



Bramble Pruning

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Brambles AKA Caneberries

- ▶ *Rubus* sp.
- ▶ Rosaceae family
- ▶ Perennial crowns and roots
- ▶ Biennial canes
 - Primocane – 1st year cane
 - Floricane – 2nd year cane
- ▶ Raspberry, Blackberry
 - Boysenberry, Loganberry, Youngberry, Oallieberry, Marionberry (not the mayor), Salmonberry – not recommended

What are Brambles?

- ▶ Blackberries – receptacle attached
 - thorny / thornless
 - erect / semi-erect / trailing
 - primocane bearing / biennial floricane bearing
- ▶ Raspberries – receptacle detached
 - Yellow/purple/black/red
 - Primocane bearing (everbearing or fall bearing) / summer bearing



Winter hardness

- ▶ Reds(-20°F) >
- ▶ Black raspberry (-10°F) >
- ▶ Purple raspberry (-5°F) >
- ▶ Erect blackberry (thorny and thornless) (0° F) >
- ▶ Semi-erect (thornless) blackberry (5° F)>
- ▶ Trailing blackberry

Winter injury

Blackberry winter injury



Raspberry winter injury



<https://www.raspberryblackberry.com/wp-content/uploads/20.-Winter-Injury-Experiences-Research-and-Recommendations-Fernandez.pdf>

Winter Injury

- ▶ Will kill floricanes but not new primocanes
- ▶ Not always apparent until fruiting laterals begin to grow
- ▶ Injured vascular tissue is damaged
- ▶ Green/brown canes
- ▶ Delay pruning as long as possible

<https://www.raspberryblackberry.com/wp-content/uploads/20.-Winter-Injury-Experiences-Research-and-Recommendations-Fernandez.pdf>

Bud damage



Note: Primary bud black and dead, secondary bud not damaged

Cane damage

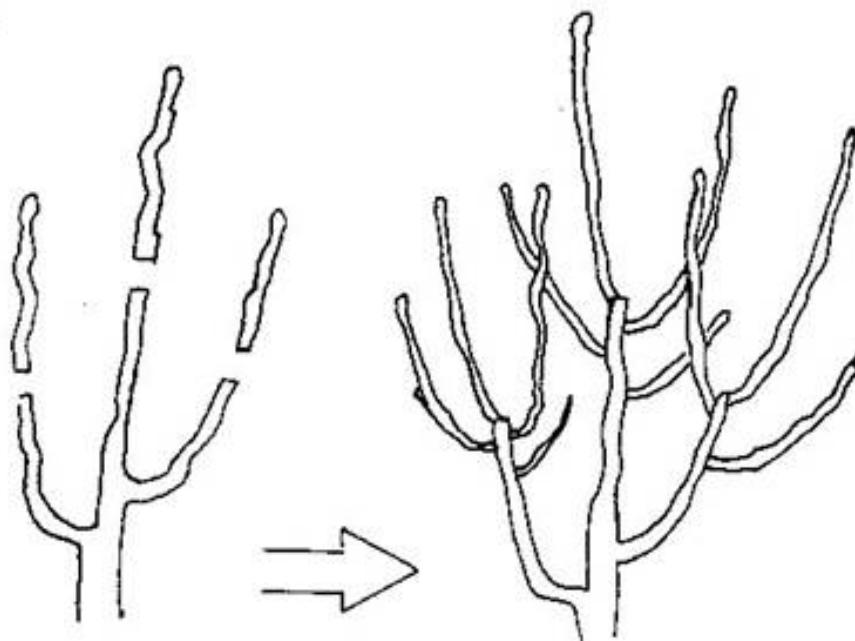


Note: browning just under "bark" is vascular damage

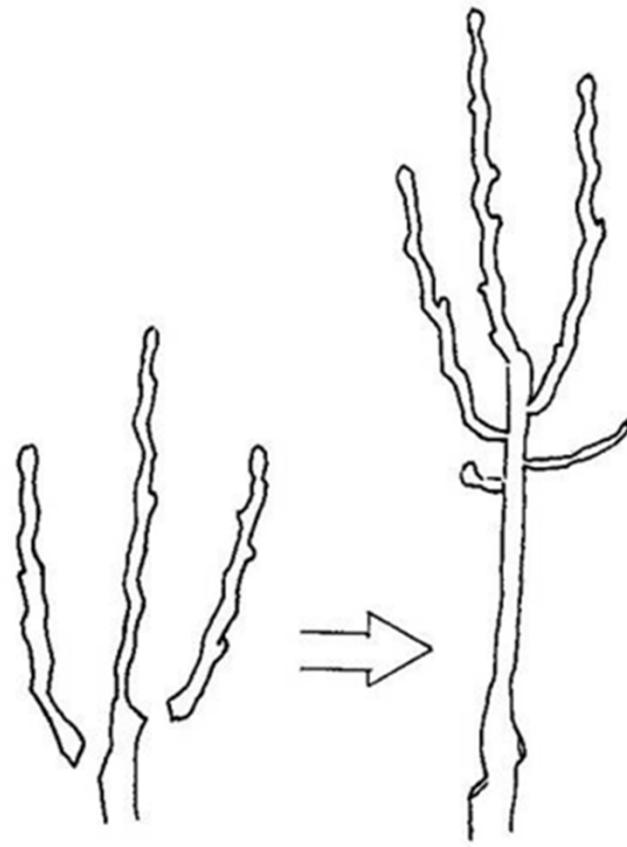
Pruning Equipment



Types of Cuts



heading back



thinning out

Pruning

- ▶ Regular pruning is necessary to establish plants and to develop vigorous plants that produce consistent crops of large berries.

Crown Gall



Dig out and remove infected plants

Caused by the soil-inhabiting bacterium, *Agrobacterium rubi*.

Usually do not cause total plant death.

Can spread to other susceptible plants through contaminated soil and tools.

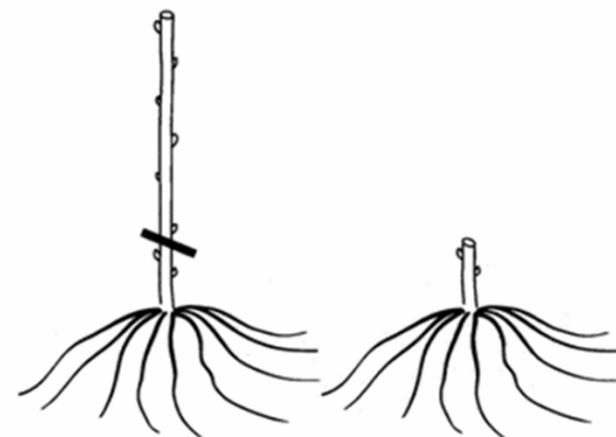
A nonpathogenic strain of bacterium (*Agrobacterium radiobacter* strain 84), for crown gall is available for apple, pear, stone fruit, blueberry, brambles, and many ornamentals.

Nursery stock is dipped in a suspension of commercially at planting time and the antagonistic bacteria act only to protect disease free plants from future infection by the crown gall bacterium; they cannot cure infected plants.

Bramble Pruning at Planting

► Dormant Plants

- Cut off most of the stem (handle) on the plants.
- Forces buds at the crown to grow
- Removes diseased stem tissue.



► Tissue cultured plants and root cuttings

- Allow these to grow without pruning

Pruning June-bearing Red Raspberries

- ▶ Hedgerow 12-18" or 18-24" width
- ▶ Not summer tipped
- ▶ Don't form side branches
- ▶ Spring
- ▶ Remove dead floricanes that have fruited
- ▶ Narrow row width & remove spindly canes
- ▶ Leave 4-5 large diameter canes per linear ft.
- ▶ Cut tall canes back to 5' in height and remove winter injured tip portions.
- ▶ Summer
- ▶ Mow along row edge to narrow row



Pruning Fall Bearing Red & Yellow Raspberries

- ▶ Produce fruit at top of first season's growth (primocane)
- ▶ Second season's production is from the lower portion of cane
- ▶ Fall Production only
 - Fruit in fall on primocanes
 - Mow close to ground with rotary mower in spring
- ▶ Spring Production
 - In spring remove dead tops of dormant primocanes
 - Thin canes to the 3-4 largest canes per ft. of row
 - Spring crop will be from lower portion of canes
 - Spring production does not work well in Kentucky

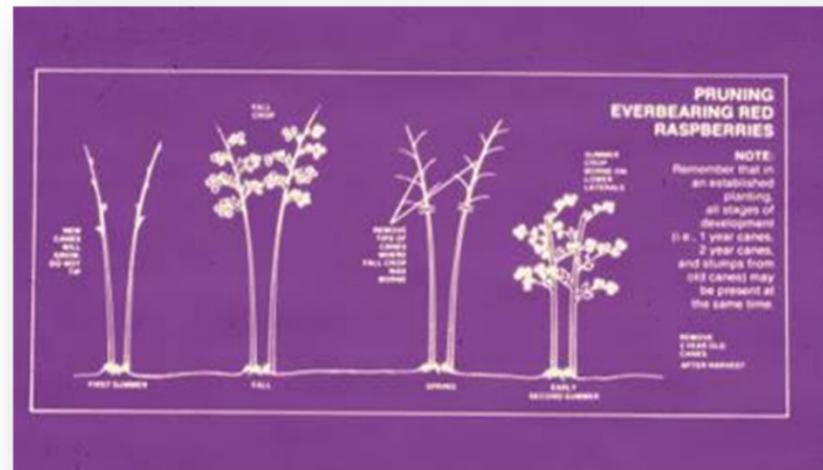


Figure 6. Temporary trellis for everbearing red raspberries that are grown for only the fall crop. Note the use of tomato stakes at 25-ft intervals and bailing twine to support the plants.

Fall Bearing Red Raspberry

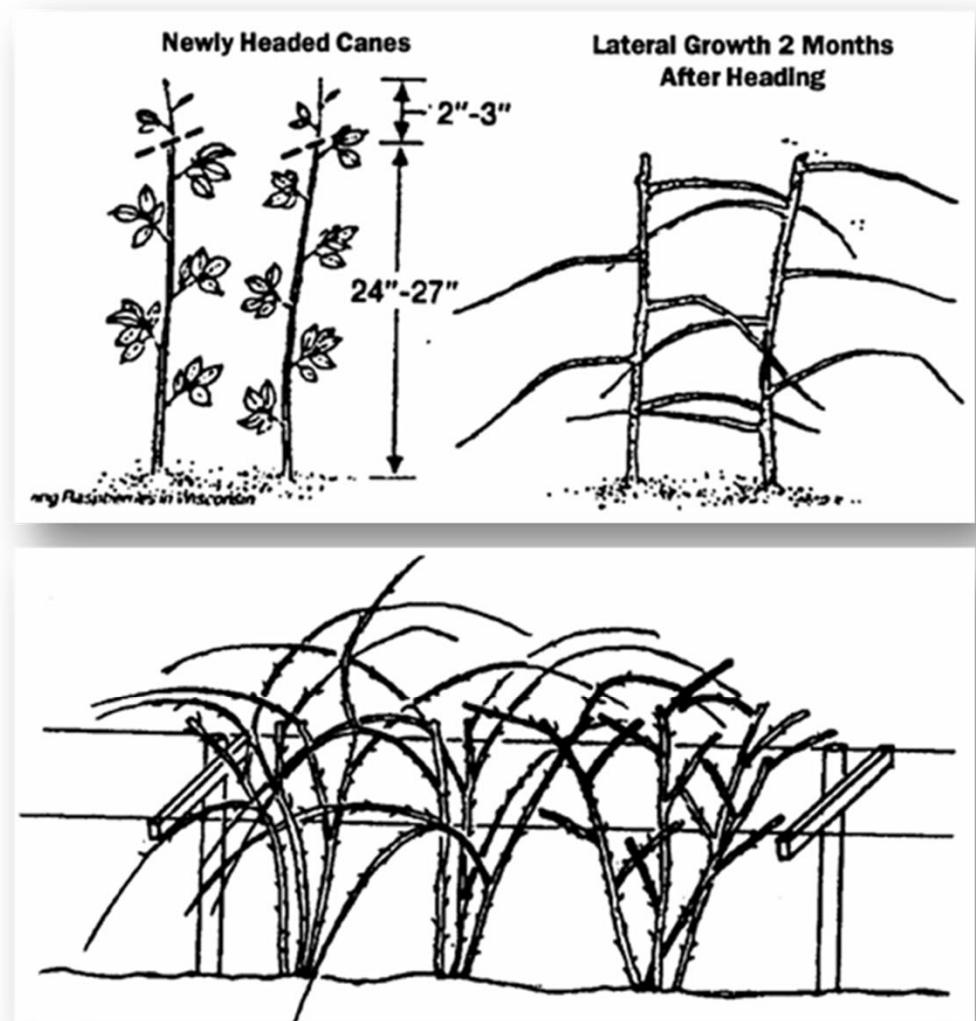


Raspberry Trellises



Black & Purple Raspberry Training

- ▶ Hill system
- ▶ Summer tipped when dry
 - Black 2'
 - Purple 28-32"
 - Royalty exception – Don't pinch
- ▶ Grow without Trellis or
- ▶ Horizontal 2-wire Trellis
 - Wire 2.5' above ground
- ▶ Spring
 - Remove dead floricanes
 - Thin out spindly canes
 - Cut laterals to 10-12" in length
 - Remove laterals on canes within 12-18" of ground



Pruning Thorny Erect Blackberries (no trellis)

- ▶ First season
 - Tip primocanes at a height of 30–36"
 - Pull out root suckers that arise outside the row
- ▶ Second season
 - Remove dead/diseased canes
 - Thin out spindly floricanes leaving 5–6 canes per ft of row.
 - Cut laterals to a length of about 12"
 - Remove laterals within 12–18" of ground



Bramble Flowering



Pruning Primocane-Fruiting Blackberries

- ▶ Fall Crop only
 - No trellis
 - Mow level with ground in spring



Prime-Jim

Pruning Primocane-Fruiting Blackberries

- ▶ Fall + Spring Crop
 - Prune off dead portions of canes in spring
 - Thin to 6 canes /ft. of row
 - Maintain 18" wide row



Prime-Jim

Pruning Thornless Erect and Semi-Erect Blackberries

- ▶ Trailing growth habit the first season
- ▶ Spring of second season
 - Remove low canes and prune where canes bend toward ground



Thornless Erect Blackberry Pruning

- ▶ Plants were summer tipped at a height of 3'
- ▶ In the spring, 1/3 to 1/4 of the total number of canes on the plant were removed, preferentially taking out smaller diameter canes and those with red-necked cane borer.
- ▶ Lowest laterals were removed and remaining laterals were cut to about 12-18" in length



Traditional Semi-erect Blackberry Training

- ▶ Two wire trellis
- ▶ Involves tying each cane to the wires.



Thornless Semi-Erect Blackberry Training

- ▶ Double T 4 Wire Trellis
 - Reduces cane tying
- ▶ Lower wires 2' apart and 2.5–3' from ground
- ▶ Upper wires 4' apart and 5' from ground



Thornless Semi-erect Blackberry Trial Treatments



▶ Conventional System

- Primocanes were tipped when they extended one foot above the top of the trellis. Dead fruiting canes that had cropped were removed in the fall.
- During dormant pruning, 1/3 to 1/4 of the total number of fruiting canes arising from the ground were removed. This included spindly canes and/or those that had red necked cane borer swellings.
- Lateral branches were pruned back to 18 inches in length and low laterals within 18 in of the ground were removed.

Conventional Training (Semi-erect)



Minimal Pruning



Thornless, Semi-erect Training Systems, 02'-05'

Training system	Yield (lb/A) ¹	Avg. berry wt. (g) ¹	Soluble solids (%) ¹
Conventional	17,999 b	6.6 a	9.5 b
Minimal pruning	21,308 a	6.1 b	9.6 a

¹Means within a column followed by the same letter are not significantly different (Duncan Waller LSD P=0.05)

Questions?

