

HEDGEROWS

A hedgerow is a densely planted pattern of trees or shrubs used to create a protective barrier around a field of crops.

Learning Objectives

The learner will:

- Identify multiple purposes for hedgerows on the farm.
- Recognize factors influencing hedgerow design
- Learn the basics of plant selection, planting, and caring for hedgerows.

Functions of Hedgerows

- Physical barrier – to humans or livestock
- Visual barrier – aesthetically pleasing
- Wind barrier – block wind, thus decreasing evapotranspiration in fields
- Create shade – creates niches in field for shade tolerant plants; stops evaporation of water from soil
- Temperature regulation – vegetation tends to moderate climate extremes
- Create habitat – habitat for pollinating insects, birds and small critters
- Create food source – fruits and nuts
- Create usable material – fuel wood, fencing material, weaving material, posts
- Prevent erosion – root mass holds soil and blocks runoff

Design

Factors influencing layout and species selection of hedgerows

- Environmental Factors
 - Climate – (average high and low temperatures, precipitation)
 - Soil type – (composition and fertility)
 - Prevailing wind direction
 - Aspect –(e.g. north facing slope for fruit trees to avoid early bloom)
- Site Factors
 - Location of roads, fields, buildings, waterways, etc.
- Goals of Designer
 - What purpose(s) will the hedgerow achieve?
- Opportunities
 - Create edge – An edge exists where two systems meet and overlap. (i.e. where a forest meets a meadow.) Maximum biological activity takes place



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along edges. The designer emphasizes this effect by planting a curving hedge because a curving line has more linear distance between two fixed points than a straight line.

- Pathways – The paths between hedgerows can be either clean cultivated, meaning bare-earth with vegetation either hoed or tilled; or paths can have vegetative cover which is managed to fix nutrients, choke weeds, hold soil, and provide mulching material. (i.e. buckwheat, clover, fescue combination.)
- Special plants – Certain nitrogen-fixing shrubs can be planted amongst fruit and nut trees to provide nitrogen to the trees. (i.e. ceanothus, pea shrubs, eleanus)

Planting Stock

- If from a nursery, plants should be grown in a similar climate. Plants can come from the nursery in a variety of forms: potted, balled and burlap, and bare root (most common)
- Home sourced plants can be grown from seed or cuttings and are especially good because they come from the same climate and ecosystem in which they will live.

Planting

- Choose a time to plant that is appropriate for species and region
- Scalp surrounding area clean of any competing vegetation
- Make a hole large enough not to impinge roots
- Trim off broken roots
- Plant to proper depth (avoid creating a basin for the trees to be submerged in if the rainy season is long.
- Use appropriate soil amendments. Too much can coddle the tree and the roots will remain in the planting hole and not venture out into native soil.
- Pat soil around roots until firm but not compacted
- Water in thoroughly

Care and Maintenance

- Protection
 - Use fencing to protect from deer, beavers, etc.
 - Line the planting hole with poultry netting before planting to protect from gophers, moles, and voles.
 - Paint tree trunks of fruit and nut species with white latex paint diluted 50% with water to protect from sun, cold, and borers
- Mulching
 - Retains moisture in the soil
 - Smothers weeds
 - Moderates soil temperature



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- Pruning
 - Prune fruit and nut species
 - Follow specific instructions for type of tree
 - Pruning is critical in the first few years

- Irrigation – if required
 - Determine irrigation schedule (see “Irrigation” chapter)
 - Ensure schedule is adequate by observation

- Annual fertilization
 - Fertilize during period of dormancy
 - Foliar spraying is acceptable in the spring

- Thinning
 - If hedgerow becomes too crowded, thin out selected trees to create spaces for others



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Assessment/Review

- How many distinct functions of hedgerows can you identify?
- What are some care and maintenance needs of hedgerows?

