Vidalia Onion Crop Update

February 13, 2025

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Welcome

- Please Sign In
- Pesticide Credits Available If Needed- GA Private and Commercial
- Darin Singleton – Miller Chemical is providing lunch today

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Irrigation Damage Survey
Hurricane Helene

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Today's Agenda

- Laser Weeding Survey – Dr. Chin-Ling Lee and Dr. Ginger Orton
- Crop Update – Chris Tyson
- Disease Update – Dr. Bhabesh Dutta
- Lunch/Sponsor Update – Darin Singleton
- Variety Trial Tour – weather permitting

Grower Survey
Weed Control

- Dr. Chin-Ling Lee
- Dr. Ginger Orton
- 1 person per farm operation
- Gift Cards for participants

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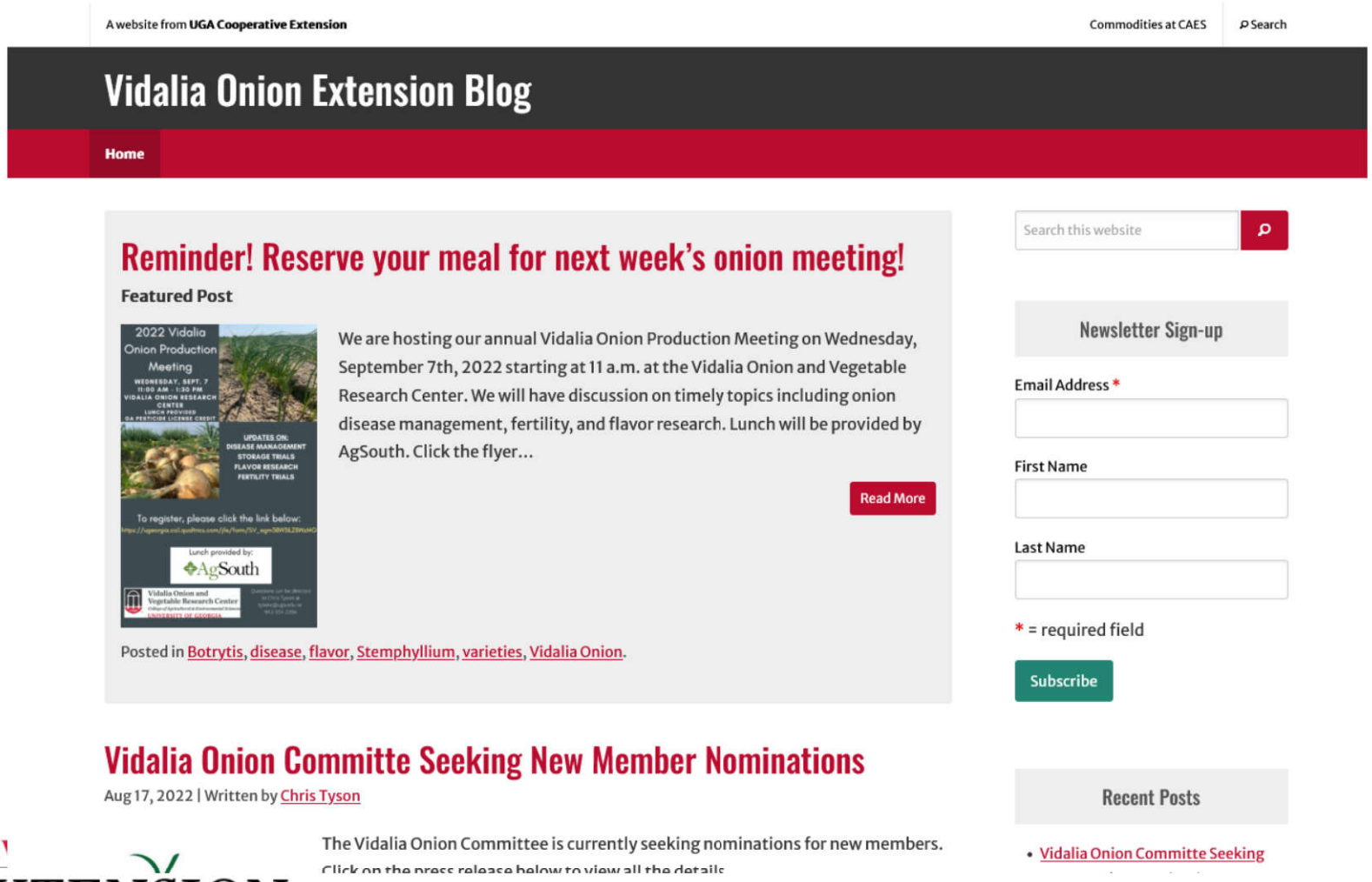
Vidalia Onion Extension Blog

https://site.extension.uga.edu/vidaliaonion/



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SPOTLIGHT ON OUR NEW STAFF

Eric Melby
VOVRC Farm Manager

(334)379-3726• Eric.Melby@uga.edu

Eric comes to Extension with a plant pathology background. He most recently worked as a general assistant for a Syngenta research farm and previously as a research assistant for the Auburn University Plant Diagnostic Lab. He looks forward to using his experience to support the Vidalia Onion and Vegetable Research Center.

Eric began his new role on October 1st , 2024.

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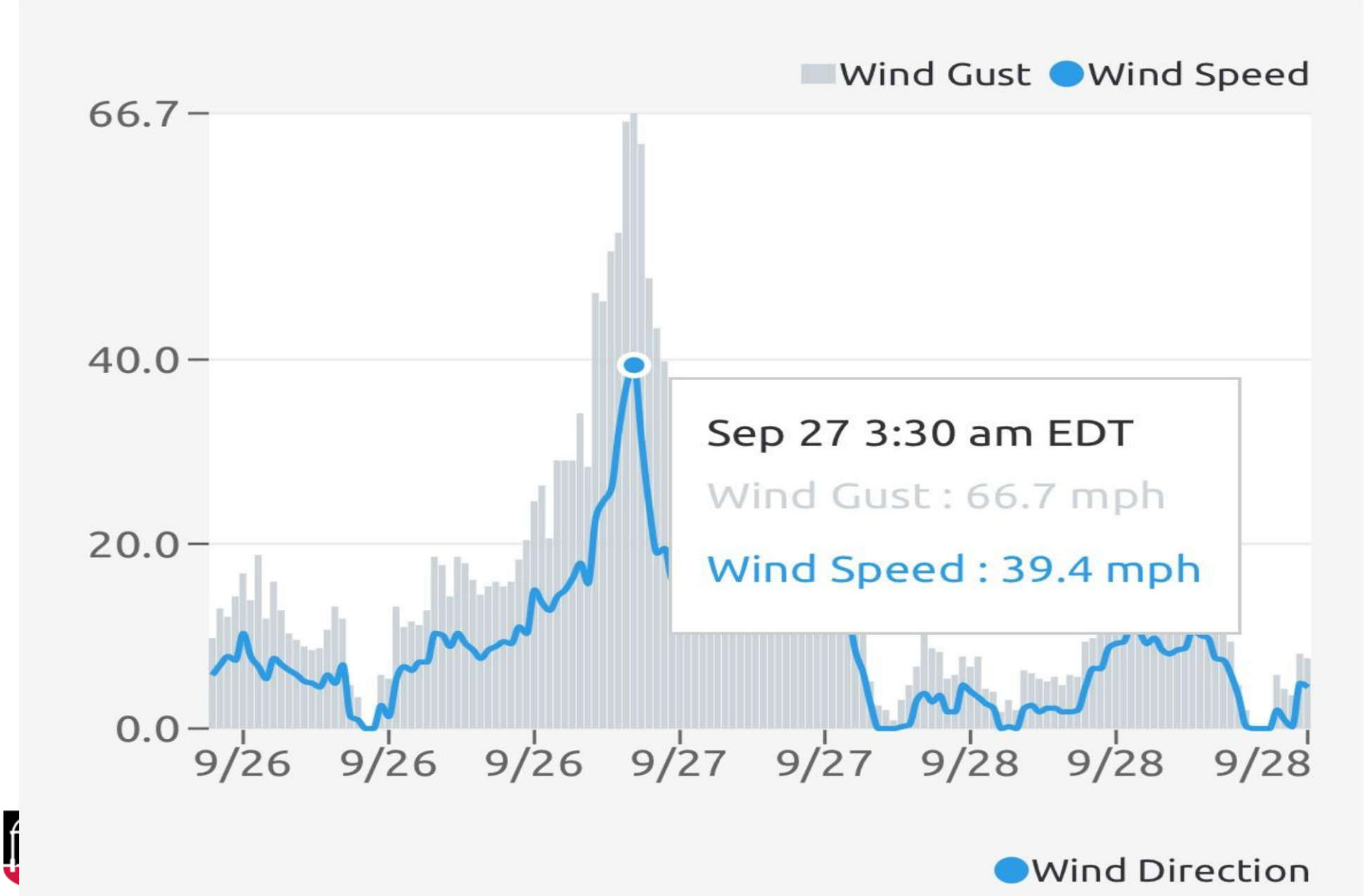
The Season So Far…….



Hurricane Helene – Early Sept planted beds

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Hurricane Helene—Beds planted the week of Sept. 16-20

Hurricane Helene- beds planted Sept. 23rd-picture taken Oct. 1st.

Hurricane Helene

- Early September Planted Beds suffered some injury from wind, rain, sand – some stand loss (5-20 %)

Mid Sept (16-20) planted beds were hit the hardest, just emerging and very tender as storm passed over (40-80% stand losses)

Beds planted but not emerged faired ok

Estimate that a total of 30% of plants were lost, that were planted at that time

Most folks planted additional seedbeds after the storm to try and make up for losses……if they were able to get seed.

November 6-8, 2024

Heavy Rains Across Area

This Occurred Just As Seedbeds were Getting Close to Being Ready to Plant

10+ inches of rain in some areas…..in a short period of time…..localized flooding in places…also warm temps….

Plants were laid over, made mowing beds very difficult

November Seedbed Issues

- Plants laid over, matted down, tangled up… hard to mow

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Then this…..

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Bacteria On Seedbeds

- Perfect Storm for Disease.....tangled plants, rain, cloudy days, warm weather, plant canopy not drying during the day
- All samples were confirmed as Pantoea ananatis.....AKA Center Rot pathogen
- Xanthomonas is a possibility during this time also.....
- Question: Are you using Lifegard on beds? Can it help with Pantoea infections in seedbeds?
- This issue caused further stand losses

Transplanting 2024

- Some weather delays but went well for the most part
- Stand losses from Helene and seedbed disease translated into inconsistencies in plant size and some stand losses in transplanted fields.

Then this…..January 2025

Snow and Cold Weather in January

- Coldest temp recorded here at station was 20.3 degrees F, which occurred the day after the snow
- Snow likely provided some insulation from these temps
- 3-6 inches of snow
- However, frost/freezing temps still caused injury to foliage

Cold Injury

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Cold Injury

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Cold Injury Progression

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Cold Injury Progression

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Despite a small, damaged top…..good healthy root sytem

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Outside leaves yellow, dying, falling off plant…….

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Unexplained leaf yellowing…..

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Leaf yellowing/twisting…..some sample sent off for yellow bud…..

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Necrotic, dead leaf tissue….distorts leaf shape, also invites diseases like Stemphyllium

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Looking forward….

- Overall, I believe the plants we have are doing well considering all that they have had to go through this season.
- Good Potential
- Managing Botrytis and Stemphyllium will be very important
- Time to start protecting against Downy……..

Onion Downy Mildew History in Vidalia Onions

Year	Date Confirmed
2012	Early March
2013	April 11
2014	April 14
2015	April 20
2016	April 13
2017	Not Reported
2018	March 19
2019	February 28
2020	March 23
2021	Not Reported
2022	Not Reported
2023	March 2
2024	March 6

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Growing Degree Days (GDD 50F)

From November-15	To February-11	Total
2024	2025	456
2023	2024	423
2022	2023	539
2021	2022	454
50 <= Temp <= 90 °F		

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Growing Degree Days (GDD 50F)

From December-5	To February-11	Total
2024	2025	328
2023	2024	251
2022	2023	402
2021	2022	364
50 <= Temp <= 90 °F		

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Growing Degree Days (GDD 50F)

From February-1	To February-11	Total
2025	2025	136
2024	2024	36
2023	2023	86
2022	2022	38
50 <= Temp <= 90 °F		

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Growing Degree Days (GDD 50F)

- Some warm weather in late November
- Cold December and January
- If you planted Dec. 5th,
  - 70 days old
  - 40% of the heat units have accumulated in the last 10 days

Thrips Control

- When to spray?
- Threshold is 5 thrips per plant (avg), BUT:
- Prior research has shown that **spraying at avg 1 thrip per plant** can also be successful by reducing future populations and # spray trips across the field.
- Thrips control does influence center rot

Thrips Control- What to use? (Last season's prices)

- Radiant – need to use 8-10 oz, 4-5 days residual
- Exirel – 13.5-20.5 oz, 1+ week residual
- Torac – 24 oz, 1+ weeks residual
- Lannate- 1.5-3pts, No residual
- Pyrethroids (Mustang Maxx, Warrior) – Cheap, not much residual

- Pyrethroids only work on *Fusca* thrips. May be other types in your fields. Fusca accounted for ½ of population in 2019 trial.

Cold Injury and Maggots

- Onion Maggot
- Seedcorn Maggot—predominant species in south US
- If you see flies, most likely seedcorn maggot
- Follows injury from previous damage
- Pyrethroids are an option, check labels, bifenthrin is not labeled in onions.
- Injury/infestation early in season reduces risk of problem vs. later in season/close to harvest.

Interest in Direct Seeded

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Tried some pelleted seed

Had to get new plates for Monosem with bigger holes

Planted well, singulation was much better than my raw seed

Would like to try pelleted on a larger scale next season

Direct Seeded, Weed Control is still largest obstacle

- Loss of Dacthal
- Fumigated vs. Unfumigated
- 34,000 weeds per acre—primarily primrose

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To Manage Weeds in Seeded Onions

- We continue our search…any ideas?
- LaserWeeder (Justin Lenz, Carbon Robotics)
- Seeded & transplant

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Seeded Onion Treatments – Planted Oct 23

1. No weed control
2. LaserWeeder Nov 9, Nov 21, Dec 5, Jan 3
3. Herbicide program
4. Herbicide program + LaserWeeder

Herbicide Program
Dacthal 3 pt PRE
Dacthal 3 pt Flag
Prowl 2 pt 2 lf
Goal 4 F 0.75 oz 2 lf
Goal 4 F 0.75 oz 3 lf
Goal 4 F 8 oz 6 leaf
Prowl 12 oz 6 leaf

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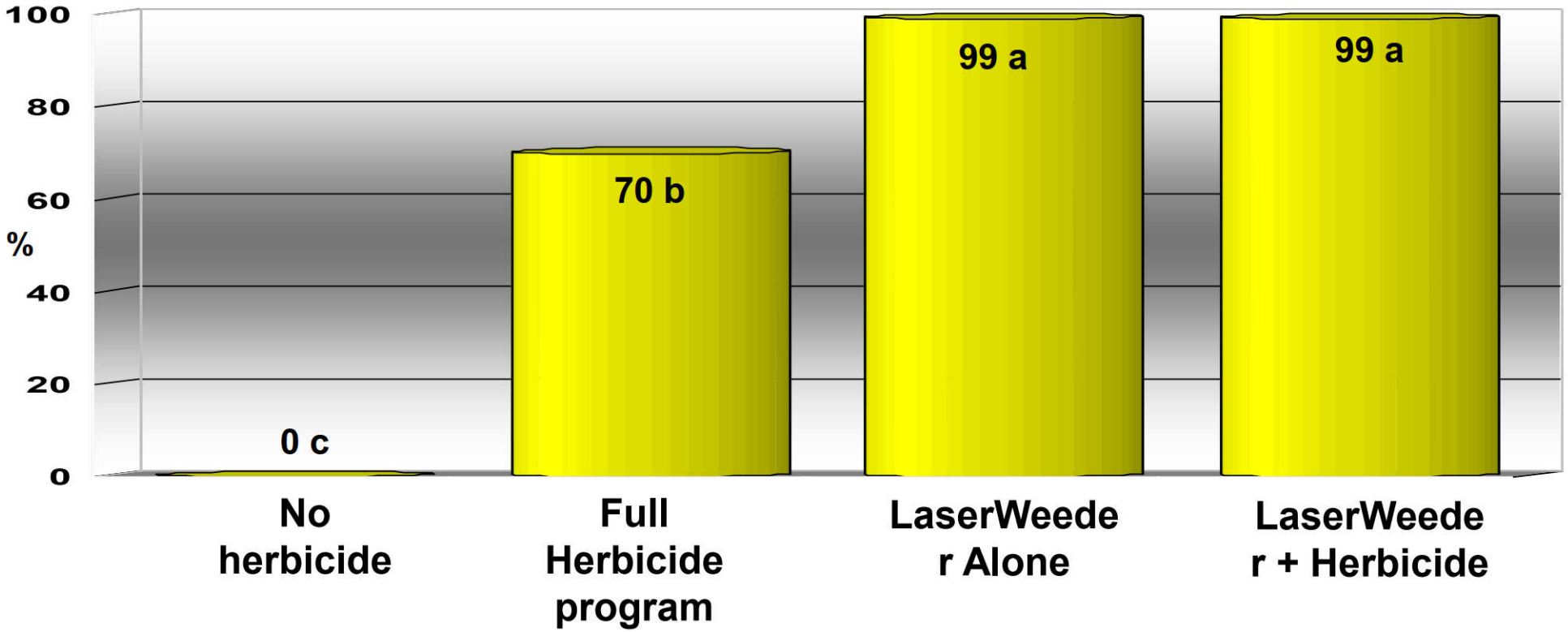
Percent Primrose Control (Seeded Onion)

February 20



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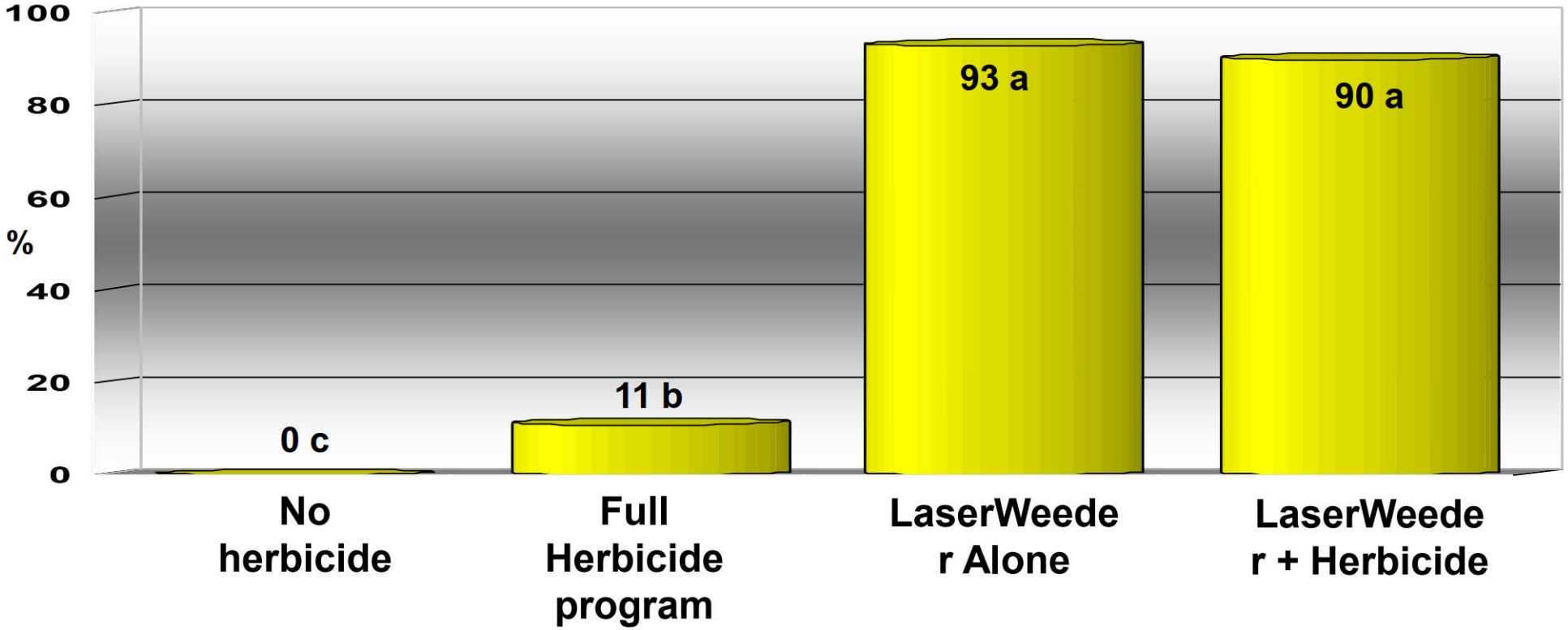
Percent Primrose Control (Seeded Onion)

Harvest – May 3

 # primrose/A: none = 71K; herbicide: 22.8K; LW: 816; LW + Herb: 181



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Onions Per Plot – Seeded Laser Weeder Exp. 2024

No weed control

Laser weeder

Herbicide program

Laser weeder + Herbicide program

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Seeded Onion Experiment – Conclusions


Photo = Chris Tyson

1. No program influenced plant stand
2. No injury from LaserWeeder
3. LaserWeeder controlled primrose, radish, swinecress, henbit
4. Compared to the herbicide program, average onion diameter & weight was <u>at least 39 and 68% greater</u> with LaserWeeder

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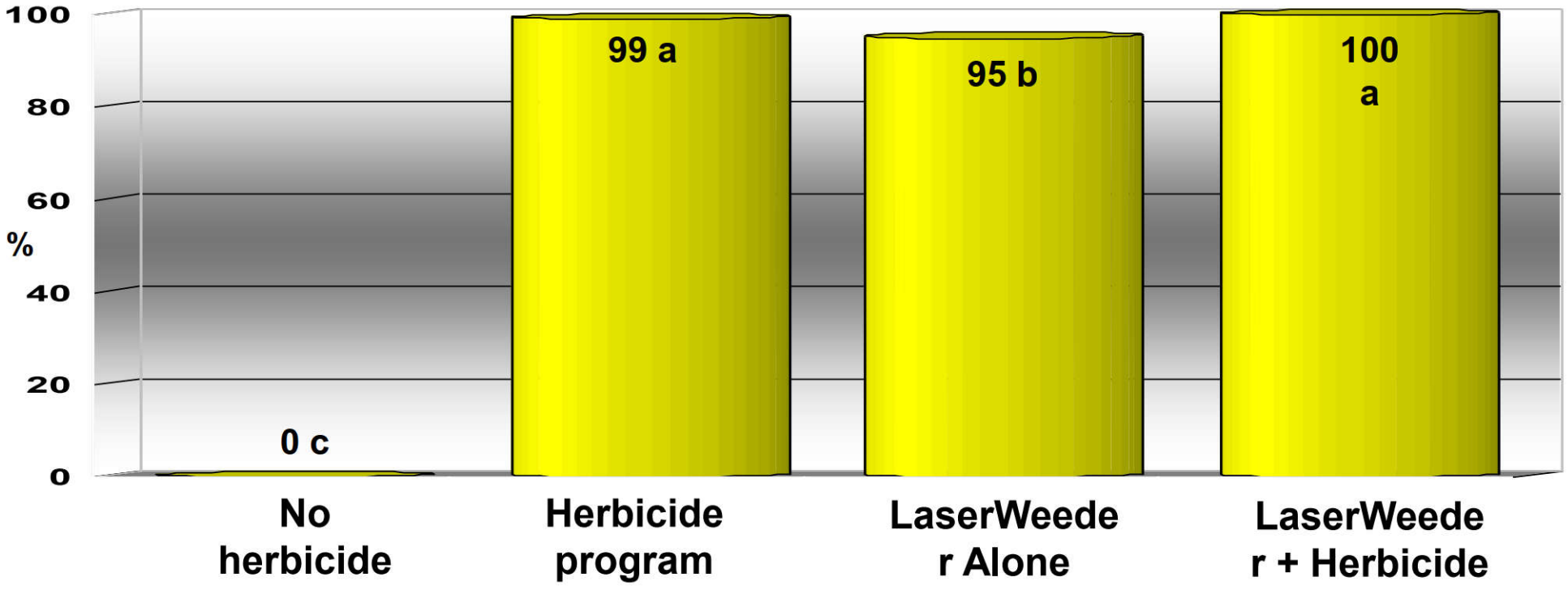
Percent Primrose Control (Transplant Onion)

Harvest



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Evaluating ARA EcoRobotix Sprayer

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2025 Variety Trial

- Planted Nov. 19
- 55 varieties
- 1200 lbs 5-10-15
- 1st application of Cal Nitrate yesterday (150 lbs)
- Weather permitting, walk through after meeting today

- Mark your calendars: Field Day is Thursday April 3rd

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