

Basics of Blackberry Weed Management



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Is Weed Control Important?

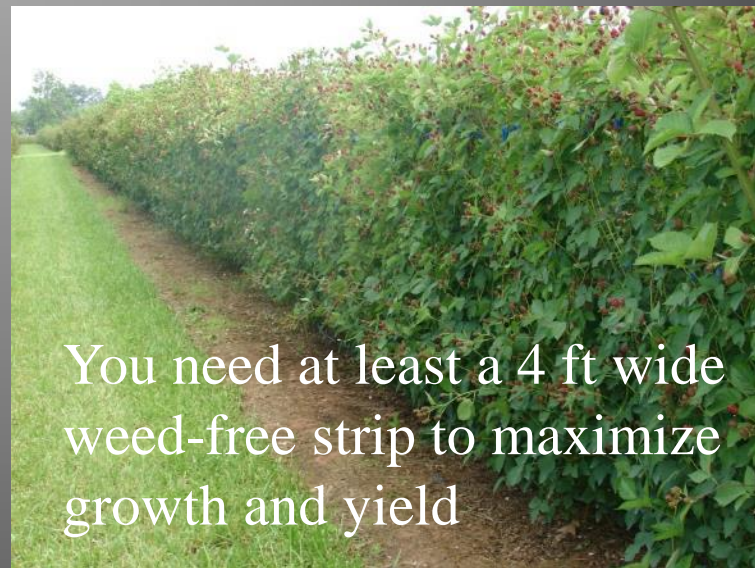
- Competition
 - Reduced growth in new plantings
 - Primocane density
 - Yield
- Physical Interference
 - Pesticide coverage
 - Foliar
 - Soil applied products
- Worker efficiency
 - Harvest
 - Movement of picking stands
 - Wet feet
 - Floracane removal



Objective in a Newly Planted Fruit Crop is to Grow, Grow, Grow!



14
Months



You need at least a 4 ft wide
weed-free strip to maximize
growth and yield

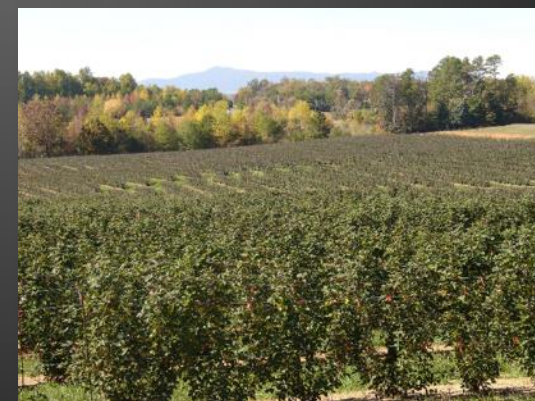
- Greatly reduce growth
- Survivability

It takes water, fertilizer and
NO weed competition to
maximize growth in young
plantings!

Bare Ground or Plastic Mulch

- Plastic

- Higher initial cost
- Better for fumigation
- Little benefit from rain
- Increased irrigation dependence
- Water drainage
- Weed control
 - Weeds around young plants
 - Weeds adjacent to the bed
 - Weeds coming through holes in plastic after first year
- Plastic removal
- Replacement of drip tape with hard hose at some point
- What about herbicides?????????



- Bare Ground

- Weed control
 - Cultivation
 - Herbicides

2 ft Vegetative Free Strip Width



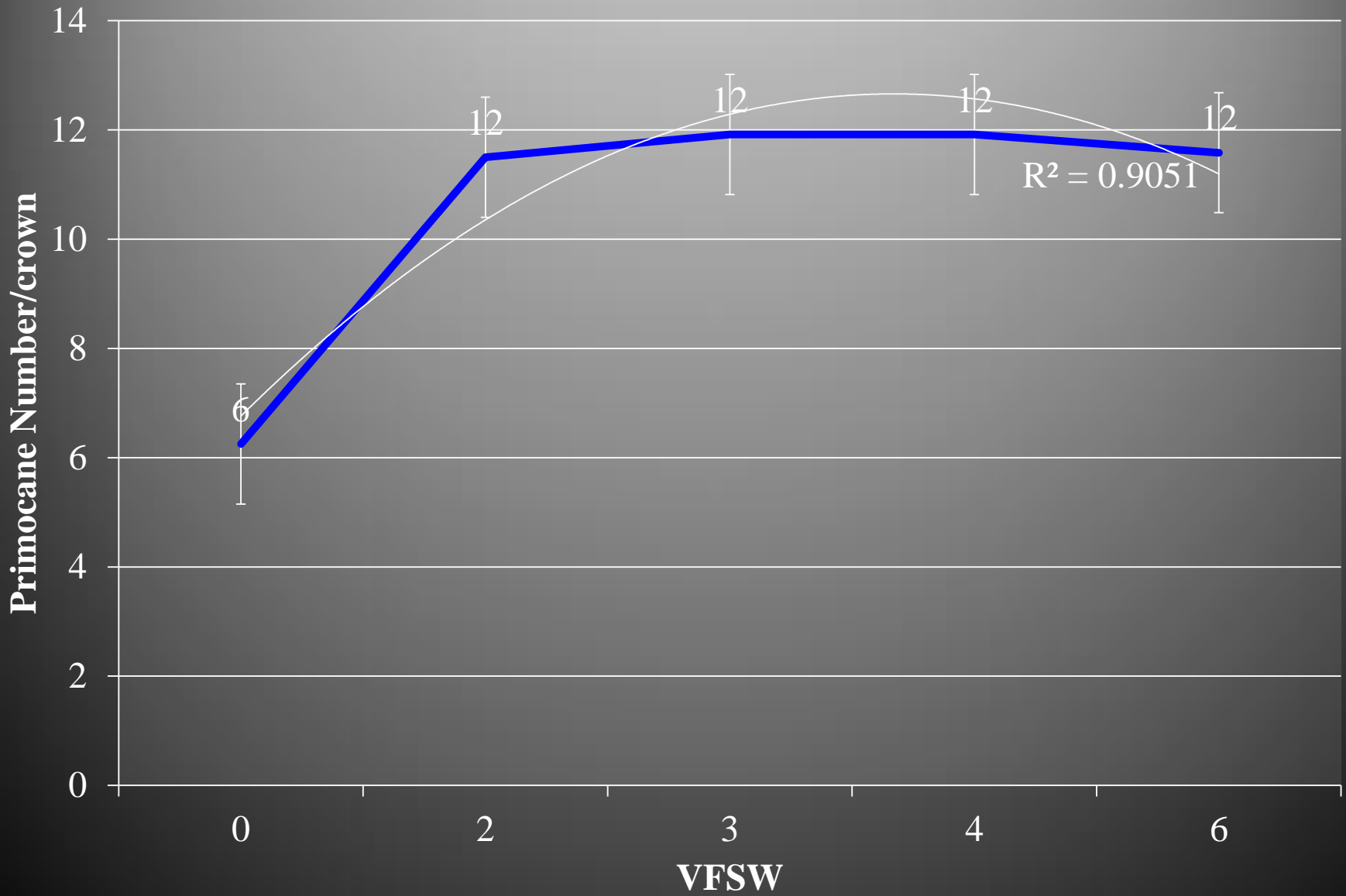
4 ft Vegetative Free Strip Width



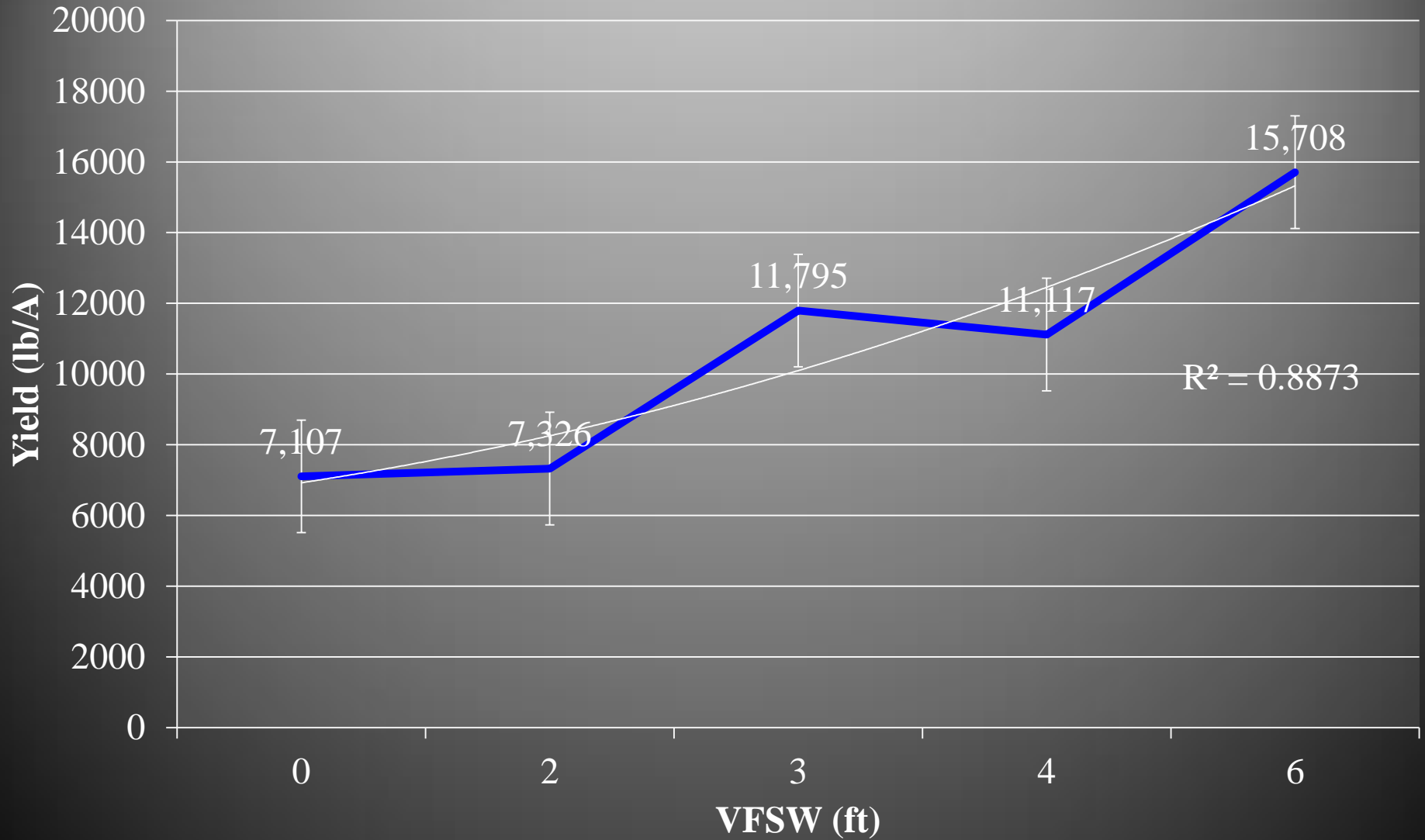
6 ft Vegetative Free Strip Width



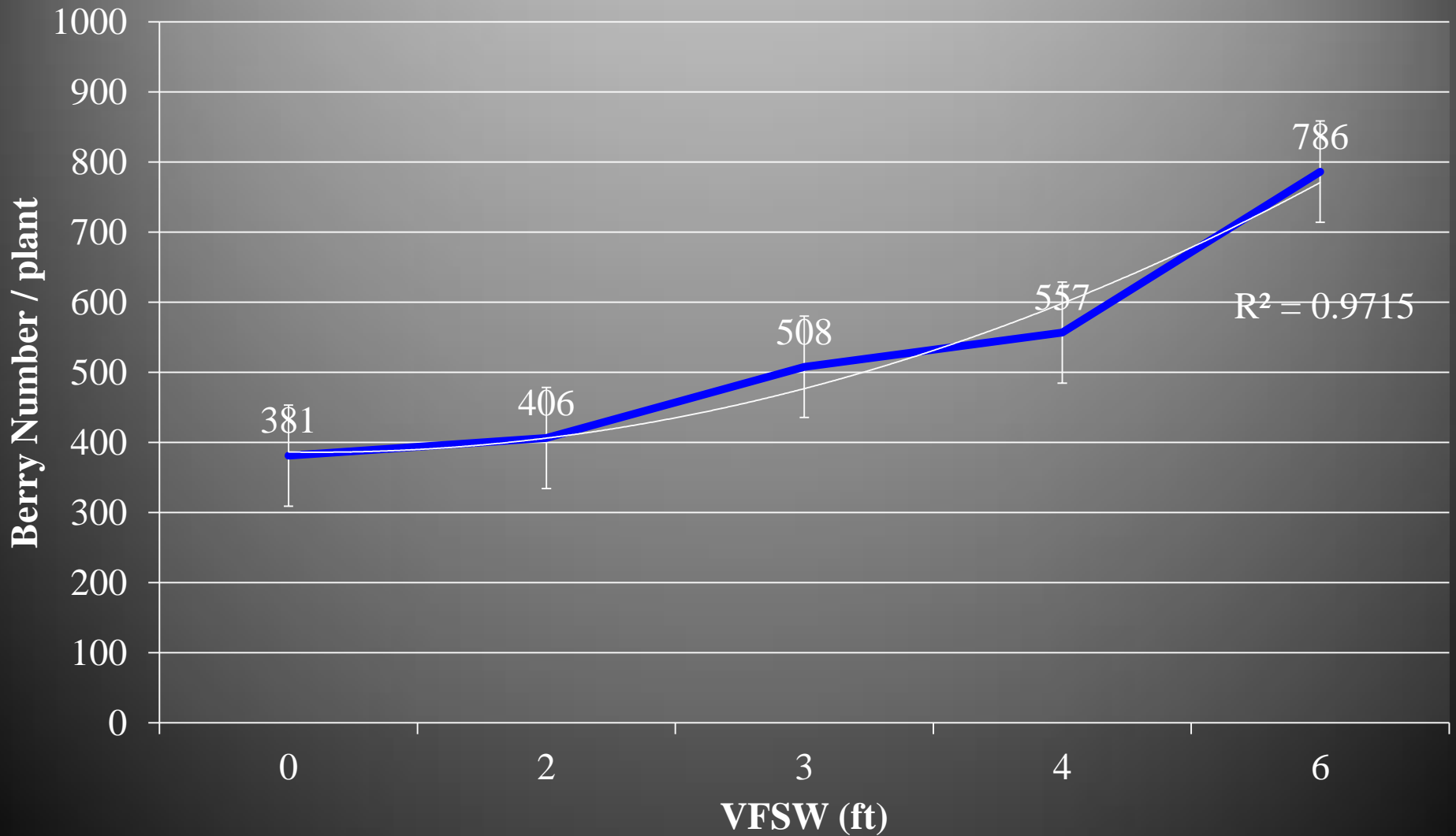
Primocane Number, Navaho Blackberry, Killdeer Farm, Kings Mtn. NC. 2014



Yield, Navaho Blackberry, Killdeer Farm, Kings Mtn. NC. 2014



Berry Number, Navaho Blackberry, Killdeer Farm, Kings Mtn. NC. 2014



Herbicide Options Newly Planted

Oryzalin

- Surflan and various generic brands
- Use rate
 - 2 to 4 qt/A
- Restrictions
 - Newly planted and established plantings
 - Does NOT control emerged weeds
 - Allow soil to settle after transplanting.
 - Ideally tissue cultured plants need time “harden off”
 - Apply as directed spray.
- Weeds controlled
 - Crabgrass, foxtail sp., an. bluegrass, goosegrass, panicum sp., an. ryegrass, lambsquarter, pigweed sp., purslane, spurge.



Simazine

- Princep and various generic brands
- Use rate
 - 2 to 4 qt/A
 - 1/2 rate in newly planted (est. <6 months)
- Restrictions
 - Do NOT apply on gravely, sand, or loamy sand soils.
 - Does NOT control emerged weeds
 - Rate is soil texture dependent
 - Can make two applications so long as total use rate does not exceed 4 qt/A
 - Ideally tissue cultured plants need time “harden off”
 - Apply as directed spray



POST Herbicide Options

- Paraquat

- Gramoxone SL (2.5 to 4 pt/A) or generic paraquat (1.5 to 2.7 pt/A)

- NIS @ 0.25 % v/v
- Contact with new canes will cause injury
- Primocanes need to be 3 ft tall or more
- May tank mix with PRE herbicides
- NON-SELECTIVE POST herbicide



- Carfentrazone

- Aim (0.8 to 2.0 fl. oz)

- COC @ 1 to 2 % v/v
- Do not allow “spray mist” to come into contact with “green stem tissue, desirable fruit, blooms, or foliage”
- Do not allow contact with you plants
- Weeds controlled
 - Morningglory, pigweeds, lambsquarter, nightshade, spurge, cocklebur, velvetleaf, prickly lettuce, and mallow sp.



POST Herbicide Options

- Poast – 1.5 to 2.5 pt/A
 - COC @ 1 % v/v
 - 45 day PHI
- Fusilade – 12 to 24 oz/A
 - COC @ 1% v/v
 - Nonbearing use only
- Select Max – 12 to 16 oz/A
 - NIS @ 0.25 % v/v
 - 7 day PHI



Sequential Applications will be Necessary for Control of Perennial Grass Weeds!!

Herbicide Program for Newly Planted

- Pre-plant
 - Glyphosate
 - Paraquat
 - After transplanting (**Not Immediately**)
 - Oryzalin + Simazine (1/2 rate)
 - POST options (as needed)
 - Paraquat + NIS
 - Non-selective herbicide
 - Aim + COC
 - Small broadleaf weeds
 - Clethodim + COC
 - Grass weeds
- Plants must be protected



Herbicide Options Established

PRE Herbicide Options for Established Caneberries

- Oryzalin or Surflan – 2 to 4 qt/A
 - Activation within 14 to 21 days
- Simazine 4F or 90DG – 2-4 qt or 2.2-4.4 lb/A
 - Even at higher rates the addition of Surflan will be necessary for maximum residual annual grass control.
- Solicam – 2.5 to 5 lb/A
 - Dormant application
 - Weak on pigweed and lambsquarter
 - Annual grasses, prickly sida, dogfennel, spurge
 - Suppresses yellow and purple nutsedge
 - Activation within 28 days; Brambles est. 12 mos.



PRE Herbicide Options for Established Brambles

- Sinbar – 1 to 2 lb/A
 - Established plantings of 1 year or more
 - Apply in spring prior to fruit set
 - Do not apply within 70 days of harvest
 - Do not use on sandy soils with less than 1% OM
 - Activation within 14 days
 - Weeds must be small (<2” tall) for POST control
 - Controls horseweed, pigweed, lambsquarters, annual morningglory, ragweed, Florida pusley, annual grasses



Sinbar...Be Careful It Cuts Both Ways

- Caneberries can be sensitive
 - Use low rate on coarse/gravelly soils
 - Avoid repeated use
 - Good sprayer calibration



Alion

- PRE
 - Excellent long term residual control
- Restrictions
 - Caneberry plants est. at least 1 year
 - Dormant application only!
 - Do not use on sand soils



- Pigweed
- Morningglory
- Carolina geranium
- Chickweed
- Horseweed
- Wild mustard
- Spotted Spurge
- Crabgrass
- Goosegrass
- Smartweed

Soil Texture	Alion Herbicide (fl oz product / broadcast acre)			Minimum Plant Age
Sand	Do Not Use			
Any other soil except those that contain 20% or greater gravel content	Soil percent Organic Matter Content	Rate Per Application	Max Rate Per Year	1 year*
	%	fl oz/A	fl oz/A	
	< 1	3.5 (0.045 lb ai/A)	7.0 (0.09 lb ai/A)	
	≥ 1	5.0 (0.065 lb ai/A)	10.0 (0.13 lb ai/A)	

Chateau

- PRE and POST
 - Excellent long term residual control
 - POST activity will aid paraquat in the control of certain species like cutleaf eveningprimrose
 - Restrictions
 - Caneberry plants est. at least 1 year
 - 6 oz/A (1 application per year)
 - 7 day PHI
- Pigweed
 - Morningglory
 - Carolina geranium
 - Cutleaf evengprimrose
 - Spotted Spurge
 - Crabgrass
 - Goosegrass
 - Smartweed
 - Mallow species
 - Wild lettuce



Solida

- Use rate
 - 4 oz/A
 - NIS @ 0.25% v/v
- Restrictions
 - When applied as a banded treatment (50% treated band or less) Solida may be applied twice per year.
 - Allow 30 days between applications
 - Blackberries established 1 year or longer
 - 21 day PHI
 - Use a directed application adjusted to provide complete coverage of the weeds while minimizing the amount of spray coming into contact with the caneberry plants



Zeus Prime XC



- Use rate
 - 8 to 15 fl. oz/A
 - NIS @ 0.25% v/v
- Restrictions
 - When applied as a banded treatment (50% treated band or less) Zeus Prime may be applied twice in a 12 mo. period.
 - Allow 60 days between applications
 - Blackberries established 2 years or longer
 - 3 day PHI
- Weeds controlled
 - Yellow nutsedge, pigweed, lambsquarter, mornglory, chickweed, cutleaf eveningprimrose, smartweed sp., tropic croton, nightshade, spurge, sida, henbit.
- Tank mix with oryzalin

Callisto

- Use rates
 - 3 fl. oz/A (can use two applications)
 - 14 days between applications
 - 6 fl. oz/A
 - COC @ 1% v/v
- Restrictions
 - Do not apply after onset of bloom
 - Do not use more than 6 fl. oz/A per crop year



Callisto

- POST Weed Control
 - Chickweed, henbit, cutleaf eveningprimrose, curly dock, dandelion, Shepherd's purse, swinecress, and white clover
 - Suppression of horseweed
- PRE Weed Control
 - Pigweed, jimsonweed, galinsoga, lambsquater, ragweed, smartweed sp.
 - Suppression of morningglory sp.



Four Herbicide Programs to Consider in Established Caneberry Plantings

- Program #1
 - Fall – Chateau or Simazine + Paraquat
 - Winter – Sinbar + Solida + Paraquat
 - Late Spring – Zeus Prime + Oryzalin + Paraquat
- Program #2
 - Fall – Chateau + Paraquat
 - Winter – Alion + Solida + Paraquat
 - Late Spring – Simazine + Oryzalin + Paraquat
- Program #3
 - Fall - Chateau or Simazine + Paraquat
 - Winter – Zeus Prime + Solida + Paraquat
 - Late Spring – Zeus Prime + Oryzalin + Paraquat
- Program #4
 - Fall – Simazine or Chateau + Paraquat
 - Winter – Solida + Oryzalin + Paraquat
 - Late Spring – Solida + Oryzalin + Paraquat



Always use NIS with Paraquat

