

Weedy Rice Management (continued)

Whitney Brim-DeForest

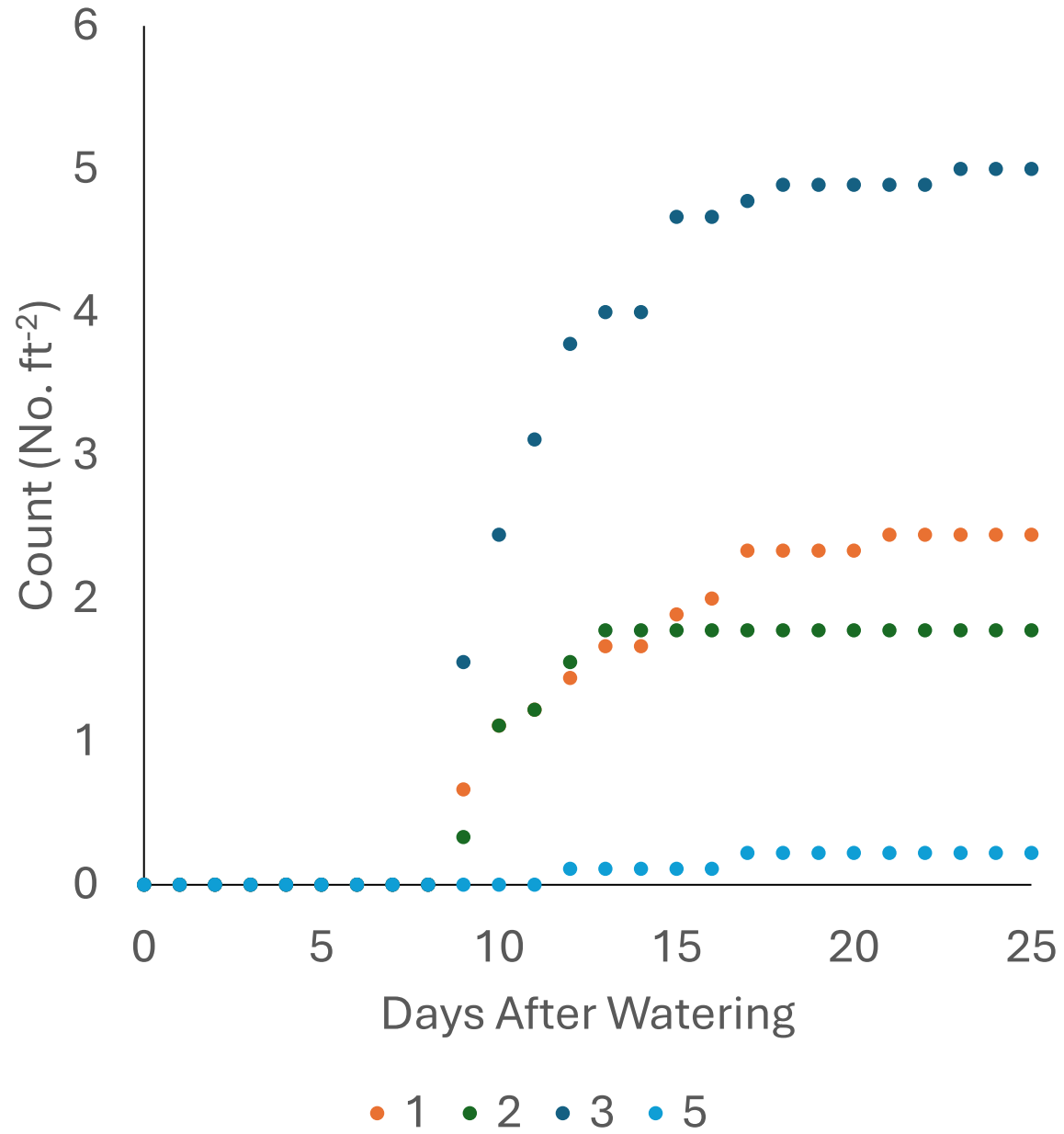
August 5, 2025



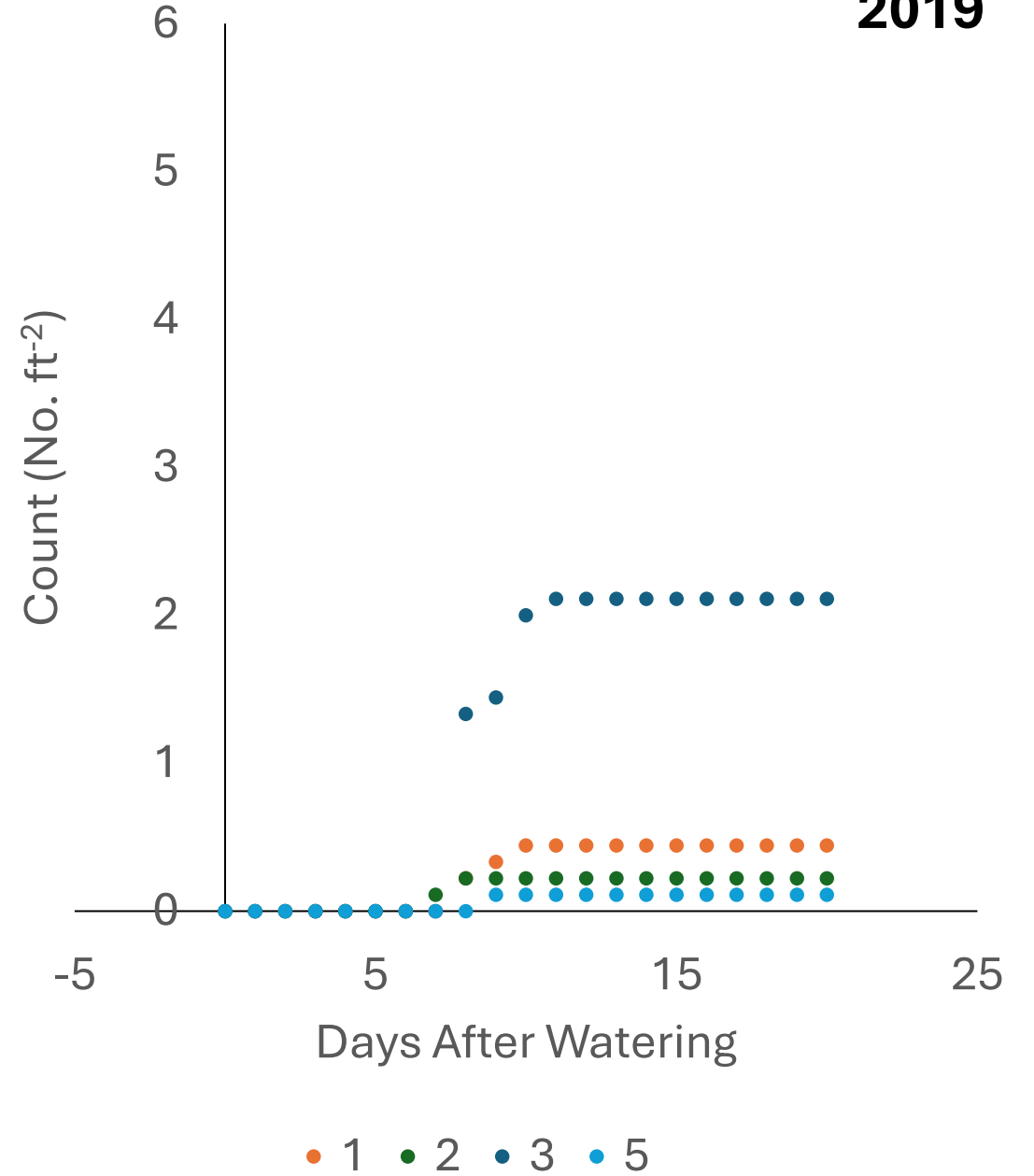
Weedy Rice Emergence

- Weedy rice emerges better under flushed conditions than under flooded conditions
- Some does emerge under flooded conditions
- To suppress weedy rice, flooding is better than flushing

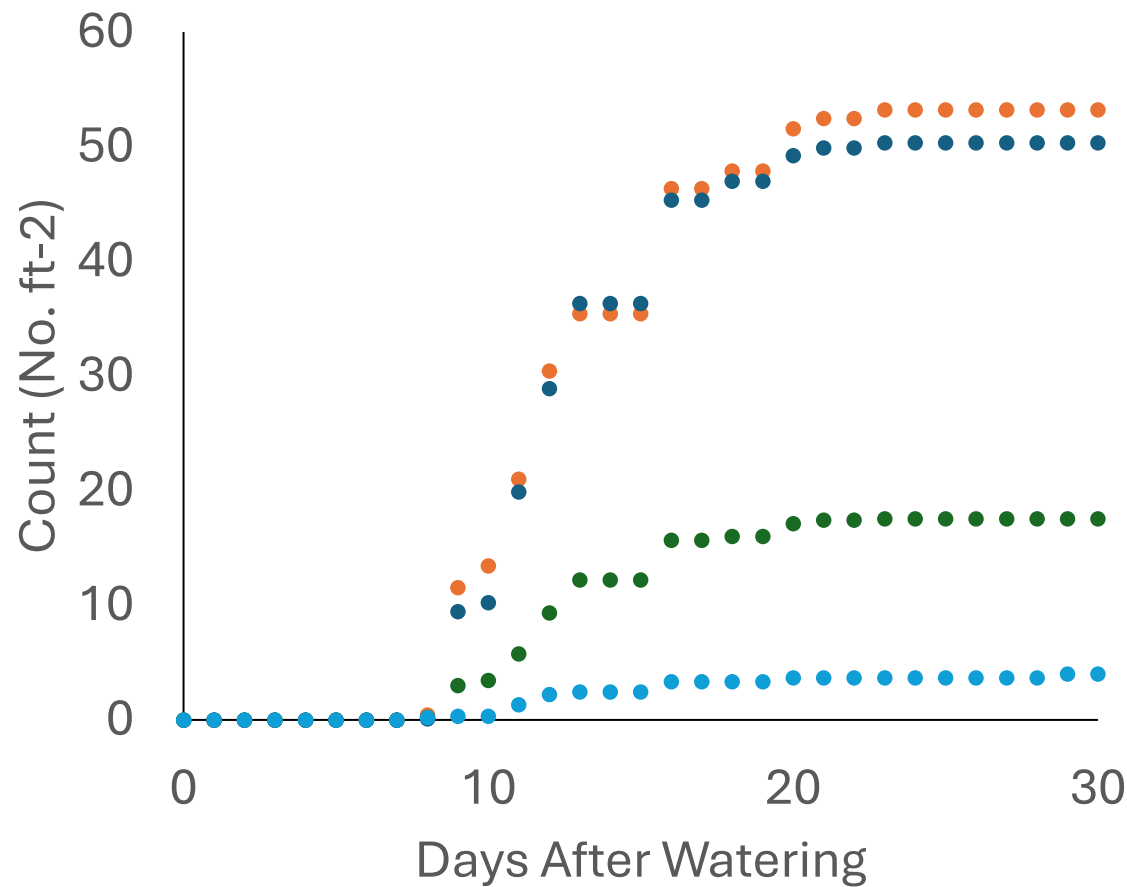
Flushed



Flood

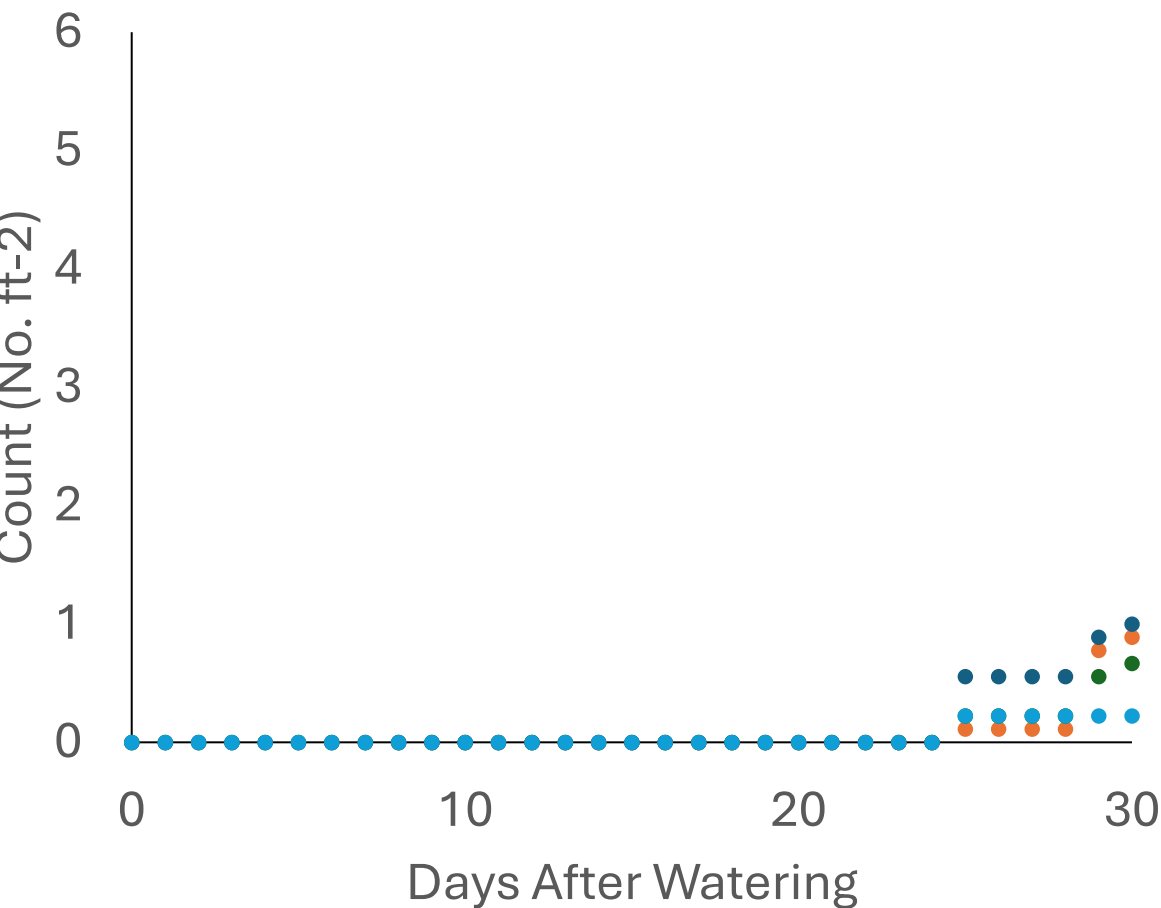


Flushed



- Biotype 1
- Biotype 2
- Biotype 3
- Biotype 5

Flood



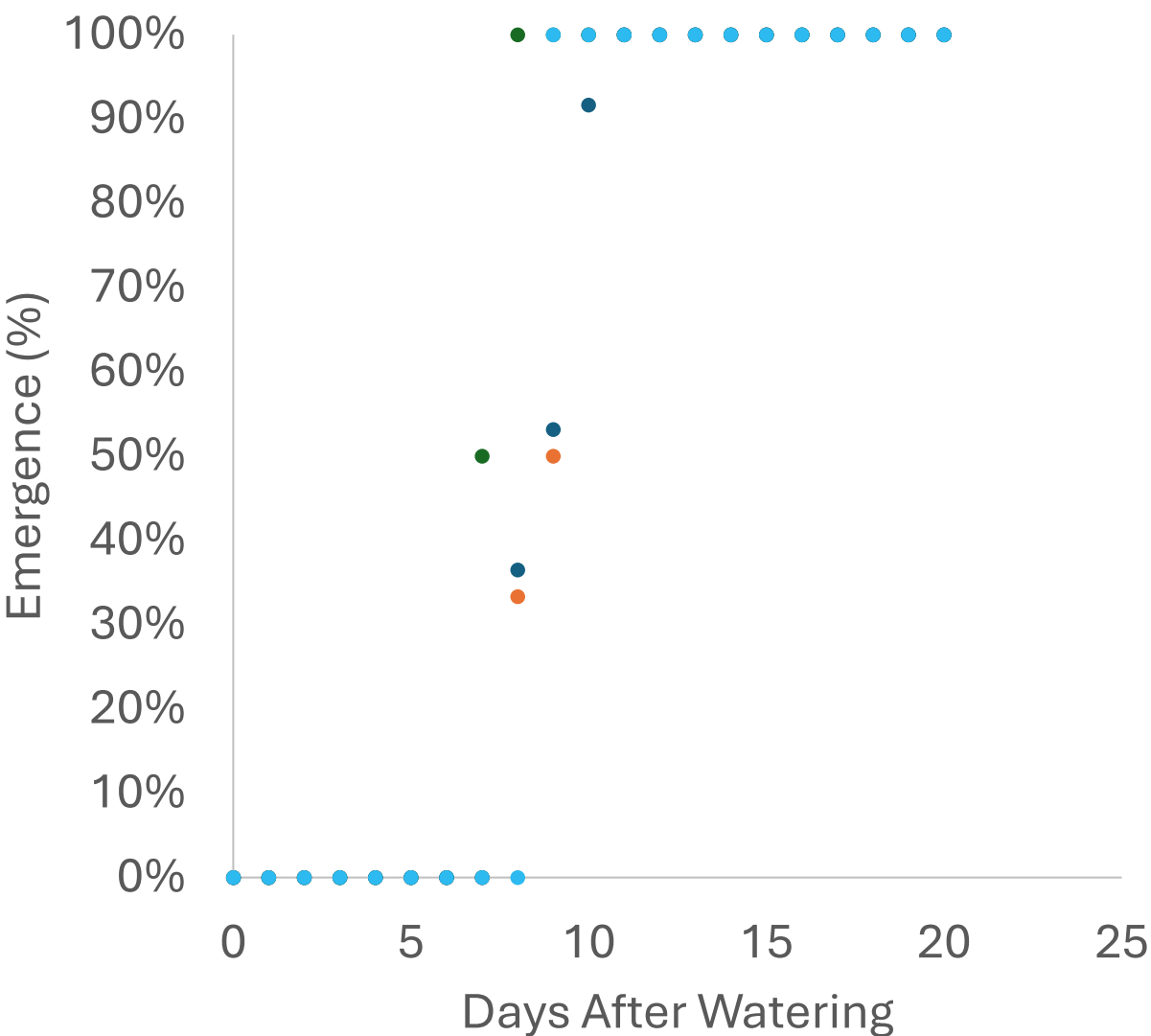
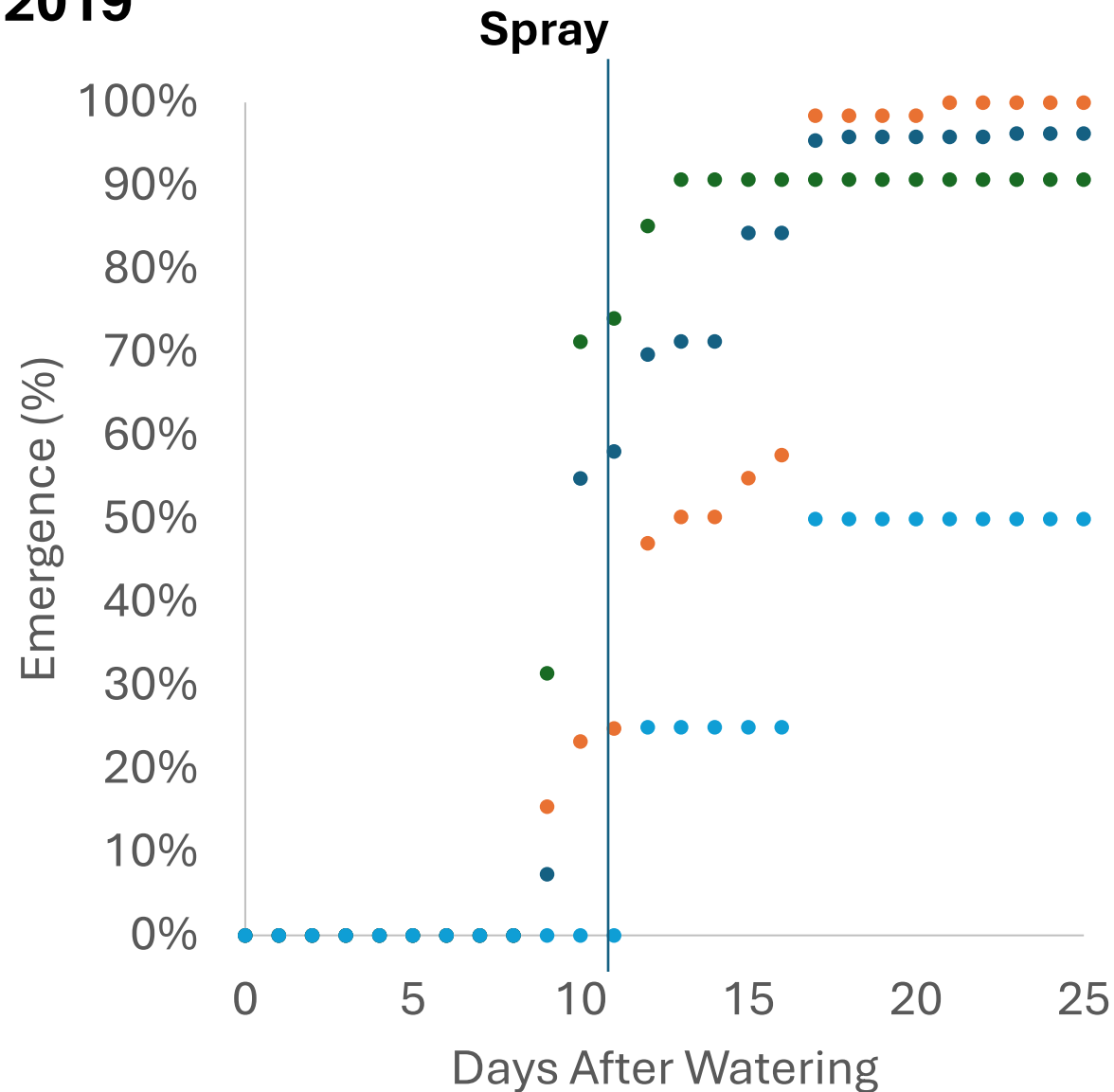
- Biotype 1
- Biotype 2
- Biotype 3
- Biotype 5

Stale Seedbed

- Spray glyphosate (or other non-selective herbicide) after flushing and allowing weedy rice to emerge
- Timing can be a bit difficult
- Based on Growing Degree Days (heat units which are biotype-specific)
- Tested in 2019-2020
- Timed the spray at 11 Days After Initial Flush



2019

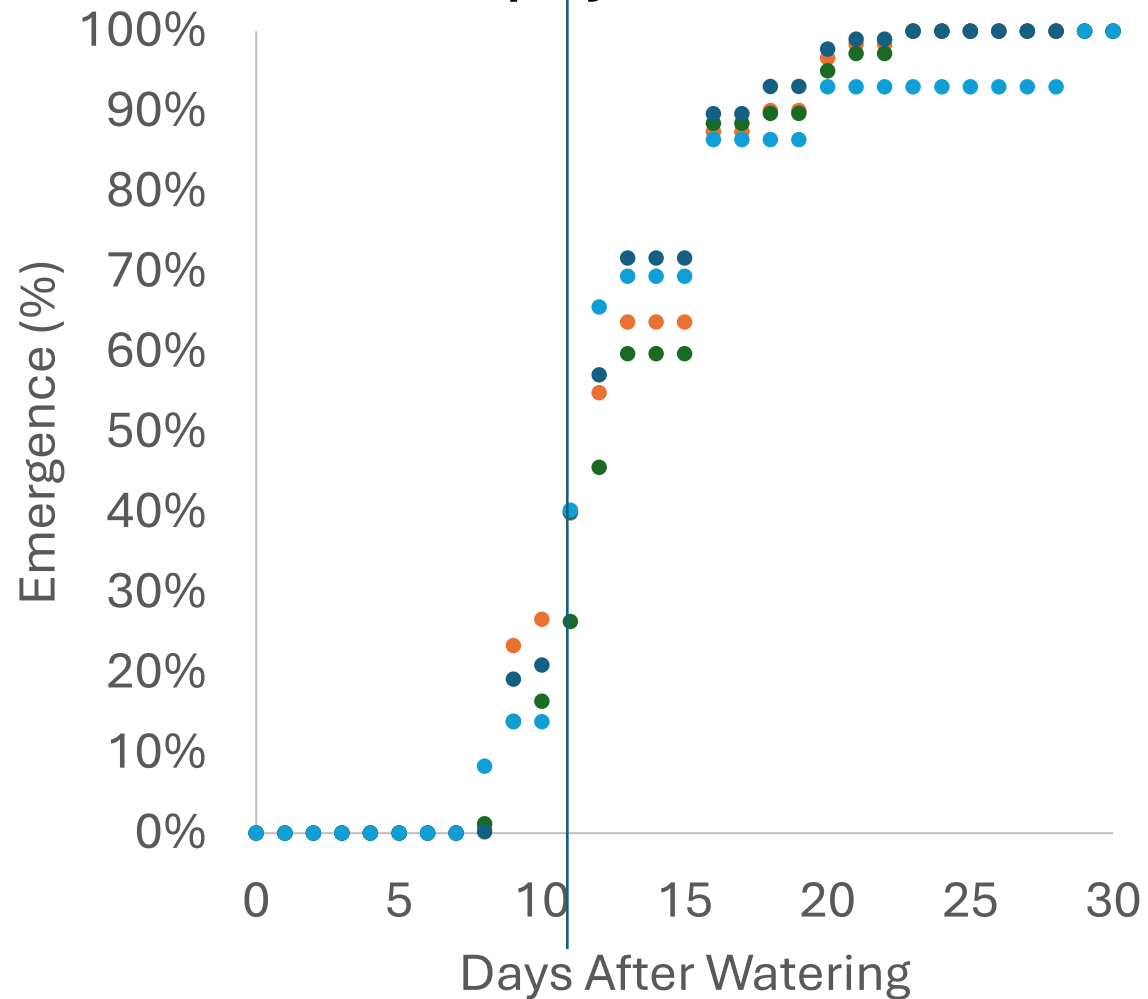


● Biotype 1 ● Biotype 2 ● Biotype 3 ● Biotype 5

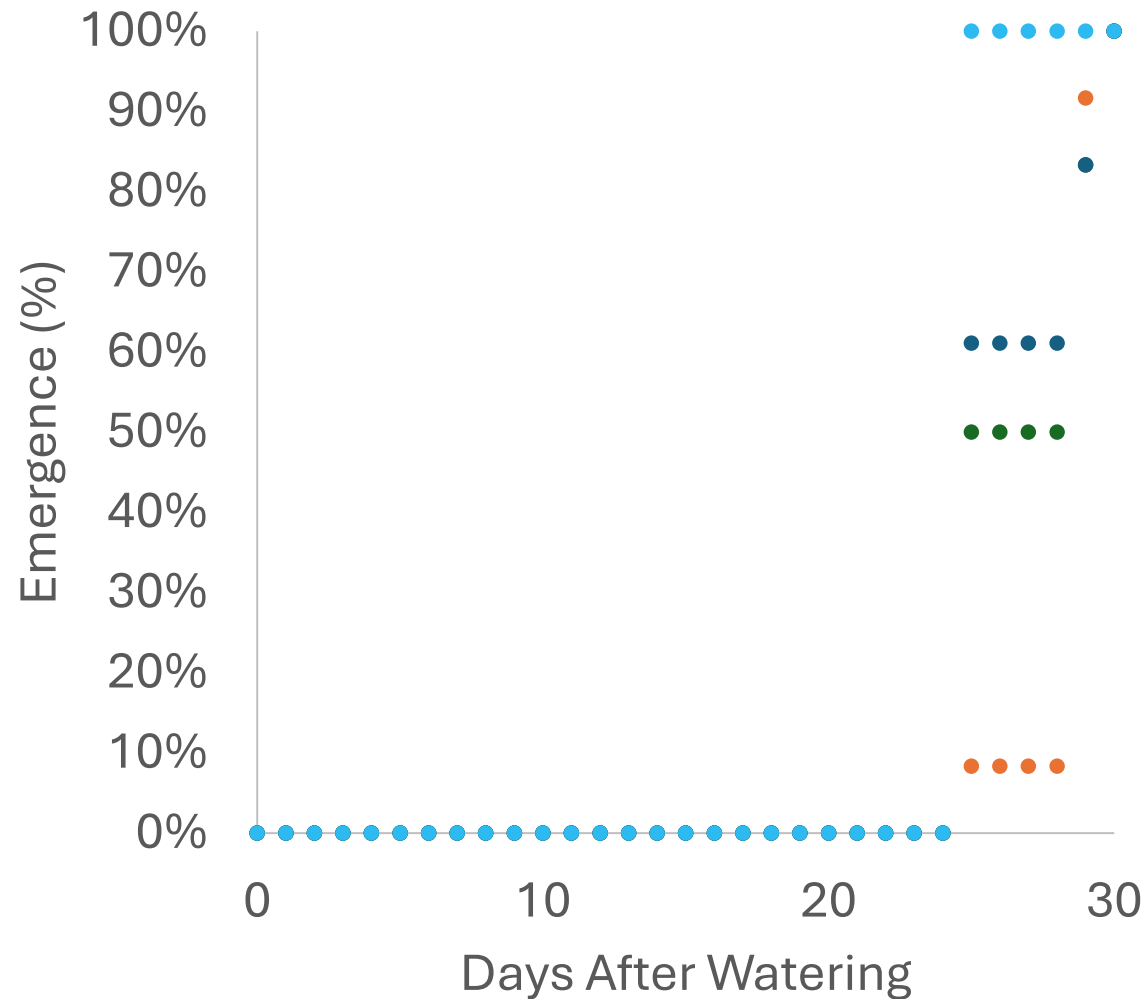
● Biotype 1 ● Biotype 2 ● Biotype 3 ● Biotype 5

2020

Spray



● Biotype 1 ● Biotype 2
● Biotype 3 ● Biotype 5



● Biotype 1 ● Biotype 2
● Biotype 3 ● Biotype 5

Stale seedbed

- 2019: Sprayed 11 days after field was flushed:
 - Type 1: 25% control
 - Type 2: 75% control
 - Type 3: 58% control
 - Type 5: 0% control
- 2020: Sprayed 11 days after field was flushed:
 - Type 1: 40% control
 - Type 2: 26% control
 - Type 3: 40% control
 - Type 5: 40% control

Fallow for Weedy Rice Management



Experimental Setup

- 2018: Established weedy rice populations in the field
 - Biotypes 1, 2, 3, and 5
- 2021-2022:
 - Managed Fallow: 1 flush (sprayed versus not-sprayed)
 - Managed Fallow: 2 flushes (sprayed versus not-sprayed)
 - Fallow (no water applied)
- 2023:
 - All treatments back into flooded rice

Managed fallow treatments

Treatment Dates	2021	2022
First Flush	May 27-28	May 27-28
1 st Spray	June 18	June 9
Second Flush	July 7	July 8-11
2 nd Spray	July 22	July 20

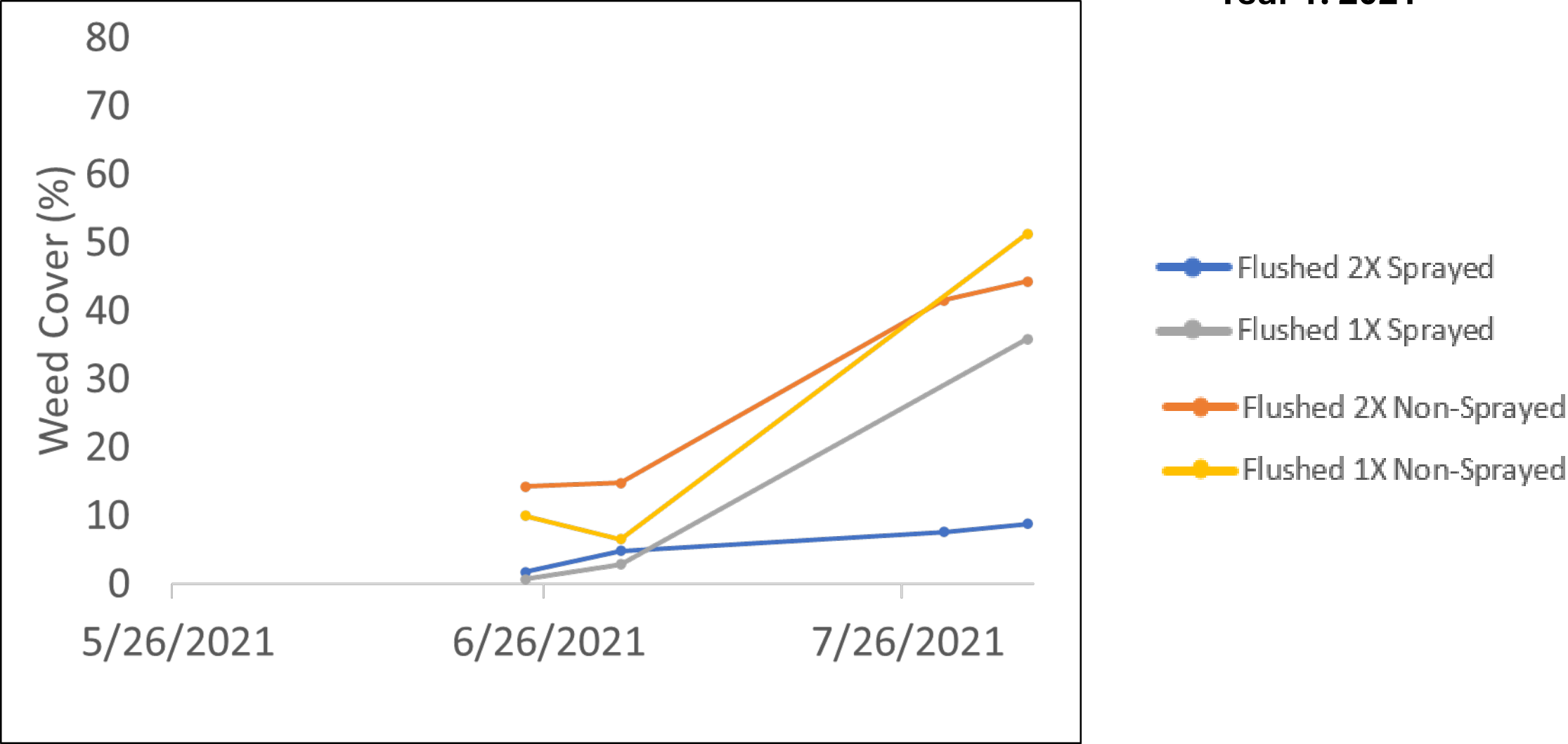
Weedy Rice 2021

	6/18/2021			7/22/2021		10/6/21-10/15/2021	
	Plants m ⁻²	SE		Plants m ⁻²	SE	Headed Plants m ⁻²	SE
2x Flush^a	329.09	87.66	Sprayed	0.00	0.00	0.00	0.00
			Non-sprayed	181.25	36.60	0.00	0.00
1x Flush^a	224.55	28.76	Sprayed	9.72	5.97	0.00	0.00
			Non-sprayed	54.17	20.83	0.00	0.00

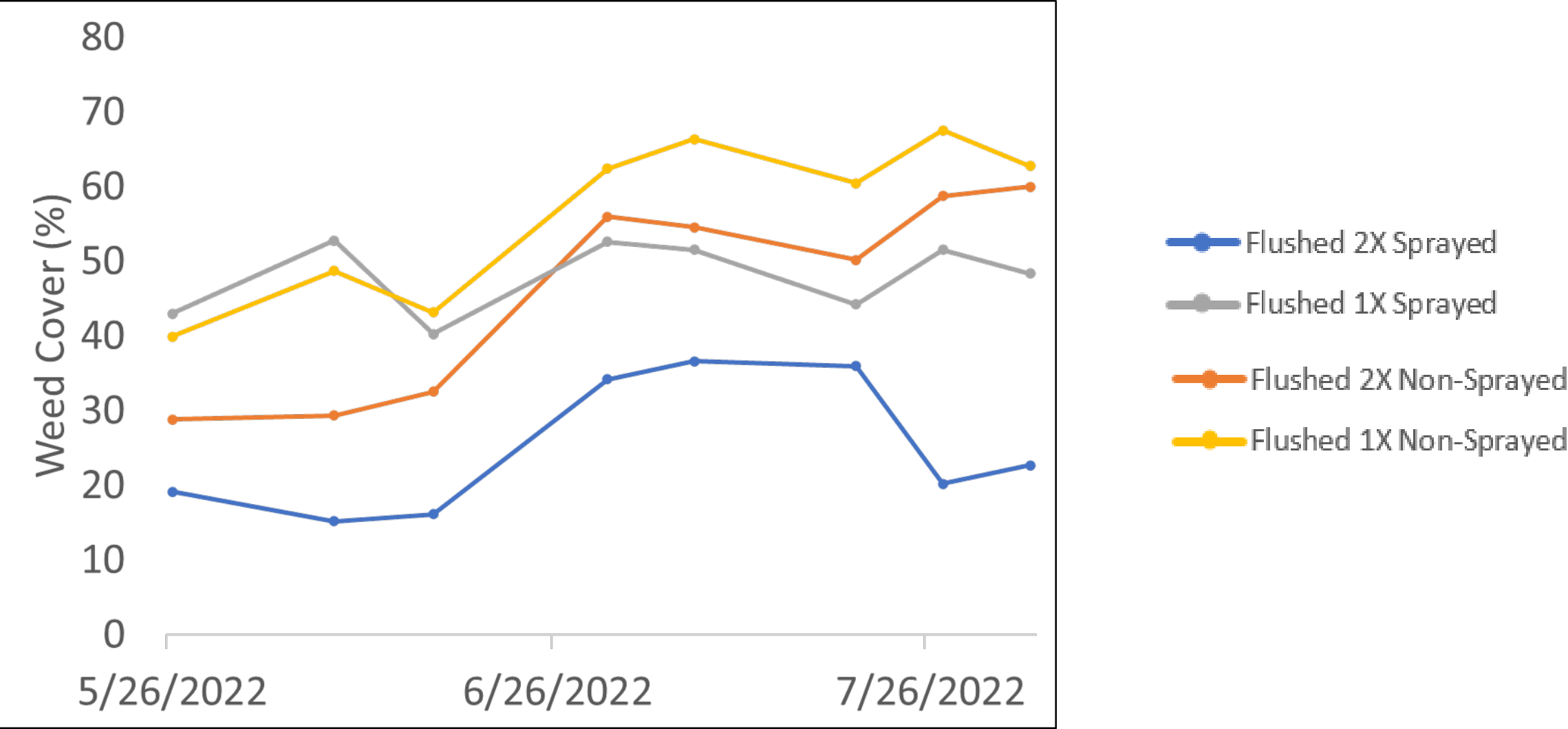
^a2x Flush: irrigated 5/27-28, 6/7, 7/7; sprayed 6/18, 7/22

^a1x Flush: irrigated 5/27-28, 6/7; sprayed 6/18

Year 1: 2021



Year 2: 2022



Results: 2021-2023

- No weeds of rice emerged under fallow treatment, including weedy rice (either Year 1 or Year 2)
- Weedy rice emerged under the 2 managed fallow treatments in Year 1, but not in Year 2
- Even without glyphosate, no weedy rice plants headed
 - Treatment idea: flush, no spray or tillage?
- 2023: Back into rice
 - No weedy rice emergence

Questions?