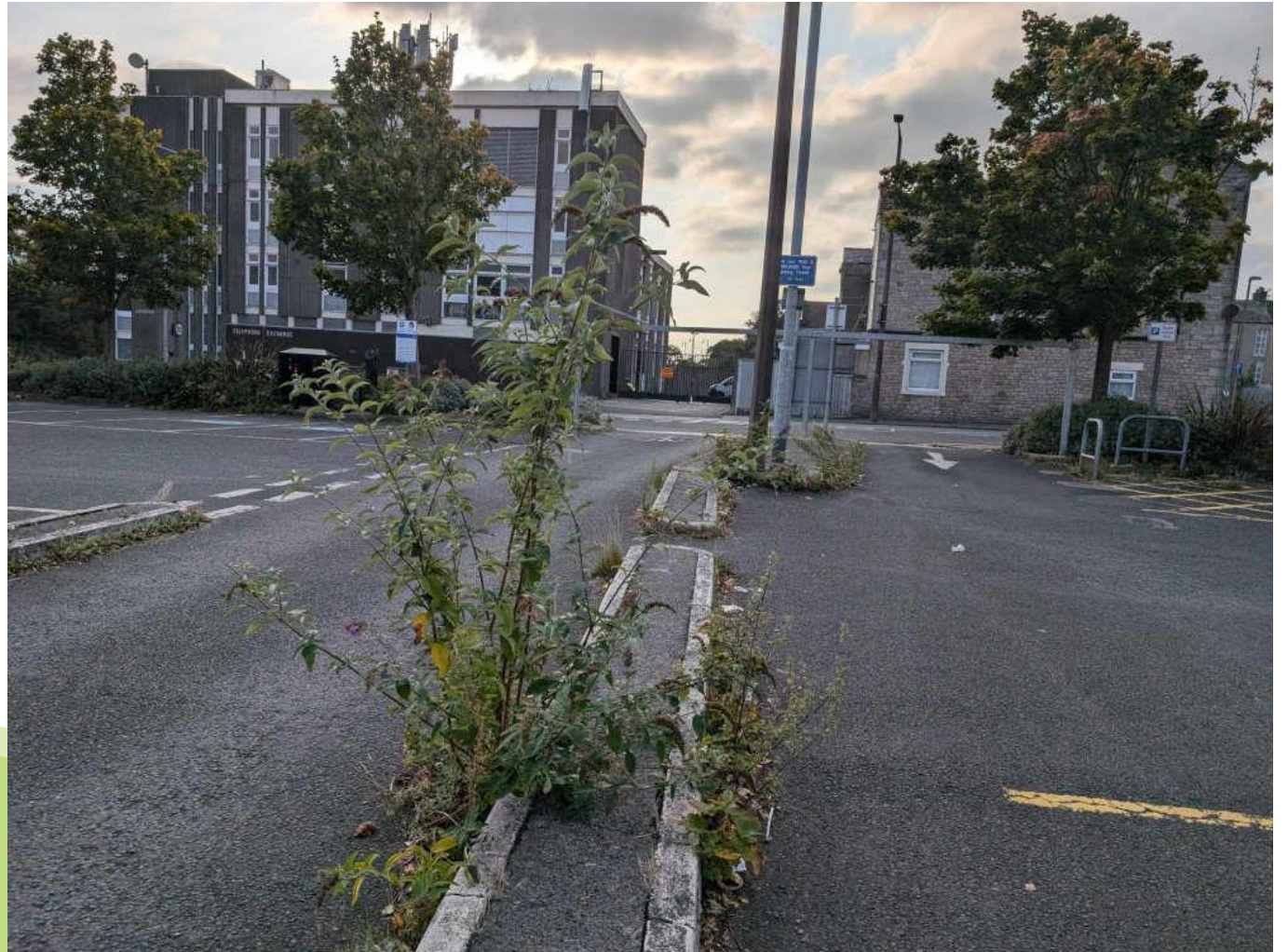


COMMON WEEDS ASSOCIATED WITH CONTAINER-GROWN HARDY ORNAMENTAL NURSERY STOCK CROP PRODUCTION AND THEIR BIOLOGY

WAYNE BROUGH, TECHNICAL HORTICULTURE MANAGER

What is a weed?

‘A weed is a plant considered undesirable in a particular situation, growing where it conflicts with human preferences, needs, or goals’.



What makes a good weed?

- Is robust and vigorous.
- Can propagate itself freely.
- Can survive in many environments.
- Persistent?
- Short lifecycle?



WEED LIFECYCLES

Annual

Completes its lifecycle in one year and sets seeds for the next year.

Perennial

Lives for many years as a single plant and sets seeds from the same plant every year.

Biennial

Completes its lifecycle in **TWO** years and sets seeds for next year (often with a different habit between years).

Weed distribution

Seed

- Wind-blown.
- Explosively thrown.
- Sticky, attached to pots, clothing, tools etc.

Spores

Roots

- Fragments in growing media and liners.

General – on matting and beds, young/old stock, bought-in stock, in irrigation water, background pressure around the nursery, adjacent fields etc.



Annual meadow-grass (*Poa annua* L.)



- Main grass species of container-grown plants.
- Low growing, slightly creeping with flower spikelets.
- Perennial biotypes exist.
- Can be found overwintering following autumn germination.
- Found in propagation as well as production.
- Spread from old stock, on cutting material, re-used pots, on clothes etc.

Flowering period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Germination period

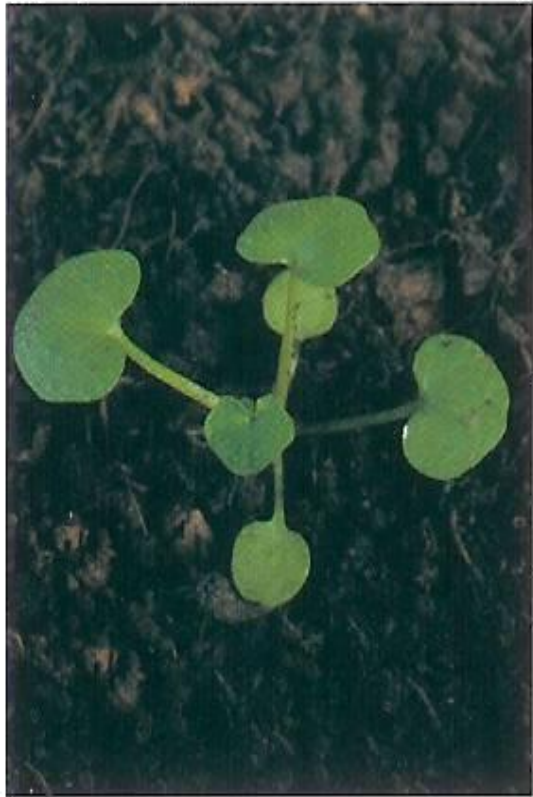
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Solid yellow – main period

Light yellow – when favourable conditions

<https://archive.ahdb.org.uk/knowledge-library/practical-weed-control-for-nursery-stock>

Bittercress, hairy (*Cardamine hirsuta* L.)



- Abundant weed of container-grown crops.
- Short annual, sometimes biennial with compact rosette of pinnate leaves.
- Flowers small and white.
- Found in propagation as well as production.
- Can flower and set seed rapidly.
- Exploding seed pods. Seed can be found on adjacent plants, re-used pots etc.

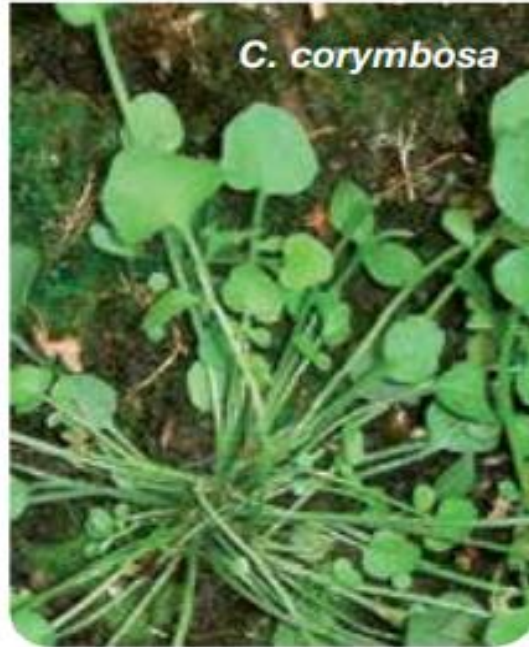
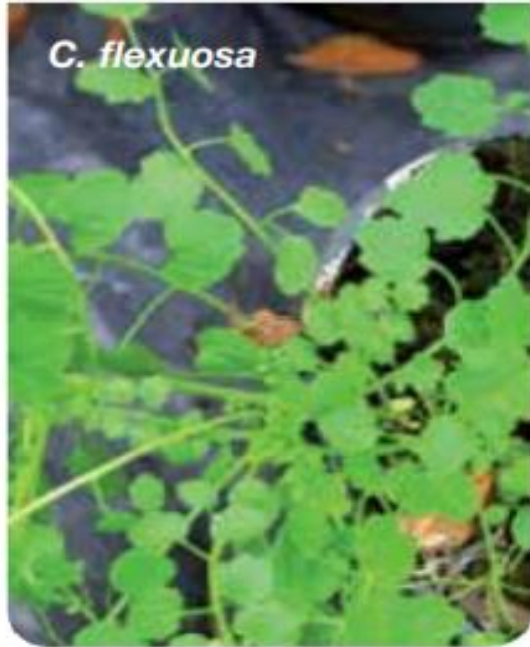
Flowering period

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Germination period

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Bittercress, flexuous and New Zealand



- Similar to hairy bittercress.
- Rosette shape and leaf number per stem used to identify each.
- Short annual, sometimes biennial.
- All three can be found on individual nurseries.
- Can be more difficult to control.

Plant feature	Hairy bittercress <i>C. hirsuta</i>	Flexuous bittercress <i>C. flexuosa</i>	New Zealand bittercress <i>C. corymbosa</i>
Rosette	Tight and leafy	Open	Open, abundant prostrate stems
Stems	Hairy	Hairy	Few hairs
Stem leaves	1-4 per stem, hairy	5-11 per stem, hairy	0-4 per stem, few hairs
Leaflets per leaf	3-11, smooth outline	5-17, wavy outline	3-7, wavy outline
Flowers	4 stamens	6 stamens	6 stamens
Seed pods	Upright	Variable	Out-held

Chickweed, common (*Stellaria media*)



- Common nursery weed.
- Vigorous, low growing, spreading annual.
- Oval leaves, small white flowers.
- Found in propagation as well as production.
- Long flowering and germination periods.
- Seeds slightly sticky, can spread on cutting material and re-used pots.



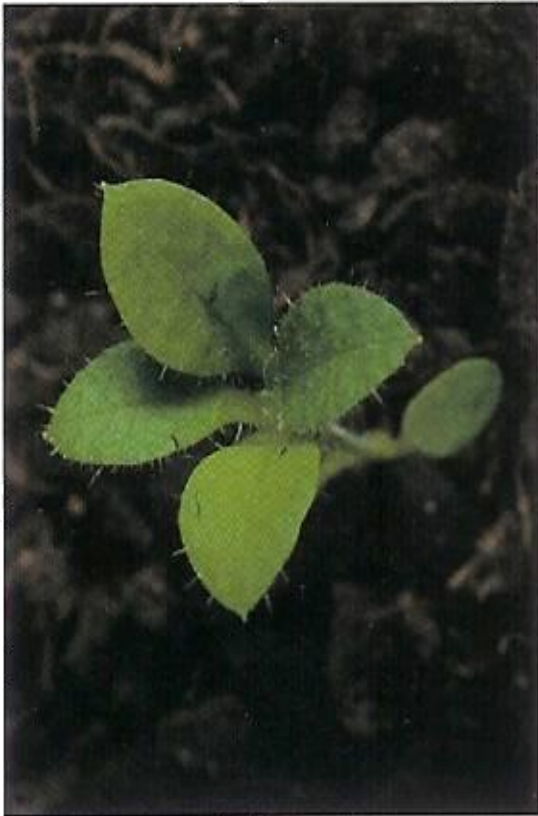
Flowering period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Germination period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Chickweed, mouse-ear (*Cerastium fontanum*)



- Similar to common chickweed.
- Leaves hairy and downy in appearance.
- Often more rounded tip to leaf.
- Slightly reduced flowering and germination periods.

Flowering period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Germination period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Groundsel (*Senecio vulgaris* L.)



- Widely distributed on nurseries.
- Short growing annual, with succulent leaves.
- Leaves pinnately lobed.
- Flowers yellow in loose clusters.
- Fluffy wind-blown seed.
- Can flower and set seed quickly.
- Can be problematic on old stock.

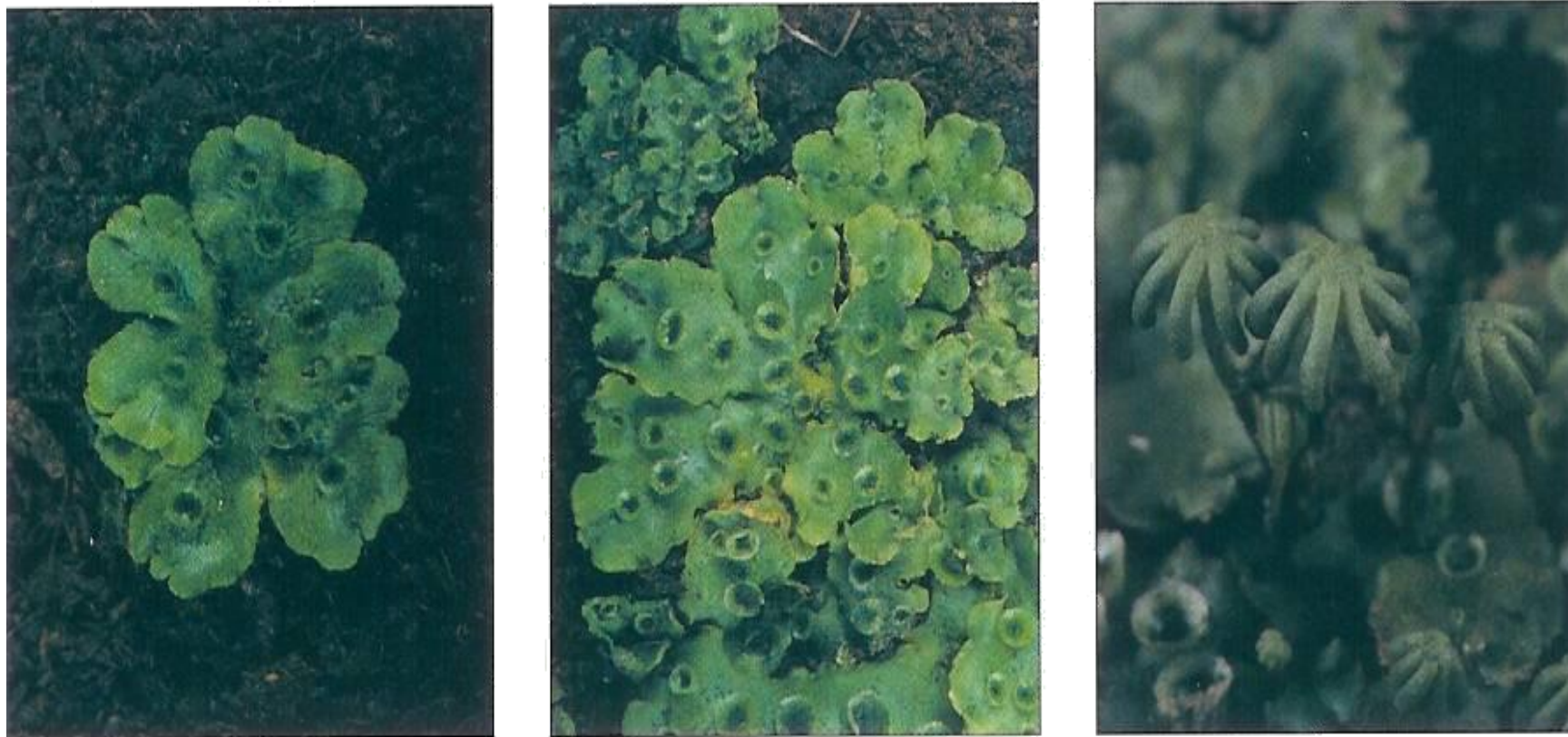
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Germination period

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Liverwort (*Marchantia polymorpha* L.)



Flowering period

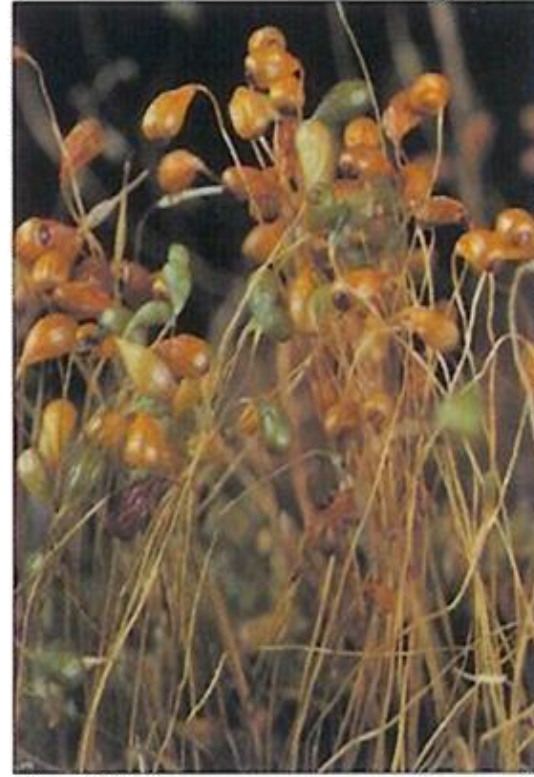
Jan Feb Mar Apr **May Jun** Jul Aug Sep Oct Nov Dec

Germination period

Jan Feb Mar **Apr May Jun** Jul Aug **Sep Oct** Nov Dec

- Lower plant (bryophyte), forming slimy green layer on the media surface.
- Spore producing bodies when mature.
- Problematic in propagation and under protection.
- Encouraged by over-watering.
- Spread by fragments and spores.

Moss (*Funaria hygrometrica*)



Flowering period

Jan Feb Mar Apr **May Jun Jul** Aug Sep Oct Nov Dec

Germination period

Jan Feb Mar **Apr May Jun** Jul Aug **Sep Oct** Nov Dec

- Another lower plant (bryophyte), forming a matted layer on the media surface.
- Brown stalked brown spore producing bodies when mature.
- Problematic in propagation and production.
- Spores are water and wind spread.

Oxalis (*Oxalis* spp.)



- An occasional problem on nurseries.
- Low creeping annual/perennial.
- Leaves brown and three-lobed.
- Small yellow flowers.
- Seed ejected from exploding seed pods.
- But can be spread by root fragments in media and stock.
- Problematic in propagation and under protection.

Flowering period

Jan Feb Mar Apr **May** Jun Jul Aug Sep Oct Nov Dec

Germination period

Jan Feb Mar **Apr** **May** Jun Jul Aug Sep Oct Nov Dec

Pearlwort, common (*Sagina procumbens* L.)



- Problematic on some nurseries.
- Vigorous low growing perennial, spreading from green star-like rosettes.
- Flowers tiny and greenish white.
- Can form a thick mat when abundant.
- Seed can stick to cutting material, re-used pots, clothing etc.

Flowering period

Jan Feb Mar Apr **May Jun Jul Aug Sep** Oct Nov Dec

Germination period

Jan **Feb Mar Apr May Jun Jul Aug Sep Oct** Nov Dec

Sowthistle, common (*Sonchus oleraceus* L.)



Flowering period

Jan Feb Mar Apr **May Jun Jul Aug Sep Oct Nov** Dec

Germination period

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- Occasional problem on nurseries.
- Medium greyish green annual, forming a tap rooted rosette.
- Flowers pale yellow and thistle-like.
- Fluffy seed heads when mature.
- Seed spread by wind.

Willow (*Salix spp.*)



Flowering period

Jan Feb **Mar Apr** May Jun Jul Aug Sep Oct Nov Dec

Germination period

Jan Feb Mar **Apr May Jun** Jul Aug Sep Oct Nov Dec

- Can be problematic where seed is blown in from perimeter and beyond.
- Tree seedling, oval leaves, downy grey on underside.
- Fluffy seed are wind dispersed in quantities.
- Once established difficult to hand weed.

Willowherb (*Epilobium spp.*)



- Widely distributed on nurseries.
- Number of different species, most common are medium sized perennials.
- Leaves lanceolate.
- Basal rosette can form.
- Small pink flowers give rise to fluffy seed.
- Wind-blown seed.
- Problem in final production.

Flowering period

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Germination period

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THANK YOU....

NEXT THE IDENTIFICATION PRACTICAL

ACKNOWLEDGEMENTS – ‘HDC PRACTICAL WEED CONTROL FOR NURSERY STOCK, REVISED 2013’

