GROWING BLUEBERRIES - BEST PRACTICES FOR CROP MANAGEMENT

KOOTENAY & BOUNDARY FARM ADVISORS

BLUEBERRY FIELD DAY – CHRISTINA LAKE AND HARROP, BC

JULY 28 AND 29, 2018

ERIC GERBRANDT

INTRODUCTION AND OVERVIEW

- Important resources – great places to go to build your knowledge
- Varieties – important considerations in a “sea of choices”
- Getting a new planting started – key principals for success
- Horticultural management basic – applied science + your green thumb
- Annual care cycle – pointers for critical yearly activities
- Field tour – open discussion on key pests and diseases, applied horticultural management and pollination considerations

IMPORTANT RESOURCES

- http://www.bcblueberry.com/

IMPORTANT RESOURCES

- http://nwberryfoundation.org/

IMPORTANT RESOURCES

- https://pnwhandbooks.org/

IMPORTANT RESOURCES

- https://www.canada.ca/en/health-canada/services/consumer-product-safety/pesticides-pest-management/registrants-applicants/tools/pesticide-label-search.html

IMPORTANT RESOURCES

- http://productionguide.agrifoodbc.ca/

IMPORTANT RESOURCES

- Whatcom County Extension
- Oregon State University and United States Department of Agriculture out of Corvallis, Oregon
- University websites – Rutgers, Michigan, North Carolina, Florida, Georgia etc.

CROP CLASSES

- Northern highbush (*Vaccinium corymbosum*)
- Southern highbush (*V. corymbosum* and *darrowii*)
- Rabbiteye (*V. ashei*)
- Lowbush (*V. angustifolium*) and half-high (*V. corymbosum* x *angustifolium*)

MARKET USE CONSIDERATIONS

- Season
- Fresh or processed
- U-pick or ready picked
- Easy-to-grow or not-for-beginners

VARIETIES – STRENGTHS AND WEAKNESSES

- Concentration of ripening
- Flavour, firmness, shelf-life
- Ease of management and harvest
- Adaptation to your microclimate – hardiness in the shoulder season?

VARIETIES – SEASON EXTENSION AND VALUE ADDED

- Early, mid and late season
- Will all fruit ripen in your microclimate?
- Will you get to take a vacation?
- What is your marketing strategy?
- Value added to increase revenue or spread out marketing window?

Opportunities for small-scale production

- U-pick, ready pick, diversify
- Local businesses and retailers
- Value added:
  - Frozen
  - Jam, syrup, jelly
  - Liqueur, wine
  - Baked goods
- Specific varieties for specific products

PROPAGATION AND PLANTING MATERIAL

- US or Canadian nurseries that specialize in commercial-quality product
- 18” plant is worth the cost
- Tissue culture or cuttings
- Quality and virus-free certification is important

FIELD PREPARATION

- Blueberries can even be grown in substrate
- Low fertility soils will benefit from amendments
- Calcareous soils will require adjustments
- Drainage during the winter and adequate moisture during summer
- Raised beds or flat planting – depends on your location
- Pre-plant soil test is a “must” – drives amendment and fertility management
- Adjust pH – depends on texture, takes time, careful not to over-shoot
- Amend prior to working to adequate planting tilth – OM if necessary
- Pre-plant fertilization – immobile nutrients, especially P

PLANTING AND ESTABLISHMENT

- Fall or spring
- Get irrigation ready before starting to plant
- Map it out and lay them out uniformly
- Cover top of potting medium but don’t bury the crown too deep
- Water regularly until roots begin to extend from root-ball
- First two years – deblossom, fertilize generously

HORTICULTURAL MANAGEMENT CONSIDERATIONS

- Canopy management:
  - Posts and wires
  - Annual pruning
- Bed and alley management:
  - Keep competition low – weed free is essential
  - Limited root zone – mulch or weed mat
  - Alleyway – grass, rotovate or spray

HORTICULTURAL MANAGEMENT CONSIDERATIONS

- Irrigation management:
  - Suspended drip
  - Overhead sprinklers
  - Combination
- Fertility management:
  - If pH is on point – everything else is easy
  - Focus on N, P and K
  - Granular soil apps are core
  - Fertigation and foliar applications only for very specific purposes
  - Timing – end of bloom, split apps
  - Tissue analysis – late July or early August, compare to standards

HORTICULTURAL MANAGEMENT CONSIDERATIONS

- Crop protection:
  - Integrated pest management approach
  - Deal with pests and diseases before they reach economic thresholds
  - Organic options are limiting
  - Conventional control can be avoided in many cases under low input systems
- Pruning:
  - Balance crop load
  - Promote vigour, replace older wood
  - Permit light penetration
  - Harvestability, quality and food safety

ANNUAL CARE CYCLE

- Spring:
  - Plant – finish pruning, fertilize, bees, irrigation
  - Diseases – mummyberry, root rot, bacterial blight, scorch/shock viruses, botrytis/anthracnose
  - Pests – aphids, spanworms/winter moths, leaf rollers, tent caterpillars
  - Field – re-apply sawdust, alleyway management, pre- and post-emerge herbicides

- Summer:
  - Plant – irrigation, harvest, tissue testing
  - Diseases – fruit rot control, canker and blight removal
  - Pests – Spotted Wing Drosophila (SWD), aphids, scale insects, caterpillars, birds

ANNUAL CARE CYCLE

- Fall:
  - Plant – irrigation, soil analysis, weed control
  - Disease – remove canker and blight, copper application for blight
  - Pests – caterpillars, rodents
- Winter:
  - Plant – prune
  - Disease – bacterial blight, mummyberry
  - Pests – scale insects, rodents

QUESTIONS FOR FIELD TOUR

- Key pest and disease issues
- Applied horticultural management
- Pollination considerations