

# **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 along edges. The designer emphasizes this effect by planting a curving hedge because a curving line has more linear distance between to 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, eleagnus)

### **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
- 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

### **Assessment/Review**

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