternatively, the grass seed can be sown at that time and plugs of each wildflower planted. This will give the wildflowers an opportunity to establish before the grasses become to long and start shading out the young plants.  Planting plugs or plants into existing meadows Wildflowers and orchids can be planted into existing meadows with limited preparation.  With a large area it is sensible to use wildflower plugs in order to maximize plants within a reasonable budget.  If they are planted in the spring they usually establish well. The basic preparation is the tight mowing of the area and the removal of as much of the residue as possible. The sowing of yellow rattle seed could be helpful as the plant is a parasite of grass and helps reduce growth. Again wintergreen orchid species should be planted in late September or early October whilst the tubers are still dormant. A circle of 15 cm diameter should be cut out of the turf and the soil loosened to a depth of 10 cm into which the tuber should be planted at a depth of 5 cm. Many of the winter dormant orchid species have fairly large finger like tubers and will require more depth when being planted. They can be planted in October or March. Whilst mature orchids are rather expensive it is more cost effective to plant out mature plants of one year from flowering rather than younger plants that have a much higher mortality rate. Choice of plants The choice of wildflower and orchid species depends on a number of factors. Firstly, the pH of the soil will determine which group of plants will grow. There are specific plants for alkaline and acid conditions. Similarly, whether the land is wet or dry influences choice as does the amount of sun received; especially in the winter. Lists of suitable wildflowers for specific areas are listed by most of the wildflower seed or plug suppliers. Chalkland Birds Foot Trefoil, Burnet, Common Knapweed, Cowslip, Dropwort, Field scabious, hoary plantain, kidney vetch, meadow buttercup, oxeye daisy. Clay  Betony, birds foot trefoil, common knapweed, common sorrel, cowslip, meadow buttercup, meadow vetch, oxeye daisy, ragged robin, ribwort plantain, self heal, red clover, yellow rattleThe following orchids can be grown in specified meadow sites.Chalk/alkaline/dryOphrys apifera (Bee Orchid), Ophrys sphegodes (Early Spider, Ophrys fuciflora (Late Spider),  Ophrys insectifera (Fly), Orchis mascula (Early Purple),  Anacamptis pyramidalis (Pyramid), Orchis militaris (Military), Gymnadenia conopsea (Fragrant), Himantoglossum hircinum (Lizard) Alkaline/neutral/damp Dactylorhiza incarnata (Early Marsh), Dactylorhiza fuchsii (Common Spotted), Dactylorhiza praetermissa (Southern Marsh), Anacamptis morio (Green Winged) Neutral/acidic/damp Platanthera bifolia (Lesser Butterfly),  Platanthera chlorantha (Greater Butterfly), Dactylorhiza maculata (Heath Spotted),Dactylorhiza purpurella (Northern Marsh) Annual MaintenanceThe meadow should not be mown before July in order to let the wildflowers seed and the orchids to die back. Mowing should be at 7cm and the “hay cleared”. A further mowing may be done in the autumn or early March at a height of 10 cm to avoid any orchid rosettes.  |

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