

# EMORSGATE SEEDS 2025



Completely Wild



#### MANOR FARM

Langridge
Bath
BA1 8AJ



#### NEEP'S BRIDGE FARM

Middle Drove Wisbech PE14 8JT

# **EMORSGATE SEEDS**

Completely Wild since 1980

We specialise in the production of seed of native wild British species and we are the longest established and largest producers of native seeds in The British Isles, with production fields near Bath (300 acres) and in the Norfolk Fens (425 acres).

#### **SPECIES**

Wild flower species, 4-11
Wild grasses, sedges and rushes, 12-13
Amenity and agricultural cultivars, 14-15
Method for sowing species, 16
Sowing Yellow Rattle, 17
Growing wild Orchids, 18

#### **MIXTURES**

Mixtures and sowing rates, 19
General-purpose meadow mixtures, 20-22
Meadow mixtures for specific soils, 23-28
Brush harvesting services, 29
Brush harvested meadow mixtures, 30-34
Special purpose mixtures, 35-37
Cornfield annuals, 38
Sowing and aftercare of mixtures, 39-41
Mixture prices, 42-43

WEBSITE: www.emorsgateseeds.com and www.wildseed.co.uk

email: enquiries@emorsgateseeds.com

Ring: 01553 829028, 10.00am – 4.00pm, Monday – Friday

Please order online, by phone or email

Our website gives up to date information on the availability, specification and price of our full range of species and mixtures. The availability of species will vary through the year, with most species being available in good quantities in the autumn, just after harvest and cleaning. Most mixtures are usually available throughout the year, but the composition of these mixtures will change to suit the season and the availability of species. Please keep an eye on our website. Although prices may occasionally change, we do try to keep them constant for the calendar year.

Seed is sold by weight and any quantity may be ordered. The price is calculated from the weight bracket that the quantity falls into. For example, 150g of Yarrow seed will cost 1.5 times the 100g price:  $1.5 \times £26.00 = £39.00$ .

Please be aware that if you require only a few grams of a species it is often cheaper to order 10g.

All species coloured in green with the *scientific name in italics* are of wild British origin. Almost all seeds listed have been grown on our farms and for each species we maintain stock records tracing back to the place of wild origin. The county of origin is given in brackets. During cultivation we take great care to maintain the true character of the wild type and to preserve a very high level of genetic variation within each species.

	Scientific name Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
	Achillea millefolium Yarrow (Shropshire)	6,000	2,210.00	240.00	26.00	10.00	3.50
***	<b>Aethusa cynapium</b> Fool's Parsley (Somerset)	300		160.00	20.00	10.00	3.50
A.	<b>Agrimonia eupatoria</b> Agrimony (Oxfordshire)	50	2,580.00	280.00	30.00	10.00	3.50
	Agrostemma githago Corncockle (England)	70	370.00	40.00	20.00	10.00	3.50
	<b>Alliaria petiolata</b> Garlic Mustard (Cumbria)	500	2210.00	240.00	26.00	10.00	3.50
な	<b>Allium ursinum</b> Ransoms (Staffordshire)	150		620.00	67.00	10.00	3.50
	Althaea officinalis Marsh-mallow (Suffolk)	450				10.00	3.50
	<b>Angelica sylvestris</b> Wild Angelica (Somerset)	160		290.00	32.00	10.00	3.50
***	Anthriscus sylvestris Cow Parsley (Norfolk)	300		260.00	28.00	10.00	3.50
W.	<b>Anthyllis vulneraria</b> Kidney Vetch (Berkshire)	400	6,620.00	720.00	78.00	10.00	3.50
	<b>Aquilegia vulgaris</b> Columbine (Somerset)	600					3.50
	Arctium minus Lesser Burdock (Somerset)	60		280.00	30.00	10.00	3.50
	Arum maculatum Lords-and-Ladies (Oxfordshire)	20			57.00	10.00	3.50

	<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
	<b>Barbarea vulgaris</b> Winter Cress (Somerset)	1,500		320.00	35.00	10.00	3.50
A	<b>Betonica officinalis</b> Betony (Yorkshire)	700	4,970.00	540.00	59.00	10.00	3.50
T	Campanula trachelium Nettle-leaved Bellflower (Somerset)	4,200				10.00	3.50
	Cardamine hirsuta Hairy Bitter-cress (Somerset)	5,000			30.00	10.00	3.50
	<b>Centaurea cyanus</b> Cornflower (Hertfordshire)	250	1,380.00	150.00	20.00	10.00	3.50
	<b>Centaurea nigra</b> Common Knapweed (Somerset)	450	2,580.00	280.00	30.00	10.00	3.50
	<b>Centaurea scabiosa</b> Greater Knapweed (Dorset)	160	3,680.00	400.00	43.00	10.00	3.50
Si de	<b>Cerastium glomeratum</b> Sticky Mouse-ear (Somerset)	3,500				17.00	3.50
	Chaerophyllum temulum Rough Chervil (Somerset)	500	3,500.00	380.00	41.00	10.00	3.50
	<b>Chelidonium majus</b> Greater Celandine (Somerset)	1,600					3.50
	<b>Cirsium eriophorum</b> Woolly thistle (Somerset)	200		780.00	85.00	10.00	3.50
· · · · · · · · · · · · · · · · · · ·	<b>Conopodium majus</b> Pignut (Shropshire)	600		580.00	63.00	10.00	3.50
4	<b>Convolvulus arvensis</b> Field Bindweed (Somerset)	90			37.00	10.00	3.50
n	<b>Cota austriaca</b> Corn Chamomile (England)	2,000	1,100.00	120.00	20.00	10.00	3.50
	Crambe maritima Sea-kale (Kent)	15			57.00	10.00	3.50
	<b>Crithmum maritimum</b> Rock Samphire (Gower)	250			46.00	10.00	3.50
	Cruciata laevipes Crosswort (Dorset)	200	3,130.00	340.00	37.00	10.00	3.50
	<b>Cynoglossum officinale</b> Hound's-Tongue (Oxfordshire)	20		360.00	39.00	10.00	3.50

	<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
4	<b>Dactylorhiza fuchsii</b> Common Spotted-Orchid (Somerset)	10,000 (with soil)		660.00	72.00	10.00	3.50
	<b>Daucus carota</b> Wild Carrot (Dorset)	1,000	1,750.00	190.00	21.00	10.00	3.50
	<b>Digitalis purpurea</b> Foxglove (Suffolk)	13,000	2,020.00	220.00	24.00	10.00	3.50
	<b>Dipsacus fullonum</b> Wild Teasel (Lincolnshire)	300	1,660.00	180.00	20.00	10.00	3.50
	<b>Echium vulgare</b> Viper's-Bugloss (Hertfordshire)	250	5,340.00	580.00	63.00	10.00	3.50
中	<b>Epilobium montanum</b> Broad-leaved Willow-herb (Somerset)	16,000		290.00	32.00	10.00	3.50
	<b>Ervilia sylvatica</b> Wood Vetch (various)	100			87.00	10.00	3.50
NO SE	<b>Eupatorium cannabinum</b> Hemp-Agrimony (Suffolk)	4,000			109.00	12.00	3.50
	Filipendula ulmaria Meadowsweet (Shropshire)	1,000	2,760.00	300.00	33.00	10.00	3.50
	Filipendula vulgaris Dropwort (Cumbria)	1,000		580.00	63.00	10.00	3.50
	<b>Fragaria vesca</b> Wild Strawberry (Norfolk)	2,000					3.50
	<b>Galium album</b> Hedge Bedstraw (Somerset)	1,500	1,470.00	160.00	120.00	10.00	3.50
	<b>Galium verum</b> Lady's Bedstraw (Derbyshire)	2,500	3,500.00	380.00	41.00	10.00	3.50
學	<b>Genista tinctoria</b> Dyers Greenweed (Somerset)	300			120.00	13.00	3.50
家	<b>Geranium dissectum</b> Cut-Leaved Crane's-Bill (Somerset)	800				10.00	3.50
1	<b>Geranium lucidum</b> Shining Crane's-Bill (Somerset)	1,000					3.50
	<b>Geranium pratense</b> Meadow Crane's-Bill (Gloucestershire)	100	5,520.00	600.00	65.00	10.00	3.50
	<b>Geranium pyreniacum</b> Hedge Crane's-bill (Somerset)	600			57.00	10.00	3.50

	Scientific name Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
	Geum rivale Water Avens (Staffordshire)	700		580.00	63.00	10.00	3.50
	<b>Geum urbanum</b> Wood Avens (Staffordshire)	400			28.10	10.00	3.50
	<b>Glebionis segetum</b> Corn Marigold (Cornwall)	600	1,660.00	180.00	20.00	10.00	3.50
	Heracleum sphondylium Hogweed (Somerset)	150		160.00	20.00	10.00	3.50
	<b>Hesperis matronalis</b> Dames-violet	400		320.00	35.00	10.00	3.50
态	Hippocrepis comosa Horseshoe Vetch (Wiltshire)	350		900.00	98.00	11.00	3.50
	Hyacinthoides non-scripta Bluebell (Carmarthenshire)	120		500.00	54.00	10.00	3.50
	<b>Hypericum montanum</b> Pale St John's-wort (Somerset)	10,000			61.00	10.00	3.50
类	<b>Hypericum perforatum</b> Perforate St John's-wort (Somerset)	10,000		520.00	57.00	10.00	3.50
	<i>Iris foetidissima</i> Gladdon (Somerset)	20		440.00	48.00	10.00	3.50
7	<i>Iris pseudacorus</i> Yellow Flag-iris (Staffordshire)	20		520.00	57.00	10.00	3.50
	<b>Knautia arvensis</b> Field Scabious (Derbyshire)	150		380.00	41.00	10.00	3.50
*	Lapsana communis Nipplewort (Oxfordshire)	800			36.00	10.00	3.50
No.	Lathyrus pratensis Meadow Vetchling (Lincolnshire)	60	6,070.00	660.00	72.00	10.00	3.50
	<b>Lathyrus sylvestris</b> Narrow-leaved Everlasting-pea (Dorset)	25		520.00	57.00	10.00	3.50
¥¥	<b>Legousia hybrida</b> Venus's Looking-glass (Somerset)	10,000				50.00	5.40
10	<b>Leontodon hispidus</b> Rough Hawkbit (Somerset)	900	5,700.00	620.00	67.00	10.00	3.50
	Lepidium didymum Lesser Swine-cress (Somerset)	400				10.00	3.50

	<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
	<b>Leucanthemum vulgare</b> Moon Daisy (Yorkshire)	2,000	1,660.00	180.00	20.00	10.00	3.50
	<b>Linum bienne</b> Pale Flax (Dorset)	800	2,940.00	320.00	35.00	10.00	3.50
	<b>Linum catharticum</b> Fairy Flax (Somerset)	10,000		2,580.00	280.00	30.00	3.50
***	<b>Lotus corniculatus</b> Bird's-Foot Trefoil (Notts)	800	5,890.00	640.00	70.00	10.00	3.50
	<b>Lotus pedunculatus</b> Greater Bird's-Foot Trefoil	800		700.00	76.00	10.00	3.50
	<b>Lycopus europaeus</b> Gypsywort (England)	4,000			48.00	10.00	3.50
4	<b>Lythrum salicaria</b> Purple Loose-Strife (Cambridgeshire)	20,000		380.00	41.00	10.00	3.50
	<b>Malva moschata</b> Musk-Mallow (Lincolnshire)	500	2,940.00	320.00	35.00	10.00	3.50
	<b>Medicago lupulina</b> Black Medick (Norfolk)	400	1,100.00	120.00	20.00	10.00	3.50
	<b>Myosotis arvensis</b> Field Forget-me-not (Somerset)	2,000		420.00	46.00	10.00	3.50
	Myrrhis odorata Sweet Cicely (Dumfriesshire)	20		420.00	46.00	10.00	3.50
3	<b>Odontites verna</b> Red Bartsia (Somerset)	10,000			91.00	10.00	3.50
	<b>Oenanthe pimpinelloides</b> Corky-fruited Water-dropwort(Dorset)	450	2,390.00	260.00	28.00	10.00	3.50
	<b>Onobrychis viciifolia</b> Sainfoin (Wiltshire)	50		220.00	24.00	10.00	3.50
	<b>Ononis spinosa</b> Spiny Rest-harrow (Norfolk)	150		880.00	96.00	10.00	3.50
	<b>Origanum vulgare</b> Wild Marjoram (Gloucestershire)	11,000		700.00	76.00	10.00	3.50
	Ornithogalum pyrenaicum Bath Asparagus (Somerset)	125			54.00	10.00	3.50
	Orobanche minor Common Broomrape (Somerset)	100,000					6.00

	<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
	<b>Papaver rhoeas</b> Common Poppy (Lancashire)	10,000	1,100.00	120.00	20.00	10.00	3.50
	<b>Pastinaca sativa</b> Wild Parsnip (Norfolk)	230	2,580.00	280.00	30.00	18.00	3.50
	<b>Plantago lanceolata</b> Ribwort Plantain (Wiltshire)	300	1,200.00	130.00	20.00	10.00	3.50
No. of London	<b>Plantago major</b> Hoary Plantain (Somerset)	3,000		210.00	23.00	10.00	3.50
	<b>Plantago media</b> Hoary Plantain (Somerset)	2,000	2,580.00	280.00	30.00	10.00	3.50
**	Polemonium caeruleum Jacob's Ladder (England)	400			54.00	10.00	3.50
	<b>Poterium sanguisorba</b> Salad Burnet (Yorkshire)	250	1,380.00	150.00	20.00	10.00	3.50
	<b>Primula veris</b> Cowslip (Lincolnshire)	900	3,860.00	420.00	46.00	10.00	3.50
	<b>Primula vulgaris</b> Primrose (Somerset)	1,300			600.00	65.00	7.00
	<b>Prunella vulgaris</b> Selfheal (Yorkshire)	1,200	2,210.00	240.00	26.00	10.00	3.50
	<b>Pulicaria dysenterica</b> Fleabane (Norfolk)	5,000				24.00	3.50
	<b>Ranunculus acris</b> Meadow Buttercup (Suffolk)	600	1,560.00	170.00	20.00	10.00	3.50
	Ranunculus arvensis Corn Buttercup (Oxfordshire)	180		340.00	37.00	10.00	3.50
0	Ranunculus bulbosus Bulbous Buttercup (Somerset)	350		320.00	35.00	10.00	3.50
X	<b>Ranunculus repens</b> Creeping Buttercup (Somerset)	400		360.00	39.00	10.00	3.50
	<b>Reseda lutea</b> Wild Mignonette (Somerset)	1,400			43.00	10.00	3.50
a dh	<b>Reseda luteola</b> Weld (Oxfordshire)	4,500		290.00	31.52	8.00	3.00
	<b>Rhinanthus minor</b> Yellow Rattle (Wiltshire, Somerset)	300	2,940.00	320.00	35-00	10.00	3.50

	<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
Total State of	Rumex acetosa Common Sorrel (Leicestershire)	1,400	3,130.00	340.00	37.00	10.00	3.50
	Rumex acetosella Sheep's Sorrel (Suffolk)	1,500		360.00	39.00	10.00	3.50
	<b>Rumex obtusifolius</b> Broad-leaved Dock (Somerset)	1,000				10.00	3.50
A STATE OF THE PARTY OF THE PAR	<b>Rumex sanguineus</b> Wood Dock (Somerset)	1,500			28.00	10.00	3.50
-	<b>Sanguisorba officinalis</b> Great Burnet (Oxfordshire)	600			65.00	10.00	3.50
*	<b>Saponaria officinalis</b> Soapwort (Norfolk)	500		480.00	52.00	10.00	3.50
	<b>Scabiosa columbaria</b> Small Scabious (Hertfordshire)	800		650.00	71.00	10.00	3.50
	<b>Silaum silaus</b> Pepper-saxifrage (Yorkshire)	400		380.00	41.00	10.00	3.50
	<b>Silene dioica</b> Red Campion (Shropshire)	1,000	1,470.00	160.00	20.00	10.00	3.50
K	<b>Silene flos-cuculi</b> Ragged Robin (Cambridgeshire)	5,000		520.00	57.00	10.00	3.50
X	Silene latifolia White Campion (Somerset)	800		240.00	26.00	10.00	3.50
	<b>Silene noctiflora</b> Night-flowering Catchfly	1,200	740.00	80.00	20.00	10.00	3.50
	<b>Silene vulgaris</b> Bladder Campion (Hertfordshire)	1,200	1,470.00	160.00	20.00	10.00	3.50
*	<b>Sisymbrium officinale</b> Hedge Mustard (Somerset)	5,000				10.00	3.50
*	Succisa pratensis Devil's-bit Scabious (Oxfordshire)	650		660.00	72.00	10.00	3.50
	<b>Tamus communis</b> Black Bryony (Berkshire)	100				10.00	3.50
	Taraxacum officinale Dandelion (Somerset)	1,300	3,130.00	340.00	37.00	10.00	3.50
4	<b>Teucrium scorodonia</b> Wood Sage (Norfolk)	1,400		880.00	96.00	10.00	3.50

	<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
	<b>Torilis japonica</b> Upright Hedge-parsley (Suffolk)	600		380.00	46.00	10.00	3.50
*	<b>Tragopogon pratensis</b> Goat's Beard (Somerset)	60			48.00	10.00	3.50
	<b>Trifolium dubium</b> Lesser Yellow Trefoil (Gloucestershire)	3,000		320.00	35.00	10.00	3.50
	Tussilago farfara Coltsfoot (Norfolk)	8,000				10.00	3.50
	<b>Umbilicus rupestris</b> Navelwort (Glamorgan)	50,000				12.00	4.00
	<b>Urtica dioica</b> Stinging Nettle (Somerset)	300			48.00	10.00	3.50
	<b>Verbascum nigrum</b> Dark Mullein (Cumbria)	10,000			38.00	10.00	3.50
	<b>Verbascum thapsus</b> Great Mullen (Suffolk)	12,000		240.00	26.00	10.00	3.50
	<b>Vicia bithynica</b> Bithynian Vetch (Somerset)	60				10.00	3.50
**	Vicia cracca Tufted Vetch (Cambridgeshire)	40	5,340.00	580.00	63.00	10.00	3.50
4	<b>Vicia sativa</b> Common Vetch (Gloucestershire)	50		260.00	28.00	10.00	3.50



<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
Agrostis capillaris Common Bent (Caernarvonshire)	15,000		200.00	22.00	10.00	3.50
<b>Agrostis vinealis</b> Brown Bent (Derbyshire)	15,000	1,660.00	180.00	20.00	10.00	3.50
Alopecurus geniculatus Marsh Foxtail (Norfolk)	1,000			22.00	10.00	3.50
Alopecurus myosuroides Blackgrass (Norfolk)	1,000		80.00	20.00	10.00	3.50
Alopecurus pratensis Meadow Foxtail (Northumberland)	1,000	1,840.00	200.00	22.00	10.00	3.50
Anthoxanthum odoratum Sweet Vernal-Grass (Wiltshire)	1,500	2,760.00	300.00	33.00	10.00	3.50
<b>Briza media</b> Quaking Grass (Cambridgeshire)	2,500	1,660.00	180.00	20.00	10.00	3.50
<b>Bromus commutatus</b> Meadow Brome (Somerset)	100			20.00	10.00	3.50
<b>Bromopsis erecta</b> Upright Brome (Somerset)	200	970.00	105.00	20.00	10.00	3.50
Carex divulsa Grey Sedge (Somerset)	800	1,290.00	140.00	20.00	10.00	3.50
Carex echinata Star Sedge (Somerset)	600	1,660.00	180.00	20.00	10.00	3.50
Carex flacca Glaucous Sedge (Somerset)	800	2,760.00	300.00	33.00	10.00	3.50
Carex sylvatica Wood Sedge (Somerset)	800			90.00	10.00	3.50
Cynosurus cristatus Crested Dog's-tail (Yorkshire)	1,000	1,100.00	120.00	20.00	10.00	3.50
Dactylis glomerata Cocksfoot (Norfolk)	800	460.00	50.00	20.00	10.00	3.50
<b>Deschampsia cespitosa</b> Tufted Hair-grass (Oxfordshire)	4,000		180.00	20.00	10.00	3.50
Festuca ovina Sheep's Fescue (Yorkshire)	1,200	550.00	60.00	20.00	10.00	3.50
<b>Festuca rubra</b> Red Fescue (Wiltshire)	1,000	460.00	50.00	20.00	10.00	3.50

<b>Scientific name</b> Common name (origin)	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
<b>Hordeum secalinum</b> Meadow Barley	600		300.00	33.00	10.00	3.50
<b>Juncus bufonius</b> Toad Rush (Somerset)	10,000			55.00	10.00	3.50
Koeleria macrantha Crested Hair-Grass (Yorkshire)	3,000			35.00	10.00	3.50
<b>Lolium perenne</b> Perennial Ryegrass (Kent)	500	280.00	30.00	20.00	10.00	3.50
<b>Phleum bertolonii</b> Small Cat's Tail (Derbyshire)	4,000	830.00	90.00	20.00	10.00	3.50
Schedonorus arundinaceus Tall Fescue (Kent)	400	260.00	28.00	20.00	10.00	3.50
<b>Trisetum flavescens</b> Yellow Oat-Grass (Leicestershire)	2,500			38.00	10.00	3.50
<b>Typha latifolia</b> Bullrush (Gower)	100,000			58.00	10.00	3.50
<b>Vulpia myurus</b> Rat's-tail Fescue (Norfolk)	1,000		220.00	24.00	10.00	3.50



Cultivars of amenity grass species and agricultural forage species may sometimes be similar to the wild form of the same species. However, most cultivars have been bred for genetic uniformity and robustness, and are usually larger and more vigorous, when compared to the wild type, and often show poor long-term persistence. Because they are genetically uniform they do not possess the genetic capacity to respond to different and changing wild environments, and they do not contribute to biodiversity and evolutionary processes. Also, large blocks of forage cultivars, such as Red Clover, may sometimes rob nearby wild vegetation of essential native pollinators.

Scientific name Common name	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
<b>Achillea millefolium</b> Yarrow	10,000		70.00	20.00	10.00	3.50
Agrostis capillaris Common Bent	15,000	330.00	36.00	20.00	10.00	3.50
<b>Agrostis stolonifera</b> Creeping Bent	15,000	220.00	24.00	20.00	10.00	3.50
Alopecurus pratensis Meadow Foxtail	1,000		100.00	20.00	10.00	3.50
<b>Cynosurus cristatus</b> Crested Dog's-tail	1,600	230.00	25.00	20.00	10.00	3.50
<b>Dactylis glomerata</b> Cocksfoot	1,000	200.00	22.00	20.00	10.00	3.50
<b>Festuca ovina</b> Sheep's Fescue	1,200	220.00	24.00	20.00	10.00	3.50
<b>Festuca rubra</b> Slender-creeping Red-fescue	1,000	200.00	22.00	20.00	10.00	3.50
<b>Holcus lanatus</b> Yorkshire Fog	2,500		50.00	20.00	10.00	3.50
<b>Lolium multiflorum</b> Westerwolds Ryegrass	400	180.00	20.00	20.00	10.00	3.50
<b>Lolium perenne</b> Perennial Ryegrass	500	180.00	20.00	20.00	10.00	3.50
<b>Lotus corniculatus</b> Bird's-foot Trefoil	800	440.00	48.00	20.00	10.00	3.50
<b>Onobrychis viciifolia</b> Sainfoin	40	280.00	30.00	20.00	10.00	3.50
<b>Phleum bertolonii</b> Small Timothy	4,000	260.00	28.00	20.00	10.00	3.50

Scientific name Common name	Seeds/g	£/10kg	£/kg	£/100g	£/10g	£/g
<b>Phleum pratense</b> Timothy	2,000	220.00	24.00	20.00	10.00	3.50
<b>Plantago lanceolata</b> Ribwort Plantain	300		40.00	20.00	10.00	3.50
<b>Poa nemoralis</b> Wood Meadow-grass	4,000	260.00	28.00	20.00	10.00	3.50
<b>Poa pratensis</b> Smooth-stalked Meadow-grass	3,000	200.00	22.00	20.00	10.00	3.50
<b>Poa trivialis</b> Rough-stalked Meadow-grass	4,000	220.00	24.00	20.00	10.00	3.50
<b>Trifolium pratense</b> Red Clover	500		22.00	20.00	10.00	3.50
<b>Trifolium repens</b> Small-leaved White-clover	1,400		24.00	20.00	10.00	3.50



#### SEED DORMANCY and GERMINATION

The germination requirements of most wild seeds are that the seed should be fully imbibed (wet), exposed to moderate temperatures (10-25°C), exposed to light, and the seed should be non-dormant. Dormancy is a property of a proportion of the seeds of some species that helps to reduce germination at an inclement time of year, or under the wrong conditions, and helps to prevent all seeds germinating at once. There are three main types of seed dormancy:

TEMPERATURE: The seeds of some species require exposure to a period of low temperature (while fully imbibed) to break dormancy. This process, termed vernalisation, is a requirement in many species that normally have spring germinating seeds, e.g. Primula species, Yellow Rattle and Betony.

SEED COAT: Some species have seeds with a hard seed coat. In these species the seed coat must be degraded by abrasion or decay sufficient to allow the seed to imbibe water. This requirement, termed scarification, is found in Geraniums, Legumes and some other species.

TIME: There are a variety of other mechanisms that ensure that seeds of a species do not all germinate at once. These seeds will often exhibit complex time and environment related patterns of germination.

#### SOWING SPECIES UNDER GLASS

Autumn and spring are good times to sow under glass, in a polythene tunnel, or in a conservatory, although seeds requiring vernalisation are best sown in the autumn. Fill a seed tray to ¾ deep with peat-free seed sowing compost, firm and water well. Sprinkle seeds on the surface at 100-500 seeds per tray and add a light covering of horticultural grit. Do not bury the seeds. Cover the tray with a sheet of glass and place in an unheated position, out of direct sunlight. Remove the glass at the first sign of germination. From an autumn sowing this will normally be in February or March. Place the tray on a bench, watering as required. Prick out the seedlings into potting compost as soon as they can be handled, holding only by the cotyledon. Grow on under glass, harden off outside, and plant out as soon as the conditions are suitable.

#### SOWING SPECIES OUTSIDE

Spring and autumn are the best times to sow outside. Prepare a weed free seed bed with a medium/fine firm tilth. Sow the seeds on the surface in patches ( $1000-4000 \text{ seeds/m}^2$ ), or in rows (100-500 seeds/m). Firm the surface to give good seed/soil contact, but do not cover the seeds. Germination will occur over a period of time depending on the species, conditions and sowing date.



#### Rhinanthus minor

Yellow Rattle is an attractive annual of hay meadows. It is partially parasitic on some other grassland species and will often reduce the vigour of adjacent coarse grasses, resulting in transient dominance of Yellow Rattle in patches across a field. Each patch triggers a succession, allowing other sown species to establish in the vacant niches left by Yellow Rattle.

Broadcast Yellow Rattle seed in the autumn onto existing scarified grassland at up to 0.5g/m<sup>2</sup>. The seed requires vernalisation to break dormancy, and will germinate in February or March of the following year. The plants flower in June and die after shedding seed in July.

Yellow Rattle can reduce the productivity of grassland, and its presence will increase and maintain species diversity of a meadow.





Orchids have dust like seed that can survive perhaps 5 years or so while dormant in the soil, but, on germination, the seedlings must form a close, within-cell, association with specific soil fungi. This symbiotic relationship continues below ground for 2-3 years, and then also as the young plant emerges above ground, through to flowering, perhaps 6-10 years after germination.

There is no easy way of knowing if your site can provide the right conditions for Orchids. The required fungus is, however, very common. Also, it appears that grassland Orchids establish and grow best in short, open, flower rich swards on poor soils.

Sprinkle the seed finely over the surface of your chosen spot. Allow rain to wash the seed down through the vegetation and into the soil, and manage consistently from year to year with a mid August cut. When flowering occurs, perhaps after 6-10 years, continue with the mid August cut to allow seed set and dispersal.



Our Orchid seed is sold mixed with dry sieved soil taken from our Orchid plots. This aids handling and assists in providing the mycorrhizal fungi required by Orchids. The proportion used is 1 part seed to 99 parts soil. Each gram of mixture will contain an estimated 10,000 seeds.

#### GENERAL PURPOSE MEADOW MIXTURES, EM1-EM3

EM1, EM2 and EM3 are perennial mixtures for creating flower rich meadows on a wide range of soil types.

#### MEADOW MIXTURES for SPECIFIC SOILS, EM4-EM10

These mixtures are designed specifically for different soil types, including clays, loams, sandy soils, calcareous soils, wetlands and tussock grassland.

#### BRUSH HARVESTED MEADOW MIXTURES, EM11-EM32

These are completely wild mixtures and have been brush harvested directly from high quality wild donor sites.

#### SPECIAL PURPOSE MIXTURES, EP1, EH1 and EW1

This group includes mixtures for the wet conditions at pond edges, the shaded conditions below hedges, and woodland ground flora.

#### CORNFIELD ANNUALS, EC1 and EC2

These wild cornfield annual mixtures produce a brilliant display of flowers in the first summer after sowing. Maintain from year to year by cultivating in the autumn.

#### MIXTURE COMPOSITION

Most of our complete mixtures consist of 20% wild flower seed and 80% grass seed by weight. The exceptions are; EM1, which contains 10% wild flower seed, EM2, which contains 15% wild flower seed, and Cornfield Mixtures EC1 and EC2, which are 100% wild flower seed. Special mixtures can be created by selecting seeds from the species lists, and/or by combining a range of flower (only) and grass (only) mixtures in varying proportions. The species composition of our mixtures will change to suit the season and the availability of species. For example, Yellow Rattle will not germinate from a spring sowing. Please keep an eye on our website.

#### SOWING RATES for MEADOW MIXTURES

The standard rate for sowing meadow mixtures in a garden, or a landscaping situation, is  $4g/m^2$ . This rate should not be exceeded, but may be reduced when sowing on farmland and over large areas. In such situations, and where conditions are good,  $2g/m^2$  is usually adequate. The rate may be reduced further to  $1g/m^2$ . This low rate creates an open structure, allowing for natural colonisation by other species. An application rate of  $1g/m^2$  equates to approximately  $1,000 \text{ seeds/m}^2$ .

If resources are limited it is better to sow at a low rate on a larger area than at a standard rate on a small area. The standard rate gives quicker establishment of full ground cover, but after 10-20 years there may be little observable difference between sowing rates of  $4g/m^2$ ,  $2g/m^2$  and  $1g/m^2$ .

# EM1: BASIC GENERAL PURPOSE MEADOW MIXTURE

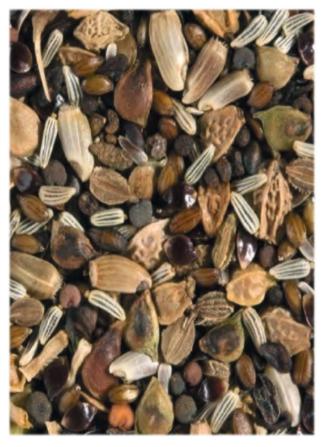
This is a simple low cost meadow mixture suitable for a wide range of soil types. The wild flowers are robust and showy, and the grasses are fine and slow growing. EM1 consists of 10% wild flowers and 90% meadow grasses.

#### % Wild flowers (EM1F)

- 1.5 Centaurea nigra, Common Knapweed
- 1.0 Daucus carota, Wild Carrot
- 0.3 Galium verum, Lady's Bedstraw
- 1.5 Leucanthemum vulgare, Moon Daisy
- 0.6 Malva moschata, Musk Mallow
- 1.6 Plantago lanceolata, Ribwort Plantain
- 1.5 Poterium sanguisorba, Salad Burnet
- 1.0 Ranunculus acris, Meadow Buttercup
- 0.5 Rhinanthus minor, Yellow Rattle
- 0.5 Silene dioica, Red Campion

#### % Meadow grasses (EG1)

- 9.0 Agrostis capillaris, Common Bent
- 31.5 Cynosurus cristatus, Crested Dog's-tail
- 27.0 Festuca rubra, Red Fescue
  - 4.5 Phleum bertolonii, Smaller Cat's-tail
- 18.0 Poa pratensis, Meadow-grass





# EM2: STANDARD GENERAL PURPOSE MEADOW MIXTURE

This meadow mixture contains a good range of species and is suitable for a wide variety of soil types. EM2 contains 15% wild flowers and 20% meadow grasses.

#### % Wild flowers (EM2F)

- 0.5 Achillea millefolium, Yarrow
- 1.0 Centaurea nigra, Common Knapweed
- 1.0 Daucus carota, Wild Carrot
- 0.5 Galium verum, Lady's Bedstraw
- 0.5 Geranium pratense, Meadow Crane's-bill
- 1.0 Knautia arvensis, Field Scabious
- 1.0 Leucanthemum vulgare, Moon Daisy
- 1.0 Malva moschata, Musk Mallow
- 2.0 Plantago lanceolata, Ribwort Plantain
- 1.0 Poterium sanguisorba, Salad Burnet
- 0.4 Primula veris, Cowslip
- 2.0 Prunella vulgaris, Selfheal
- 2.0 Ranunculus acris, Meadow Buttercup
- 1.0 Rhinanthus minor, Yellow Rattle
- 0.1 Rumex acetosa, Common Sorrel

#### % Meadow grasses (EG1)

- 8.5 Agrostis capillaris, Common Bent
- 29.8 Cynosurus cristatus, Crested Dog's-tail
- 25.5 Festuca rubra, Red Fescue
- 4.2 Phleum bertolonii, Smaller Cat's-tail
- 17.0 Poa pratensis, Meadow Grass





#### EM3: SPECIAL GENERAL PURPOSE MEADOW MIXTURE

Meadow mixture EM3 contains a very wide range of species. It may be used to create a very diverse sward, or where conditions and soil type may vary across a site. EM3 consists of 20% wild flower seed and 80% meadow grasses.

#### % Wild flowers (EM3F)

- 0.3 Achillea millefolium, Yarrow
- 0.5 Agrimonia eupatoria, Agrimony
- 0.2 Betonica officinalis, Betony
- 1.5 Centaurea nigra, Common Knapweed
- 0.5 Centaurea scabiosa, Greater Knapweed
- 1.0 Cruciata laevipes, Crosswort
- 1.0 Daucus carota, Wild Carrot
- 0.1 Echium vulgare, Viper's-bugloss
- 0.5 Filipendula ulmaria, Meadowsweet
- 0.5 Galium album, Hedge Bedstraw
- 0.5 Galium verum, Lady's Bedstraw
- 0.2 Geranium pratense, Meadow Cranesbill
- 1.0 Knautia arvensis, Field Scabious
- 0.2 Leontodon hispidus, Rough Hawkbit
- 1.5 Leucanthemum vulgare, Moon Daisy
- 0.1 Lotus corniculatus, Bird's-foot Trefoil
- 1.0 Malva moschata, Musk Mallow
- 0.5 Medicago lupulina, Black Medick
- 0.1 Origanum vulgare, Wild Marjoram
- 0.4 Pastinaca sativa, Wild Parsnip
- 1.5 Plantago lanceolata, Ribwort Plantain
- 1.0 Poterium sanguisorba, Salad Burnet
- 0.2 Primula veris, Cowslip
- 2.0 Prunella vulgaris, Selfheal
- 1.5 Ranunculus acris, Meadow Buttercup
- 0.2 Ranunculus bulbosus, Bulbous Buttercup
- 1.0 Rhinanthus minor, Yellow Rattle
- 0.2 Rumex acetosa, Common Sorrel
- 0.1 Silaum silaus, Pepper Saxifrage
- 0.5 Silene vulgaris, Bladder Campion
- 0.1 Torilis japonica, Upright Hedge-parsley
- 0.1 Tragopogon pratensis, Goat's Beard

#### % Meadow grasses (EG1)

- 8.0 Agrostis capillaris, Common Bent
- 28.0 Cynosurus cristatus, Crested Dog's-tail
- 24.0 Festuca rubra, Red Fescue
- 4.0 Phleum bertolonii, Smaller Cat's-tail
- 16.0 Poa pratensis, Meadow Grass



# EM4: MEADOW MIXTURE for CLAY SOILS

EM4 is a special mixture for clay soils, containing wild flowers and wild grasses that are well adapted to these conditions.

#### % Wild flowers (EM4F)

- 0.5 Achillea millefolium, Yarrow
- 0.5 Agrimonia eupatoria, Agrimony
- 0.5 Betonica officinalis, Betony
- 2.0 Carex flacca, Glaucous Sedge
- 2.5 Centaurea nigra, Common Knapweed
- 0.2 Filipendula ulmaria, Meadowsweet
- 0.5 Geranium pratense, Meadow Crane's-bill
- 1.0 Knautia arvensis, Field Scabious
- 0.2 Leontodon hispidus, Rough Hawkbit
- 1.5 Leucanthemum vulgare, Moon Daisy
- 0.2 Lotus corniculatus, Bird's-foot Trefoil
- 1.0 Malva moschata, Musk Mallow
- 2.5 Plantago lanceolata, Ribwort Plantain
- 0.4 Primula veris, Cowslip
- 2.0 Prunella vulgaris, Selfheal
- 1.5 Ranunculus acris, Meadow Buttercup
- 0.5 Ranunculus bulbosus, Bulbous Buttercup
- 1.0 Rhinanthus minor, Yellow Rattle
- 0.5 Rumex acetosa, Common Sorrel
- 0.5 Silaum silaus, Pepper Saxifrage
- 0.5 Vicia cracca, Tufted Vetch

#### % Meadow grasses (EG4)

- 5.0 Agrostis capillaris, Common Bent
- 3.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 3.0 Briza media, Quaking Grass
- 58.0 Cynosurus cristatus, Crested Dog's-tail
- 10.0 Festuca rubra, Red Fescue
- 1.0 Trisetum flavescens, Yellow Oat-grass





Clay soils are composed of very fine particles and are sticky and heavy when wet, and very hard when dry. Therefore they are difficult to work, and it is often best to autumn plough and allow winter frosts to create a tilth. Clay soils are usually moderately fertile and slightly acid to neutral in pH.

# EM5: MEADOW MIXTURE for LOAMY SOILS

EM5 is suitable for loamy soils and is based on MG5 grasslands, the flower rich meadows that were once widespread in lowland Britain, but are now very rare.

#### % Wild flowers (EM5F)

- 0.3 Achillea millefolium, Yarrow
- 0.5 Agrimonia eupatoria, Agrimony
- 0.5 Betonica officinalis, Betony
- 1.5 Carex flacca, Glaucous Sedge
- 2.5 Centaurea nigra, Common Knapweed
- 0.5 Daucus carota, Wild carrot
- 0.5 Galium verum, Lady's Bedstraw
- 0.5 Geranium pratense, Meadow Cranesbill
- 1.0 Knautia arvensis, Field Scabious
- 0.2 Leontodon hispidus, Rough Hawkbit
- 1.5 Leucanthemum vulgare, Moon Daisy
- 0.3 Lotus corniculatus, Bird's-foot Trefoil
- 1.0 Malva moschata, Musk Mallow
- 0.5 Medicago lupulina, Black Medick
- 1.5 Plantago lanceolata, Ribwort Plantain
- 0.5 Primula veris, Cowslip
- 2.0 Prunella vulgaris, Selfheal
- 2.0 Ranunculus acris, Meadow Buttercup
- 0.2 Ranunculus bulbosus, Bulbous Buttercup
- 1.0 Rhinanthus minor, Yellow Rattle
- 0.5 Rumex acetosa, Common Sorrel
- 0.5 Silaum silaus, Pepper Saxifrage
- 0.5 Vicia cracca, Tufted Vetch

#### % Meadow grasses (EG5)

- 5.0 Agrostis capillaris, Common Bent
- 3.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 3.0 Briza media, Quaking Grass
- 58.0 Cynosurus cristatus, Crested Dog's-tail
- 10.0 Festuca rubra, Red Fescue
  - 1.0 Trisetum flavescens, Yellow Oat-grass





# EM6: MEADOW MIXTURE for CHALK and LIMESTONE SOILS

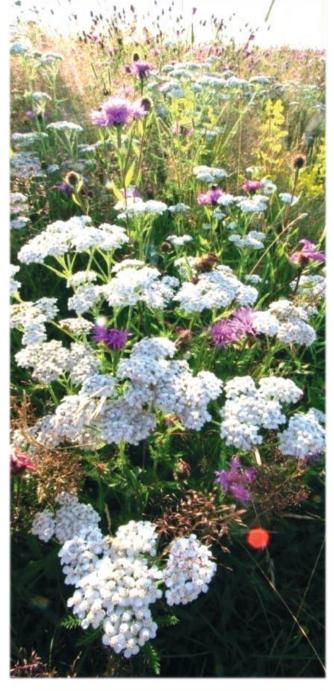
This rich mixture is suitable for sowing onto thin lime-rich soils over chalk or limestone. Calcareous soils are high in pH, free draining, often nutrient poor, and can support some of the most diverse and interesting plant communities.

#### % Wild flowers (EM6F)

- 0.2 Achillea millefolium, Yarrow
- 0.5 Agrimonia eupatoria, Agrimony
- 0.2 Anthyllis vulneraria, Kidney Vetch
- 0.2 Betonica officinalis, Betony
- 1.0 Carex flacca, Glaucous Sedge
- 1.0 Centaurea nigra, Common Knapweed
- 2.0 Centaurea scabiosa, Greater Knapweed
- 1.0 Daucus carota, Wild Carrot
- 0.4 Filipendula vulgaris, Dropwort
- 0.5 Galium album, Hedge Bedstraw
- 0.5 Galium verum, Lady's Bedstraw
- 1.0 Knautia arvensis, Field Scabious
- 0.2 Leontodon hispidus, Rough Hawkbit
- 1.0 Leucanthemum vulgare, Moon Daisy
- 0.2 Lotus corniculatus, Bird's-foot Trefoil
- 0.5 Medicago lupulina, Black Medick
- 0.2 Origanum vulgare, Wild Marjoram
- 1.0 Pastinaca sativa, Wild Parsnip
- 1.0 Plantago lanceolata, Ribwort Plantain
- 0.5 Plantago media, Hoary Plantain
- 2.0 Poterium sanguisorba, Salad Burnet
- 0.3 Primula veris, Cowslip
- 1.5 Prunella vulgaris, Selfheal
- 0.9 Ranunculus bulbosus, Bulbous Buttercup
- 1.0 Rhinanthus minor, Yellow Rattle
- 0.2 Rumex acetosa, Common Sorrel
- 1.0 Silene vulgaris, Bladder Campion

#### % **Meadow grasses** (EG6)

- 2.0 Briza media, Quaking Grass
- 10.0 Bromopsis erecta, Upright Brome
- 42.0 Cynosurus cristatus, Crested Dog's-tail
- 13.0 Festuca ovina, Sheep's Fescue
- 10.0 Festuca rubra, Red Fescue
- 2.0 Koeleria macrantha, Crested Hair-grass
- 1.0 Trisetum flavescens, Yellow Oat-grass





# EM7: MEADOW MIXTURE for SANDY SOILS

Meadow mixture EM7 contains species that are deep rooting and drought tolerant. It is suitable for well-drained sandy soils of moderate pH.

#### % Wild flowers (EM7F)

- 0.5 Achillea millefolium, Yarrow
- 0.2 Anthyllis vulneraria, Kidney Vetch
- 0.2 Betonica officinalis, Betony
- 2.0 Centaurea nigra, Common Knapweed
- 1.5 Cruciata laevipes, Crosswort
- 0.5 Cynoglossum officinale, Hound's-tongue
- 2.0 Daucus carota, Wild Carrot
- 0.2 Echium vulgare, Viper's-bugloss
- 2.5 Galium verum, Lady's Bedstraw
- 1.0 Knautia arvensis, Field Scabious
- 0.2 Leontodon hispidus, Rough Hawkbit
- 1.0 Leucanthemum vulgare, Moon Daisy
- 0.2 Lotus corniculatus, Bird's-foot Trefoil
- 0.5 Medicago lupulina, Black Medick
- 1.3 Poterium sanguisorba, Salad Burnet
- 1.5 Prunella vulgaris, Selfheal
- 0.5 Ranunculus acris, Meadow Buttercup
- 0.5 Reseda luteola, Weld
- 1.0 Rhinanthus minor, Yellow Rattle
- 0.5 Rumex acetosella, Sheep's Sorrel
- 1.0 Silene alba, White Campion
- 1.0 Silene vulgaris, Bladder Campion
- 0.2 Verbascum thapsus, Great Mullein

#### % Meadow grasses (EG7)

- 4.0 Agrostis capillaris, Common Bent
- 4.0 Agrostis vinealis, Brown Bent
- 4.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 45.0 Cynosurus cristatus, Crested Dog's-tail
- 10.0 Festuca ovina, Sheep's Fescue
- 10.0 Festuca rubra, Red Fescue
  - 3.0 Koeleria macrantha, Crested Hair-grass





# EM8: MEADOW MIXTURE for WETLANDS

EM8 is suitable for seasonally wet soils in lowland areas and is based on the vegetation of traditional water meadows.

#### % Wild flowers (EM8F)

- 0.5 Achillea millefolium, Yarrow
- 1.0 Betonica officinalis, Betony
- 3.0 Centaurea nigra, Common Knapweed
- 0.4 Filipendula ulmaria, Meadowsweet
- 3.0 Galium verum, Lady's Bedstraw
- 0.5 Leontodon hispidus, Rough Hawkbit
- 0.5 Leucanthemum vulgare, Moon Daisy
- 1.8 Lotus corniculatus, Bird's-foot Trefoil
- 1.0 Plantago lanceolata, Ribwort Plantain
- 0.5 Primula veris, Cowslip
- 0.4 Prunella vulgaris, Selfheal
- 0.8 Ranunculus acris, Meadow Buttercup
- 0.2 Ranunculus bulbosus, Bulbous Buttercup
- 0.8 Rhinanthus minor, Yellow Rattle
- 1.4 Rumex acetosa, Common Sorrel
- 0.1 Sanguisorba officinalis, Great Burnet
- 0.3 Silaum silaus, Pepper Saxifrage
- 2.0 Silene flos-cuculi, Ragged Robin
- 0.3 Succisa pratensis, Devil's-bit Scabious
- 0.6 Taraxacum officinale, Dandelion
- 0.1 Tragopogon pratensis, Goat's Beard
- 0.8 Vicia cracca, Tufted Vetch

#### % Wetland grasses (EG8)

- 4.0 Agrostis capillaris, Common Bent
- 4.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 4.0 Briza media, Quaking Grass
- 54.0 Cynosurus cristatus, Crested Dog's-tail
- 4.0 Deschampsia cespitosa, Tufted Hair-grass
- 10.0 Festuca rubra, Red Rescue





# EM10: TUSSOCK and WAYSIDE MIXTURE

The robust wild flowers and grasses in this mixture will form a tussock structure, providing an excellent habitat for invertebrates, birds and other creatures throughout the year.

#### % Wild flowers (EM10F)

- 0.4 Achillea millefolium, Yarrow
- 0.5 Agrimonia eupatoria, Agrimony
- 0.4 Arctium lappa, Greater Burdock
- 0.4 Arctium minus, Lesser Burdock
- 2.0 Carex echinata, Star Sedge
- 2.0 Centaurea nigra, Common Knapweed
- 0.5 Centaurea scabiosa, Greater Knapweed
- 1.5 Chaerophyllum temulum, Rough Chervil
- 0.4 Cirsium eriophorum, Woolly Thistle
- 1.0 Cruciata laevipes, Crosswort
- 1.0 Daucus carota, Wild Carrot
- 2.0 Dipsacus fullonum, Wild Teasel
- 0.2 Filipendula ulmaria, Meadowsweet
- 1.0 Galium album, Hedge Bedstraw
- 0.4 Geranium pratense, Meadow Cranesbill
- 0.4 Knautia arvensis, Field Scabious
- 1.0 Leucanthemum vulgare, Moon Daisy
- 1.0 Malva moschata, Musk Mallow
- 1.5 Ranunculus acris, Meadow Buttercup
- 0.5 Silene alba, White Campion
- 1.0 Silene dioica, Red Campion
- 0.5 Torilis japonica, Upright Hedge-parsley
- 0.4 Vicia cracca, Tufted Vetch

#### % Tussock grasses (EG10)

- 47.0 Cynosurus cristatus, Crested Dog's-tail
- 8.0 Deschampsia cespitosa, Tufted Hair-grass
- 8.0 Festuca rubra, Red Fescue
- 2.0 Schedonorus arundinaceus, Tall Fescue
- 15.0 Schedonorus pratensis, Meadow Fescue





Tussock and wayside grasslands are not normally grazed, and are cut only every 2-5 years to control scrub. The resulting vegetation provides year round structural habitat diversity, hibernation and nesting sites and foraging opportunities for invertebrates, reptiles and amphibians, mammals and birds. Created biodiversity can be huge.



#### BRUSH HARVESTING METHOD

We designed and made the first meadow brush harvester in 1986. A world first, and that harvester is still going strong. Unlike suction harvesters, and fan assisted brush harvesters, our brush harvesters are very kind to invertebrates. We have several 1.4m side-mounted brush harvesters, and a 3.0m trailed brush harvester. Typical yield of clean dry seed is  $\pm$  10-40kg/acre and work rate is  $\pm$  0.5-1.0 acres/1.0m brush length/hour. Standing hay crops are not harmed.

Brush harvesting produces a completely wild, 100% natural, meadow mixture. With only 3% of wild meadows surviving in the British Isles, and these often as small isolated fields, brush harvesting provides a method to enlarge and link these important sites without harming their scientific and heritage value.

#### CONTRACT BRUSH HARVESTING COSTS

- Pre-harvest site visit, ± £400.00
- Brush harvesting, ± £500.00/acre
- Seed drying and cleaning, ± £100.00/acre
- Sample seed analysis, ± £300.00/sample
- Temperature and humidity controlled seed storage, ± £15.00/kg/year

#### **MEADOWS WANTED**

We pay £100.00-180.00/acre for the option to brush harvest the very best species rich unimproved hay meadows.

Prices and costs will vary depending on site conditions and context.

# EM12: FOLLY FARM MEADOWS



Folly Farm is an Avon Wildlife Trust reserve situated in the rolling hills south of Bath on neutral soils. The hay meadows at Folly Farm are very high quality lowland neutral hay meadow SSSI. They are home to a huge diversity of native meadow species, including thousands of wild Orchids. Mixture EM12 is brush harvested from these fields. It is a fantastic mixture, with a wild flower seed content well in excess of 50%. It is our best lowland neutral hay meadow brush harvested mixture and is an excellent example of MG5 grassland.



# EM13: AVIS MEADOW

Avis Meadow is a Wiltshire Wildlife Trust reserve near Minety in the Upper Thames catchment just east of Malmesbury. It is an SSSI quality wet meadow with elements of both floodplain meadow MG4 grassland and neutral lowland meadow MG5 grassland. It is a very good mixture for restoring floodplain meadows and wet native grasslands.



EM14: BISHOP'S HILL MEADOWS

Bishop's Hill Meadows are situated near Wickwar in South Gloucestershire. The meadows are part of the Lower Woods SSSI complex, a greater part of which is a Gloucestershire Wildlife Trust Reserve. Mixture EM14 is an excellent example of lowland unimproved MG4 hay meadow.



# EM18: S<sup>T</sup> CATHERINE MEADOWS



EM18 is harvested from hay meadows on thin soils over limestone at S<sup>t</sup> Catherine, just north of Bath. This is a superb mixture rich in calcareous grassland species. The wild flower seed content is well over 50%.

EM18 is our best lowland calcareous meadow mixture, highly recommended.



Harvest time at St Catherine using a 3.0m trailed brush harvester. Capable of harvesting 5 acres/hour.

# EM31: CLATTINGER FLOODPLAIN MEADOWS



Clattinger Farm is a Wiltshire Wildlife Trust Nature Reserve situated on the upper Thames flood plain. The fields at Clattinger are SSSI, consisting of both flood plain meadow MG4 grasslands and lowland meadow MG5 grasslands. Well worth a visit. EM31 Clattinger is our best flood plain meadow MG4 mixture.

# EM32: HIGHGROVE MEADOWS



EM32 is a great mixture harvested from the special meadows at Highgrove House in Wiltshire.





Mixture EM33 has been brush harvested from upland hay meadows on the border between Wales and England.

EM34: MIXED DIVERSE MEADOWS



EM34 is a blend of brush harvested mixtures from many diverse meadows. It contains a huge number of native wild meadow species, is brimming with biodiversity, and will adapt to most conditions.

# **EP1: POND EDGE MIXTURE**

Pond Edge Mixture EP1 contains wild flowers and grasses suitable for sowing at the wet margins of ponds, streams and ditches.

#### % Wild flowers (EP1F)

- 0.5 Angelica sylvestris, Wild Angelica
- 0.1 Caltha palustris, Marsh Marigold
- 0.5 Carex echinata, Star Sedge
- 0.2 Carex pendula, Pendulous Sedge
- 2.0 Centaurea nigra, Common Knapweed
- 1.2 Cruciata laevipes, Crosswort
- 0.5 Dipsacus fullonum, Wild Teasel
- 0.1 Eupatorium cannabinum, Hemp Agrimony
- 3.5 Filipendula ulmaria, Meadowsweet
- 0.5 Geum rivale, Water Avens
- 8.0 Iris pseudacorus, Yellow Flag-iris
- 0.2 Lycopus europaeus, Gypsywort
- 0.1 Lysimachia vulgaris, Yellow Loosestrife
- 0.2 Lythrum salicaria, Purple Loosestrife
- 0.5 Oenanthe pimpinelloides, Corky-fruited Water-dropwort
- 0.5 Prunella vulgaris, Selfheal
- 0.1 Pulicaria dysenterica, Common Fleabane
- 1.0 Silene dioica, Red Campion
- 0.1 Silene flos-cuculi, Ragged Robin
- 0.1 Thalictrum flavum, Common Meadow-rue
- 0.1 Typha latifolia, Bullrush

#### % Wetland grasses (EG8)

- 4.0 Agrostis capillaris, Common Bent
- 4.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 4.0 Briza media, Quaking Grass
- 54.0 Cynosurus cristatus, Crested Dog's-tail
- 4.0 Deschampsia cespitosa, Tufted Hair-grass
- 10.0 Festuca rubra, Red Rescue





# EH1: HEDGEROW MIXTURE

EH1 contains species that are adapted to semi-shade and is suitable for sowing alongside newly planted and established hedges, and on rides and woodland margins.

#### % Wild flowers (EH1F)

- 2.0 Agrimonia eupatoria, Agrimony
- 0.1 Alliaria petiolata, Garlic Mustard
- 1.0 Arctium minus, Lesser Burdock
- 0.1 Anthriscus sylvestris, Cow Parsley
- 1.5 Carex echinata, Star Sedge
- 2.0 Centaurea nigra, Common Knapweed
- 0.5 Chaerophyllum temulum, Rough Chervil
- 1.0 Cruciata laevipes, Crosswort
- 0.8 Daucus carota, Wild Carrot
- 1.5 Dipsacus fullonum, Wild Teasel
- 1.0 Filipendula ulmaria, Meadowsweet
- 0.5 Galium album, Hedge Bedstraw
- 0.2 Geranium pratense, Meadow Crane's-bill
- 1.5 Leucanthemum vulgare, Moon Daisy
- 0.1 Origanum vulgare, Wild Marjoram
- 0.2 Primula veris, Cowslip
- 1.0 Prunella vulgaris, Selfheal
- 0.2 Rumex acetosa, Common Sorrel
- 0.1 Saponaria officinalis, Soapwort
- 2.5 Silene dioica, Red Campion
- 1.0 Silene vulgaris, Bladder Campion
- 1.0 Torilis japonica, Upright Hedge-parsley
- 0.2 Vicia cracca, Tufted Vetch

#### % Grasses (EG9)

- 5.0 Agrostis capillaris, Common Bent
- 4.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 1.0 Brachypodium sylvaticum, False Brome
- 45.0 Cynosurus cristatus, Crested Dog's-tail
  - 5.0 Deschampsia cespitosa, Tufted Hair-grass
- 10.0 Festuca rubra, Red-fescue
- 10.0 Poa nemoralis, Wood Meadow-grass



The flora at the base of hedges is vulnerable to field operations. Mixture EH1 can be used to repair past damage, or may be sown when planting a new hedge.

# EW1: WOODLAND MIXTURE

EW1 is a very good mixture of woodland wild flowers and grasses that will bloom in spring and early summer.

#### % Wild flowers (EW1F)

- 0.2 Alliaria petiolata, Garlic Mustard
- 1.0 Allium ursinum, Ransoms
- 0.5 Anthriscus sylvestris, Cow Parsley
- 0.5 Arctium minus, Lesser Burdock
- 0.1 Campanula trachelium, Nettle-leaved Bell-
- 0.2 Carex sylvatica, Wood Sedge
- 1.5 Chaerophyllum temulum, Rough Chervil
- 3.0 Digitalis purpurea, Foxglove
- 0.1 Eupatorium cannabinum, Hemp-agrimony
- 1.5 Filipendula ulmaria, Meadowsweet
- 1.0 Galium album, Hedge Bedstraw
- 0.2 Geum urbanum, Wood Avens
- 3.0 Hyacinthoides non-scripta, Bluebell
- 0.5 Iris foetidissima, Gladdon
- 0.5 Prunella vulgaris, Selfheal
- 4.0 Silene dioica, Red Campion
- 0.2 Teucrium scorodonia, Wood Sage
- 1.0 Torilis japonica, Upright Hedge-parsley
- 1.0 Vicia cracca, Tufted Vetch

#### % Grasses (EG9)

- 5.0 Agrostis capillaris, Common Bent
- 4.0 Anthoxanthum odoratum, Sweet Vernal-grass
- 1.0 Brachypodium sylvaticum, False Brome
- 45.0 Cynosurus cristatus, Crested Dog's-tail
  - 5.0 Deschampsia cespitosa, Tufted Hair-grass
- 10.0 Festuca rubra, Red-fescue
- 10.0 Poa nemoralis, Wood Meadow-grass





# EC1 and EC2 CORNFIELD MIXTURES

Cornfield mixtures produce a brilliant show of flowers in June and July from an autumn, winter or early spring sowing. Sow alone at 2g/m² onto prepared bare soil. All species in EC1 and EC2 are hardy and wild to the British Isles. They are self-sustaining year to year with annual autumn cultivation. Alternatively, sow as a colourful "nurse" for a meadow mixture.



# EC1: STANDARD CORNFIELD MIXTURE

%	Wild flowers
50.0	Agrostemma githago, Corn Cockle
20.0	Centaurea cyanus, Cornflower
5.0	Cota austriaca, Corn Chamomile
15.0	Glebionis segetum, Corn Marigold
10.0	Papaver rhoeas, Common Poppy

# EC2: SPECIAL CORNFIELD MIXTURE

% Wild flowers

30.0	Agrostemma githago, Corn Cockle
25.0	Centaurea cyanus, Cornflower
4.0	Cota austriaca, Corn Chamomile
15.0	Glebionis segetum, Corn Marigold
2.0	Linum bienne, Pale Flax
1.0	Matricaria chamomilla, Scented Mayweed
10.0	Papaver rhoeas, Common Poppy
8.0	Ranunculus arvensis, Corn Buttercup
2.0	Sinapis arvensis, Charlock
1.0	Tripleurospermum inodorum, Mayweed
2.0	Veronica persica, Common Field-speedwell



MEADOW CREATION: 3m roller feed seed box mounted on 3m discs surface sowing a meadow mixture at 2g/m² onto the surface of prepared bare soil



MEADOW RESTORATION: 3m roller feed seed box mounted on 3m discs surface sowing a meadow mixture at  $2g/m^2$  onto the surface of scarified species poor grassland

#### MEADOW CREATION BY SOWING ONTO PREPARED SOIL

**Ground Preparation:** Select ground that is not highly fertile, and does not have a problem with perennial weeds. Remove any existing vegetation by repeated cultivation or turf stripping. Then plough, surface cultivate or dig to bring up clean soil, harrow or rake to produce a medium tilth, and roll or tread to produce a firm surface. Aim to produce a firm, weed free, medium tilth, seed-bed.

**Sowing rate:** Sow at 4g/m<sup>2</sup> in a landscaping or garden setting. A reduced rate of around 2g/m<sup>2</sup> may be used in an agricultural setting or on large areas.

**Sowing:** Sow in the autumn or the spring, or at any other time of the year if the ground conditions are good. Divide the quantity of seed and sow half in one direction over the entire area and the remainder at 90°. The seed must be sown on the surface and can be applied by seed drill, seed fiddle, or broadcast by hand. Do not incorporate or cover the seed, but firm in with a roll, or by treading, to give good seed/soil contact.

**Aftercare:** Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds can look unsightly, but they will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out. So resist cutting the annual weeds until mid to late summer, especially if the mixture contains Yellow Rattle, or has been sown with a nurse of cornfield annuals. Then cut, remove and compost. Early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the following year.

In the second growing season, and each year thereafter, leave the meadow uncut and un-grazed from the end of March to mid-summer, allowing the sown species to flower in June and July. After flowering, cut and remove the vegetation. This may be taken off as hay, or cut and stacked nearby to rot. The meadow may then be kept mown or grazed through to the end of March in the following year. Moderate winter poaching is beneficial. Flowering in the second growing season will be very good, and as the years go by, and with good management, species diversity will increase.

Cutting date can be varied from year to year, bringing it forward to early July if the meadow becomes rank, or taking a later cut in early August if the structure is good. Perennial weeds can be controlled by selective scything or topping. Cut perennial weeds at flowering and before seed set.

#### MEADOW RESTORATION BY SOWING INTO EXISTING GRASS

Meadow restoration is a no-plough method for diversifying existing established grassland. However, restoration is more challenging than creation, and success depends upon, (1) a good site, (2) very hard scarification, (3) autumn sowing and (4) Yellow Rattle.

Select grassland with a good wild grass content (but otherwise species poor) on poor to moderately fertile soil. Avoid ground infested with Docks, Thistles or Nettles. Prepare in late summer by cutting low and/or grazing very hard. Then scarify hard with harrows or by raking, aiming to create around 50% bare soil. This is best done when the ground is dry. Sow on the surface in the autumn (September is the best month) using a complete meadow mixture at  $4g/m^2$ , following the method given above. Then roll hard to firm back the soil and give good seed/soil contact. Continue cutting or grazing after sowing the seed, and until the end of March in the following year. From then on manage as a meadow, leaving it uncut each year till mid summer.

Yellow Rattle at up to  $0.5g/m^2$ , if not already in the standard mixture, will help to suppress some of the existing coarse grasses and assist in the establishment of the sown species.

#### SOWING YELLOW RATTLE INTO EXISTING GRASS

**Ground preparation:** Yellow Rattle is a partial parasitic annual of other plant species. It's hosts include Perennial Ryegrass and Yorkshire Fog. Sowing Yellow Rattle can reduce the productivity of grassland, reduce competition from existing grasses and increase species diversity. However, establishment can be tricky. Prepare for sowing by cutting or grazing very hard in mid summer. Then scarify hard with harrows or by raking, aiming to create around 50% bare soil.

**Sowing:** Yellow Rattle seed has poor longevity in soil and a strict requirement for vernalisation. It will not germinate from a spring sowing. Therefore, sow fresh seed in late summer to early winter at up to 0.5g/m<sup>2</sup>. Yellow Rattle may be sown alone or combined with other species. Sow on the surface and roll in. Autumn and winter grazing will help to tread the seed in.

**Aftercare:** Germination usually occurs around February/March. Cease grazing or cutting at the end of March and manage as an established meadow. Under favourable conditions plant numbers can increase quickly, producing a flush of Yellow Rattle in years two or three. A flush is always followed by decline, and it is this decline that provides opportunities for other sown species.

Heavy grazing or cutting during the growing season will eliminate Yellow Rattle.

#### SOWING SPECIAL PURPOSE MIXTURES

Ground preparation for these mixtures will be similar to that for meadow creation, taking into account the site and ground conditions. In many cases it will be necessary to create a weed free seed-bed before sowing the seed. As with meadow mixtures, sow on the surface and firm in.

Tussock, Pond, Woodland, Hedgerow, and Pollinator mixes should be left uncut throughout the year and from year to year, or can be lightly grazed. However, occasional selective scything and topping may be needed to control scrub or patches of weed.

#### SOWING CORNFIELD ANNUALS

**Ground preparation:** Cultivate the soil to create a weed free seed-bed with a medium to fine firm tilth, following the method described for meadow creation.

**Sowing rate:** Sow cornfield mixtures at  $2g/m^2$ . If sown as a nurse for a meadow then sow both mixes together at a combined rate of  $6g/m^2$ .

**Sowing:** If the Cornfield Annuals are being sown alone then sow in the autumn, winter or early spring. A later sowing will shift flowering beyond the normal peak in June. If sowing as a nurse for a meadow mixture then combine the two mixtures and sow in the autumn, winter or early spring. Sow on the surface and roll in.

**Aftercare:** Cornfield Annuals sown alone should be allowed to grow, flower and shed seed, then in late summer the area can be cut and cultivated. An annual cultivation is essential for re-establishment from self-sown seed.

If the cornfield annuals have been sown as a nurse for a meadow mixture then cut after flowering in mid summer and remove the cuttings, but do not cultivate. The cornfield annuals will suppress annual weed growth in the first year and give shelter to the under-sown perennial meadow species. After cutting manage the area as an established meadow, allowing the meadow species to replace the cornfield annuals in year two and thereafter.

# **COMPLETE MIXTURES**

		£/100kg	£/10kg	£/kilo	£/100g	Page
General Purpose Meadow Mixtures						
EM1	Basic general purpose	3,550.00	390.00	42.00	20.00	21
EM2	Standard general purpose	4,570.00	500.00	54.00	20.00	22
ЕМ3	Special general purpose	5,920.00	640.00	70.00	20.00	23
Meadow Mixtures for Specific Soils						
EM4	For clay soils	6,430.00	700.00	76.00	20.00	24
EM5	For loamy soils	6,430.00	700.00	76.00	20.00	25
EM6	For chalk and limestone soils	6,770.00	740.00	80.00	20.00	26
EM7	For sandy soils	6,770.00	740.00	80.00	20.00	27
EM8	For wetlands	7,270.00	790.00	86.00	20.00	28
EM10	Tussock and wayside mixture	5,920.00	640.00	70.00	20.00	29
Brush Harvested Meadow Mixtures						
EM12	Folly Farm Meadows	8,890.00	970.00	105.00	20.00	30
EM13	Avis Meadow		1,010.00	110.00	20.00	31
EM14	Bishop's Hill Meadows	7,620.00	830.00	90.00	20.00	31
EM18	$S^{T}$ Catherine Meadows	6,770.00	740.00	80.00	20.00	32
EM31	Clattinger Floodplain Meadows	10,160.00	1,100.00	120.00	20.00	33
EM32	Highgrove Meadows		1,010.00	110.00	20.00	33
EM33	Welsh Borders Upland Meadows	5,080.00	550.00	60.00	20.00	34
EM34	Mixed diverse meadows	4,230.00	460.00	50.00	20.00	34
Special Purpose Mixtures						
EP1	Pond edge mixture		920.00	100.00	20.00	35
EH1	Hedgerow mixture	7,110.00	770.00	84.00	20.00	36
EW1	Woodland mixture	8,290.00	900.00	98.00	20.00	37
Cornfield Annual Mixtures						
EC1	Standard cornfield mixture	6,770.00	740.00	80.00	20.00	38
EC2	Special cornfield mixture	10,160.00	1,100.00	120.00	20.00	38

Any quantity of seed may be ordered (minimum quantity 100g). The cost is calculated from the weight bracket that the quantity falls into. Quantities less than 1kg are charged at the 100g rate, 1kg and over at the 1kg rate, etc. For example, 1.5kg of EM1 will cost 1.5 x the kg rate:  $1.5 \times £42.00 = £63.00$ .

# PART MIXTURES

#### Listed below are the prices for part mixtures

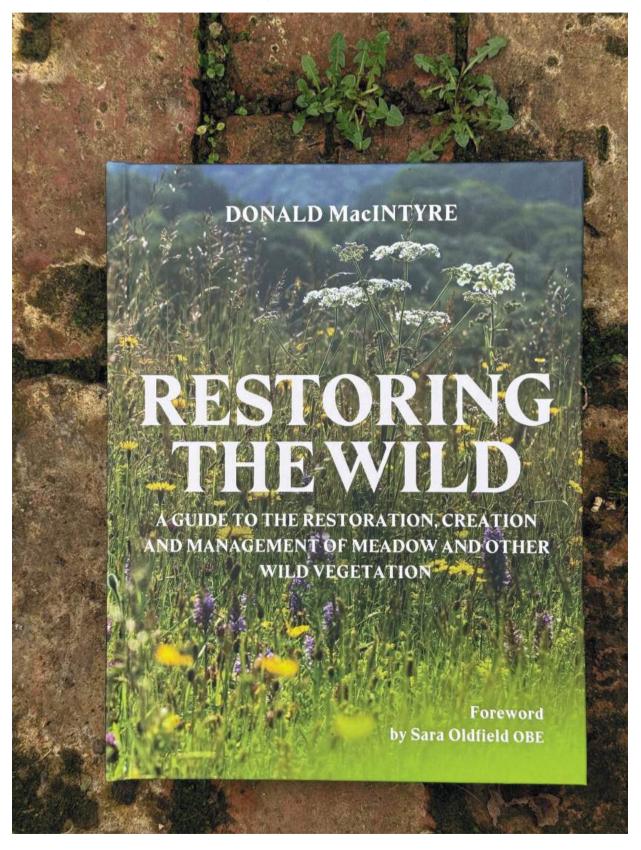
		£/100kg	£/10kg	£/kilo	£/100g	Page
100% Wild flower mixtures						
EM1F	Basic general purpose		2,210.00	240.00	26.00	21
EM2F	Standard general purpose		2,390.00	260.00	28.00	22
EM3F	Special general purpose		2,760.00	300.00	33.00	23
EM4F	Wild flowers for clay soils		2,760.00	300.00	33.00	24
EM5F	Wild flowers for loamy soils		2,760.00	300.00	33.00	25
EM6F	For chalk and limestone soils		2,940.00	320.00	33.00	26
EM7F	Wild flowers for sandy soils		2,940.00	320.00	33.00	27
EM8F	Wild flowers for wetlands		3,130.00	340.00	37.00	28
EM10F	Tussock wild flowers		2,670.00	290.00	32.00	29
EP1F	Pond edge wild flowers		3,220.00	350.00	38.00	35
EH1F	Hedgerow wild flowers		2,760.00	300.00	33.00	36
EW1F	Woodland wild flowers		3,220.00	350.00	38.00	37
100% Meadow grass mixtures						
EG1	Basic general purpose	2,030.00	220.00	24.00	20.00	21
EG4	Meadow grasses for clay soils	3,390.00	370.00	40.00	20.00	24
EG5	Meadow grasses for loamy soils	3,390.00	370.00	40.00	20.00	25
EG6	For chalk and limestone soils	4,060.00	440.00	48.00	20.00	26
EG7	Meadow grasses for sandy soils	3,390.00	370.00	40.00	20.00	27
EG8	Meadow grasses for wetlands	3,720.00	400.00	44.00	20.00	28
EG9	For hedgerow and woodland	3,720.00	400.00	44.00	20.00	36
EG10	Tussock grass mixture	3,050.00	330.00	36.00	20.00	29

#### TERMS and CONDITIONS

All seeds are offered subject to availability and being unsold at the time of ordering. The up to date availability, price and specification of our species and mixtures is as detailed on our website, unless otherwise stated. We guarantee that our seeds are of high viability and purity, true to type and of the correct weight when delivered. Seed found not to meet these standards may be returned in full, undamaged, within 30 days, for a replacement or refund. The performance of our seeds will be influenced by the storage conditions after despatch and the site conditions after sowing.

# RESTORING THE WILD by Donald MacIntyre

Encapsulating 45 years of restoration experience, this book combines science, opinion and practice to give a full account of native species restoration. Published autumn 2024 and available from booksellers and our website above. (Hardback, 272pp, £24.00).



Donald MacIntyre, Jane Lipington, Mischa MacIntyre, Marsha MacIntyre, Laurie MacIntyre, Myrica MacIntyre, Daniel Campbell, Marc Bullock, Albert Hughes, Carl Cockle, Mark Schofield, Marion Robinson, Karen Claxton, Amanda Evenett, Siona Smith, Nicole Scott and Ross.