

## Blackberries and Raspberries

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R&B production guide from NRAES revised last year - highly recommended  
www.nraes.org online to order or extension services at University of Maine \$48 US  
A good supplement is the ATTRA organic culture of bramble fruits – good complement to NRAES guide

Cornell extension new high tunnel publication guide - free download or buy for \$15

He'll start with bad news – only 100-200 acres are in raspberries in Maine – more people get in and out than any other crop...

Labour is a huge issue – need dependable labour pool, finesse work like picking. Hard to get crop off. Organic growers should look at blueberries first, less aggressive pests than raspberries

Good news – lots of demand, good price, can make crop profitable if have good resources

Need to be well drained, don't like wet feet, need full sun, protect from wind, wind break critical, plant quick-growing red pine, something else behind for long term like fir

Slope good for drainage, plant up on slope, avoid heavy cold air and frosts (especially primocane fall fruit)

Grows at higher pH than Highbush blueberry

Eliminate perennial weeds prior to planting – worth it! – don't carve strips into pasture, grasses with grow into row and compete with raspberries.

Don't follow solanaceae with raspberries or plant close to wild brambles (disease vectors) – need to be about 500 ft., or ideally put wind breaks in between, vector is aphids

Crown is perennial, lives 10-20 yrs, loaded with buds than produce canes and roots  
1<sup>st</sup> yr primocane, 2<sup>nd</sup> florican (lives 2 yrs)

Red raspberries spread from crown, black varieties don't really spread.

Where leaf meets stem there are axillary buds, cane overwinters, axillary buds form shoots, then fruiting laterals (where fruit forms) in second spring, then fruiting cane dies

Everbearing/primocane raspberry = cane still lives 2 yrs, but primocane axillary buds on top of cane break late summer/early fall of 1<sup>st</sup> year, and in 2<sup>nd</sup> year lower buds give fruit in summer

Handles – dormant canes from nursery, should have good roots 8 inches to a couple feet long – least expensive, should be from certified/inspected nursery

Tissue culture plug plants, like tomatoe transplants, sterile conditions, are chilled and come dormant, 2-3 times the cost than handles (but clean so no viruses) grow more uniformly than handles, good vigour

Planting – early spring (mid-may in Maine)

Add a lot of organic matter (OM) – at least 2% minimum, should be 4%

Holes 1 ft deep for handles, plant to same depth as from nursery, plug should be covered by soil, susceptible to draught

Handles should be trimmed (top) to avoid plant sending out fruit

Raised beds good for poorly drained areas

75 % root system is 8-10 inches in soil, helps with root rot, but now need irrigation (trickle is best)

‘Kilarney’ variety very aggressive can plant far apart

minimum 8 ft distance between rows (12 ft with tractor) – give them their space, need lots of light and air movement 1<sup>st</sup> line of defence against disease. In-row spacing 20-30 inches

Mulching really helps raspberries. Classic: woodchip/sawdust, keeps weeds down, fine sawdust will compress too much, use mat w/ good porosity, like mature compost, add another layer in spring (compost has to be clean – should be covered to prevent weed seed contamination). Compost mulch also provides nutrients vs. woodchip mulch

Plasticulture: when using plastic have slit down middle to make sure primocanes can come out – biodegradable plastics may not be certified, but may work well

Important – no competition in planting year, likes to see clean cultivation or grow non-competitive crops like lettuce and beans between rows

Primocanes will spread, cut them out if beyond 1.5-2 feet, fruit in the middle could harbour disease in a wide row. Best narrow row with lots of light

Fertilize in June and August

Raspberries have small root system in 1<sup>st</sup> year, trickle drip system best, keep them hydrated, keeps foliage and fruit dry (less diseases), overhead irrigation can work for frost control, expensive, gets foliage wet

To control weeds in planting year, need good tillage methods, budding cultivator, burner (only when weeds are small), vinegar for small weeds, mulching in-row with hand weeding

Spring 2<sup>nd</sup> season, establish ground cover between rows, turf to mow 4-6 times a yr, aug/sept, hard fescue/bluegrass mix, slow growing bunch grasses don't creep, stay away from contractor mixes, don't add clover –it comes in anyway and can become a weed problem – source tomato ringspot virus

In 2-3 years (when established) – add 60 lb. N total every year. Soil test every 2 yrs, check pH, P, K

Late July test primocane leaves – near tip youngest fully emerged leaf, 40 leaves per acre

Average life span of patch 10-15 years, due to disease issues, but he's seen 25 yr old plantings

Trellising: tall and narrow row, makes picking easier. Posts in ground at least 2 ft (prevent frost heaving), people using iron posts, need anchors. Recommends #9 wire. Can use tomato clips, bailing twine used for attaching canes to wire

T trellis more popular, internal braces better since don't trip over anchor at the end of rows

3.5-4 ft tall for cross placement (cross should be 3-3.5 ft long). Want posts to be sturdy (lots of weight). 1.5 ft wide at ground, 3.5 ft at cross bar (top), creates a V effect, bring light in the row, puts fruiting canes on outside

V trellis 2 posts every 25-30 ft – longer lasting system

I Trellis – likes the least, cheapest, single posts, shove canes between wire, canes can be heavy, not so stable in high wind, harder to open up as much as you want,

Hill system, good for blackberries, like growing beefsteak tomatoes, 1 plant 4ft, 8-12 ft between rows, solid stake for each plant, choose best 6-8 canes tied to post, blackberries have branching growth habit that doesn't lend itself well to hedge planting

Why prune? Manage vegetative growth, not competition, improves quality, size, picking ease, reduces disease

2 steps:

summer – maintain 1.5 ft row width, cutting out primocanes that are beyond edge of hedge

late summer/fall can remove floricanes – he discourages that in north, keep until winter since carbohydrates go back into winter, acts as windbreak for primocanes

winter – dormant pruning – after new year, snow has to be gone (mid march usually, before canes bud out). Spent floricanes have gray bark, highly branched (1<sup>st</sup> step)

Prune weak, spindly canes, save good healthy brown bark primocanes

Prune outside 2.5 ft row width to maintain proper row

Step 3 – thinning, selecting for tallest thickest cane - 3-4 canes per linear ft row, tie canes to wire. Take old material out – could spread disease.

When you're done, planting should look drastically thin

Another option: mowing – eliminates crop for the year, saves pruning, mow \_ field each year to have fruit every year

Exception: primocane variety will get crop after mowing (only after 3-4 yrs old), but need to take trellis down and up again

Growing blackberries hard situation – hardiness an issue

Blackberries break in 1<sup>st</sup> year, fruit in 2<sup>nd</sup> year – do much better on hill system, bushier than raspberries. 30 inches tall, break top growing point in 1<sup>st</sup> year to encourage branching

6-8 canes tied to a stake, shorter laterals to 12-16 inches, christmas tree shape (16 inches at bottom, 12 inches at top)

Varieties

favourites: hard. Zone 4

‘Prelude’ from NY (gd flavour large size, susceptible to phythoptera), ‘Boyne’ (fruit small soft dark) from Manitoba, ‘Killarney’ (larger fruit, brightly coloured) from Manitoba, ‘Nova’ (mid season, fairly disease resistant, few thorns) from NS, ‘Encore’ (late, largest fruit late july/early august, bridges gap between summer and fall fruiting types, not as winter hardy as prelude NY) (in order of ripening)

Everbearing – ‘Autumn Bliss’ from Scotland (popular high tunnels, earlier, weak plant, susceptible to phythoptera, mid august harvest), ‘Autumn Britten’, ‘Polana’ (Poland, fruit small, not favourite flavour), ‘Polka’ (new from Poland), ‘Joan’ looks great good tasting, impressive variety from Scotland

Yellow raspberries – hard to market – makes ugly jam not good for processing  
best variety ‘Anne’ 3<sup>rd</sup> wk august good flavour, ‘kiwi gold’ more orange

Black raspberries – hardiness an issue (from southern north America), not good variety choice (jewel), disease susceptible, thorny ones more hardy.

Blackberries:

‘Darrow’ susceptible to genetic breakdown after 6-7 yrs stop fruiting, some out of Maine  
‘fort kent king’ (not thorny) – home garden variety where can’t grow anything else

Thornless: ‘chester’ needs protection, triple crown

Primocane fruiting varieties for blackberries – most exciting thing in black/rasp berries – maybe in 10-15 yrs available for commercial production. Prime-Jan and Prime-Jim too late for here, for home garden market – from Arkansas. High tunnels in Pennsylvania

Pick every day, morning when dry and cool, shallow package, not more than 3 inches deep

Stack on flats with good air movement – floor fans, close to 32 F. can keep for a week and still marketable

Pick-your own \_ farms in Maine

Pre-pick harvest, you have to deal with lots of labour issues

Retail good demand, price resistance, good markets in restaurants

Wholesale good demand, storage issues

Most common failure is weeds! Too much competition. Get some good mulch down, hand pulling of weeds, must keep up

Raspberries – mosaic virus, curled up leaves could be potato leaf hoppers (look under leaves) if not, it's a disease problem. Remove diseased canes and 2 on either side. And get ride of wild brambles.

Phytophthora – caused by standing water (algae, blocks the plant from getting moisture) – pick good site and/or used raised beds

Bottom line – labour most difficult

Establishment and maintenance costs similar to blueberries

0-\$6,000 net returns (0 if bad winter, so get hardy varieties) not going to have demand problems

price \$1.50-3.50/lb. in Portland can get \$6/lb