Blackberry Fertilization and Weed Control

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Fertilization

- **Soil Testing:** $10.00, need 1 pint from 20 subsamples in area to be planted. Tells: pH, Nitrogen, Phosphorus and Potassium. pH

- **Very little fertilizer needed **first year**, but P & K should be plowed down before planting if really low:**
  - Need 10 per Acre N, 50 lbs per acre P, 250-300 lbs per acre K.

- **2nd year and on:** *Increase Nitrogen*
  - Apply at bloom to increase berry size, stimulate growth and boost yields.
  - Apply 2nd time, after harvest, to grow primocanes.
How Much and What Kind?

- 10 lbs of 10-20-10 or 13-13-13 per 100 feet of row as split application:
  - Half at bloom, half mid-season.

- If only Nitrogen needed: apply 5 lbs of ammonium nitrate, 34-0-0, per 100 feet of row as a split application.
Organic Fertilizers

- General recommendation for manures:
  - 5 to 15 pounds per 10 feet or row applied in fall.
  - Can be clumpy and hard to apply.

- Cottonseed meal: Easier to apply, more predictable content: 7.5 lbs per 10 feet of row in mid to late winter. (6-3-1.5)
How to Apply Granular Fertilizers

- **Broadcast:**
  - Only to rows, not down grassy middles.
  - Avoid getting granules on crown of plant to avoid burn.

- **Banded:**
  - Try to band down both sides of row.
Weed Control

- **The Planting Row:**
  - Once a hedgerow formed, weeds easier to keep out.
  - Band herbicides or mulch along row edges only.
  - In-row mulching suppresses primocanes and invites rodents.

- **Between Rows:**
  - Mow to keep weeds from going to seed.
  - Weeder geese will eat both berries, new shoots and grasses in row middles/between rows.
Identify the Weed

- Grass?
  - Annual or Perennial?
- Sedge?
  - Nutsedge not controlled by grass herbicides
- Broadleaved?
  - Annual, perennial or biennial?
Weed Categories

- Annual…grasses vs. broadleaves
  - Live and die within 1 year
- Perennial…grasses, broadleaves vs. sedges
  - Live more than 1 year
- Biennial….broad leafed weeds
  - Need two years to complete cycle
Grassy Weeds

- Bermuda Grass...perennial
- Crabgrass...annual
Broadleafed Weeds

- Pigweed…annual

- Henbit, Chickweed and Dandelion: winter annuals.
Nutsedge

How to identify mature yellow nutsedge.

Rhizome and daughter plant
Yellow nutsedge mother plant
Tubers
Weed Control Strategies

- Prevention before planting
  - Herbicides, or Tillage, or cover crops.
- Mulches
- Cultivation
- Flaming
- Soaps or vinegars
- Synthetic herbicides
Special Considerations for Blackberries:

- A long-term/perennial crop
- Need grass between rows for erosion control and foot traffic.
- Blackberry roots are very shallow.
- Blackberries send up suckers that are susceptible to some herbicides.
Prevention/Soil Preparation:

- One year pre-planting...kill out all perennial weeds.
- Plant a cover crop to add organic matter
- Choose crop for row middles:
  - Permanent grass, tall fescue
  - Legume mix
    - Add Nitrogen but may attract pollinators at same time that blackberries need them. Check bloom time.
Mulching

- Organic
  - Straw/Hay
  - Wood Chips
  - Sawdust
- Synthetic
  - Plastic
  - Woven Polyester
Cultivation

- Grape Hoe
  - Potential Damage to Plants
- Rototiller
  - Plow Pan
- In all cultivation, timing, and depth control imperative
Flaming

- Only kills at the surface
- Does not kill perennial weeds unless used repeatedly: four times
- Restricted by burn bans
Soaps and Vinegars

- Burns weeds down to surface.
- Needs multiple applications for perennials.
Synthetic (Chemical) Herbicides

- Classified in several ways
  - Selective versus Non-selective
  - Soil applied versus Foliar applied
  - Systemic versus Contact
- It is important to be sure the product you use is correct for your situation
  - What is your situation?
  - What product choices are available?
- Where can I find this information?
  - Product labels
    - www.cdms.net
  - Grower guides
Herbicide Labels are Specific

- You need a product having:
  - Your crop on the label.
  - Your weeds on the label.
  - Crop age appropriate for the product.
  - Correct pre-harvest interval.
  - Re-entry time for harvesting.

- www.cdms.net
Oklahoma Small Fruit Weed Control Suggestions

- In OSU Extension Agent’s Handbook of Insect, Plant Disease and Weed Control – Publication E-832
- Updated annually
- Check with your County Extension Office
- This is a guide – Always verify information on the product label !!!!!!
Herbicides you may find useful

- **Preemergence**
  - Applied before weed seeds germinate (Spring/Fall)
  - Apply to weed-free planting or when weeds are removed
  - Examples: Devrinol, Casoron, Princep, Surflan

- **Postemergence**
  - Apply when weeds in active growth
  - Most effective when weeds are small
  - Examples: Glyphosate (Roundup), Poast, Scythe
Preemergence Herbicides

- Devrinol (dry flowable) -
  - Controls crabgrass, goosegrass, chickweed, purslane & more
- Casoron (granule)
  - Controls many annual grasses, ragweed, henbit, mustard & more
- Princep (wettable powder or liquid) -
  - Foxtail, Lambsquarter, morningglory, nightshade, ragweed & more
- Surflan (liquid) –
  - Many annual grasses, fewer broadleaf weeds

Note: none very effective on nutsedge!
Postemergence Herbicides

- **Glyphosate (Roundup, Glyfos, Credit)** – (liquid & dry formulations)
  - Use in most small fruit crops
  - Will injure or kill fruit plants
    - Use before planting or use directed applications
  - Controls most green plants
  - Apply when weed growth is active
  - One of few choices for nutsedge & broadleaf weeds (e.g.-morningglories)

- **Poast** – (liquid)
  - Note pre-harvest restrictions!
  - Controls actively growing grasses (lawns, alleyways, etc.)
Problems to Avoid

- Under-application → poor control
- Over-application → crop injury, residues
- Unintended applications
  - Roundup injury when suckers are treated
- Using the same spray tank for phenoxy (2,4-d) herbicides on susceptible plants.
  - E.g. when applying Poast for grass control on grape
Injury symptoms

- Glyphosate on grape
- Simazine
- Phenoxy herbicide injury

Photo credit – Dr. Tom Lanini