The encyclopaedia of arable weeds (Common names A to C only)
Annual meadow-grass
*Poa annua*

**Seed statistics**
- Seed longevity: >5 years
- Seed weight: 0.2mg
- Seeds/flower: 1
- Seeds/plant: 10–500

**Location**

**Geographic location**
Annual meadow-grass grows nationwide and up to an altitude of 1,200m.

**Soil type**
It prefers fertile, heavily disturbed soils.

**Life cycle**
- Seed shed
- Flowering
- Germination

**Competitive in**
- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

**Value to biodiversity**
- WOSR
- WW

**Competitive in**
- Spring crops
- Resistance

**Seed shed**
- Not present
- More likely
- Very likely

**Flowering**
- Not present
- More likely
- Very likely

**Germination**
- Not present
- More likely
- Very likely
Description
It is a tufted annual or short-lived perennial grass, often compact, 3–30cm tall. Shoots and leaves appear flattened. The flowers form an open pyramid on the shoot.

Key features
Young plant: The leaves are light green and flattened, with a curved tip; the undersides have a distinctive central ridge.

Flowers: It flowers all year round.

Biology
Annual meadow-grass is the most common grass weed in winter- and summer-sown arable crops throughout most of the UK. As it can overwinter, plants are found at all growth stages during the year. It can complete its life cycle in 6 weeks. Although most reproduction is by seed, annual meadow-grass has long lateral roots and can also regenerate from shoots detached from the main plant by disturbance.

Annual meadow-grass poses little threat to crop yield, but can delay ripening and interfere with harvest.

Management
It is encouraged by minimum tillage compared to ploughing. Residual herbicides control it both in cereals and other crops.

It has developed resistance to some herbicides: paraquat in hops and simazine in orchards.
Awned canary-grass
Phalaris paradoxa

Seed statistics
Seed weight: 1.25mg

Life cycle
Unknown

Location
Geographic location
Awned canary-grass is a lowland weed, especially in south Britain.

Soil type
It likes moisture-retentive soils.
Description
It is a tufted annual grass up to 1m tall, freely tillering, with long tapering leaves and a long pointed ligule. The flowerheads are upright, broad and densely packed with spikelets which have green and white striped markings.

Key features
Flowers/fruit: The flowerheads fall intact when ripe.

Biology
Awned canary-grass is an annual grass which only reproduces by seed. Although it is uncommon, it is a fairly new but increasing problem. It is generally found in the same areas as black-grass, in moisture-retentive soils. It is competitive with cereal crops.

It spreads initially from volunteers of previous bird-seed crops. It is difficult to control with the usual grass herbicides and can be a serious weed in winter crops.

Management
Seeds may be buried by deep ploughing, and leaving in the seedbank for 2–3 years. Cycloxydim may be used in some broad-leaved crops.
Barley

Hordeum vulgare

Seed statistics

Seed longevity: <1 year
Seed weight: 58mg
Seeds/ear: 19–25
Seeds/plant: 60–75

Life cycle

Location

Geographic location

Winter and spring barleys are found as weeds in lowland areas, on road verges and wasteland, as well as in cereal crops.

Soil type

Weed barleys are found on all soil types, though are less common in soils under organic management.
**Description**
Barley is a tufted grass 60–120cm tall, with few leaves.

**Key features**

*Young plant:* The leaf blades are hairless and yellow-green, with a clockwise twist.

*Flowers/fruit:* The nodding flowerheads have very long awns.

**Biology**
Barley volunteers from the previous crop can germinate after harvest if soil conditions are favourable. The young plants persist overwinter and will flower before the following wheat crop. However, they seldom persist in the seedbank beyond 2 years if controlled. Barley is a particular nuisance as a weed in cereal seed crops, and in milling and processing crops.

**Management**
It can be controlled with herbicides in broadleaved crops and, with certain grass herbicides, in wheat.
**Barren brome**

*Anisantha sterilis*

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**Location**

**Geographic location**

Found mainly in England and the arable areas of Scotland, barren brome is usually a lowland grass, but has been shown to reach altitudes of over 350m. Its natural habitat includes verges, field headlands and waste ground.

**Soil type**

It grows on waste or cultivated land on well-drained soils.

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**Seed statistics**

Seed longevity: 1–5 years  
Seed decline: 90% per year  
Germination depth: 5cm  
Seed weight: 8.4mg  
Seeds/flower: 1  
Seeds/plant: 200

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**Life cycle**

- Seed shed:  
- Flowering:  
- Germination:

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**Competitive in**

- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

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**Location**

**Geographic location**

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**Soil type**

It grows on waste or cultivated land on well-drained soils.
Description
It is an annual tufted grass that can grow to 100cm in height. The leaf blades are green, turning purple, and are finely pointed and covered in short hairs. It is also known as sterile brome.

Key features
Plant: The ligule is very pointed.

Flower: The long-awned drooping flowerhead is tinged with purple after flowering.

Biology
Barren brome is a weed of winter crops, causing lodging when present in large populations. Plants overwinter with green leaves; seeds germinate mainly in autumn. Spring-germinating seedlings can flower the same year. Population increase is favoured by cereal monoculture, early-autumn cereal sowing, no-till cultivation and lack of break crops. Seed germination is inhibited by drought and by low temperatures after shedding. Barren brome can be very competitive in the early stages of crop growth of autumn-sown cereals, particularly where the crop is established by reduced cultivations.

Management
Seed dormancy varies between populations but is lost rapidly. Seed burial can induce dormancy. Seed should be left on the soil surface as light aids germination. Spray off with glyphosate prior to drilling.

Barren brome is unlikely to emerge from a depth >10cm so deep ploughing to 15cm immediately after harvest helps control.
Black bent

*Agrostis gigantea*

**Location**

**Geographic location**
Black bent is mainly found in arable fields in lowland areas of England, the arable areas of Scotland and locally in Ireland.

**Soil type**
It spreads in light sandy soils where it reproduces both from rhizomes and from seed. In wetter soils it can propagate only from rhizomes.

**Seed statistics**
Seed longevity: >5 years
Seed weight: 0.067mg

**Life cycle**

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**Competitive in**

- Not present
- Unlikely
- More likely
- Very likely

**Value to biodiversity**
- WOSR
- WW

**Map**

- Not present
- Unlikely
- More likely
- Very likely
**Description**

It is a loosely tufted perennial grass that can grow to a height of 40–120cm. It has tough creeping rhizomes.

**Key features**

**Plant:** The leaves are dull, green and hairless; the blades are flat, broad and taper to a point; the sheaths are rounded and smooth.

**Flowers:** The large green or purplish flowerheads are upright, oval and usually open, with many branches carrying singleflowered spikelets.

**Lookalikes**

Black bent may be confused with creeping bent.

**Biology**

Black bent can develop into dense patches which are often a problem in fields that are frequently irrigated and where weather is cool. The plants can reproduce vegetatively from fragments of rhizome.

**Management**

Spring cropping reduces vigour. When cultivating, beware of breaking the rhizomes as black bent can root from every broken node. Glyphosate used in summer on uncropped land or pre-harvest in early harvested crops controls rhizomes. Some residual herbicides may affect the seedlings.
Black-bindweed
*Fallopia convolvulus*

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**Seed statistics**
- Seed longevity: >5 years
- Seed weight: 5mg
- Seeds/plant: 100–1,000

**Location**

**Geographic location**
Black-bindweed is mainly found in lowland areas but can grow up to an altitude of 400m, in arable, especially cereal crops, disturbed land, other bare ground and road sides.

**Soil type**
It grows on fertile, moist soils with pH >5.

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**Life cycle**

- Seed shed
- Flowering
- Germination

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**Competitive in**
- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

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**Not present**

**Unlikely**

**More likely**

**Very likely**

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Map showing distribution of Black-bindweed in the UK.
Description
It is a summer annual that scrambles as high as the supporting vegetation will allow. The flowers grow on loose flowering spikes.

Key features
Seedling: The hypocotyl is crimson and the cotyledons and first leaves reddish.

Plant: Although the leaves are heart-shaped and resemble field bindweed, the lower lobes of black-bindweed leaves are more rounded than those of field bindweed.

Lookalikes
Young plants of black-bindweed can be confused with those of field bindweed.

The difference is in the cotyledons; black-bindweed has long cotyledons with short stalks, while field bindweed has oval cotyledons, notched at the tip.

Biology
Black-bindweed is one of the most common weeds of cereals; it occurs particularly in spring cereals and in open crops of winter wheat. It is also found in potato, beet and maize crops. It grows rapidly from large seedlings mainly germinating in spring and is deep rooting. Seeds are dispersed in cereal grains. Plants germinating in autumn do not survive winter.

Management
In cereals, combinations of sulfonylureas and hormonal and contact herbicides are often needed for good control. In spring broadleaved crops and maize, control can be variable if soil conditions are dry and residual herbicides do not work well.
Black-grass
Alopecurus myosuroides

Life cycle

Seed shed
Flowering
Germination

Seed statistics
Seed longevity: 1–5 years
Seed decline: 80% per year
Germination depth: 5.7cm
Seed weight: 1.8mg
Seeds/head: 100
Seeds/plant: 800

Location
Geographic location
Black-grass is most abundant in cultivated land in south-east England, but it is distributed all over the British Isles. It has gradually spread north and west, recently appearing in south-east Scotland and Northumberland, but is still rare in northern Scotland.

Soil type
It is found on heavy and light soils, but thrives on heavy, poorly drained soils.
**Description**

It is an annual grass, 20–85cm tall with upright, round and slender stems which have few nodes. Black-grass grows in graceful tufts. The very narrow, dark purple flowerhead is packed with single-flowered spikelets.

**Key features**

**Young plant:** The leaves are fine and smooth with a shiny upper surface; the leaf blade is twisted with a blunt tip. The lower sheath of larger seedlings is often purple.

**Lookalikes**

Black-grass can be confused with loose silky bent at the young plant stage of development, due to the reddish/purple colouring of the leaf sheath, but silky-bent tends to prefer lighter soils.

**Biology**

Black-grass is a major weed of winter-sown cereals with very high seed production. Crop profit is reduced because of yield loss, herbicide cost and delayed sowing. Seeds produced in high numbers are shed before crop harvest. About 80% will germinate in winter and these tiller in early spring. Black-grass can emerge from clods broken down during winter. There is very little spring emergence from undisturbed soils.

**Management**

Ploughing buries new seed but older seed brought to the soil surface may germinate. Some 80% of the buried seed dies in the first year. Restricting ploughing to alternate years minimises old seed from being ploughed up. Stale seedbeds and delayed drilling allow more time for black-grass to emerge and be sprayed off with a non-selective herbicide before drilling.

There is a high risk of herbicide resistance developing if ‘fop’, ‘dim’ or ALS herbicides are used repeatedly. It is best to control black-grass in break crops, as the different herbicide groups used with broad-leaved crops reduce the risk of resistance development. Spring-sown crops can also help.
Black mustard

*Brassica nigra*

### Seed statistics
- Seed longevity: >5 years
- Seed weight: 3.33mg
- Seeds/plant: 10–100

### Life cycle
- Seed shed
- Flowering
- Germination

### Location
**Geographic location**
Generally a lowland plant, black mustard grows persistently near rivers, in flood plains, in arable field margins and in waste ground.

**Soil type**
It prefers nutrient-rich and damp clays and silts.
Description
It is a tall, branched, annual dicotyledon, 40–200cm tall with a bristly lower stem. The flowers are bright yellow.

Key features
Leaves: The leaves are lobed and hairy.

Biology
Black mustard was formerly cultivated as mustard seed, though it is now rarely grown. Although some early-germinating plants overwinter they are not hardy and seldom survive the winter, so seed germinating in spring is more of a problem in late-sown wheat and spring-sown crops.

Management
Use a stale seedbed approach before sowing spring crops. Control seedlings with harrows and established plants with hoeing. Black mustard can be controlled with foliar-acting herbicides.
Black nightshade  
*Solanum nigrum*

**Location**

**Geographic location**  
Black nightshade is fairly widespread in vegetable crops, gardens, vineyards and on banks and rubbish tips.

**Soil type**  
It prefers loose, free-draining, nutrient-rich soils in the pH range 5 to 7.

**Seed statistics**

- Seed longevity: >5 years
- Germination depth: 5.5cm
- Seed weight: 1mg
- Seeds/flower: 40
- Seeds/plant: 500

**Life cycle**

- Seed shed
- Flowering
- Germination

**Competitive in**

- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

**Not present**  
- Unlikely  
- More likely  
- Very likely
**Description**
It is a branched, bushy annual plant with dark oval leaves, growing up to 70cm tall. The flowers resemble white potato flowers and occur in groups of 5 to 10.

**Key features**
**Young plant:** The hypocotyls and cotyledons are hairy.

**Fruit:** The fruit is spherical and glossy black.

**Biology**
Black nightshade is a common weed of vegetable and spring legume crops. Flowers are pollinated by insects and are self-fertile. It germinates in spring and summer, fruiting in the same year. The seeds are distributed by birds. It does not persist in winter crop rotations and where there are large grass breaks.

**Management**
There are a number of herbicides available to control black nightshade in winter wheat but it is easier to control the weed in uncropped land. In row crops, use hoes where herbicides are not available.

Biotypes resistant to simazine have been found in the UK.
**Broad-leaved dock**
*Rumex obtusifolius*

### Seed statistics
- **Seed longevity:** >5 years
- **Germination depth:** 5cm
- **Seed weight:** 1.43mg
- **Seeds/flower:** 1
- **Seeds/plant:** 7,000

### Life cycle
- **Seed shed:**
- **Flowering:**
- **Germination:**

### Location
**Geographic location**
Broad-leaved dock grows in meadows, pastures, ditches, waste ground and neglected cultivated ground up to an altitude of 850m.

**Soil type**
It prefers high-nitrogen, humus-rich clay or loam soils.
Description
It is an upright perennial with a long tap root, branched stems and sturdy broad leaves. The flower spike may be branched with clusters of flowers spaced apart.

Key features
Leaves: The blades of the first true leaves are broad, rounded at the tip and heart-shaped at the base.
Flowers: The margins of the flowers are toothed.
Fruit: The segments have spiny teeth.

Biology
Broad-leaved dock occurs more rarely on arable land than does curled dock, with which it is able to hybridise. It tends to grow in compacted and damp soil around field edges and in gateways. It overwinters as a rosette, flowering in the second year. It can reproduce from root fragments detached by ploughing.

Management
Broad-leaved dock can be controlled with herbicides in cereals, grass and uncropped land, but can be difficult to control in other crops except by pulling or hoeing.
Canadian fleabane

*Conyza canadensis*

**Seed statistics**
- Seed weight: 0.333mg
- Seeds/flower: 45
- Seeds/plant: 0–50,000

**Location**

**Geographic location**
Canadian fleabane is a plant of open lowland habitats such as gardens, waste ground, railway ballast and urban areas.

**Soil type**
It grows on rough, stony, sandy or drained loam soils with some nitrogen.
**Description**

It is an upright, branched annual dicotyledon, growing up to 180cm tall. The plant germinates in winter and overwinters as a small rosette of long hairy leaves, sometimes with toothed edges, from which the flowering stem grows during late spring. Small daisy-like flowers with upward-pointing petals are tightly enclosed by the sepals, and occur in loose flower spikes.

**Lookalikes**

Canadian fleabane may be confused with daisy which is similar in the seedling stage, but has more-rounded cotyledons.

Field forget-me-not is similar at the seedling stage, but has hairy cotyledons.

**Biology**

Canadian fleabane only occurs sporadically but increasingly in annual arable and vegetable crops, e.g. carrot and parsnip.

**Management**

The rosettes can be destroyed by autumn cultivations.
Charlock
*Sinapis arvensis*

### Location

#### Geographic location
Charlock is generally a weed of lowland areas though it has been found at altitudes up to 450m. It grows in open habitats, such as arable fields or recently disturbed soil.

#### Soil type
It is found on well-aerated and well-watered but drained, alkaline-rich soils, which have a high organic matter content.

### Seed statistics
- **Seed longevity:** >5 years
- **Germination depth:** 4.3cm
- **Seed weight:** 2mg
- **Seeds/flower:** 8–13
- **Seeds/plant:** 16–25,000

### Life cycle

#### Seed shed

#### Flowering

#### Germination

### Competitive in

<table>
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<tr>
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### Value to biodiversity

- **WOSR**
- **WW**

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Not present
Unlikely
More likely
Very likely
**Description**

Charlock is a 20–200cm high, dark-green to purplish hairy annual; it can be very variable in form, with irregularly toothed leaves.

The pale yellow four-petalled flowers occur at the top of the flowering spike.

**Key features**

**Flowers:** The flower sepals spread horizontally.

**Fruit:** The fruit has a beak 7mm or more long.

**Biology**

Charlock is common on arable land. It used to be a serious weed of cereals, but it is now more commonly found in broad-leaved crops. It is highly competitive in cereals. It mainly germinates in spring, but summer-germinating plants and plants emerging in the autumn in early-sown oilseed rape may survive a mild winter. The seeds can be dispersed in crop seeds, or by ingestion by birds.

**Management**

Charlock is difficult to control in brassica crops but is readily controlled by residual and foliar herbicides in cereal and legume crops. Between 4 and 6 weeks after germinating, its hairy leaf surface traps herbicide so it is more susceptible at this stage.
Cleavers
*Galium aparine*

**Location**

**Geographic location**
Cleavers is found all over Britain except for the very highest mountainous areas. It has spread north and west following the trends in winter cropping.

**Soil type**
It is found on well-watered humus-rich loam and clay soils and grows best on highly fertile soils.

**Seed statistics**
- Seed longevity: 1–5 years
- Germination depth: 7cm
- Seed weight: 8.3mg
- Seeds/flower: 2
- Seeds/plant: 300–400

**Life cycle**

- Seed shed
- Flowering
- Germination

**Competitive in**
- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

Not present
Unlikely
More likely
Very likely

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*Galium aparine*

**Value to biodiversity**
- WOSR

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*30*
Description
It is a scrambling or climbing annual dicotyledon. The stems are four-angled, 50–200cm long, covered with minute, down-curved prickly hairs.

Key features
Young plant: The oval cotyledons are notched at the tip.
Flowers: The flowers are white.

Lookalikes
Cleavers may be confused with ivy-leaved speedwell at the cotyledon stage. Cleaver cotyledons are notched at the tip and have longer cotyledon stalks. Cleavers may also be confused with some hemp-nettles.

Biology
Cleavers can germinate and young plants continue to grow over mild winters, although mature plants die before frost starts. Adult cleavers plants are very competitive; they can be very large and can choke wheat crops by growing over the top of the canopy, causing crop lodging and affecting combining. Seeds are moved in crop grain or by clinging to fur or clothing and require chilling before germination. A long autumn germination period is supported in a winter cropping system. 3% of oilseed rape samples are rejected because they contain more than 4% of cleavers seed. The seeds can also be difficult to remove from cereal samples and cause losses of grain.

Management
Cleavers cannot be controlled purely by cultural methods. Mechanical and tine weeders can be used to remove a proportion of emerged cleavers within the wheat crop. Ploughing may increase seedling emergence, when seeds brought to the soil surface germinate. There are a number of herbicides that can be used to control cleavers in arable crops.
Cock’s-foot  
*Dactylis glomerata*

**Seed statistics**
- Seed longevity: 1–5 years
- Seed weight: 2mg
- Seeds/head: 100

**Life cycle**

**Location**

**Geographic location**
Cock’s-foot is usually found in meadows, pastures, waste ground, roadsides, or field edges. It grows to an altitude of 700m.

**Soil type**
It is found on a wide range of fertile, neutral or alkaline soils.
Description
It is a large, densely tufted, perennial grass of coarse appearance, 30cm to 1.2m tall. There are many strains, with differing growth habits. The broad leaf blades have a prominent ridge on the undersides and are often bluish-green in colour. The flowerheads are often triangular and appear densely packed.

Key features
Plant: The stems are flattened, especially at the base.

Biology
Cock’s-foot is sown as an agricultural grass and may be present in arable fields after ploughing. It remains green all winter.

It mainly reproduces by seed which can persist from 2–3 years on the soil surface. Seed set is high and the fruit fairly mobile.

Management
Although it is often found in first-year cereals after grass, it seldom persists in routinely cultivated soils. It is best controlled at the time of grass destruction or in fallow.
Common chickweed
*Stellaria media*

**Location**

**Geographic location**
Common chickweed can be found all over Britain, especially in crops, usually below an altitude of 200m but able to grow up to 400m.

**Soil type**
It grows on fertile nitrogen-rich soils which are not highly acid. It prefers watered but not waterlogged situations.

**Seed statistics**
- Seed longevity: >5 years
- Germination depth: 3.6cm
- Seed weight: 0.35mg
- Seeds/flower: 8
- Seeds/plant: 2,500

**Life cycle**

[Diagram showing the life cycle with Seed shed, Flowering, and Germination phases]

**Value to biodiversity**
- WOSR
- WW
- Spring crops
- Resistance
- Value to biodiversity

[Map showing the distribution of common chickweed in the UK with Not present, Unlikely, More likely, and Very likely areas]

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**Description**

It is an annual low-growing bright-green plant, with tiny five-petalled white flowers.

**Key features**

**Plant:** The stems are rounded with a single line of hairs.

**Leaves:** The leaves are oval, usually 8mm or longer, and end in a slight point.

**Lookalikes**

Common chickweed may be confused with common mouse-ear.

**Biology**

Common chickweed can grow at relatively low temperatures and may suppress overwintered crops or, if dense, severely restrict crop growth. Germination of chickweed can occur throughout the year, with up to three generations possible in any one year in winter cereals, particularly wheat; plants may be seen to be flowering at any time. Spring-germinating plants die in late summer, while autumn-germinating plants survive the winter as a dense low-growing mat. Plants may reproduce by seed, moved by birds, or vegetatively by root cuttings.

**Management**

Control by preventing seed production and re-establishment after cultivation. Early shallow tillage encourages the seed germination; when the seedlings emerge, the land should be tilled again and then drilled with the crop.

Sulfonylurea resistance in chickweed has been confirmed in the UK. Where sulfonylurea herbicides are used, mix with a herbicide with an alternative mode of action.
Common couch
Elytrigia repens

Seed statistics
Seed longevity: 1–5 years
Seed weight: 2.5mg
Seeds/head: 100
Seeds/plant: 15–400

Location
Geographic location
Couch grows country-wide on fertile disturbed soils, waste and cultivated ground up to an altitude of 430m.

Soil type
It is present on all soil types including seaside sands and shingles.

Life cycle
Seed shed
Flowering
Germination

Competitive in

- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

Not present
Unlikely
More likely
Very likely
Description
It is a tall, very vigorous perennial grass up to 20cm with white, creeping underground rhizomes growing into large groups or patches. The leaves are hairy on the inner surface and rough at the edges. Spikelets are arranged in two opposite rows.

Key features

Plant: As the rhizome extends, common couch plantlets seem to grow in straight lines. The individual plants have an upright form.

Flower: Spikelets lie flat against the stem so they feel smooth when fingers are moved along the flowerhead.

Lookalikes
The flowerhead is superficially similar to that of rye-grass (*Lolium* spp.) but in rye-grass the narrow, rounded side of the spikelet is adjacent to the stem.

Biology
Common couch is a highly competitive weed of all crops. Mature shoots die back in the autumn but young shoots can overwinter. The plant can reproduce from rhizome fragments and from seed.

Management
Intensive cultivations at 2–3 week intervals will fragment the rhizomes and induce growth, exhausting food reserves. Bury the weakened rhizomes with deep ploughing or spray with glyphosate. Control of couch is cheaper and more effective with glyphosate in uncropped land, stale seedbeds or combinable crops than in break crops.
Common field-speedwell
*Veronica persica*

**Life cycle**
- **Seed shed**: Not present
- **Flowering**: More likely
- **Germination**: Very likely

**Seed statistics**
- Seed longevity: >5 years
- Seed weight: 0.52mg
- Seeds/flower: 7
- Seeds/plant: 50–10,000

**Location**

**Geographic location**
Common field-speedwell grows up to an altitude of 350m and prefers flat or gently sloping ground. It is a common weed of arable land and other bare soils such as disturbed or waste ground.

**Soil type**
It prefers damp, nutrient-rich loam soils, pH 6–8.
Description
It is a low sprawling hairy annual with a sturdy stem, forming loose cushions 10–40cm across. The leaves are broadly triangular and toothed, on short stalks.

The large flowers, 9–14mm are borne on long stalks growing from the leaf axils; the upper petals are sky blue and the lower white.

Key features
Flower: Flowers are large and predominantly sky blue.

Biology
Common field-speedwell is frequently found on arable land, both on fallow ground and beneath the crop canopy. It is found on autumn- and spring-sown crops probably encouraged by an increase in winter cropping. Plants can overwinter and even flower throughout the year, giving rise to two generations per season; the large seeds are probably dispersed by ants. Shoot fragments are able to regenerate.

Management
Residual herbicides are generally quite effective in autumn- and spring-sown crops; sulfonyleureas and contact herbicides are effective in cereals.
Common fumitory
*Fumaria officinalis*

### Seed statistics
- Seed longevity: >5 years
- Seed weight: 4mg
- Seeds/flower: 1
- Seeds/plant: 1,600

### Life cycle
- Seed shed
- Flowering
- Germination

### Location
#### Geographic location
Common fumitory is a lowland plant, growing up to an altitude of 300m. It appears in winter and Spring crops and may be increasing in fields of winter cereals in the north of England and in Scotland where there is poor control by residual herbicides.

#### Soil type
It prefers nutrient-rich chalky loams with good water availability and is an indicator of good soil conditions.
**Description**

It is a slender, hairless, semi-upright or sprawling, branched annual dicotyledon, growing up to 40cm tall. The smooth leaves are divided, feathery and slightly greyish in colour. The flower stems have many pinkish lipped flowers, 7–8mm long and tipped with dark purple-red.

**Key features**

**Plant:** The sap is colourless.

**Flower:** The sepal is less than half the flower length. There are often more than 20 flowers on a flowering spike.

**Fruit:** It is shaped like a flattened globe.

**Biology**

Common fumitory is widespread on arable land. It mainly germinates in spring and can set seed in one year. It can be self-fertile or can cross-fertilise.

**Management**

Control of established plants is difficult with herbicides. Seedlings can be controlled with mecoprop-P and HBN herbicides in cereals.
Common hemp-nettle

*Galeopsis tetrahit*

**Seed statistics**
Germination depth: 3cm
Seed weight: 4.83mg
Seeds/flower: 4
Seeds/plant: 300–2,400

**Life cycle**

- **Seed shed**
- **Flowering**
- **Germination**

**Location**

**Geographic location**
Common hemp-nettle occurs in disturbed ground with high levels of bare soil, often in broad-leaved crops, or in moist sites near river banks and hedgerows, up to an altitude of 400m. It commonly occurs in spring cereals in northern England and Scotland.

**Soil type**
It can grow on a wide range of soils pH 4.5–7, and may be more common in soils of relatively high organic matter or in areas where soils remain moist in the summer.
**Description**

It is a bristly annual dicotyledon, with leaves resembling those of common nettle. The stems are brittle and usually have distinct swellings below the attachment of each leaf-pair. The flowers are cream or pink and similar to those of dead nettle.

**Key features**

**Plant:** There is a distinct swelling where the leaf stalk meets the stem. Plants can have a bristly appearance.

**Biology**

Common hemp-nettle forms more robust plants in broad-leaved crops and fallow ground than in cereal crops. The plants reproduce by seed, which is produced in smaller quantities than in similar plants and may still be on the plant during harvest, so contaminating crop grain. Seeds germinate only after overwintering.

**Management**

It is controlled by a range of broad-leaved weed herbicides.
Common mouse-ear
*Cerastium fontanum*

**Location**

**Geographic location**
Common mouse-ear grows to altitudes of above 1,000m in all areas of Britain, in fertile habitats including meadows, pastures, cultivated ground, dunes and shingle.

**Soil type**
It likes acidic, wetter soils, rich in nutrients.

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**Seed statistics**
Seed longevity: >5 years
Seed weight: 0.1mg
Seeds/flower: 40
Seeds/plant: 0–1,200

**Life cycle**
- Seed shed
- Flowering
- Germination

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**Competitive in**
- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

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Value to biodiversity
- WOSR
- WW
- Spring crops
- Resistance
- Value to biodiversity
**Description**

It is a sprawling or upright, perennial dicotyledon 5–50cm tall. The small oval leaves and the stem are covered with dense white hairs. The flowers have five white petals, with sepals the same length as the petals.

**Key features**

**Young plant:** The seedlings are very small and hairy.

**Biology**

Common mouse-ear is a perennial, which functions as an annual in arable fields. The seeds are dispersed by wind or eaten by birds. It can emerge throughout the year, given sufficient soil moisture.

**Management**

It is less common where soils are routinely cultivated and is likely to be encouraged by reduced cultivation and direct drilling. It does not compete in dense, vigorous crops.
Common nettle
_Urtica dioica_

**Location**

**Geographic location**
Common nettle is found in a wide variety of habitats including cultivated and waste ground, scrub, unmanaged grassland, and fen and river banks, up to an altitude of 850m.

**Soil type**
It prefers nutrient-rich soils.

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**Seed statistics**
- Seed longevity: >5 years
- Seed weight: 0.13mg
- Seeds/flower: 1

**Life cycle**

- Seed shed
- Flowering
- Germination

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**Map**

[Map showing the distribution of Common nettle across the UK]
Description
This common hedgerow perennial grows to above 1.5m and has extensive creeping rooting stolons. The leaves are pointed with toothed edges. The stem is square in cross section and covered with stinging hairs. The tiny green male and female flowers are borne in tassels by different plants.

Key features
Young plant: It has longer and more triangular first true leaves than annual nettle.

Plant: It is tall and upright, with leaves larger than those of small nettle. The leaves and stem are covered in stinging hairs.

Lookalikes
Common nettle may be confused with small nettle, however it has shorter cotyledons than small nettle and the first true leaves of common nettle are longer and more triangular.

Biology
Common nettle is frequently found in waste places and field margins, though it does encroach onto arable land. It is a particular problem in perennial crops and grassland. Some young shoots of nettle can overwinter, but the plant mostly dies back, growing strongly in spring. The plants reproduce when stolons are fragmented or from seed ingested by animals.

Management
It will be reduced by continuous cutting. For control, use glyphosate in fallow or selective treatments in grassland.
Common orache
*Atriplex patula*

**Location**

**Geographic location**
Common orache is mainly a lowland weed but can grow up to an altitude of 400m. It is found on arable land, on manure heaps, demolition sites, and areas with a large amount of bare soil.

**Soil type**
It prefers moist soils with pH > 5.

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**Seed statistics**
- Seed longevity: >5 years
- Seed weight: 2mg
- Seeds/plant: 100–6,000

**Life cycle**
- Seed shed
- Flowering
- Germination

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**Competitive in**
- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity
**Description**
It is a sturdy annual plant, growing up to 80cm tall. It has a branched stem and long, horizontally spreading branches. Leaves are initially mealy, later turning green on both sides. Flowers form in small clusters along the flowering stalk, the female flowers are pyramid-shaped.

**Key features**
**Plant:** The young leaves are mealy. The shoots of the growing plants have upright triangular leaves at the top.

**Lookalikes**
Common orache may be confused with fat-hen: fat-hen and Good King Henry also have mealy leaves. Orache has broader cotyledon stalks with leaf and cotyledon having a bright-green underside, whilst young fat-hen plants may be bright purple on the underside of the cotyledons.

**Biology**
Common orache is particularly common in broad-leaved crops or fallow areas. Plants regenerate only by seed, which can be an impurity in crop seed, and may be spread by birds or small mammals. The plants do not overwinter. Early sown winter crops are usually too competitive to be affected by this spring-germinating species but the deep tap root can interfere with harvesting of beet crops.

**Management**
Minimum tillage may reduce emergence. It can be controlled by a range of herbicides at the seedling stage.
**Common poppy**  
*Papaver rhoes*

### Seed statistics
- **Seed longevity:** Up to 100 years
- **Germination depth:** 0.5cm
- **Seed weight:** 0.09mg
- **Seeds/flower:** 1,360
- **Seeds/plant:** 20,000

### Life cycle

**Location**

**Geographic location**
Poppy is widely distributed in all areas of the British Isles, but is less abundant in northern Scotland. It tends to prefer lowland areas.

**Soil type**
Poppy prefers soils with reasonable moisture and will spread in areas with bare soil.

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Not present  
Unlikely  
More likely  
Very likely
**Description**

It is an upright, hairy annual 20–80cm tall. The stems are bristly and sometimes spreading. The dull green leaves at the base form a rosette with divided segments. The broken stem bleeds a white sap. The large flowers have four petals sometimes with a large black spot at the centre. The ovary is short and smooth.

**Key features**

**Fruit:** The seed head is short and smooth.

**Lookalikes**

Common poppy may be confused with young plants of shepherd’s-purse but the cotyledons of common poppy are narrower. The hairs of the common poppy stand singly and may be forked, while those of shepherd’s-purse form little star-like clusters.

**Biology**

Common poppy occurs particularly in winter cereals and oilseed rape where it is competitive, but is also found in spring crops, fallows and more rarely vegetables and clover crops. Autumn-germinating seedlings can overwinter. Plants flower in midsummer, but there may be a second flush of flowers once the wheat crop has been harvested. The plant reproduces entirely by seed. The very long seed persistence means that poppy appears in newly cultivated land.

**Management**

The best control method is to stimulate germination through cultivation before spraying with glyphosate. Common poppy is controlled by a wide range of herbicides in cereals and legumes, but control is more difficult in brassica crops. Sulfonylurea resistance has been confirmed in the UK.
Common vetch
Vicia sativa

**Life cycle**

- **Seed shed**
- **Flowering**
- **Germination**

**Location**

**Geographic location**
Although it is widely found in lowland areas in most of the British Isles, in Ireland it is mainly confined to the east coast.

**Soil type**
It prefers dry and sandy soils.
Description
A scrambling dicotyledon, the stems grow to 20–120cm in length. The leaves are divided into 3–8 pairs of oval leaflets and end in a tendril. The flowers are like those of a pea and occur in the last few leaf axils.

Key features
Young plant: The first true leaves are long and narrow with no leaflets.

Biology
Common vetch was once grown as a cultivated plant. It is found in grassy field margins, but may also be seen in arable crops, sometimes as cultivated forms where vetches form part of the cropping rotation. Common vetch usually germinates in autumn and overwinters; more rarely it is a summer annual. Undisturbed plants may be biennial. It is often seen in spring-sown crops where it can interfere with harvesting and seed can contaminate grain.

Management
Seedlings can be harrowed out, but once established it is not readily controlled except with hoeing. Vetches are generally susceptible to sulfonylureas and some hormone herbicides such as mecoprop-P and dicamba.
Corn spurrey  
*Spergula arvensis*

**Seed statistics**
- Seed longevity: Longest ever recorded over 170 years
- Germination depth: 3.9cm
- Seed weight: 1mg
- Seeds/flower: 25
- Seeds/plant: 1,000–10,000

**Location**

**Geographic location**
Corn spurrey occurs in cereal fields or other cultivated land up to an altitude of 450m.

**Soil type**
It occurs most frequently on light soils and surface-leached sandy soils with a low pH.

**Life cycle**
- Seed shed
- Flowering
- Germination

**Value to biodiversity**
- WOSR
- WW
- Spring crops
- Resistance
- Value to biodiversity

Not present
Unlikely
More likely
Very likely

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Description
It is an annual weed, growing to 60cm tall, with white star-like flowers. The very narrow leaves are in groups of four.

Key features
Young plant: The cotyledons and first true leaves are similar, both needle-shaped

Plant: The leaves are needle-shaped and arranged in whorls.

Biology
Corn spurrey can be a troublesome weed of cereals, because of its dense mats of growth. Two generations can occur in one season because plants can set many seeds within 10 weeks of germinating and just a fortnight after flowering. There is a persistent seedbank. Seeds can be transported by birds or mammals, or agricultural machinery.

Management
Raising the pH over time will reduce corn spurrey and encourage the competitiveness of the crop.
**Cornflower**

*Centaurea cyanus*

**Location**

**Geographic location**

Although cornflower has become rare as a wild plant, it may be found in waste places, roadsides and rubbish tips, often as a garden escapee. It is occasionally found in the north-east of England and Scotland.

**Soil type**

It grows best in sandy loams and chalky clays.

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**Seed statistics**

- Seed longevity: 1–5 years
- Germination depth: 3cm
- Seed weight: 4.35mg
- Seeds/plant: 700–1,600

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**Life cycle**

- Seed shed
- Flowering
- Germination

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**Value to biodiversity**

- Competitive in: Spring crops, Resistance, Value to biodiversity
- Not present
- Unlikely
- More likely
- Very likely
Description
It is an annual dicotyledon with upright habit, growing up to 1m tall. The stem and leaves are covered with woolly hairs and the flowerhead has a ring of usually bright blue flowers.

Key features
Plant: The long thin leaves are covered with woolly hairs.

Flowers: The flowers are bright blue.

Biology
Cornflower can emerge in autumn- and spring-sown crops and can compete quite well with cereals; in the past it was capable of reducing yields and interfering with harvesting. Autumn-germinating plants overwinter and produce more seeds than spring-germinating plants.

Management
Use a stale seedbed approach before sowing crops. Harrows will control seedlings but hoeing is required for larger plants. Cornflower is susceptible to the main spring-applied herbicides.
Cow parsley
*Anthriscus sylvesteris*

**Seed statistics**
- Seed longevity: 1–5 years
- Seed weight: 3.33mg
- Seeds/floret: 2
- Seeds/plant: 100–1,000

**Life cycle**

**Location**

**Geographic location**
Cow parsley grows throughout Britain in hedgerows, verges, meadows and river banks.

**Soil type**
It is found most frequently on alkaline soils. It does not like very wet or very dry conditions.
**Description**

It is a robust perennial dicotyledon, 40–150cm tall, with upright branched hollow stems. The leaves are divided two to three times giving a feathery appearance. Small white flowers cluster in a dense umbrella-shaped head up to 6cm across.

**Key features**

**Plant:** It has hollow furrowed unspotted stems, sometimes purplish in colour, and triangular grooved leaf stems.

**Flowers:** Cow parsley is the first umbellifer to flower.

**Lookalikes**

Cow parsley may be confused with shepherd’s-needle or other similar umbellifers when young: The leaflets are coarser and less divided than shepherd’s-needle, and the cotyledons longer and thinner than fool’s parsley.

**Biology**

Cow parsley spreads into crop headlands from hedgerows. It is usually found as a seedling in cereal crops. The seeds require chilling to germinate and the seedlings grow slowly. Mature plants can overwinter forming new leaves in the spring; these die off as the flowering stem grows. The plant can also regenerate from the buds in the axils of the basal leaves.

**Management**

Spread may be reduced by ploughing and probably moderate cultivation. It can be partly controlled with cereal herbicides.
Creeping bent
*Agrostis stolonifera*

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**Seed statistics**
- Seed weight: 0.067mg
- Seeds/head: 100
- Seeds/plant: 1,000–10,000

**Life cycle**
- Seed shed
- Flowering
- Germination

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**Location**

**Geographic location**
Creeping bent grows throughout the British Isles up to an altitude of 950m. It tolerates a wide range of habitats from salt marshes to sand dunes and grassland to arable.

**Soil type**
It is found on all soil types, from wet to dry, heavy or light soils.
Description
It is a close-tufted, perennial grass 8–40cm tall, spreading by means of fine stolons which produce small roots when in contact with water or moist soil. Leaves are long, narrow and pointed. The flowerhead forms an open dainty cylinder.

Key features
Plant: Leaves are green or greyish-green and hairless; sheaths are rounded and smooth.

Flowers: The flowerheads are upright, cylindrical and usually open.

Lookalikes
Creeping bent may be confused with black bent: creeping bent has a narrower, tighter flowerhead, and spreads by stolons not rhizomes, forming a loose tuft.

Biology
Creeping bent can be a weed of headlands, but seldom goes far into arable fields. The plants can overwinter. In arable fields propagation by detached shoots is an important means of spread.

Management
Spring cropping can reduce the vigour. Reasonable control of creeping bent stolons can be achieved with glyphosate, most effectively in uncropped land or summer fallsows, but pre-harvest in early-harvested crops. Some residual herbicides may affect seedlings. Early cultivations can stimulate shed seed to germinate, so stale seedbeds may be used to control the young germinating plants, which can be killed by subsequent cultivation.
Creeping thistle
*Cirsium arvense*

**Seed statistics**
- Seed longevity: >5 years
- Germination depth: 5.3cm
- Seed weight: 1.25mg
- Seeds/head: 10–100
- Seeds/plant: 4,000–5,000

**Location**

**Geographic location**
Creeping thistle is found almost everywhere in Britain, on cultivated land or overgrazed pastures.

**Soil type**
It prefers loams rich in nitrogen and other nutrients, which are slightly damp, and is an indicator of thin crops.
Description
It is a perennial vigorous dicotyledon, with extensive creeping rhizomes. Plants grow up to 150cm tall, often in extensive clumps.

Key features
Plant: In the field plants group close together. The stems are unwinged and shiny and the flower stalks have many small flowerheads.

Lookalikes
Creeping thistle may be confused with spear thistle; the young plants of thistles are often difficult to tell apart. Creeping thistle is less likely to set fertile seed than other thistles. There are few marginal spines on creeping thistle. The large second leaf of spear thistle is densely hairy.

Biology
Creeping thistle is one of the most troublesome weeds of arable land. Dense patches can interfere with cereal harvest and can be even more of a problem in potatoes and sugar beet. The plant dies back in winter while seeds are still retained in the seed head. The separate sexes need to be within a few hundred metres for seeds to be fertile, although some plants may be self-fertile. Only about 3% of the seed is viable. Plants regenerate aggressively from the extensive system of branched, lateral roots, each of which may give rise to new shoots, resulting in the formation of large clonal patches which can expand at the rate of 6m per year.

Management
Creeping thistle is difficult to eradicate because of the extensive root system and because the waxy coating on the leaves reduces herbicide adhesion. It can be controlled by combinations of herbicides, ploughing and crop rotations, but avoid chisel ploughing or cultivations which break up rhizomes as they readily regenerate. It is possible to drag the rhizomes to the surface for desiccation in fallows.
Crested dog’s-tail
*Cynosurus cristatus*

Location

Geographic location
Crested dog’s-tail is generally a plant of lowland areas and its distribution is widespread throughout the British Isles. It is usually associated with pasture, meadow, or short swards but can be found in fallow.

Soil type
It likes neutral to alkaline-rich well-drained soils of low- to mid-fertility.

Seed statistics
Seed weight: 0.5mg
Seeds/head: 1
Seeds/plant: 1,100

Life cycle

Seed shed
Flowering
Germination

Competitive in

Not present  More likely
Unlikely  Very likely

WW  WOSR  Spring crops  Resistance  Value to biodiversity
Description
It is a short, densely tufted perennial grass, wiry and upright. 5–75cm tall. The leaf blades are narrow, fine and pointed. The flowerheads are densely packed with spikelets.

Biology
Crested dog’s-tail was formerly sown as a pasture plant. It remains green all winter, but in the summer the leaves die off.

Management
It does not persist in regularly cultivated soils and can be controlled with hoeing and harrowing.
Curled dock
*Rumex crispus*

**Seed statistics**
- Seed longevity: >5 years
- Germination depth: 3cm
- Seed weight: 2mg
- Seeds/head: 1
- Seeds/plant: 3,000–40,000

**Location**

**Geographic location**
Curled dock is found on verges, wasteland and arable land up to an altitude of 850m.

**Soil type**
It likes nutrient-rich and compacted clay loams, and damp soils.

**Life cycle**
- Seed shed
- Flowering
- Germination

**Competitive in**
- WW
- WOSR
- Spring crops
- Resistance
- Value to biodiversity

Value to biodiversity: Not present

More likely

Very likely
Description
Curled dock is a robust dicotyledon, 50–120cm tall, though it may grow higher. It has long coarse basal leaves with wavy edges. The flowering shoot has individual flowers with heart-shaped petals in dense clusters.

Key features
Young plant: The cotyledons are more slender than those of broad-leaved dock.

Plant: The leaves are 4–8 times longer than broad, with wavy margins.

Biology
Curled dock is often abundant on arable land with heavy, damp soils. It is found more frequently in spring than winter crops and can be difficult to control in crops other than cereals. Curled dock can overwinter as a rosette of small leaves; it is the size of this rosette which determines if the plant will flower the following year. Sometimes two crops of seeds may be produced a season. Reproduction is mainly by seed but the plant may produce vegetatively from root fragments.

Management
In row crops, routine hoeing or pulling may be required. Control established plants in uncropped land or in grass breaks with suitable herbicides.
Cut-leaved crane’s-bill
*Geranium dissectum*

**Seed statistics**
- Seed longevity: 1–5 years
- Germination depth: 6cm
- Seed weight: 1.67mg
- Seeds/flower: 5
- Seeds/plant: 0–9,500

**Life cycle**

**Location**

**Geographic location**
Cut-leaved crane’s-bill grows in disturbed warm soils up to an altitude of 350m.

**Soil type**
It prefers loose, nutrient-rich, fresh loam soils.
Description
It is a hairy, semi-upright or sprawling, branched annual dicotyledon which grows to 60cm tall. The small pink flowers have five notched petals.

Key features
Plant: The deeply divided leaves have seven lobes and a rounded outline. Stem and leaf hairs frequently end in glands (a hand lens is required).

Biology
Cut-leaved crane’s-bill is fairly common in cereal crops, particularly on lighter soils and fallows. Reproduction is by seed and 80–90% of the seeds germinate. Autumn-germinating plants can overwinter.

Management
Herbicide control is variable with residual herbicides. Sulfonylureas have useful activity.
Further information

Available at ahdb.org.uk/knowledge-library