

Groundcovers: What Are They & How to Use Them

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Your growing conditions should drive your decision making about which shrub, perennial, annual, and/or herb species and the cultivar which will work best in your landscape.

- **Essential site information:** sun exposure, soil conditions, water conditions & availability
- **Plant considerations:** growth habit (includes shape, size, color, texture), purpose in the landscape, and cost.
- **Growth Zone:** most of New England falls into zones 4-7.
- **Deer and Rabbit Resistance:** if they are common in the landscape.

Considerations

<i>Sun Exposure</i>	Full Sun – 6+ hours	Part Sun – 4-6, some in PM;	Part Shade – 4-6, some in AM	Full Shade – less than 4 hours
<i>Site</i>	Slope – grade of 12% or ore	Cascading	Flat surface	Climbing
<i>Soil</i>	Acidic – pH < 7	Neutral – pH = 7	Alkaline – pH > 7	
<i>Water Needs</i>	Dry	Moist	Wet	
<i>Habit</i>	Mounding/Round	Matting/Flat	Spreading	Spiking
<i>Growth Rate</i>	Slow - >12"/year	Medium – 12-24"/year	Fast – 25+"/year	
<i>Size at Maturity</i>	Low – less than 12"	Medium – 13-24"	High – 25-40"	Very High – 41+"
<i>Texture</i>	Evergreen	Herbaceous	Flowering – attracts bees, butterflies	Berries- attracts birds
<i>Purpose</i>	Erosion control	Garden edging	Mulch substitute	Lawn substitute
<i>Landscape</i>	Woodland Garden	Pollinator Garden	Rain Garden	Natives Garden

Plant Terminology

- Annual – germinates, sets seeds, flowers, dies in 1 year
- Biennial – forms basal rosette in Y1, flowers & fruits in Y2, dies
- Deciduous – falling leaves; not evergreen
- Evergreen – green leaves through the winter; not deciduous
- Fern – flowerless, seedless vascular plants that produce spores
- Herb – plant without a persistent above ground woody stem
- Herbaceous – with the characteristics of an herb; not evergreen. Most annuals, biennials, perennials are herbaceous. Ferns are non-flowering herbaceous plants.
- Ornamental Grass – dramatic, decorative perennial grasses
- Perennial – herbaceous plants that live for 3 or more years
- Shrub – wood plant with several stems; shorter than a typical tree
- Tree – large woody plant; usually with a single main stem or trunk

Garden Math

Determine area to be covered at plant maturity:

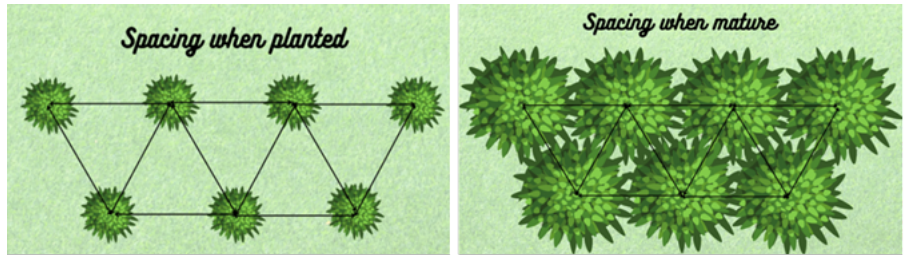
- Measure square footage (SF) of garden area (GA) you wish to cover. Odd shape, break into smaller rectangles, then add.
- Determine desired space in feet (S) the plant will cover when mature. If plant is given in inches, divide by 12.
- Square the spacing (S^2) to determine how many SF each plant will occupy.
- Your garden area is 5' by 4'. You are planting Jacob's Ladder which is 2' wide at maturity.

- **Formula:** Number (N) = GA/ S^2
- Example: GA = 5'x4'=20SF
 $S = 24'$, $24/12=2$
 $S^2 = 2 \times 2 = 4$
N=20/4 = 5 plants

Plant Placement

Best pattern is staggered rows - or triangular pattern – results in

- Faster, more even coverage
- More natural look
- Measure plants on-center equaling 1/2 to 1/1 of full-size when mature.



Plants Mentioned in Lecture (* native plant)

- Achillea mollis (Ladies Mantle) – deer & rabbit tolerant
- Aethionema (Candytuft) - slow growing herbaceous
- Ajuga (Bugleweed) – sloping surface, deer & rabbit tolerant; alternative to lawn
- *Anemone canadensis (Windflower) – rain garden; deer & clay soil tolerant
- Artemisia stelleriana (Beach Wormwood) – hell strips; deer, rabbit, drought tolerant
- Asarum canadense (Wild Ginger) – evergreen herb; deer and heavy shade tolerant; alternative to lawn
- *Asclepias syriaca (Common milkweed) – deer & drought tolerant; essential for Monarch butterflies
- Aurinia sacatillis (Baskets of Gold) – cascading
- *Callirhoe involucrate (Winecup) – drought tolerant
- Cerastium tomentosum (snow-in-summer) – deer & drought tolerant, sandy soil
- *Clethra anifolia (Summersweet, Pepper Bush) = deciduous shrub, tolerates all soils, heavy shade, attracts butterflies, birds
- *Comptonia peregrina (Sweet fern) – spreading plant habit, deer & drought tolerant
- Cotoneaster apiculatus (Cranberry cotoneaster) – trailing plant, rabbit tolerant, attracts birds
- Deutzia – deer and rabbit tolerant; shrub
- Epimedium (Barrenwort) – deer, rabbit, deep shade, drought tolerant; sunny slopes
- Euphorbia polychrome (Cushion spurge) – dry shade, deer, rabbit & drought tolerant
- Festuca glauca ‘Elijah blue’ (grass) – hell strip; deer and drought tolerant
- Gallium odoratum (Sweet Woodruff) – herb; shade to deep shade; deer, rabbit tolerant
- *Geranium (Cranesbill) – flat surface; deer & rabbit tolerant; attracts butterflies
- Hibiscus (Rose mallow) – moist/wet soil; attracts butterflies
- Hosta – water loving, deep shade tolerant
- Heuchera (Coral bells) – clay soil, dry shade, attracts hummingbirds
- *Hydrangea arborescens – (smooth hydrangea), deciduous shrub, rabbit tolerant, tolerates all soils
- *Hydrangea quercifolia (Oakleaf hydrangea) – moist/wet soil; fall foliage; shrub
- *Juniper – spreading, deer and rabbit tolerant; evergreen; shrub
- *Kalmia latifolia (Mountain Laurel) – broadleaf evergreen shrub, rabbit tolerant
- Liliaria (Leopard plant) – moist/wet soil; tolerates heavy shade; rain garden
- Liriope spicata (Creeping Liriope) – rain garden; deer and rabbit tolerant
- *Onoclea sensibilis (Sensitive fern) – tolerates rabbits, clay soil, wet soil heavy shade
- Ophiopogon japonicus (Mondo Grass) – sunny slopes; deer and rabbit tolerant
- *Penstemon canescens (Beardtongue) – hell strip; deer tolerant; attracts pollinators
- *Phlox subulata (Moss Phlox) – trailing plant, deer & drought tolerant
- Physocarpus opulifolius (Ninebark) - deciduous shrub, tolerates all soils, winter interest
- Pieris japonica (Andromeda) – broadleaf evergreen shrub, deer and heavy shade tolerant
- *Polygonatum (Solomon’s Seal) – rain garden; erosion control
- Pulmonaria (Lungwort) – dry shade, deer tolerant
- Rhododendron – broadleaf evergreen shrub, rabbit tolerant
- Siberian iris – water loving, deer, rabbit & drought tolerant
- Teucrium chamaedrys (Wall Germander) – fast growing herb, deer, rabbit & drought tolerant
- Thymus praecox (Thyme) – deer, rabbit, drought tolerant; attracts butterflies; alternative to lawn
- Thymus serpyllum (Creeping thyme) – deer, rabbit & drought tolerant, attracts butterflies
- *Tiarella cordifolia (Foamflower) – trailing plant, deer & rabbit tolerant
- *Verbena hastata– Moist soil, attracts hummingbirds & butterflies
- *Viburnum (many cultivars) – deciduous shrub, clay soil tolerant
- *Weigela – deer and rabbit resistant; attracts hummingbirds; shrub

Websites & Gardens for Getting Ideas:

- Coastal Landscaping in Massachusetts, Plant Highlights & Images: Shrubs and Groundcovers at <https://www.mass.gov/doc/coastal-landscaping-in-massachusetts-plant-highlights-and-images-shrubs-and-groundcovers/download>
- Grow Native Massachusetts' Plant Lists and Landscape Guides at <https://www.grownativemass.org/Great-Resources/Plant-Lists-Landscape-Guides>
- Landscape Plants Rated by Deer Resistance at <https://njaes.rutgers.edu/deer-resistant-plants/>
- Massachusetts Prohibited Plant List at <https://www.mass.gov/massachusetts-prohibited-plant-list>
- Missouri Botanical Garden plant finder at <https://www.missouribotanicalgarden.org/plantfinder/plantfindersearch.aspx>
- Native Plant Trust Groundcover Plant Finder at <https://plantfinder.nativeplanttrust.org/index.cfm>
- Polly Hill Arboretum Plant Selection Guide at <https://www.pollyhillarboretum.org/plants/plant-selection-guide/>
- Rabbit Resistant Garden and Landscape Plants at <https://extension.psu.edu/programs/master-gardener/counties/pike/publications/rabbit-resistant-garden-and-landscape-plants>

Garden Idea Sites:

- *11 of the Best Groundcovers for Shade* at Coastal Landscaping in Massachusetts, Plant Highlights & Images: Shrubs and Groundcovers at <https://www.mass.gov/doc/coastal-landscaping-in-massachusetts-plant-highlights-and-images-shrubs-and-groundcovers/download>
- *14 Amazing Groundcover Plants that Enjoy Wet Feet* at <https://www.tipsbulletin.com/ground-cover-plants-for-wet-soil/>
- *15 Drought Tolerant Groundcovers for Low-Maintenance Beauty* at <https://www.bhg.com/gardening/flowers/perennials/drought-tolerant-groundcovers/>
- *17 Great Ground Cover Plants for Full sun*: <https://leafyplace.com/ground-cover-plants-for-full-sun/>

Resources on Native Plants:

- Lorimer, U. (2022). The northeast native plant primer: 235 plants for an earth-friendly garden. Portland, OR, The Timber Press.
- Richardson, M. and Jaffe, D. (2018). Native plants for New England gardens. Guildford, CT, Globe Pequot.
- Fialkoff, A. and McCargo, H. (2022). Native ground covers for northeast landscapes. N. Yarmouth, ME, The Wild Seed Project.