Weed Control updates in Cranberry

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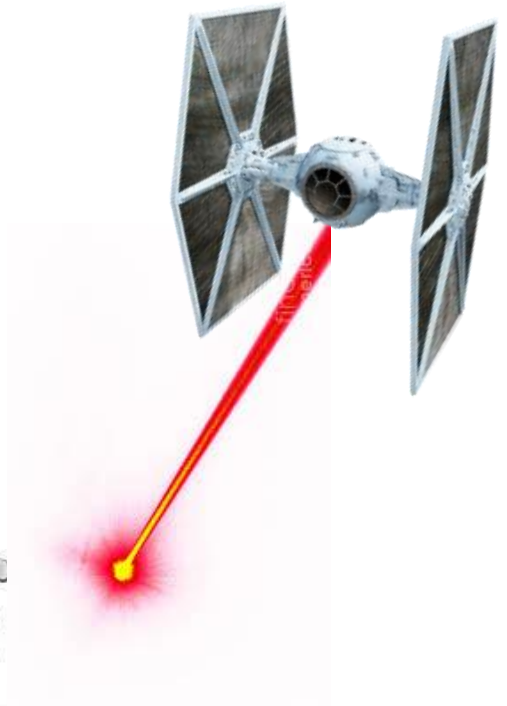
Outline

- Pending Registrations & Regulatory Updates
- Brake On! (Fluridone) testing
- Slough Sedge Control

Pending Registrations & Regulatory Updates

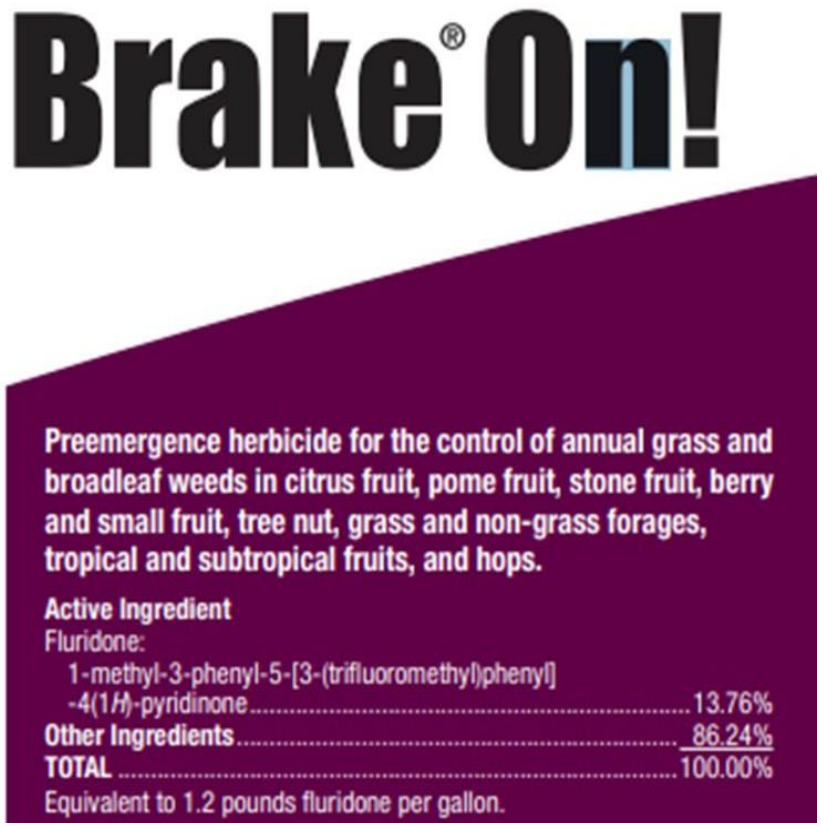
- **Flumioxazin – submitted to EPA (NOT REGISTERED YET)**
  - **Valor will be the trade name. Granular formulation**
  - **Dormant application to minimize damage**
  - **Max rate of 0.188 lb/A flumioxazin**
  - **Max of 4 applications/ year**
  - **For sphagnum moss control – consider making the fall application fb dormant application**
  - **Improve soil drainage**

Herbicide Applications with Drone



- **Uncharted Territory –**
- **How do we proceed?**
  - **EPA, IR-4, ODA, Syngenta (Callisto), and weed scientist.**
  - **EPA Interim Policy**
    - ***Allows states to approve drone use in certain circumstances:***
    - ***The label does not prohibit aerial application***
    - ***The drone application needs to follow all safety and use directions***

Brake On! Preemergence Herbicide



- Fluridone (a.i) is a WSSA Group 12 herbicide (bleacher)
  - same mode of action as norflurazon (Evital 5G)
- Residual control of annual broadleaf and grassy weeds.
- Long soil persistence because of strong soil adsorption, especially in acidic soils.
- The label was expanded to include cranberry in February 2023, but there is no local data on weed control and long-term crop tolerance.
- Active POST is used for controlling moss (Sandler 2019) but is only labeled now as a residual PRE herbicide.

Brake On! Label Rates

Table 1. Application Rates for Brake On! in Permanent Crops†			
Crops	**Soil Texture**	**Rate in Fluid Ounces per Acre**	**Application Method**
Citrus Fruit (Crop Group 10-10), Pome Fruit (Crop Group 11-10), Stone Fruit (Crop Group 12-12), Berry and Small Fruit (Crop Group 13-07)††, Tree Nut (Crop Group 14-12), Tropical and Subtropical Fruit, Edible Peel (Crop Subgroup 23A), Tropical and Subtropical Fruit, Inedible Peel (Crop Subgroup 24B), and Hops†††	All Soil Types	21 to 43	Preemergence Broadcast or Banded

- **Shouldn't be applied at less than 32 fl. oz/A for effective residual weed control**
- **Activation required to activate this product – minimum of 0.5 inches following application.**
- **Moist soil is needed to maintain residual weed control – a minimum of 0.75 inches per week.**
- **Dormant application - Avoid spray contact with crop foliage, green bark, roots, or fruit as it may cause crop injury**

Brake On! Label Use Restrictions

- **DO NOT apply by air.**
- **Chemigation: DO NOT apply through any type of irrigation system.**
- **DO NOT apply more than 43 fluid ounces of this product per acre per application OR per crop year (equivalent to 0.40 lb fluridone per acre).**
- **DO NOT Do not apply a product containing fluridone to the same area or field more than two years in a row**
- **DO NOT apply within 30 days prior to harvest**

2024 –Slough Sedge trial

Objectives:

Evaluate weed control efficacy and cranberry response to preemergence herbicides applied at tight bud (dormant stage) based on labeled rates:

Dormant

- **Fluridone (Brake On!) 43 fl oz/A**
- **Simazine (Simazine 4L) at 2 qt/A**

Early Spring (April) and/or Late Spring (May)

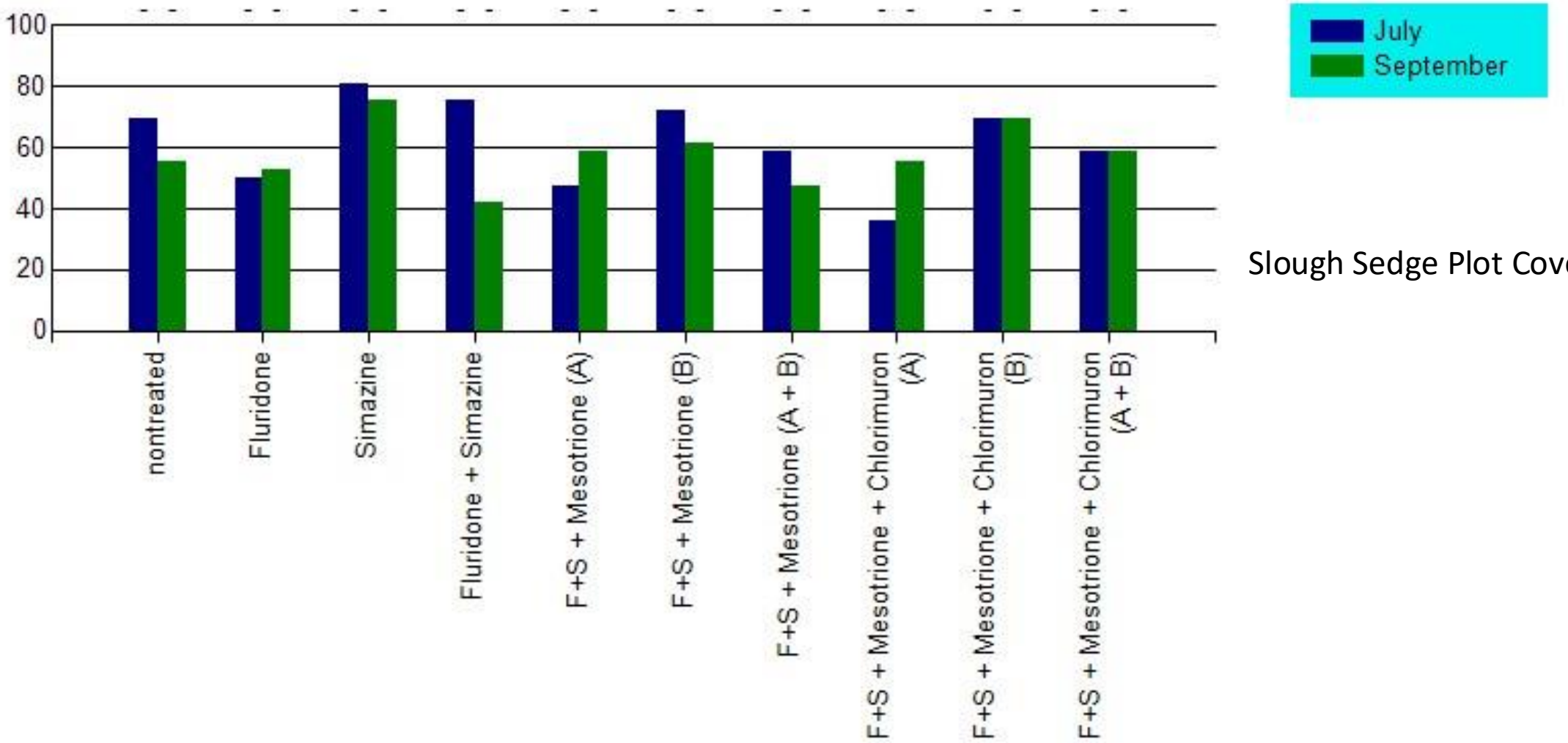
- **Mesotrione (Callisto) 8 fl oz/A**
- **Chlorimuon (Curio) 0.5 oz/A**

Experimental design:

- **Nontreated control**
- **Mature Stevens**
- **Randomized complete block design with four replicates**
- **Chemigated at 1000 GPA on Feb 21, 2024**

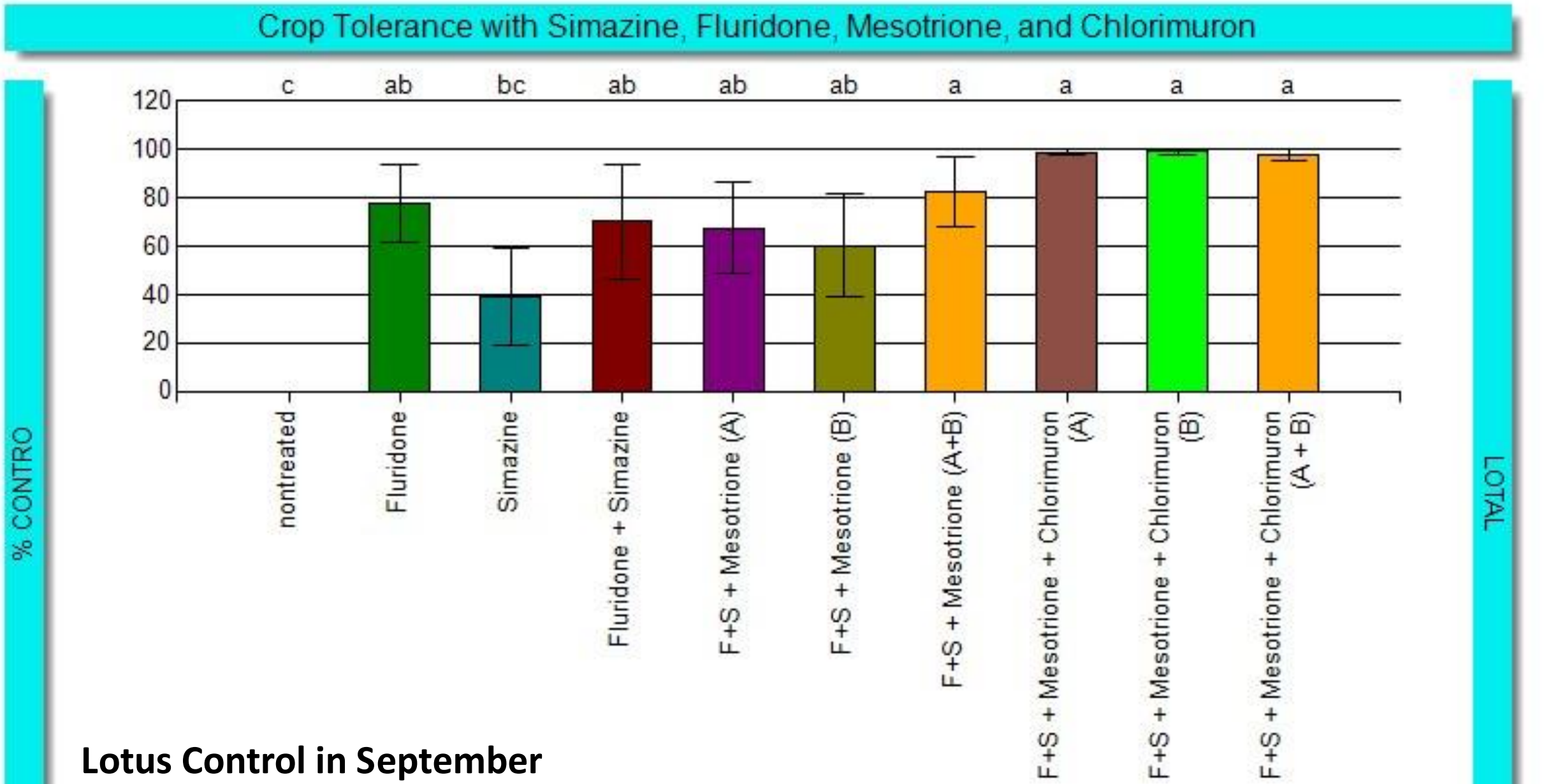
Mild infestation of cranberry in a Slough sedge field

Crop Tolerance with Simazine, Fluridone, Mesotrione, and Chlorimuron



Slough Sedge Plot Cover (%)

Trial ID: 24.CRAN.MESO.Bandon.2024



Lotus Control in September

Discussion

- No Crop injury was observed with dormant application
- Non-dormant applications might injure the crop

New Jersey

Brake On! 43 oz/A

	Boom	Chemigation	
Bud swell			
Early elongation			

2024 –Slough Sedge trial

- What weeds can be controlled by fluridone?
- Annual grasses and broadleaves

Slough sedge was not affected by the treatments.

A reduction in the number of Lotus was noticed during flowering time.

In the literature, control of Carex spp. in noncrop areas

- Glyphosate
- Imazapyr (Group 2 herbicide)
- Post Harvest applications of norflurazon and 2,4-D controlled (Shawa 1984)

Slough sedge unaffected by treatments

Second Study Slough Sedge POST EMERGENCE

Objectives:

Early Spring (April) and/or Late Spring (May)

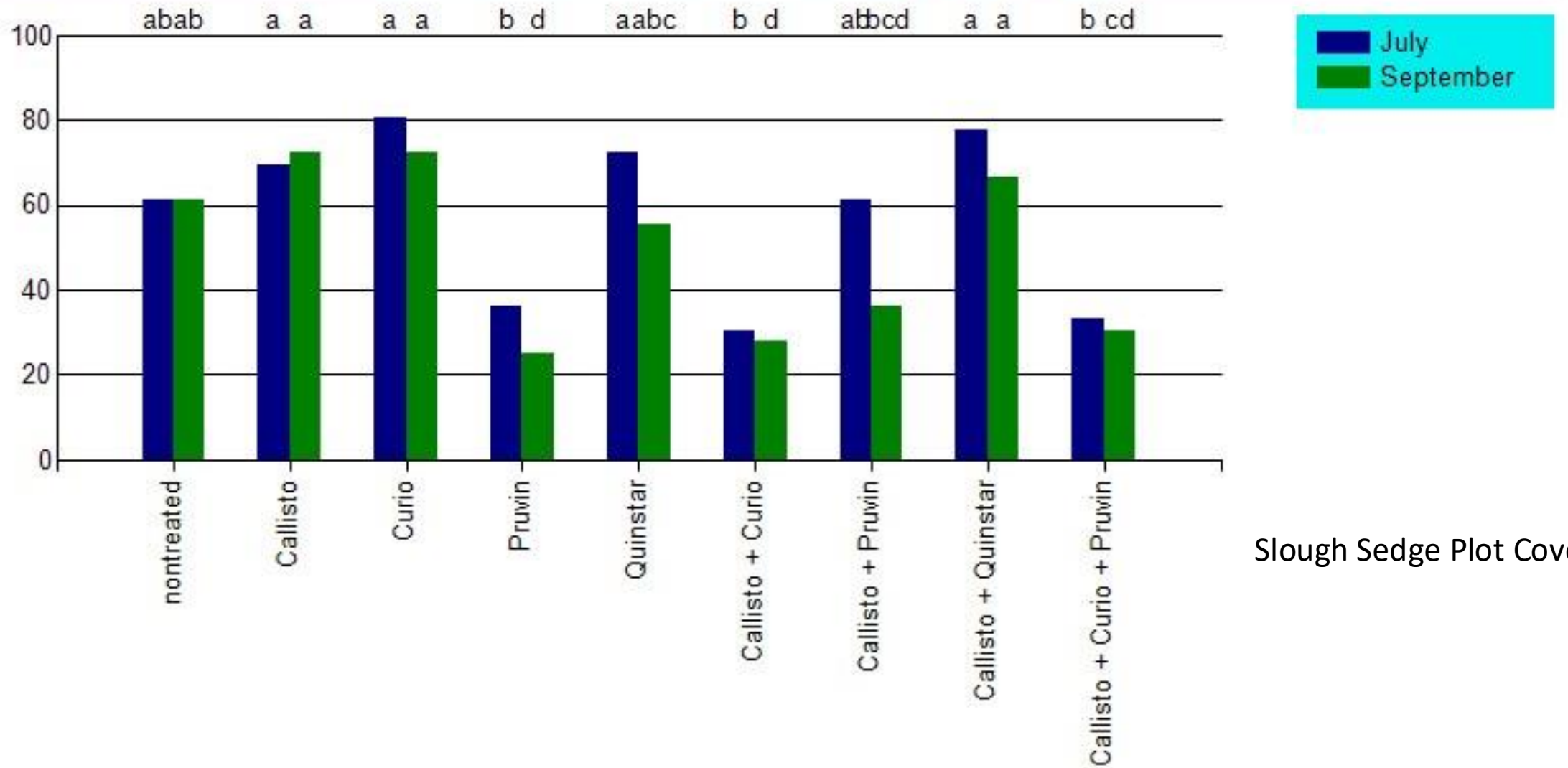
- Mesotrione (Callisto) 8 fl oz/A
- Chlorimuon (Curio) 0.5 oz/A
- Rimsulfuron (Pruvin)
- Quinclorac (Quinstar 4L)
- Selected combinations including Mesotrione + Chlorimuron+Rimsulfuron

Experimental design:

Experimental design:

- Nontreated control
- Mature Stevens
- Randomized complete block design with four replicates
- Chemigated at 1000 GPA on April 17 and May 29, 2024

Mesotrione Tankmixtures for controlling Sleugh sedge



Slough Sedge Plot Cover (%)

Trial ID: 24.CRAN.MESO.MIX.Bandon

Plot View 30 Days after First Application

Nontreated

Pruvin 2 oz

Callisto + Pruvin + Curio

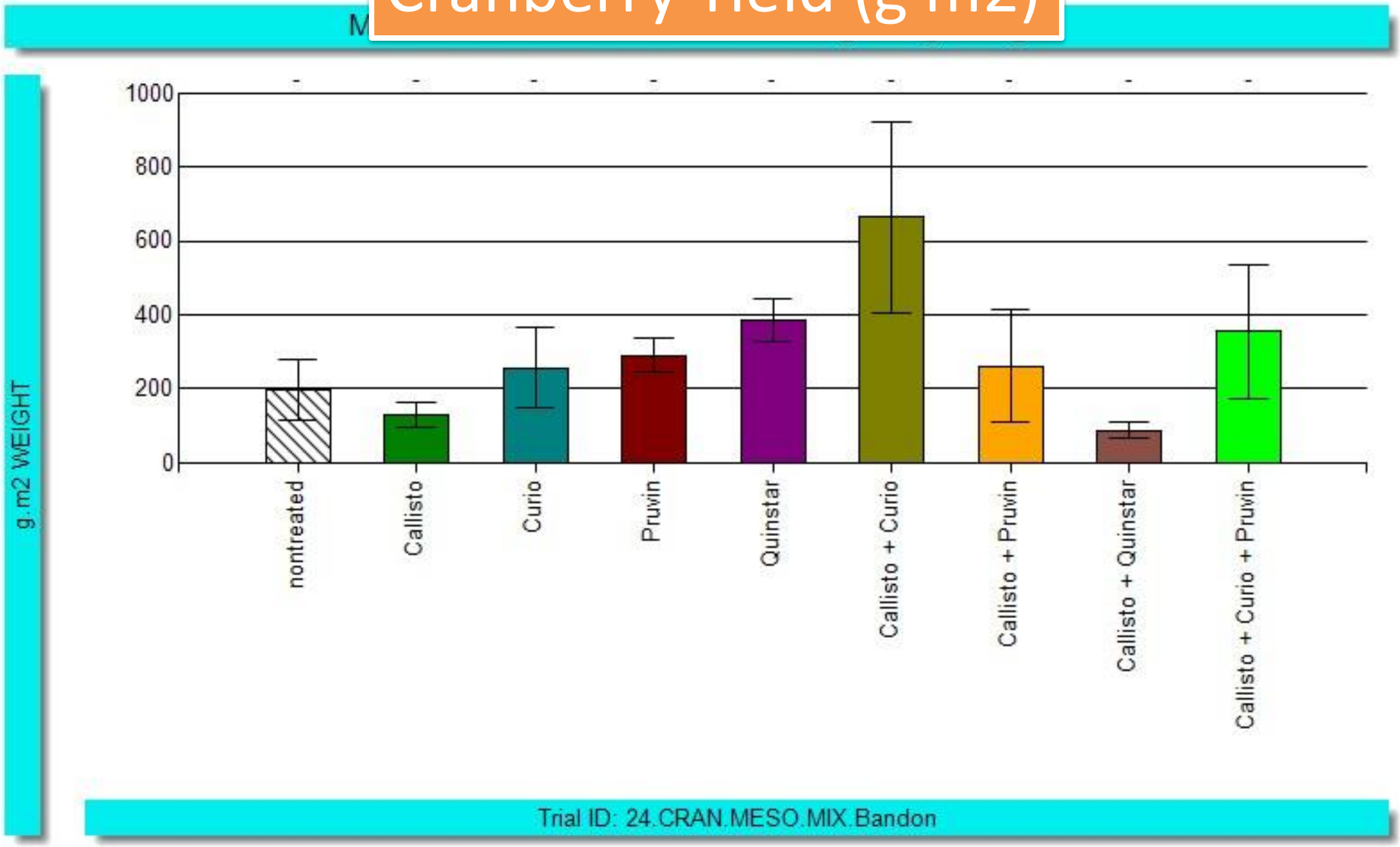
Plot View 162 Days after First Application

Nontreated

Pruvin 2 oz

Callisto + Pruvin +

Cranberry Yield (g m2)



Summary of Cranberry Response to Selected Herbicides

Active ingredient	Stage of application	Crop response	Status
pyroxasulfone	dormant	**Tolerant**	No registration
sulfentrazone	Dormant/ cabbage head	**Tolerant**	OR registration
flumioxazin	Dormant/ cabbage head	tolerant in dormant rates 2-4 oz	EPA review
pendimethalin	Dormant/ cabbage head	**Not tolerant**	Registration withdrawn
Copper chelate	In season	**No tolerant (high rates)**	Registered for disease management
Fluridone	dormant	Tolerant	registered
Tolpyralate	dormant	**Not tolerant**	Not registered

Condusions

- Fluridone (Brake On!) does not control slough sedge
- Pruvin and Callisto + Curio seem to suppress slough sedge
- Variability in yield might be related to weed competition
- Management of established perennials likely need multi-year approach

Acknowledgements

Oregon Cranberry Growers Association

Collaborator:

Seawind farms