

The Do's and Don'ts of Pruning



MICHIGAN STATE UNIVERSITY

WHY PRUNE ?

1. Maintain Health and Appearance

Remove the 3 D's:

- a. Dead
- b. Diseased
- c. Damaged



WHY PRUNE?

2. Train plant growth



WHY PRUNE?

2. Train plant growth



WHY PRUNE?

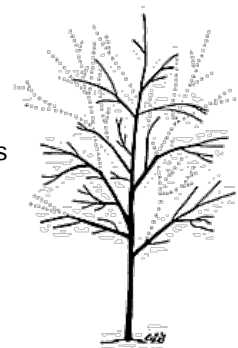
3. Structure



WHY PRUNE?

4. Thinning

- a. Increase air flow
- b. Remove crossing branches



WHY PRUNE?

5. Control Plant Size





Photo by Matt Smith, Univ. of Tennessee

WHY PRUNE?

6. Fruit and Flowering



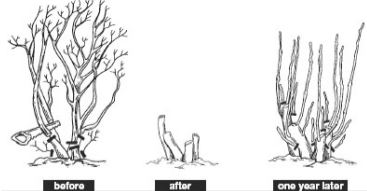


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WHY PRUNE?

7. Reinvigorate





before after one year later

WHY PRUNE?

8. Value





PRUNING TOOLS

- Hand pruners
 - By-pass
 - Anvil = BAD!
- Hand shears





PRUNING TOOLS

- Loppers
- Hand saws
- Pole pruners, pole saws, extension pruners






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Things NOT to do when pruning

- Don't use a hack saw



Things NOT to do when pruning

- Use proper safety equipment!



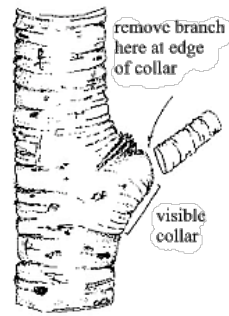
Things NOT to do when pruning

- DO NOT leave stubs



Things NOT to do when pruning

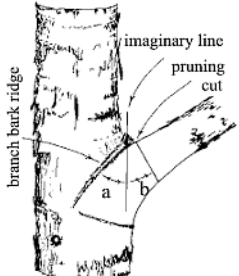
- DO NOT harm branch collar or bark ridge



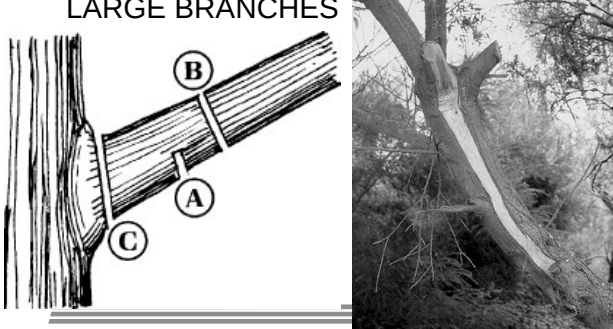
Things NOT to do when pruning

- DO NOT make flush cuts

no visible collar



IMPORTANCE OF 3-POINT CUT ON LARGE BRANCHES



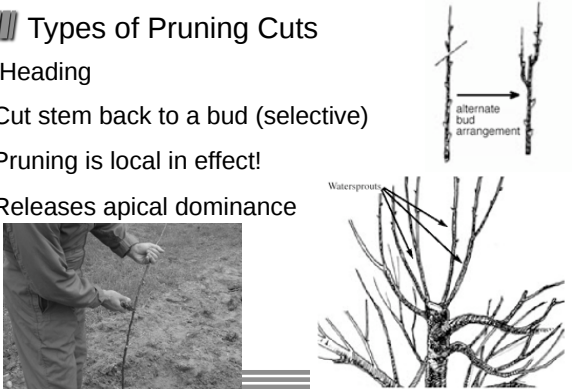
Wound Dressings DON'T Help!

- Can crack when exposed to sun
- Allows moisture to accumulate behind the dressing
- Actually can promote more disease problems
- Only makes YOU feel better



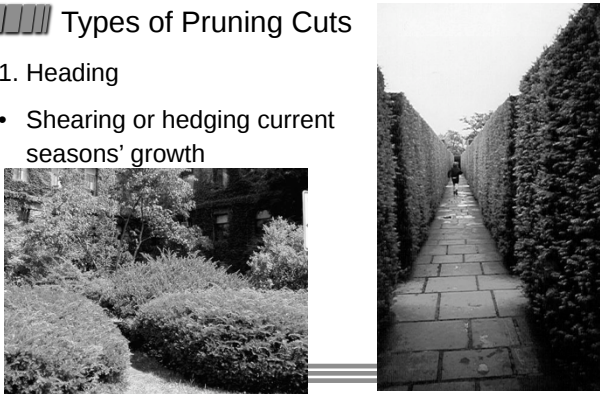
Types of Pruning Cuts

1. Heading
 - Cut stem back to a bud (selective)
 - Pruning is local in effect!
 - Releases apical dominance



Types of Pruning Cuts

1. Heading
 - Shearing or hedging current seasons' growth



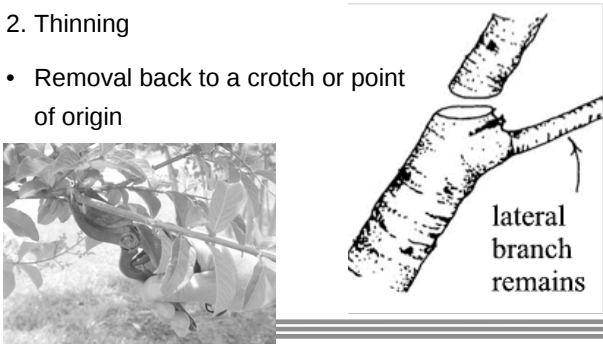
Types of Pruning Cuts

- Shearing doesn't work in all situations



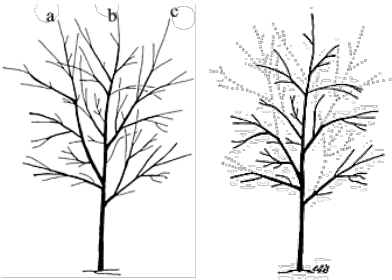
Types of Pruning Cuts

2. Thinning
 - Removal back to a crotch or point of origin



Types of Pruning Cuts

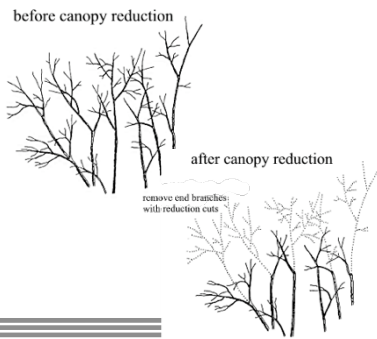
2. Thinning
 - Used to make a canopy less dense
 - Lighten load
 - Sunlight & buds



Types of Pruning Cuts

2. Thinning

- Used to reduce height
- Drop-crotching



Types of Pruning Cuts

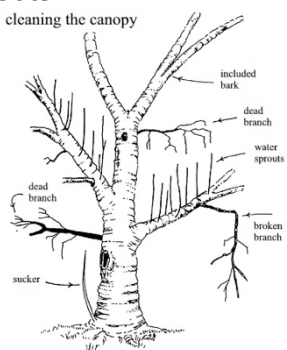


Avoid reduction to a weaker branch with a close to 90 degree angle to branch origin

Types of Pruning Cuts

2. Thinning

- Removal of water sprouts
- Canopy cleaning



Types of Pruning Cuts

3. Deadheading/Pinching

- Woody and herbaceous
- Advantages:
 - Extend current bloom or promote 2nd bloom



Types of Pruning Cuts

3. Deadheading/Pinching

- Advantages (cont.):
 - Prevents seed/fruit formation
 - Continued productivity in most annuals and perennials



General Seasonal Effects

- Timing depends on:
 - Plant species, condition, & desired results



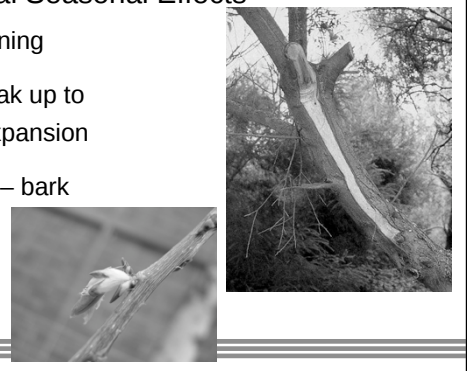
General Seasonal Effects

- Dormant Pruning
 - Done in LATE winter – few pests, architecture visible
 - Deciduous plants = less impact on plant vigor
 - Evergreens = least amount of setback stress



General Seasonal Effects

- Spring Pruning
 - Bud-break up to shoot expansion
 - Caution – bark slipping



General Seasonal Effects

- Spring Pruning
 - Early to late spring pruning:
 - This encourages even more growth
 - Sap flow is heavy
 - Oaks and Elms = **NOT** during growing season!



General Seasonal Effects

Summer Pruning = end of growth flush

- Remember indeterminate & determinate growth
- Best time for heavy bleeders
- Redirect growth of younger plants
- Pinching back, deadheading, dwarfing
- General light maintenance – 3 D's

General Seasonal Effects

Fall Pruning = end of all growth flushes

- NOT a good time:
 - Decay fungi are sporulating
 - Not enough time to heal
- May force late shoot growth
- Must consider when plants flower – new or old wood?

Avoid pruning in late fall / early winter!

- Apple trees on left unpruned
- Trees on right pruned Dec. 10
- Cold injury caused by early winter pruning!



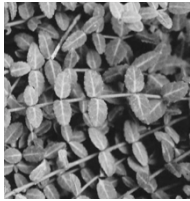
Pruning at Time of Planting

- Remember purpose in landscape
- Bare-root to develop canopy
- Container, B&B = thinning & 3D's




Pruning According to Plant Type

- Broad-leaved Evergreens
 - Right space = very little pruning
 - Before period of fast growth – late winter
 - Too early or too late = damage
 - Limited latent buds



Pruning According to Plant Type

- Broad-leaved Evergreens
 - Deadheading to improve branching & flowering




Pruning According to Plant Type

- Conifers and Narrow-leaved Evergreens
 - Maintain primary leader
 - Late winter prune to limb up or thin
 - Late Summer or Fall prune = injury



Pruning According to Plant Type

- Conifers and Narrow-leaved Evergreens
 - Pinching candles – timing critical
 - Shoot expands before needles
 - Leave part of candle for bud set



Pruning According to Plant Type

- Conifers and Narrow-leaved Evergreens
 - Mugo pine to control height




Pruning According to Plant Type

3. Evergreen Shrubs

- Selective heading and thinning
- Shearing last resort
- Juniper, Taxus, Arborvitae, Chamaecyparis



Pruning According to Plant Type

4. Deciduous Shrubs

- Thinning cuts
- Important on multi-stem species



Pruning According to Plant Type

4. Deciduous Shrubs

- Heading cuts and deadheading
- Dieback shrubs
 - Hydrangea
 - Callicarpa
 - Buddleia



Pruning According to Plant Type

5. Shade Trees

- Primarily thinning cuts
- Remember 3-cut method!
- 3 D's and limbing-up



Pruning According to Plant Type

6. Flowering Trees and Shrubs

- Based on time of bloom!
- Old or new wood
- May rule



Pruning According to Plant Type

6. Flowering Trees and Shrubs

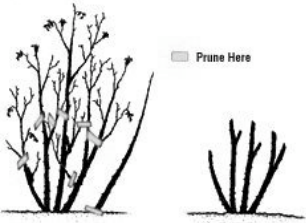
- Old Wood:
 - Forsythia, viburnum, quince
- New Wood:
 - Rose of Sharon, Clethra, Buddleja



Pruning According to Plant Type

7. Roses

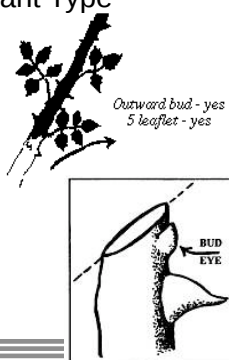
- Keep canopy thin
- Cut to outward facing bud
- Remove suckers
- Some dieback @ pruning = leave more than normal



Pruning According to Plant Type

7. Roses

- Deadheading
 - Renews wood
- Prune at 1st or 2nd 5 leaflet leaf with an outward facing bud
- Faster regrowth & larger flowers



Pruning According to Plant Type

8. Clematis – Group 1

- Flower on new wood in summer
- Prune back to lowest pair of strong buds late winter each year



Pruning According to Plant Type

8. Clematis – Group 2

- Flower on old wood in the spring
- Prune immediately after flowering
- Most will tolerate drastic cutting back



Pruning According to Plant Type

8. Clematis – Group 3

- Flower on old AND new wood
- Old = big flowers
- New = smaller flowers
- Begin renewal pruning in the 3rd year
- Remove 1/4 to 1/3 of old stems back to 12"



Pruning According to Plant Type

9. Wisteria

- Pergolas
- Standards
- Shrubs
- Espalier



Pruning According to Plant Type

9. Wisteria

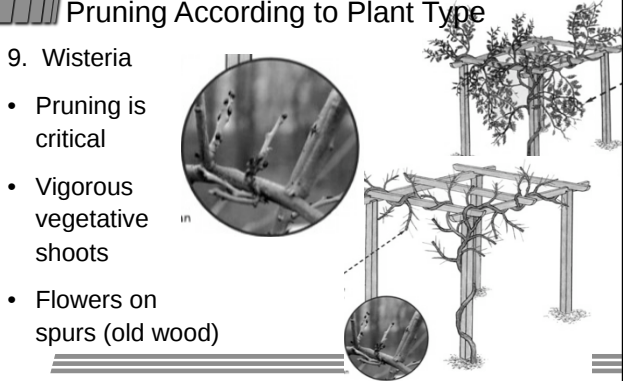
- Marginally hardy in MI
- Winter injury to flower buds
- Needs moisture in Aug



Pruning According to Plant Type

9. Wisteria

- Pruning is critical
- Vigorous vegetative shoots
- Flowers on spurs (old wood)



Pruning According to Plant Type

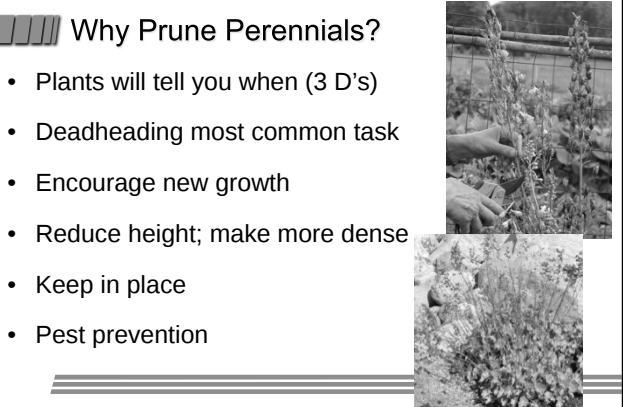
9. Wisteria

- Proper support
- Pods, seed, and spurs



Why Prune Perennials?

- Plants will tell you when (3 D's)
- Deadheading most common task
- Encourage new growth
- Reduce height; make more dense
- Keep in place
- Pest prevention



Wait Until Spring to Prune

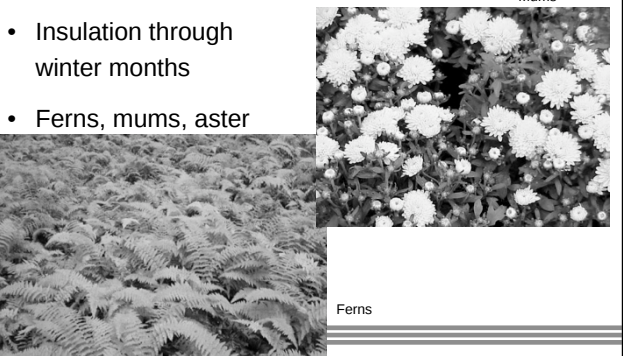
- Seed, form, bark, foliage color, etc.
- Butterfly eggs & bird feed
- Indicate where late emergers are in the garden



Ceratostigma

Wait Until Spring to Prune

- Insulation through winter months
- Ferns, mums, aster



Mums

Ferns

Wait Until Spring to Prune

Hollyhock rust

- Prune before new growth begins
- Remove all dead
- Leave healthy evergreen foliage




Wait Until Spring to Prune

Buddleia davidii

- Semi-hardy shrubs, wait until bud break
- Ornamental grasses before new growth




Why Prune in the Fall?

Coreopsis grandiflora

- If it turns to mush
- To avoid reseeding
- More time in the Fall




Aquilegia hybrids

Fall Pruning – When & How?

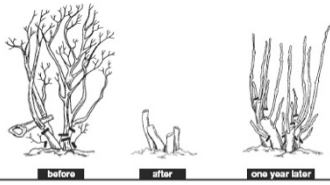
- Wait until dormant
- Prune to 2-3" for most
- Prune to 6" to catch snow for insulation
- Remove stubs in spring



Renovation Pruning

A. Deciduous Shrubs

- Plants with perm. framework = slowly
- Suckering shrubs = down to the ground

Renovation Pruning

B. Evergreen Shrubs

- Plants with latent buds (taxus)
- Plants without latent buds (juniper)




What Can Arborists Do For You?

Important Associations:

- International Society of Arborists (ISA) – training & certification programs
- Michigan Forestry & Parks Association (MFPA)
- Society of Municipal Arborists – (SMA)





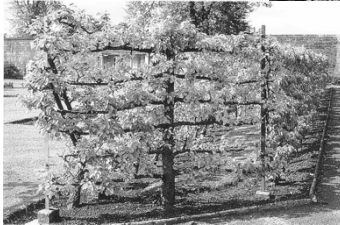
Espalier

- Trained in a vertical plane
- Takes up less space
- Trained to wall



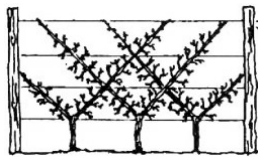

Espalier

- Free-standing
- Horizontal or vertical pattern


Espalier

- Supple branches
- First season at 45° angle, then arms to 90° in fall
- Avoid spring pruning after establishment
- Summer pruning for dwarfing & spur formation




Pleaching

- Alternative to formal hedges
- Supple branches needed
- Branches woven together in horizontal plane



Pleaching

- Wire support needed to establish scaffold
- Keep canopy thinned
- Summer pruning for control
- Suckering

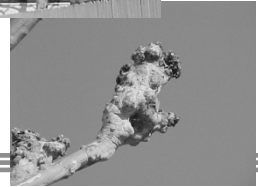


//// Pleaching??



//// Pollarding

- Knobs of callus from repetitive pruning
- Established framework and bold texture
- Sycamore and willows are common



//// Pollarding

- Dense shade in summer
- Full sun in winter
- Can be healthy and long-lived



//// Topiary

- Pruning into formal or geometric shapes
- True topiary on it's own roots
- Fake topiary – use of wire structure



//// Topiary – Plant selection

- Best are *Buxus* and *Taxus*
- Small foliage; slow growth
- Usually one prune a year
- Privet not a good choice



//// Topiary – Training

- Promote bushy growth early
- Small = single plants
- Large = multiple plants
- Avoid fine detail – keep it bold & simple



Topiary – Care

- Fertilize in late winter
- Control competition – food, light, etc.
- Remove snow loads
- Slow growers, prune once in summer
- Fast growers, prune multiple times



Topiary – Care

- Shears o.k. with large specimens
- Use hand pruners on large-leaved plants
- Use templates for established geometric shapes
- Always cut lightly




Bonsai

- Japanese & Chinese art
- Miniature replicas of landscapes or mature trees




Bonsai

- Detailed pruning and pinching
- Use of wire to shape and constrict





Bonsai

- Small, shallow root systems
- Re-pot every 2 – 4 years with new soil
- Avoid extreme temps
- Must manage water

