

How and Why to Grow Hedgerows

Claire Denton-Spalding



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What Extension Master Gardeners Do

Master Gardeners are trained volunteer educators. They work within their local communities to encourage and promote environmentally sound horticulture practices through sustainable landscape management, education, and training.

Sharing Knowledge. Empowering Communities



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Charlottesville-Albemarle

FOR THE 2024 YEAR
173 Master Gardeners
26 Master Gardener Interns

CONTRIBUTED A TOTAL OF
22,315 volunteer hours
and made
42,974 direct educational contacts

VALUED AT
\$744,874.00*

*Based on a value of \$33.38/hour from [Independent Sector](#) 2023 Value of Volunteer Hours by State



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Today's Objective

- Define hedgerows
- Know the history of hedgerows
- Explain the benefits of hedgerows
- Understand how to design and plant a hedgerow

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What are Hedgerows?

- A hedgerow includes both the **hedge and features such as banks, trees, walls, fences and gates**. It may be ancient or newly planted, with a single species or many, and everything in between. (Woodland Trust)
- A **boundary line of trees and shrubs...the feature should be over 20 m [65 ft] long and less than 5 m [16 ft] wide between major stems at the base**. (Devon Hedges)



Photo: Sam Abell, National Geographic, English Hedgerow



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Photo: Claire Denton-Spalding, Foothaven Farm, Charlottesville, VA



Photo: Lewis Clarke, Seaside Hedge, England

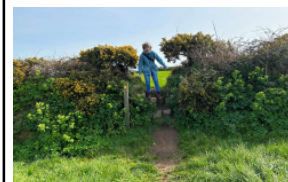


Photo: Grace Denton-Spalding, Cornwall, England



Photo: Tom Hynes, newly laid traditional hedging, Northamptonshire, England



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Bronze Age Hedgerows

- Used to enclose livestock and agriculture
- Earliest evidence dates to 2500 BCE – a sprig of blackthorn, believed to be a hedge remnant, found in a field boundary ditch in Fengate



Photo: Sam Abell, English Hedgerow



Photo: Roger Darlington, Blackthorn



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Hedgerows and English History

- 1235: Statute of Merton gave the Lords the power to enclose common grazing land for themselves
- 1607: The common folks lost access to common grazing land and revolted. The Midland Revolt involved thousands of citizens pulling down hedgerows
- 1603/4: The first bills of enclosure passed



By Frederick Hendrik Van Hove, Frontispiece to John Worlidge, 'Systema Agriculturae: The mystery of husbandry discovered'



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Hedgerows and English History

- 1801: The General Enclosure Act was passed, which made it easier to enclose land
- 1876: The Commons Act ruled that enclosure should only take place if there was some public benefit
- 1947: The Agriculture Act was passed, which financially rewarded farmers for removing their hedgerows



By William Wyke, Manchester from Kersal Moor



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Modern Preservation Efforts

- The Hedgerows Regulations Act of 1997 offered hedges greater protections
- The UK Government designates protections for hedgerows
- Multiple UK nonprofits financially support the laying of hedgerows

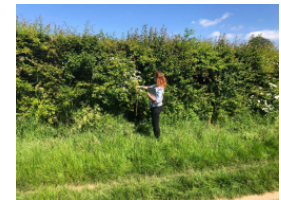


Photo: Megan Gimber, measuring the height of a hedge as part of the Great British Hedgerow Survey



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Hedgerows in America

- Scarcity of trees for wooden fencing
- Late 18th and early 19th century: American hawthorn hedge
- Mid-to-late 19th century: Osage orange hedges
- Mid-1860s: Invention of barbed wire

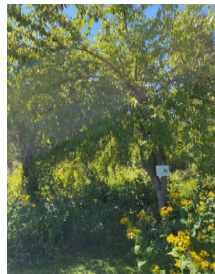


Photo: Claire Denton-Spalding, Osage Orange Fence, James Monroe Highland



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Hedgerows in America

- 1934: Shelterbelts in six Great Plains states to protect crops and wildlife from wind, intercept blowing snow and sand
- Post-WW2: Removal of hedgerows for agriculture
- 1965: Introduction of invasive species in hedgerows

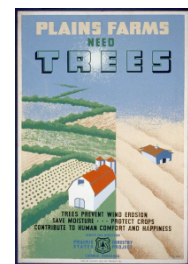
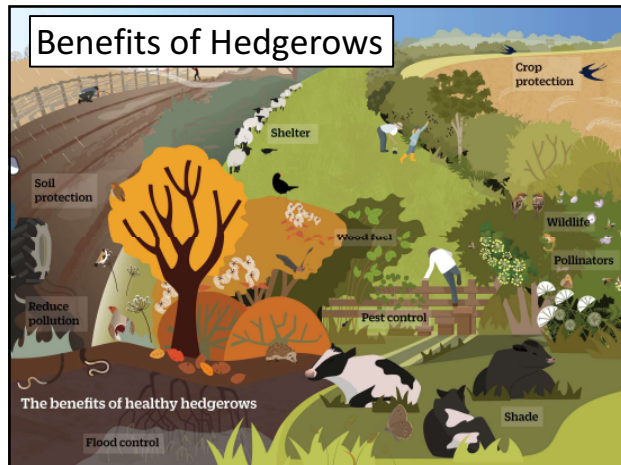


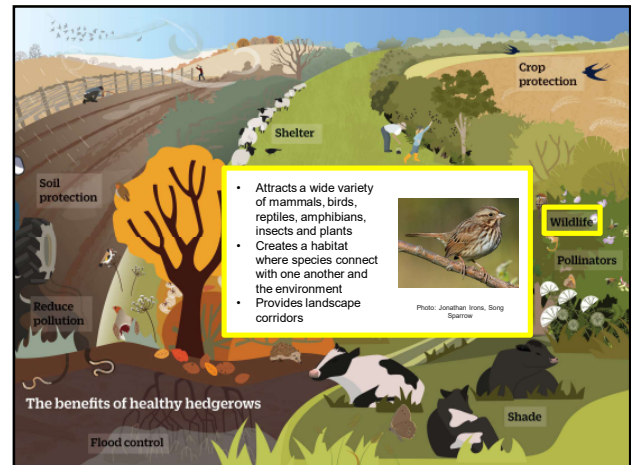
Image: Plains States Forestry Project



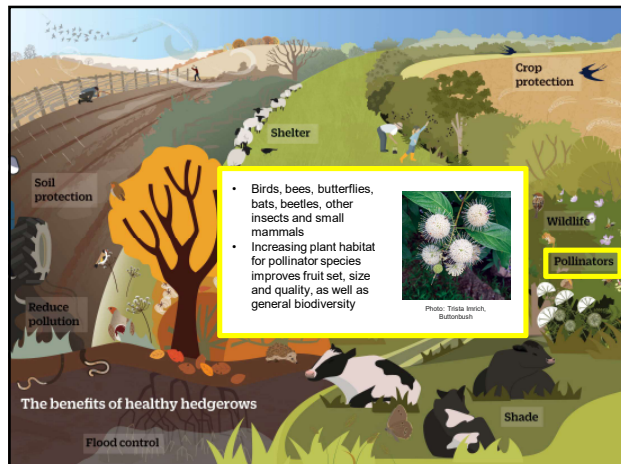
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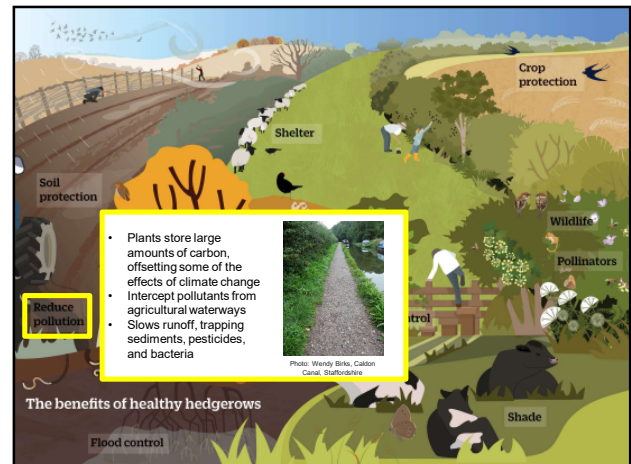
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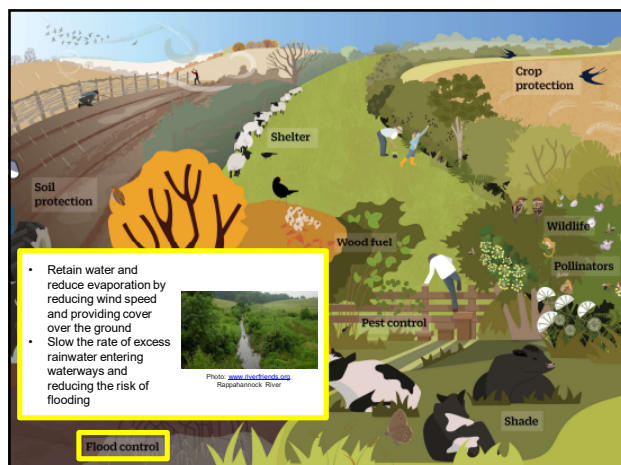
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The 8 Essential Elements of Conservation Landscaping

1. Is designed to benefit the environment and function efficiently and aesthetically for human use and well-being;
2. Uses locally native plants that are appropriate for site conditions;
3. Institutes a management plan for the removal of existing invasive plants and the prevention of future nonnative plant invasions;
4. Provides habitat for wildlife;
5. Promotes healthy air quality and minimizes air pollution;
6. Conserves and cleans water;
7. Promotes healthy soils;
8. Is managed to conserve energy, reduce waste, and eliminate or minimize the use of pesticides and fertilizers.

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Planting a Hedgerow in Virginia

- Focus on biodiversity, not traditional hedges
- Native trees, shrubs, and plants
- Applicable to urban landscapes, as well as farms and larger plots of land

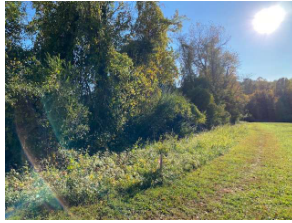


Photo: Claire Denton-Spalding, Foxhaven Farm



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1. Define the Purpose

- Primary goal: Support wildlife
- Secondary goal:
 - Windbreak
 - Privacy screen
 - Noise buffer
 - Lawn reduction



Photo: Outdoor area with hedgerow, Kate Anne Landscape Design & Build



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2. Determine the Location, Height, and Depth

- Use the purpose to determine the height
- The depth should be between 10-20 feet to maximize habitat potential



Photo: Annabel Rennick, formal English garden with evergreen hedge border



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3. Choose the Plants

- Choose the right plants for your space and climate
- Keystone species
- Plant Consideration Checklist

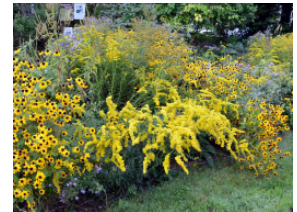


Photo: Janet Allen, goldenrods in the garden



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Plant Consideration Checklist

- ☐ Is the plant native?
- ☐ Is the plant a keystone species?
- ☐ What is the plant's hardiness zone?
- ☐ What are the light requirements for the plant?
- ☐ How large is the plant at maturity?
- ☐ What pH does the plant require?
- ☐ How would this plant contribute to seasonal interest?
- ☐ Does the plant have a tolerance to heat, cold, salt, drought, pollution, wind and wild or domestic animals?
- ☐ What is the mix of evergreen or deciduous?
- ☐ How much do the plants cost and are they available in a nursery?
- ☐ What maintenance is required for the plant?

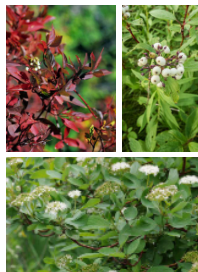


Photo: Sally and Andy Wasowski, Stephanie Brundage, James Reeves, red leaf dogwood



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Hedgerow Layering

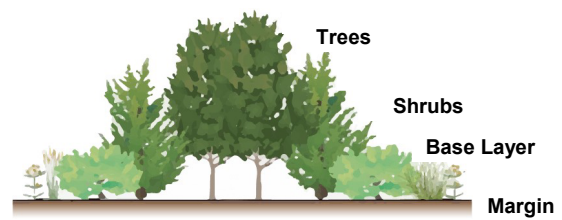


Image: <https://extension.oregonstate.edu/catalog/pub/lem8721>



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Tree Layer

The woody part of a hedge which is normally more than 4m [13 ft] high...Both **isolated trees**, where the canopies do not touch, and **lines of trees** are included here...Lines of trees may or may not have a shrub layer beneath them. Includes **ancient trees** and **those with veteran features** (e.g. deadwood, rot holes, splits and sap runs). (Hedgelink)



Photo: Roger Jones, Trees and hedgerow on Foxhall Road verge, Essex, England



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<p>American Beech <i>Fagus sylvatica</i></p> <p>Photo: Betty Washington</p>	<p>Pawpaw <i>Asimina triloba</i></p> <p>Photo: Betty Washington</p>	<p>Downy serviceberry <i>Amelanchier alnifolia</i></p> <p>Photo: Elaine Mills</p>
<p>Hazelnut <i>Corylus americana</i></p> <p>Photo: Betty Washington</p>	<p>Persimmon <i>Diospyros virginiana</i></p> <p>Photo: Mary Free</p>	
<p>Red cedar <i>Juniperus virginiana</i></p> <p>Photo: The Natural Garden</p>	<p>Photo: David Garth</p>	

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Keystone Species

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Shrub Layer

The woody part of the hedge consisting of bushes, which are usually **multi-stemmed and much branched**, together with young trees, and is less than 4m [13 ft] high. (Hedgelink)



Photo: Oliver Dixon, Autumn hedgerow near Lligatceek, Scotland



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<p>Spicebush <i>Lindera benzoin</i></p> <p>Photo: Dan Cook</p>	<p>Sumac <i>Rhus</i> spp.</p> <p>Photo: Stephanie Brundage</p>	<p>Black Hawthorn <i>Viburnum prunifolium</i></p> <p>Photo: Elaine Mills</p>
<p>Lowbush Blueberry <i>Vaccinium angustifolium</i></p> <p>Photo: Elaine Mills</p>	<p>Buttonbush <i>Ceanothus americanus</i></p> <p>Photo: Jim Robbins</p>	<p>Blackberry <i>Rubus</i> spp.</p> <p>Photo: Randy LaBace</p>

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Keystone Species

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Base Layer

The bare or vegetated **ground beneath the canopy** of the shrub and tree layer, where any perennial plant communities are at least **partly shade tolerant**... (Hedgelink)

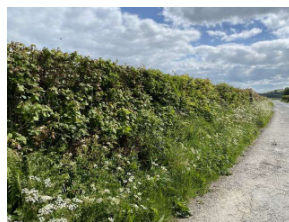


Photo: Alan Hughes, wildflowers and hedge alongside the road to Meidrim, Wales



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<p>Heart-leaved aster <i>Symphyotrichum cordifolium</i></p> <p>Photo: R.A. Noremacher</p>	<p>Joe-Pye Weed <i>Eupatorium</i> spp.</p> <p>Photo: Elaine Mills</p>	<p>Dogbane <i>Apocynum canadense</i></p> <p>Photo: Virginia Williflowers</p>
<p>Blue stemmed goldenrod <i>Solidago canadensis</i></p> <p>Photo: Denise Greene</p>	<p>Black-eyed Susan <i>Rudbeckia hirta</i></p> <p>Photo: Mary Free</p>	

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Keystone Species

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Margin

*The ground adjoining the base towards the field centre. Include **grass buffer strips**, **arable conservation headlands** and **field margins** managed to benefit biodiversity, whether it be, for example, rare arable plants, bees and other insects dependent on nectar and pollen, or farmland birds. (Hedgelink)*



Photo: David P. Howard, Autumn Hedgerow, Cotswold, England



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4. Establish the Hedgerow

- Fund the hedgerow
- Purchase plants
- Lay out hedgerows
- Plant according to tree and shrub best practices
- Water each new planting
- Mulch to discourage weeds and encourage survival



Photo: Diane Earl, hedgerow planting



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5. Maintain the Hedgerow

- Keep it thick and dense
- Cut at the right time
- Don't cut too often or too tight
- Water for the first 1-3 years
- Manage invasive species
- Rejuvenate the hedge



Photo: A forgotten landscape, Hedge-laying training course



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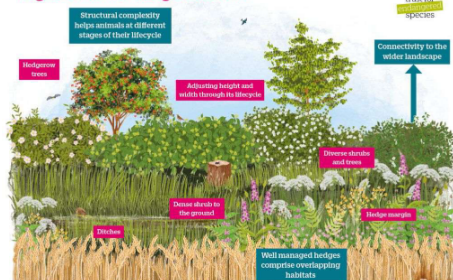
Photo: Tom Hynes, a traditional stone-faced Devon hedge with stones placed on edge, Beaford, England



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Biodiversity Considerations

A good wildlife hedge structure



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Recap

- Understand what a hedgerow is
- History in UK and USA
- Benefits, including biodiversity
- Planting a hedgerow in Virginia



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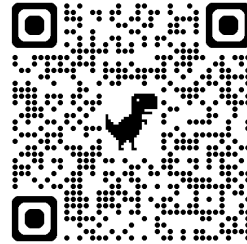
Resources

- Healthy Landscapes Program: <https://piedmontmastergardeners.org/gardening-questions/healthy-landscapes/>
- Hedgeline: <https://hedgeline.org.uk/>
- Thomas Jefferson Soil and Water Conservation District: <https://www.tjswcd.org/>
- Natural Resource Conservation Service: <https://www.nrcs.usda.gov/getting-assistance/other-topics/organic/nrcs-assistance-for-organic-farmers/habitat-biodiversity>
- A Guide to Hedgerows: Plantings That Enhance Biodiversity, Sustainability and Functionality: <https://extension.oregonstate.edu/catalog/pub/em8721>
- The traditional farm hedgerow: <https://www.smallfarmcanada.ca/features/the-traditional-farm-hedgerow/>



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Resources



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Helpful Resources and Credits

- Publications – Virginia Coop Extension
<http://ext.vt.edu>
- Extension web sites for all land grant universities: <http://www.extension.org/search>



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