



Tree Pruning Basics

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About Us

Trees are our
Passion

Yard Whispers is a leading tree, forestry and agroforestry **consulting company that provides services** for sustainable management of trees/forest on public and private lands

We offer services to:

- ❑ Residential and commercial business
- ❑ Golf course industry
- ❑ Municipal governments
- ❑ Parks and campgrounds
- ❑ Urban developers
- ❑ Legal and regulatory bodies
- ❑ Educational institutions
- ❑ NGO - provincial, national and international

Yard Whispers is wholly owned subsidiary of **ATTS Group Inc**

Our Services

Arborist Services

- **Forensic Tree Expert** for insurance and legal services
- Integrated Pest Management- Tree pests ID, assessment and recommendation
- **Tree Risk and Hazard Assessments (TRAQ Certified)**
- Tree appraisal and value assessment
- Tree preservation and protection plan

Urban/Town Tree services

- **Tree inventory for rural and urban areas**
- Urban forest management plan
- **Development of tree bylaws, policy and regulations**

Natural forest management

- Woodlot management plans- harvesting and reforestation
- **Tree planning and designs for acreage owners**
- Tree/forest design, planting and species selection for reforestation and reclamation projects

Agroforestry Services

- Shelterbelts and windbreaks design
- **Riparian and natural revegetation**
- **Biodiversity, wildlife and pollinators planting**

Key Messages

- ▶ “Duty of Care” - you must be aware about it
- ▶ Most of trees do not require pruning - You MUST have a reason to prune trees/shrubs
- ▶ Safety precautions are MUST as pruning is very danger work
- ▶ Perform proper pruning technique
- ▶ Remember 3D - Dead, Disease and Damage - you can prune 3D anytime
- ▶ Hire ISA Certified Arborist if you can not perform pruning or removal
- ▶ Pruning fruit trees requires extra knowledge and skills - I consider it as Art
- ▶ Tree Hazard/Risk Assessment - hire independent and qualified (TRAQ) Arborist
- ▶ Tools- keep them sharp and clean
- ▶ Pruning is hard work but also lot of fun
- ▶ Educate / learn about pruning

Duty of Care

- ▶ The law outlines a landowner's responsibility, known in law as **'the duty of care'**, to take reasonable care to avoid acts or omissions which he or she could reasonably foresee may result in harm or injury. When a tree owner fails to exercise his or her responsibility the result may be a **claim for negligence**.

Safety First

- Please wear Personal Protective Equipment (PPE)
 - such safety helmets, gloves, clothes, eye goggles, ear protection, etc
- Call ISA Certified Arborist for any danger trees
 - under powerlines, too big, too close to building, etc
- If you have NO experience to prune any trees call Arborist
- Do NOT come close to trees after storm and powerline are on ground
- If use ladder use properly- DO NOT USE THEM AT ALL preferably
- Weather - make sure it is not rainy, slippery, cold, etc
- Make sure that you are physically fit to do pruning
- Trees with diseases, flaws, holes, weak, etc are more hazardous than healthy trees
- If you hire somebody, ask for insurance and WCB

Safety - Powerline and Trees

- ▶ **MUST HIRE PROFESSIONAL ARBORIST** with certification to work around powerline
- ▶ Tree is nothing but water and extremely good electricity conductor
- ▶ **Do NOT** come close to trees after storm and powerline are on ground



Source: <https://www.thepeterboroughexaminer.com/>

Source: <https://www.thestar.com/>

Myths about pruning

- ❑ Pruning is difficult - it is a hard work though
- ❑ Tree will die if they are pruned wrong time of year
- ❑ All pruning must be done during the winter
- ❑ Removing and pruning trees is “*crime against nature*”
- ❑ Most trees need pruning - *No they don't*
- ❑ Hedge shears is the all you need to do with shrubs
- ❑ Anybody with pick up truck, chainsaw, and pruners are expert
- ❑ All cuts must be treated with paint

Basic Principles of pruning

- Reasons to Prune - You must have it
- Visualize the shape tree/shrub at maturity - how tree will look like after pruning
- Understand tree forms and branch structures
- Select the main scaffold branches or main stems that you want to keep
- What to prune ??
- How much to prune??
- Perform proper pruning cuts techniques
- Remove weak crotches, crossed branches, suckers and water sprouts
- Remove dead, damaged and diseased wood (3D)
- Thin crown will get more air and sunlight at center of crown
- Cut back to branch collar as to leave the smallest wound possible- do not leave stubs
- Remember that too much of anything is not always best - you can always prune next year

Reasons to prune

- ❑ Safety reasons for people and property
- ❑ Maintain and improve overall health of trees
- ❑ To train new tree
- ❑ Restore balance and symmetry; and reduce growth
- ❑ Rejuvenate deciduous shrubs
- ❑ Reduce fire hazards
- ❑ To encourage flowering, to promote and improve fruit production
- ❑ Achieve aesthetics and visibility goals
- ❑ To increase real estate of your property



Reasons to prune trees



Safety - Protect People/Property



Safety- People trail storm



Safety -People/property



To Protect Infrastructure



Health - To control Disease



Health - To control Insects



Increase Fruit production

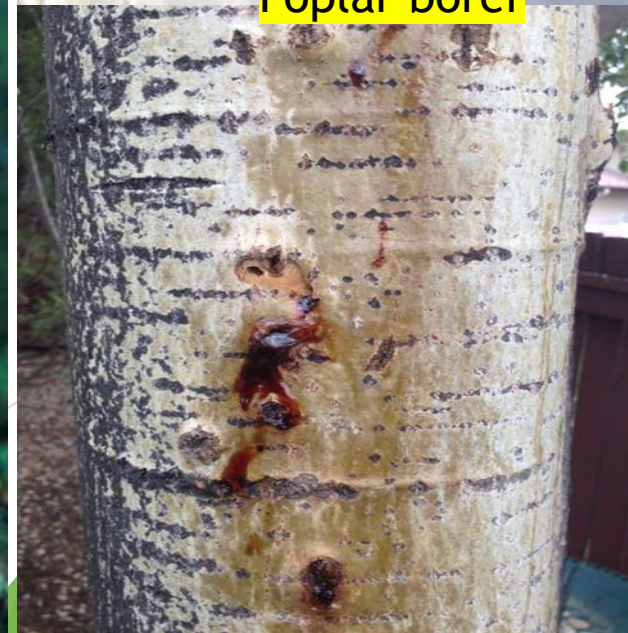


Aesthetics

Pruning of insects infested trees



Poplar borer



White pine weevil



Oystershell scale



Bronze Birch borer

Pruning disease infested trees



Cytospora canker



Black knot



Bronze Leaf Disease



Poplar Leaf spot



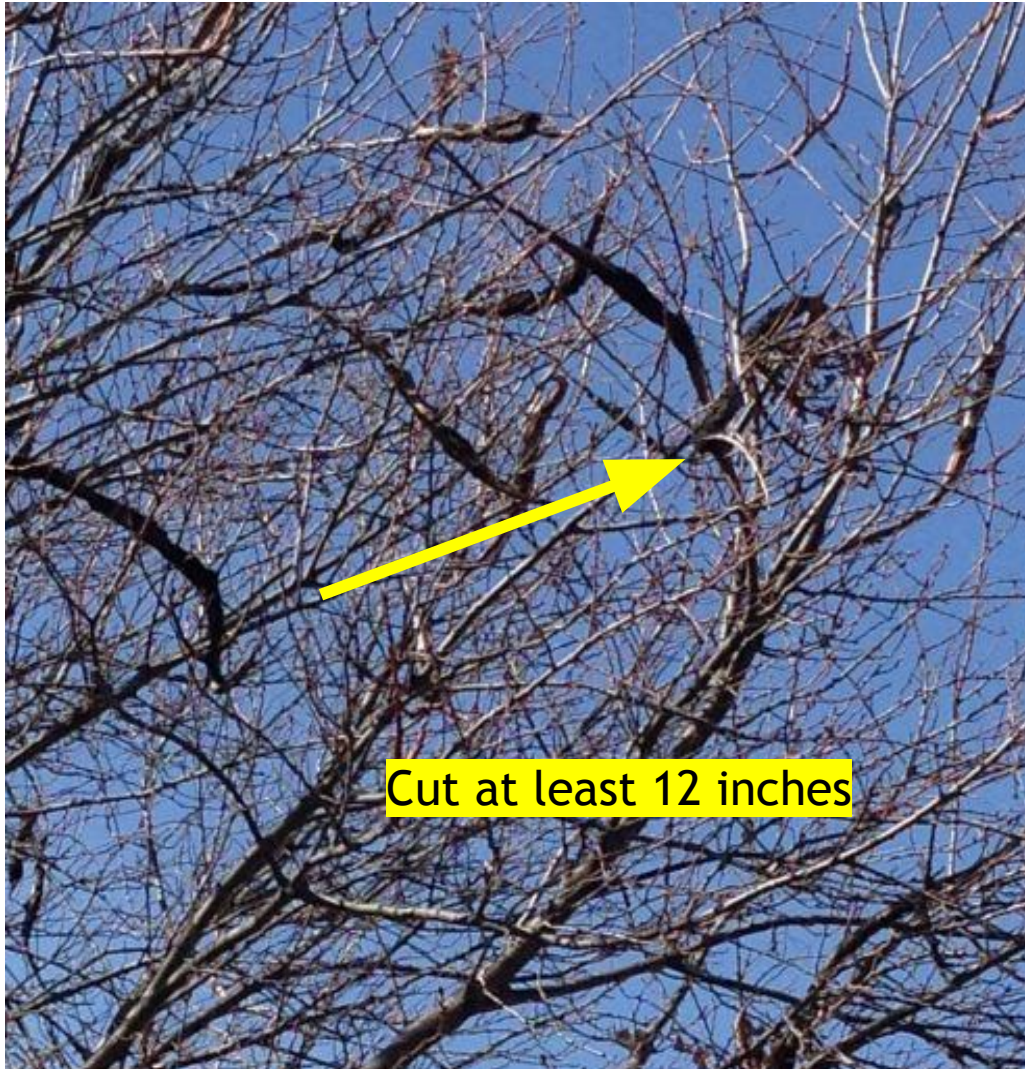
Fireblight



Black Knot pruning

Table 1: Plant Species Affected by Black Knot

Amur Cherry	Mayday Tree
Apricot	Mongolian Cherry
Black Cherry	Nanking Cherry
Chokecherry	Pin Cherry
Dropmore Cherry	Cultivated Plum
Flowering Almond	Wild Plum
Flowering Plum	Prunus Hybrids
Japanese Plum	Sand Cherry
Korean Cherry	Sour Cherry



Tree defects



Fungus



Cavities



Cracks



Roots severed



Root collar and frost



Safety reason



Risk of Failure - Branch, Trunk, Whole Tree (uprooted)





What is NOT proper pruning !!!! Totally Avoidable



Results of improper pruning



Avoidable !!!
“ Haircut”- Powerline pruning

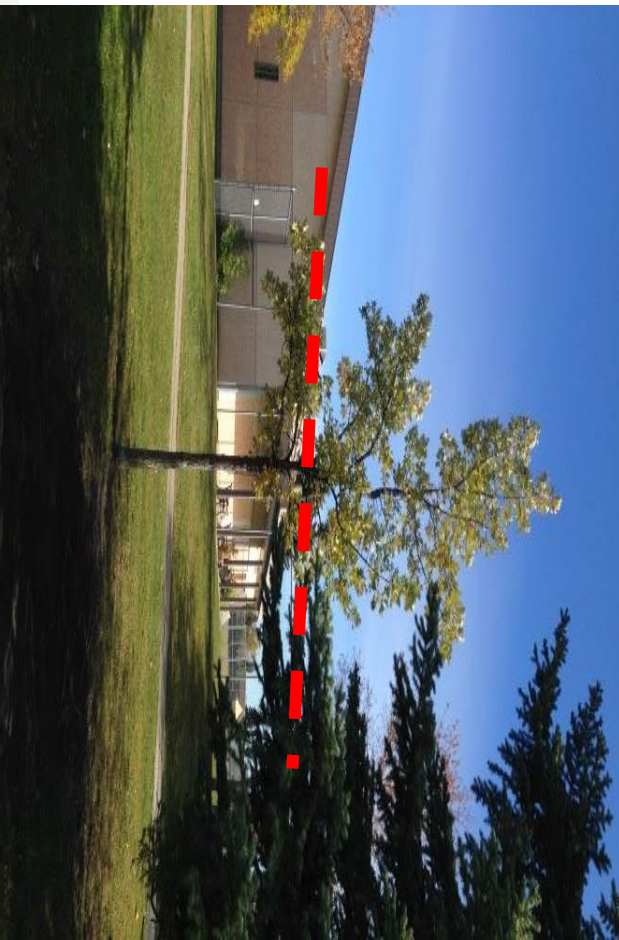


Avoidable !!!
“Lion Tailing” pruning



Visualize 360°

Tree Form - A - apical dominance





Open Tree Form - multi leaders



Codominant Stems



Co-dominant Branches



Branch Unions



Included bark



Bark Inclusion-weak



Weak branch joints lead to Tree Risk Failure

When to prune trees?

- **Coniferous** can be pruned any time of year
- Hardwood trees- For majority of tree the best is time from **March to mid-May or during the winter- when leaves are off**
- 3D - Dead, disease and damaged - ANYTIME
- When safety issues arises and tree become hazard
- After unusual weather - late snow and other storms
- **Exemptions**
 - Birch and Maple - prune ONLY during growing season - June and July - leaves must be fully developed
 - Regulatory requirement - **Elm tree - DO NOT prune from April 1 till October 1**
 - Flowering and fruiting time
 - Late fall and early winter - do not prune
 - To avoid spreading disease - eg black knot, fire blight, etc

What to prune ?



Co-dominant stem

Water sprout

Suckers



Broken and downward

How much to prune - **NO** more than 25%



Crown - Energy/Sugar Factory

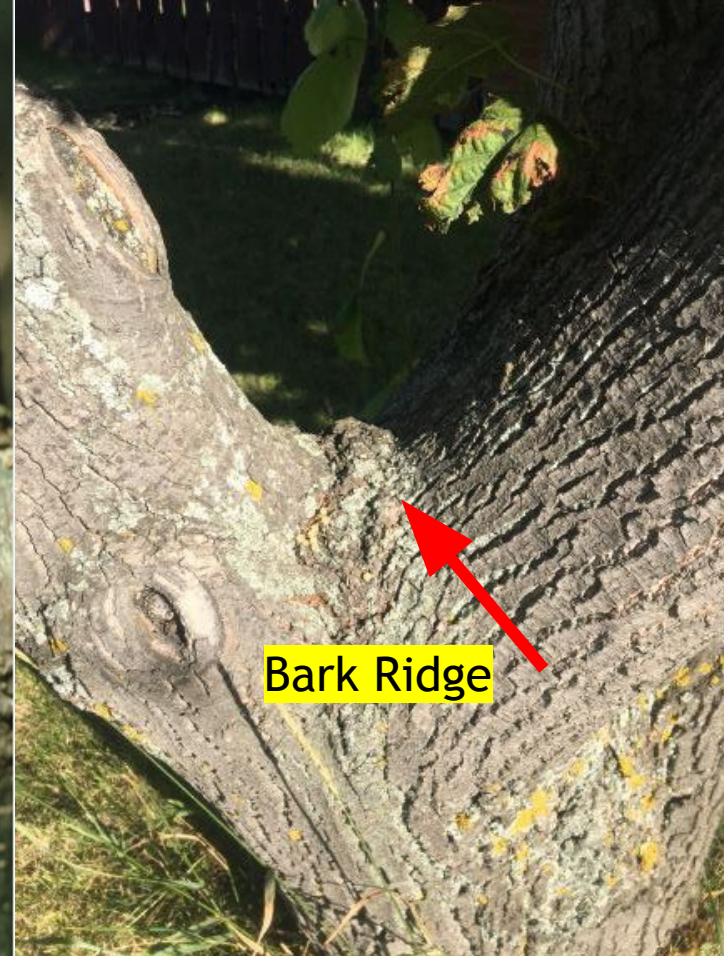
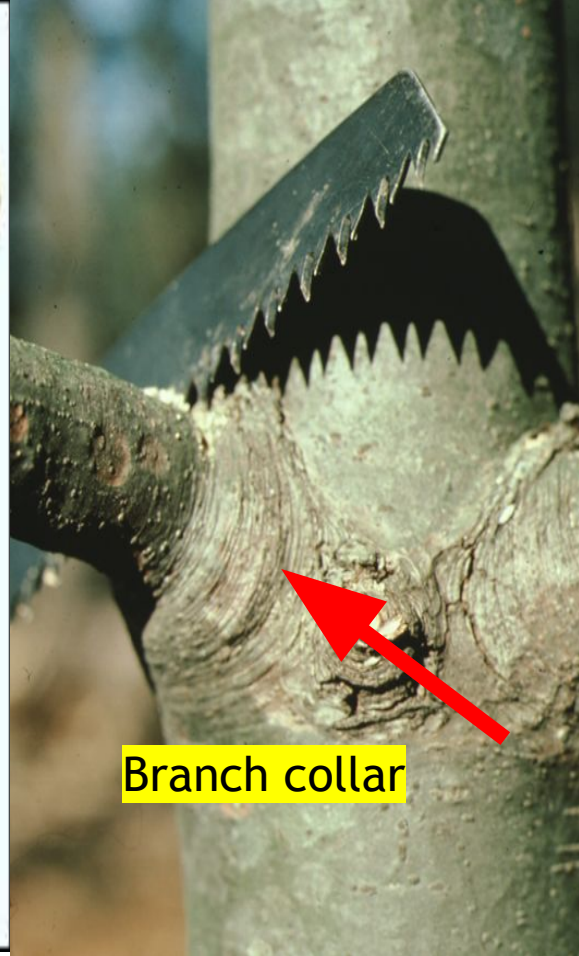
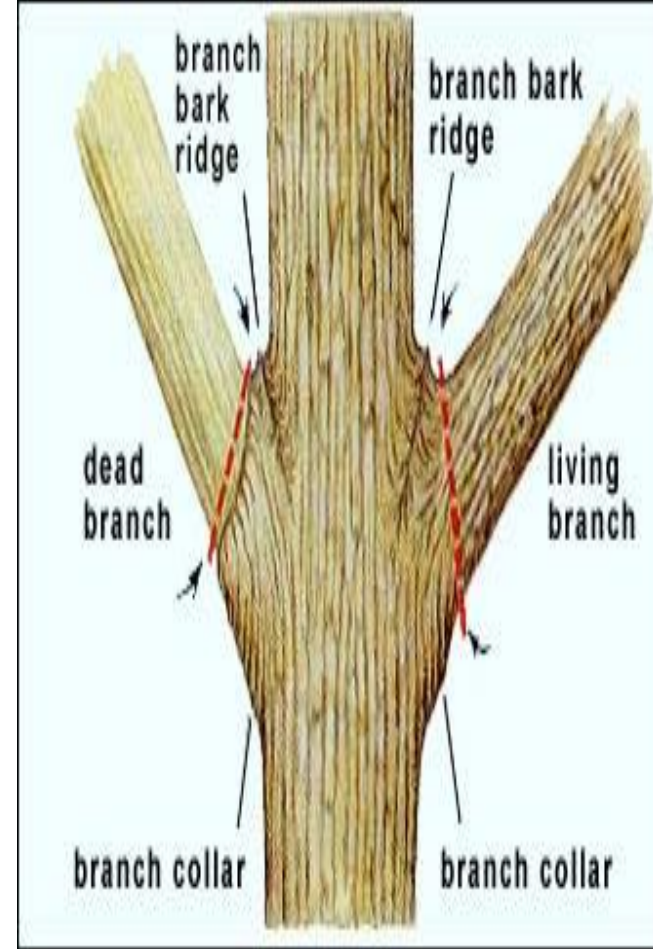


Roots- Water and mineral Factory



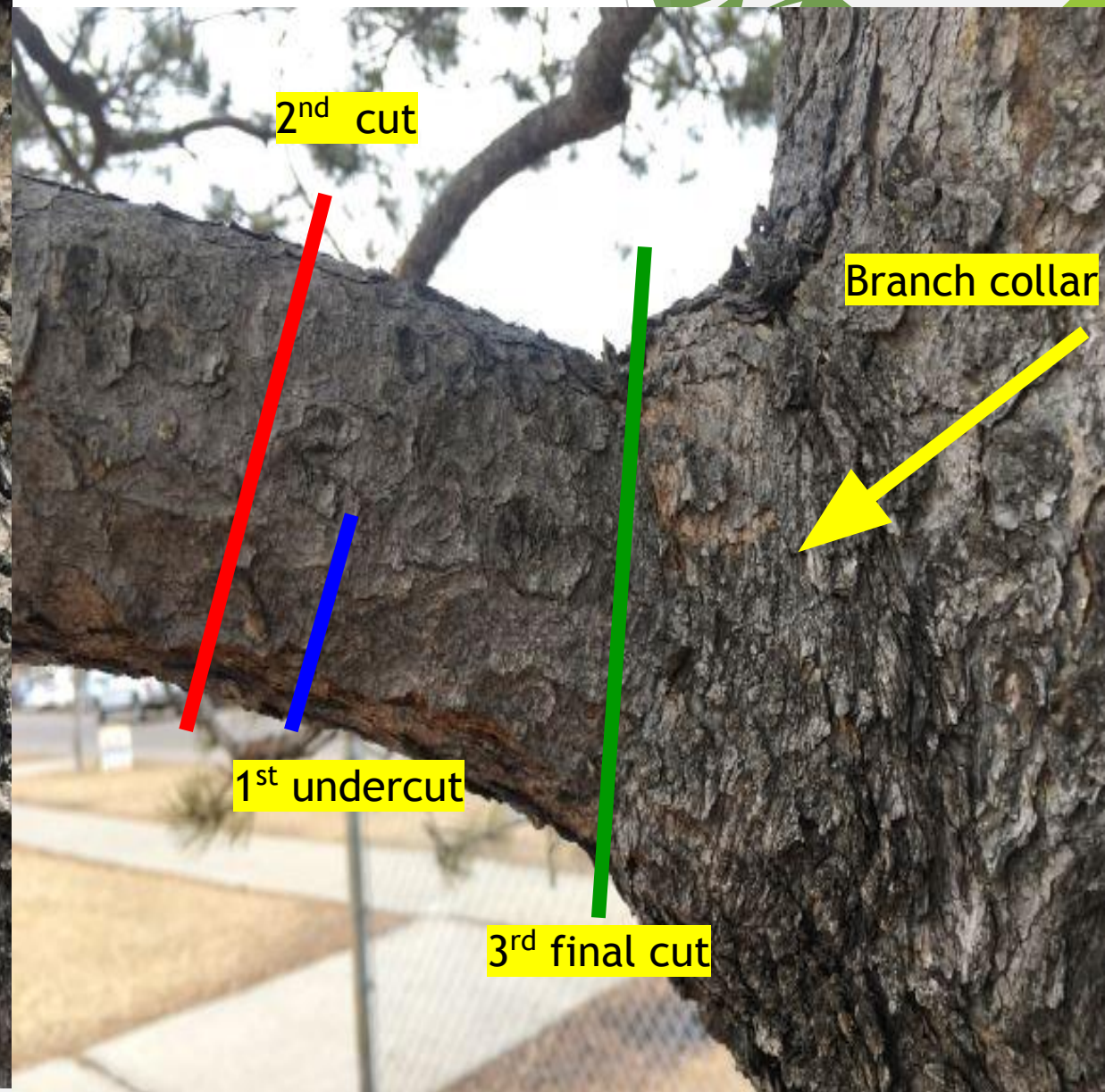
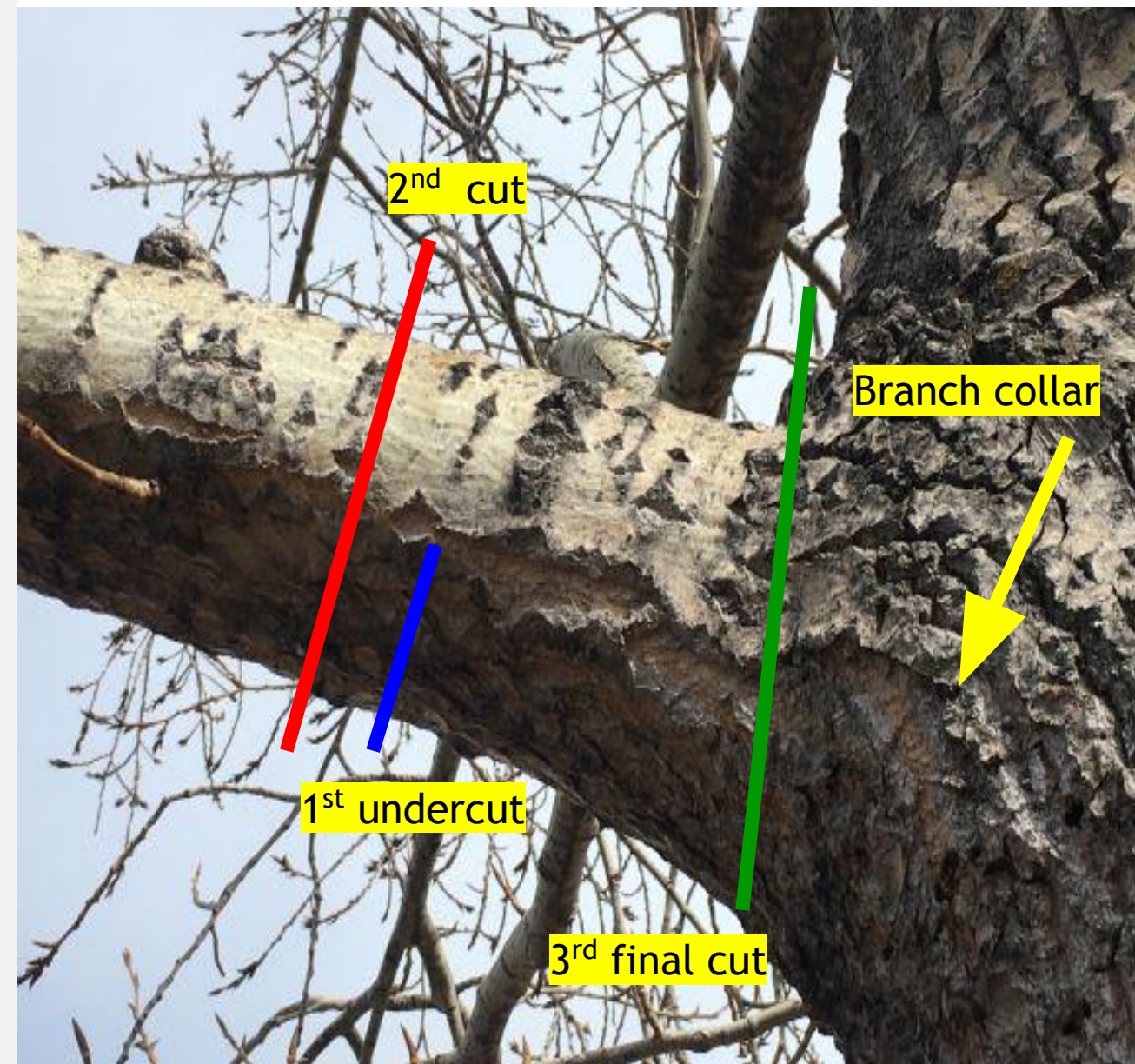
How much to prune?

- Pruning create stress to trees and vulnerability
- It opens opportunity for insect and diseases to invade trees
- **No more 25 %** of alive branches
- The amount of live tissue that should be removed depends on the tree size, species, and age, as well as the pruning objectives.



Understanding Branch Joints- Branch Collar and Bark Ridge

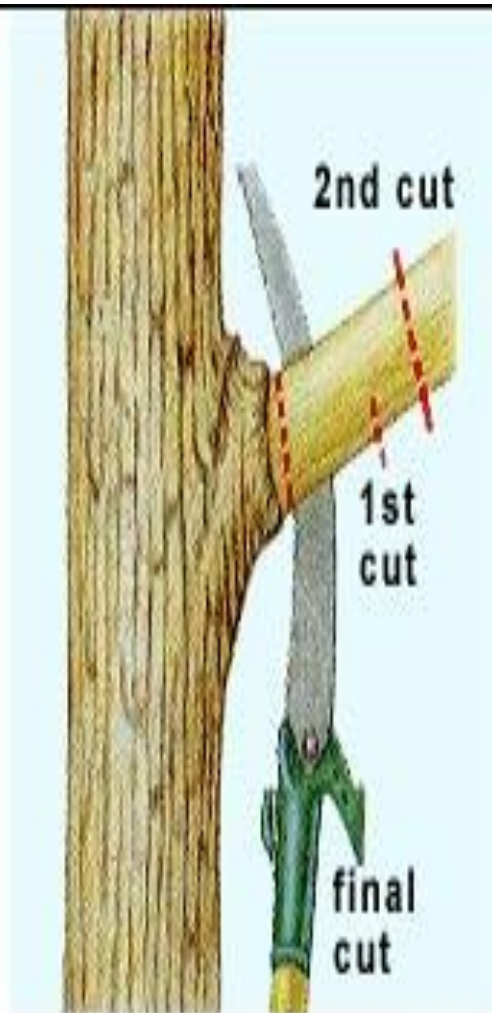
3 Way cut pruning-large branches



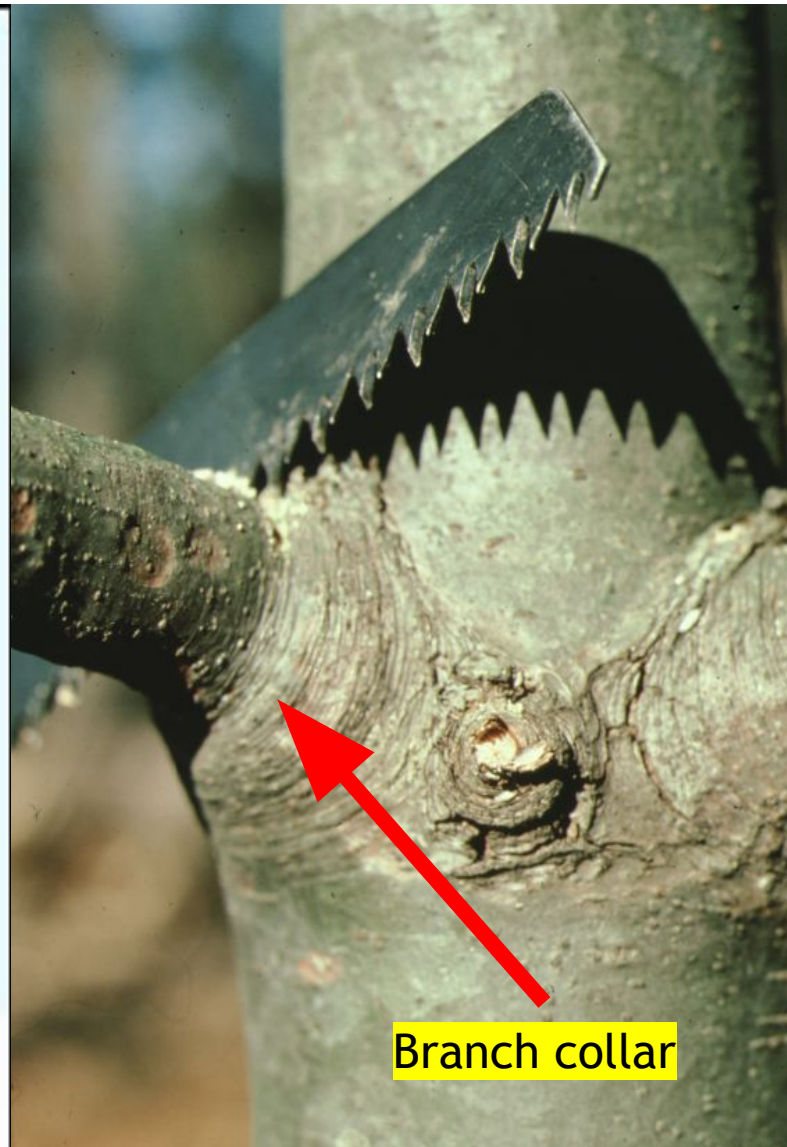
Pruning cuts on smaller branches



B. Cutting a small branch



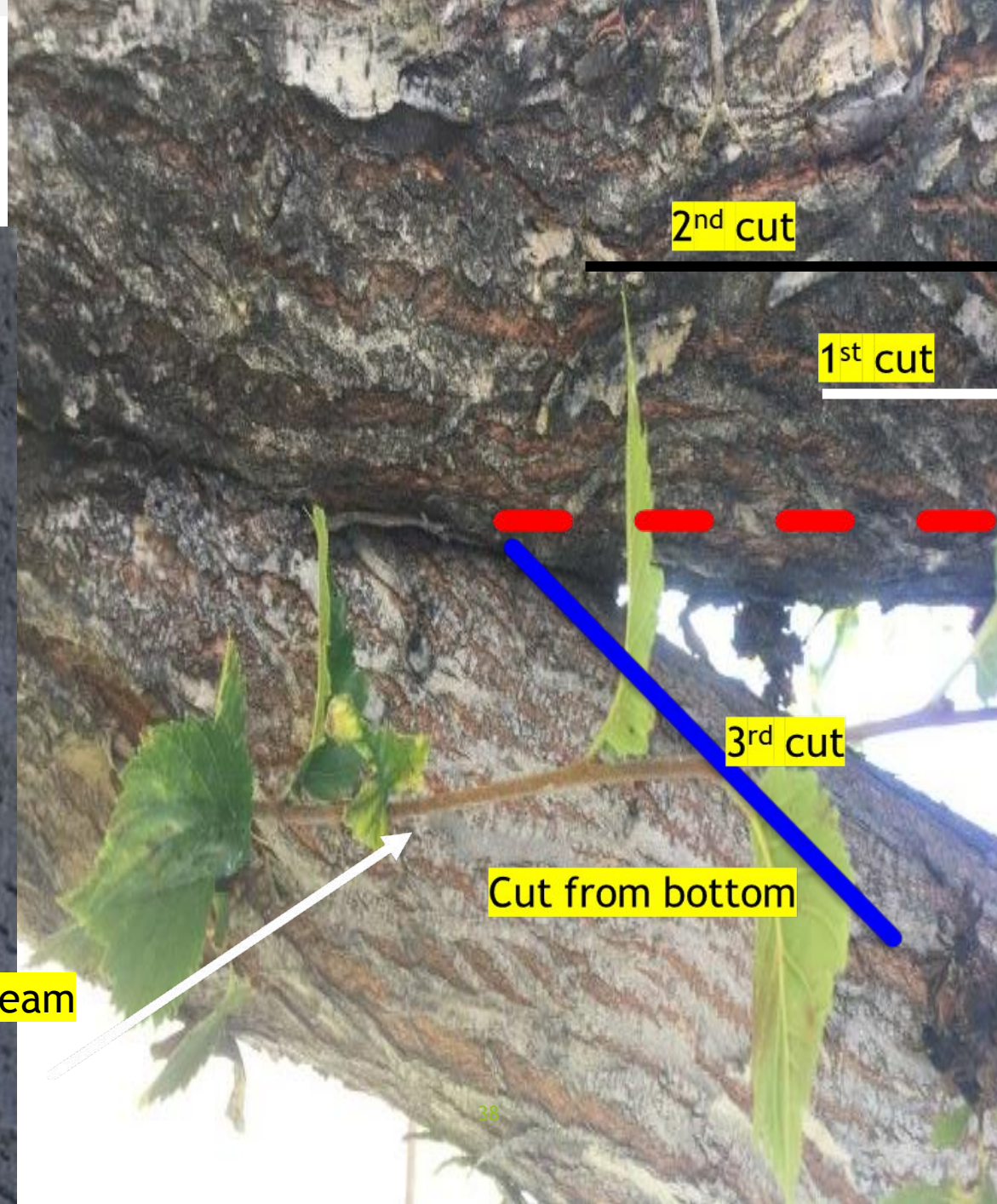
C. Cutting a larger branch



Branch collar



Pruning cuts -No branch collar





Opposite buds:
Maple, Ash, Dogwood
And Ohio Buckeye



Alternate buds:
all rest trees and shrubs

Branch
pruning - pay
attention on
buds
distribution
on twigs

Pruning cuts on twigs

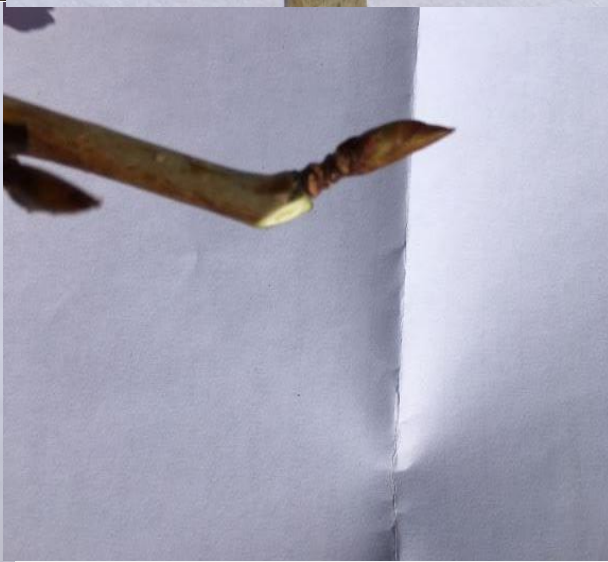
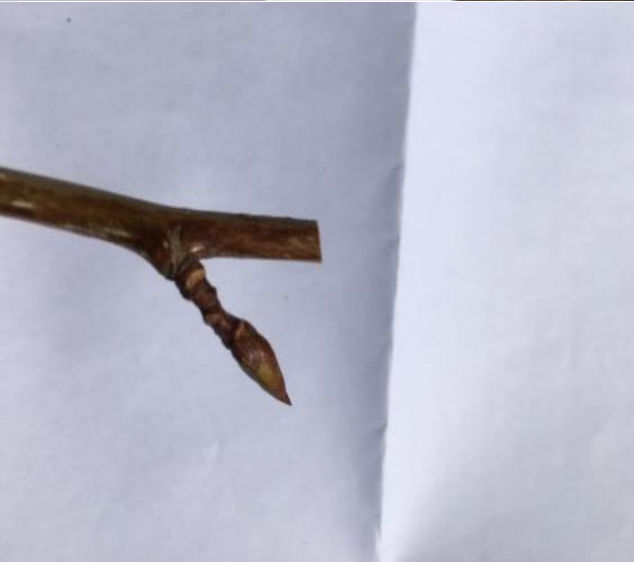
Too High Cuts



Too Low Cuts



Proper cuts



Opposite buds pruning cuts

Alternate buds pruning cuts

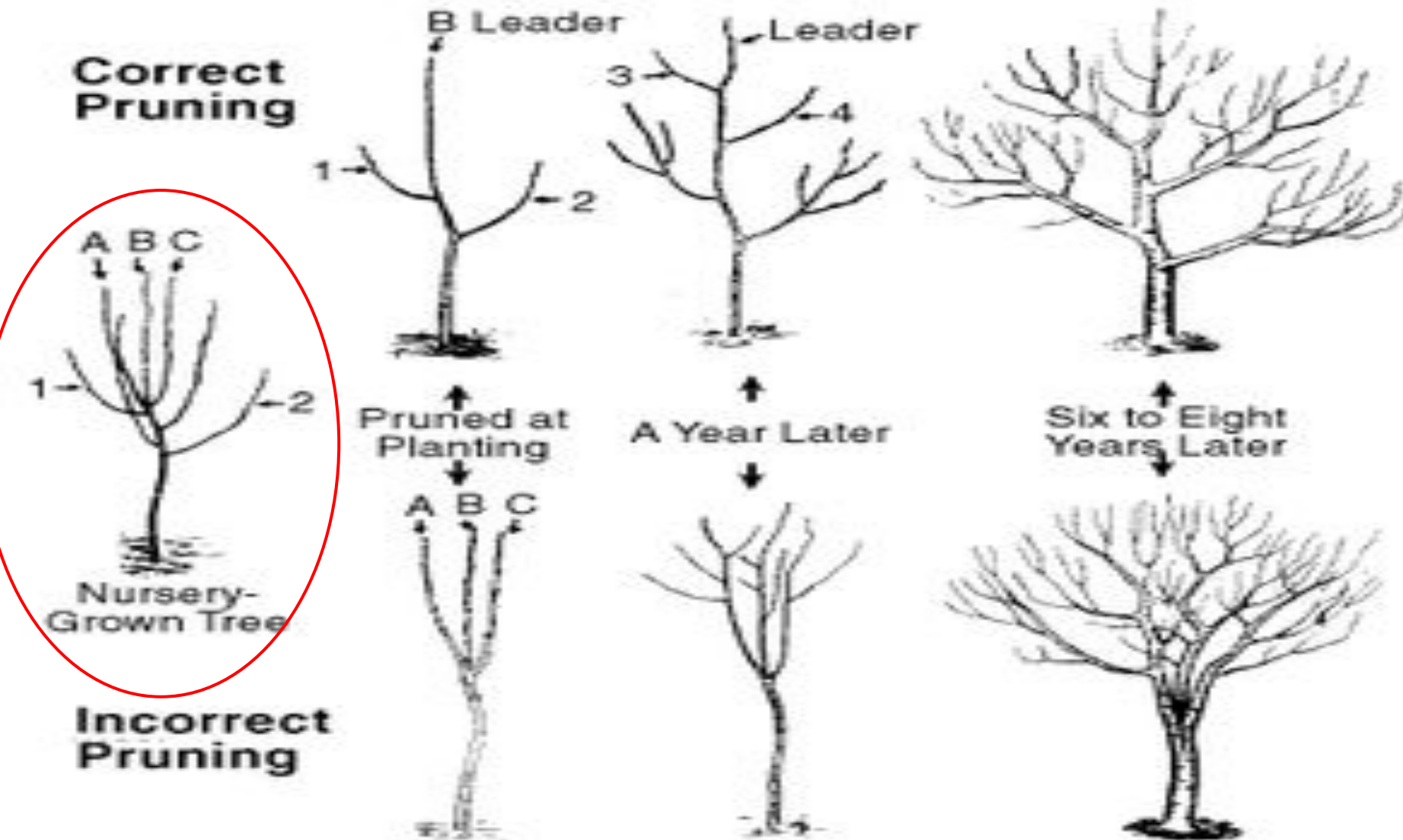


Proper cuts -proper wound healing
No need to paint or wound dressing



Improper pruning stubs -Remove them

Train vs prune tree when it is young

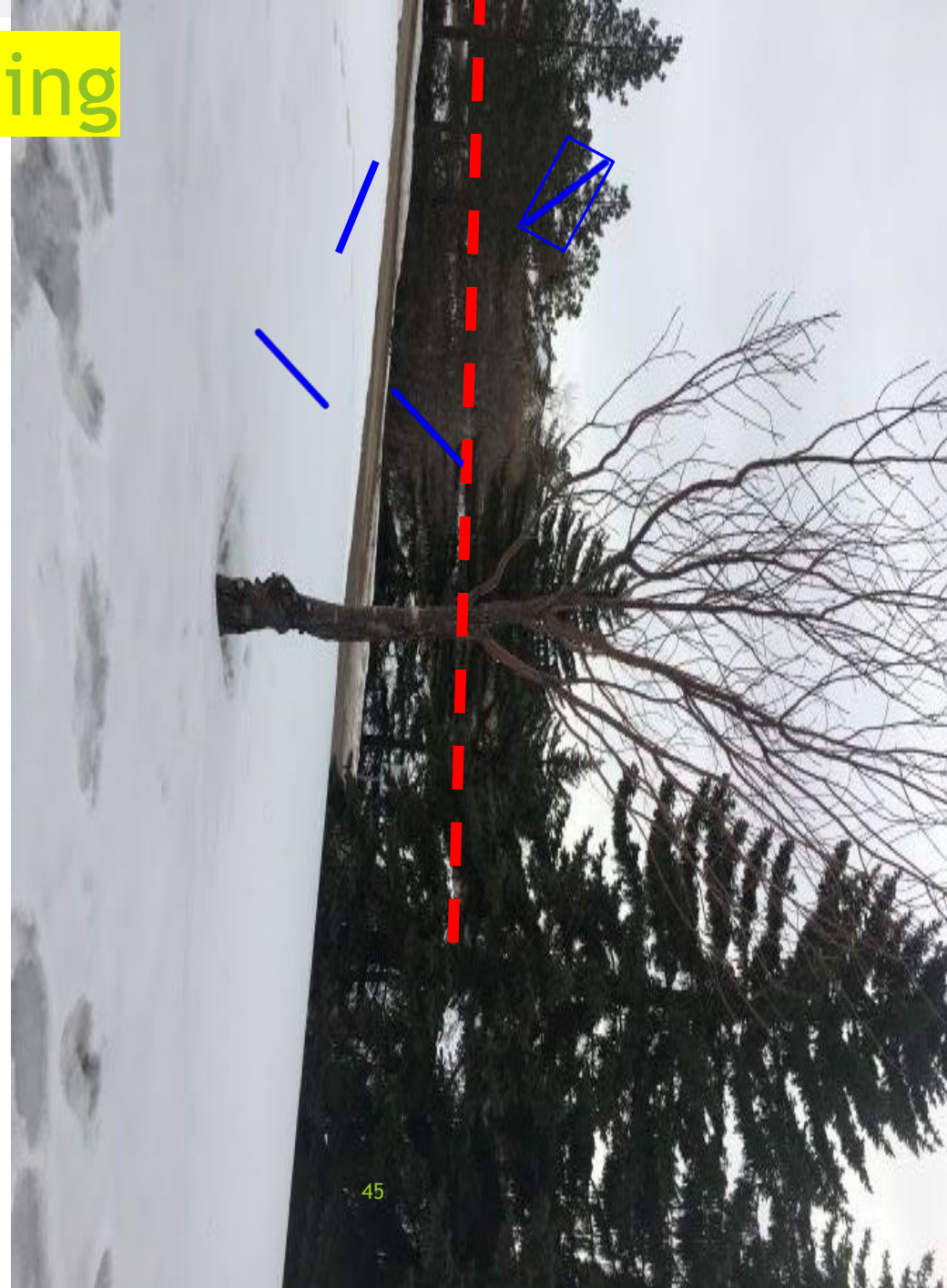
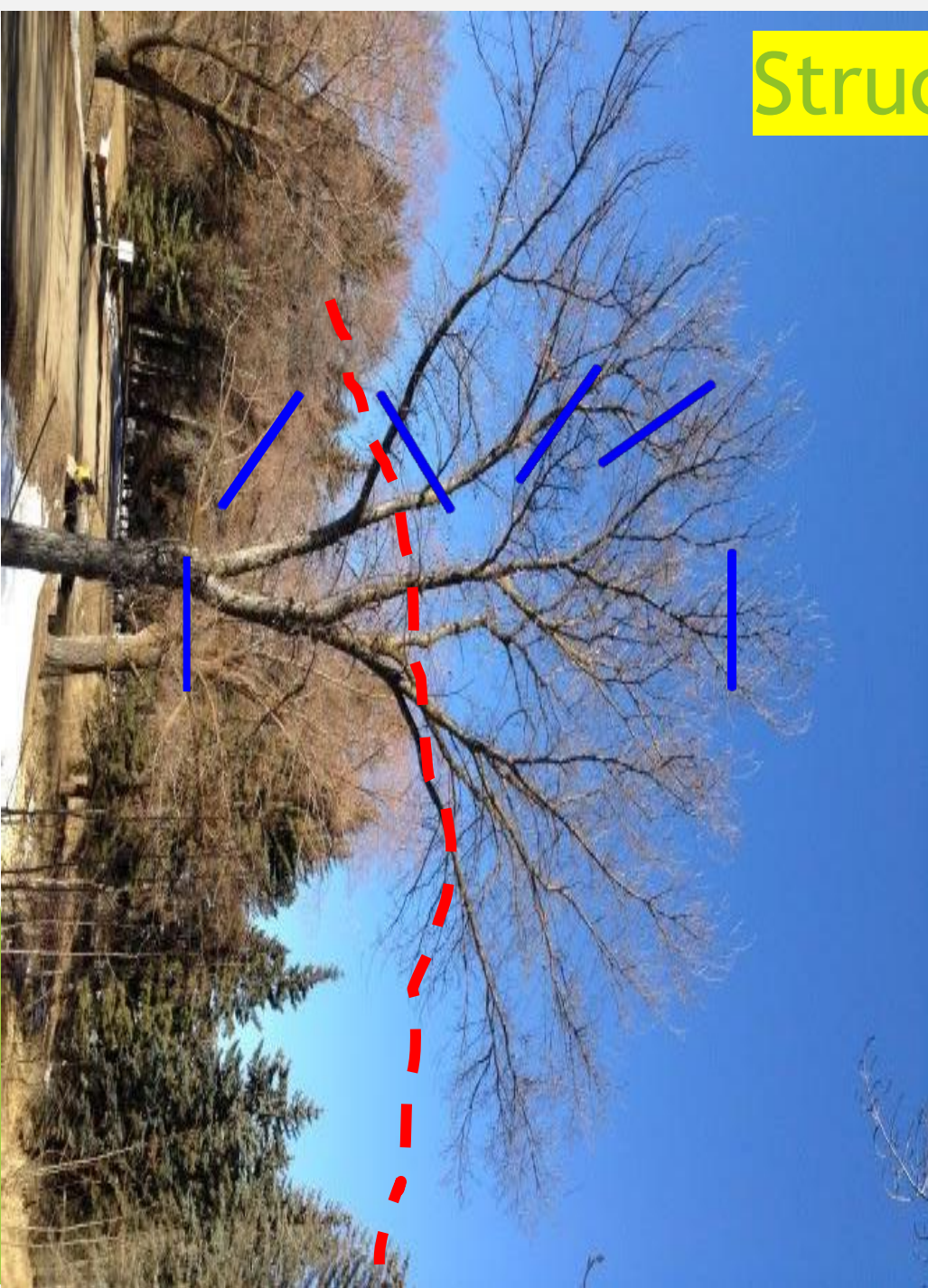


Importance of training young tree up to 20 years of age



- Train the leader
- Build a strong structure
- Balance branches
- Reduce co-dominant branching
- Reduction pruning on lower branches
- Slowly remove lower branches

Structural pruning



Pruning tree after 20 years of age

- ❑ Growth is slowing down at this stage
- ❑ Balance as needed
- ❑ Remove poor crotches
- ❑ Reduction pruning on co-dominant leaders
- ❑ Repair storm damage, wind, ice and flooding
- ❑ Prune to reduce fire hazards -eg remove dead branches



Pruning coniferous

- ❑ Most of coniferous trees requires very little or no pruning
- ❑ Never make pruning cuts **behind the green foliage on a branch**
- ❑ Pine - mid June
- ❑ Spruce and Fir - Mid may till mid June
- ❑ Cedar and Juniper - more clipping then pruning -early spring till mid June
- ❑ Damaged top leader needs to be removed and one side branch need to re-established as leader



Dead sticks



Dead sticks



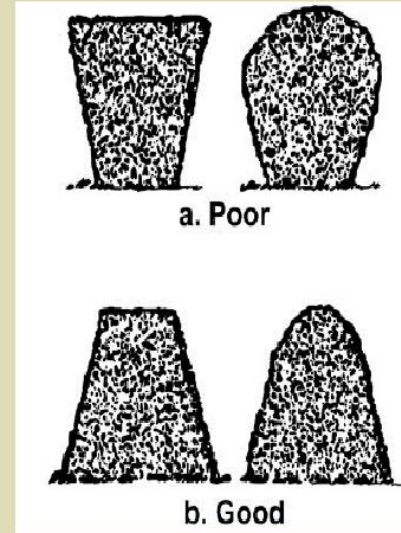
Dead sticks

Pine and Spruce Pruning





Examples



Perfect



Hedge Trimming - base wide, top narrow



Topiary/Shearing



Completed work

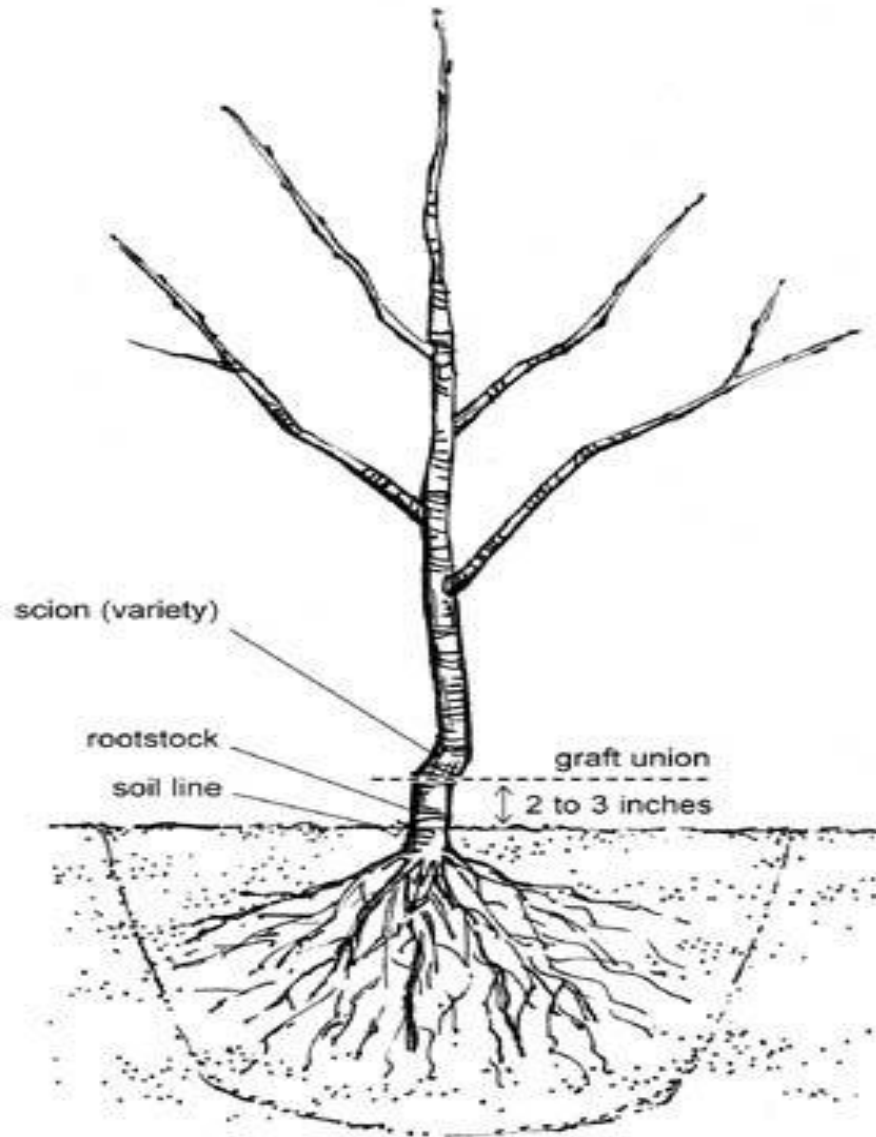


Pruning fruit trees

- ▶ You have to have a reason to prune fruit trees - Why?
 - ▶ Do you want to reduce the size of trees? Is your tree too big and tall?
 - ▶ Do you have a tree to produce poor crop? Large abundance of small crop
 - ▶ Is your tree diseased?
 - ▶ Do you have access to center of trees for crop or spraying ?
 - ▶ Do you want more sunlight for your crop?
 - ▶ To improve branch strength ? How many lbs of apple one branch can hold?
 - ▶ To improve air circulation?



Fruit tree structure



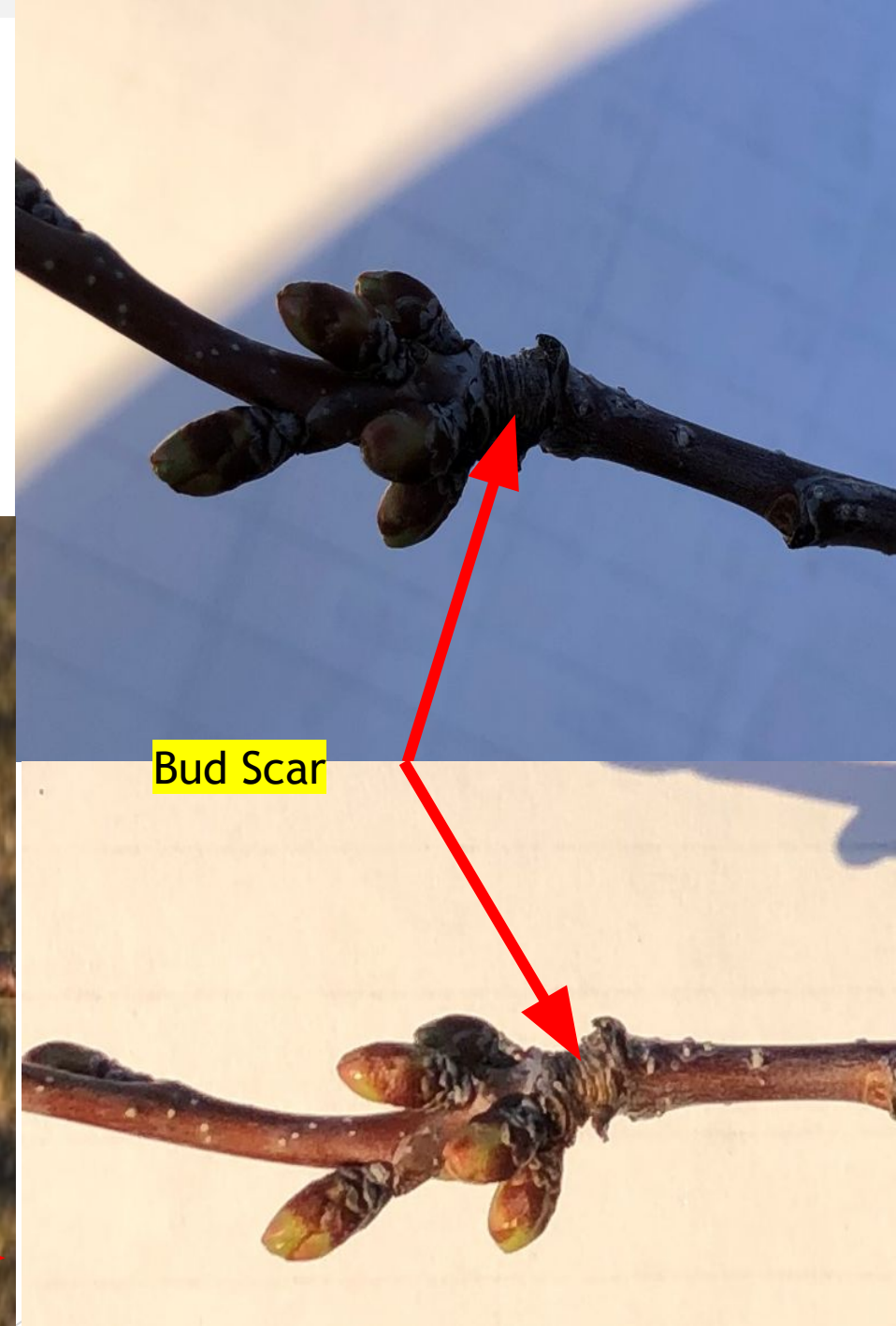
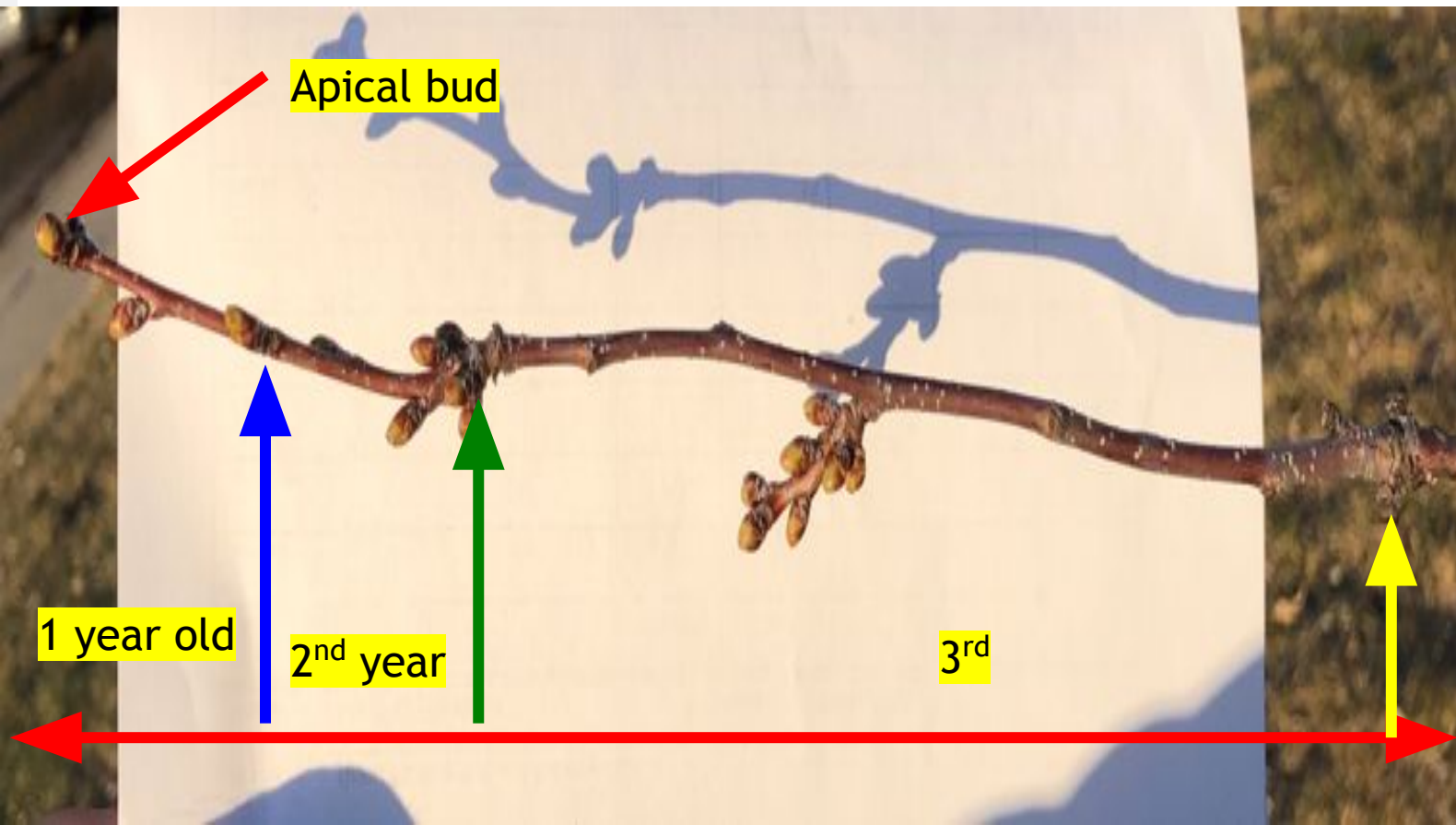
Flower/Fruit bud

Leaf bud

Root stock for apples

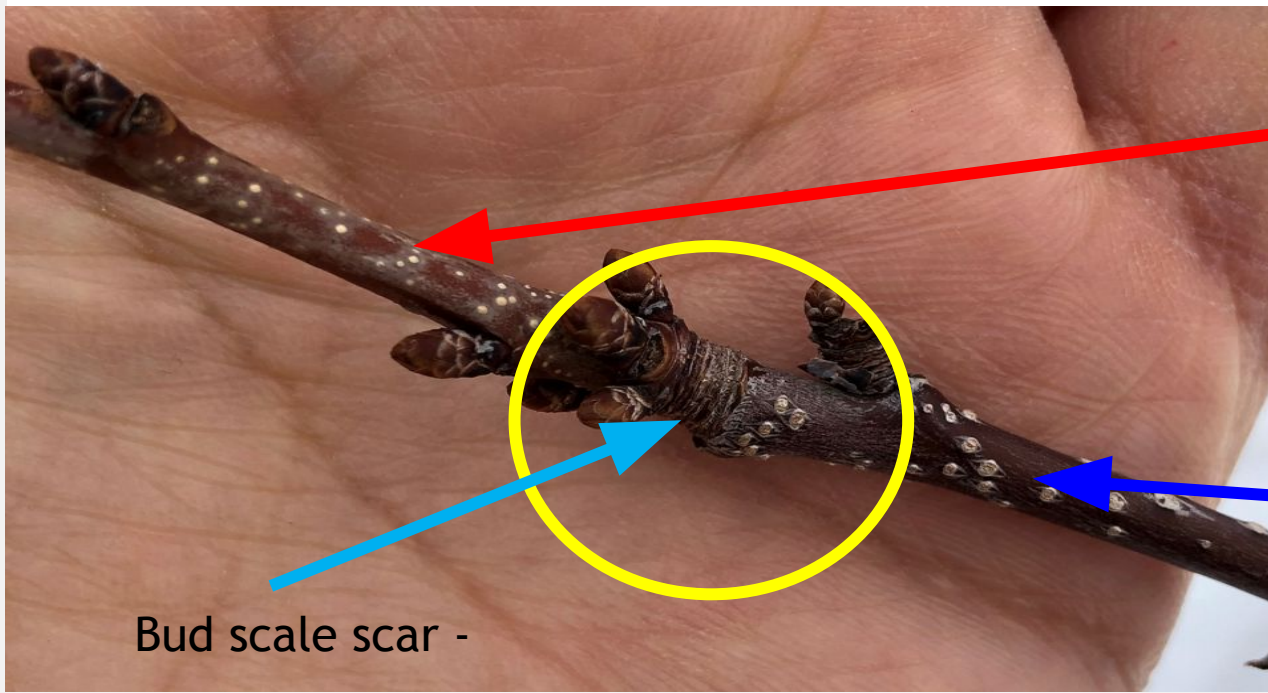
- ▶ Pay particular attention to the rootstock you choose for your apple trees.
- ▶ seedling rootstock is grown from the seed of an apple, often McIntosh or another common, hardy variety.
- ▶ Seedling rootstock—every single seed is a genetically different individual—hardiness, anchorage and adaptability to different soil types are generally excellent
- ▶ Nurseries will label the trees **dwarfing, semi-dwarfing, and standard**
 - ▶ **Standard rootstock may let tree grow up to 20 feet or more**
 - ▶ **Semi-dwarfing /dwarfing 8-15 feet tall**

Twig anatomy



Fruit Set

- ▶ Apples/Pear - Fruit spurs grow on 2, 3 and up to 10 years old wood
- ▶ Cherry/Plums - Fruit spurs grow on 1, 2 or 3rd year old wood



This year growth

2,3 or 4 year growth



Apple Structure

- ▶ Few large branches
- ▶ Open form structure
- ▶ Removal of large laterals
- ▶ Removal of lower branches
- ▶ Reduction of height



Pruning fruit trees

- ❑ Remove any branches that are growing inside - **leave center of tree open**
- ❑ Remove any 3D (Dead, diseased, and damage) branches
- ❑ Remove all suckers and branches that are downward branch
- ❑ Rubbing and crisscrossing branches remove
- ❑ Remove competing leaders
- ❑ Remove narrow crotches



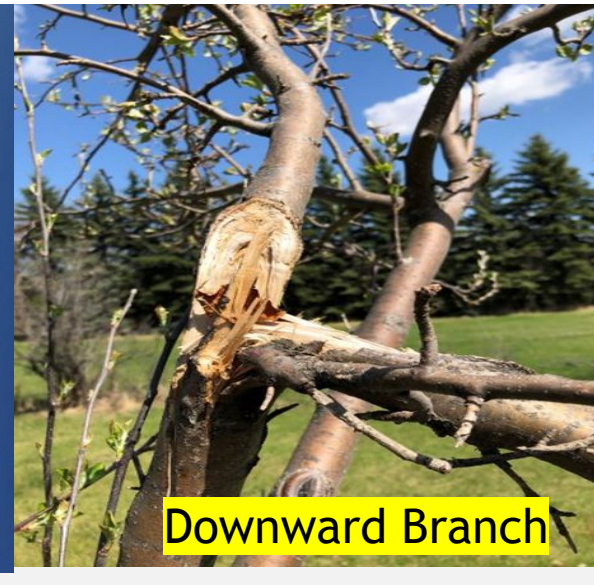
Shape



Suckers



Topping

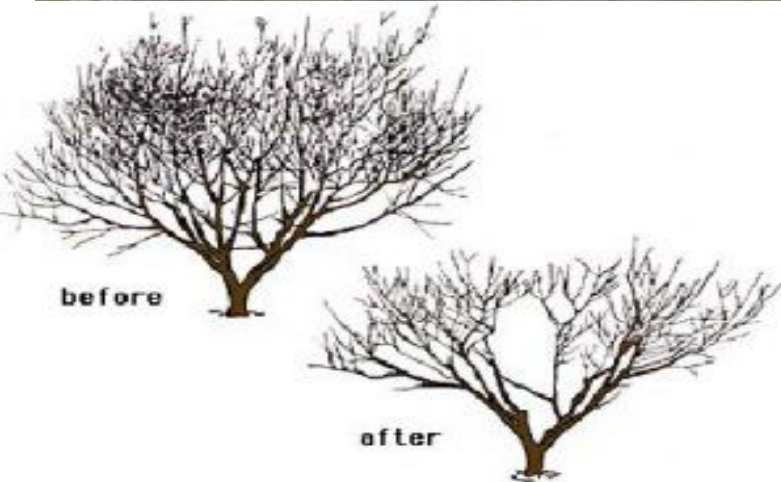


Downward Branch



Rubbing

Before and after pruning of apple



Prunus and Malus species- Mayday, Shubert Chokecherry, Pincherry, Crabapple etc

- They are in same Rose family of species as apple, hawthorns, roses and others.
- Prunus species have single seeds, hard central “stone”
- Many species are **cyanogenic (toxic)** -seeds and leaves or after they have been decomposed or crushed
- Crabapple and Shubert’s are grafted onto suckering rootstock so you need to remove suckers annually
- Black Knot is huge problem in Prunus genus and early pruning is the only way to reduce potential of spreading disease

Shrub blooming prior June 20

- Prune immediately after bloom has finished
- Aim is to promote more flower buds for next year
- Prune weak stems and heading back selected stems to promote strong lateral shoot
- **Examples are:** Dogwood, Lilacs, Spirea varieties and Mock orange (philadelphus) flowering plums, hawthorn, forsythia, crabapple, Viburnum, mountain ash etc
- Unpruned shrubs can become more twiggy

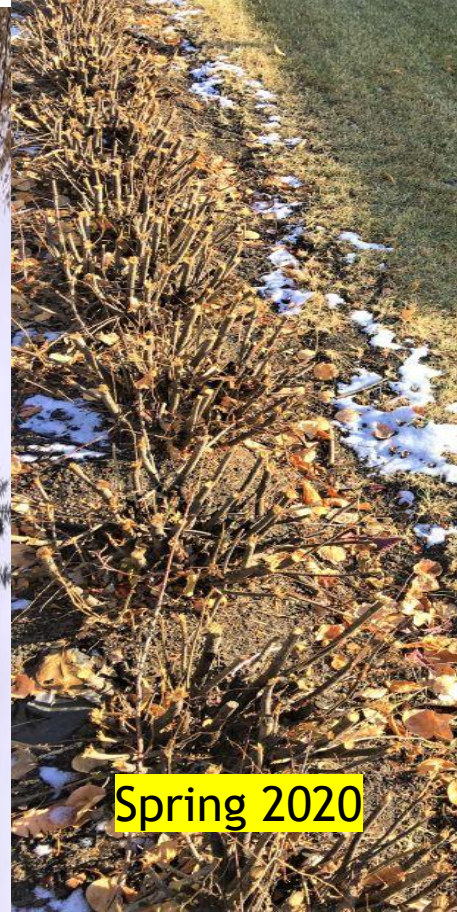
Shrubs blooming after June 20

- Shrubs bloom after June 20 should be pruned [in dormant season](#) or just before growth in spring
- **Examples:** Potentilla retain their shape naturally and little pruning is required
- Spiraeas requires severe cutting back of all stems
- Lilacs and Honeysuckles requires regular pruning
- Evergreens shrubs most of times requires NO pruning

Lilac and cotoneaster pruning



2019



Spring 2020



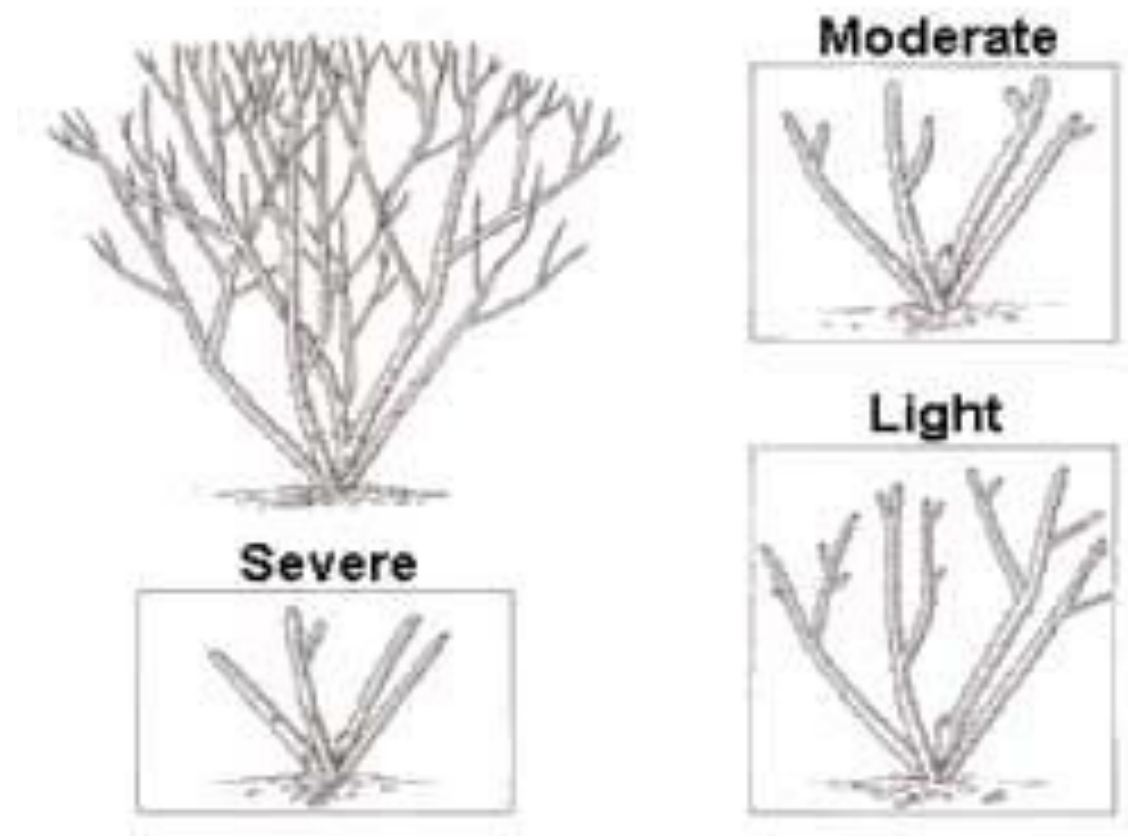
Summer 2020

Pruning roses



Pruning Roses

- ❑ In wild roses produce strong new shoots from near the base of plant each season
- ❑ Prune during the winter - march/April just before season starts
- ❑ Deadheading during summer - prune to above 2 to five leaflets buds
- ❑ Cut back into healthy wood -
- ❑ Cut outward pointing bud to encourage an open center
- ❑ Cut any diseased or damaged branch
- ❑ Remove all thin, weak canes that are smaller than a pencil in diameter



Shelterbelt fire hazard pruning

- ▶ Reduce potential for fire
- ▶ Reduce potential for various human or livestock injuries
- ▶ Most of internal branches are dead and can be removed
- ▶ Increase the value of the logs
- ▶ Produce better lumber - knots free



Pruning Circling roots



Root girdling



Tools



Pruning tools



Clean and Sanitized



Must be Sharp



You get what you pay for, so cheaper tools....usually are !!!!



Buy only tools that you really need



Clean up and sharpen tools after you finish work

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