

Herbicide use with drip in cabbage, celery and cilantro

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The U.S. Environmental Protection Agency (EPA) issued an emergency order on August 7, 2024, to suspend the use of Dacthal (DCPA) in California.

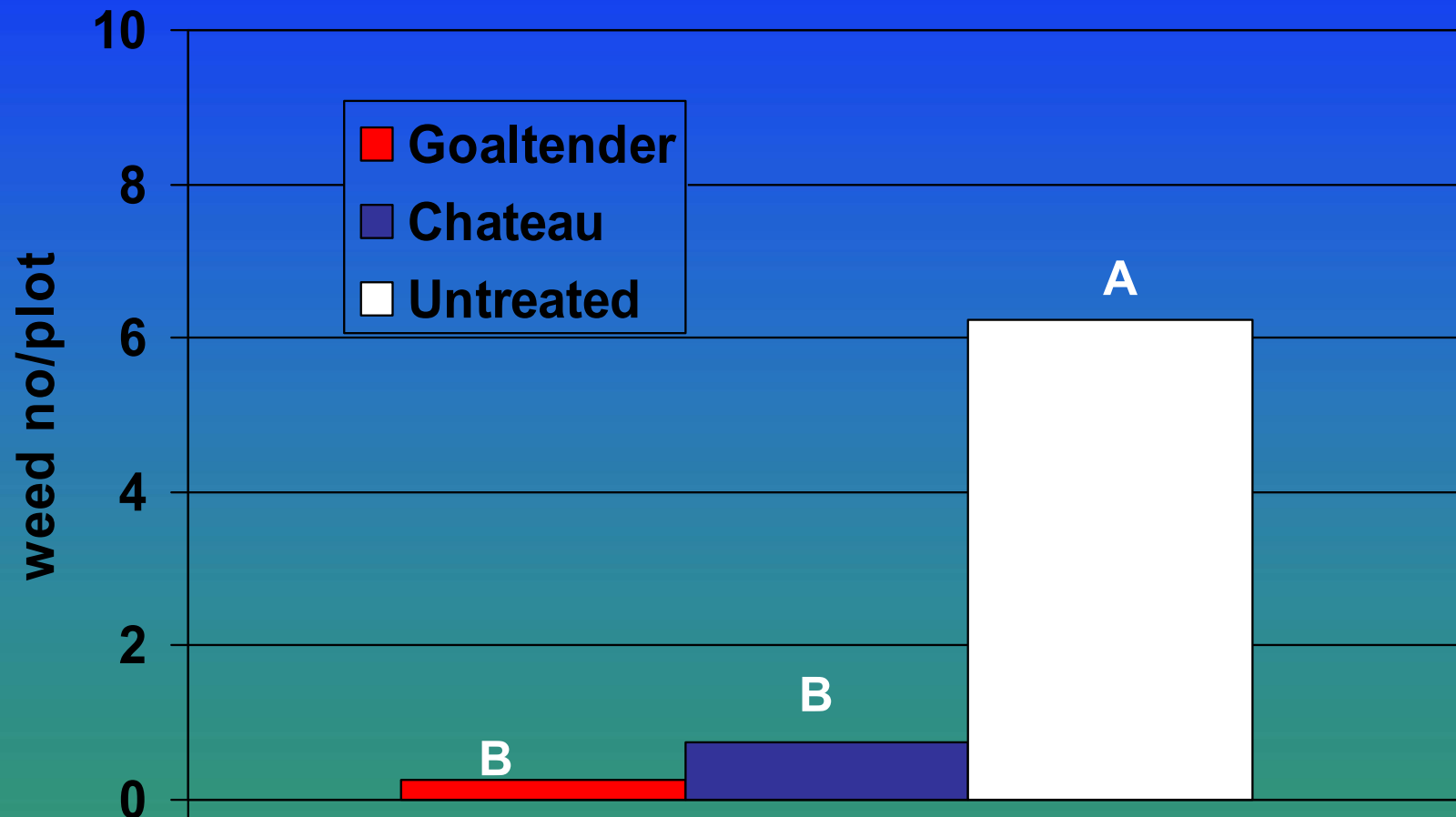
Pre-plant applied herbicides

- **Goaltender (oxyfluorfen) 0.25 lb a. i. /acre (1 pint)**
- **Chateau (flumioxazin) 0.063 lbs a. i. /acre**
- **(2 oz/acre of product)**

- **Application:**
 - Sprayed 1 day before planting to beds.**

- **Irrigation:**
 - Single drip line for 2 crop rows**

Weeds in cabbage, Jan 12



Weeds: sowthistle, mallow, goosefoot

**Injury to cabbage:
0 (none) to 10 (dead)**

Untreated = Chateau = Goaltender

<1

**Number of marketable heads:
Similar in all treatments**

Celery:

- Goaltender (oxyfluorfen) 0.25 lb a. i. /acre
- Chateau (flumioxazin) 0.063 lbs a. i. /acre
- **Spray Application 1 day before planting :**
 - to pre-irrigated beds
 - to dry beds
- **Irrigation:** single drip line for 2 crop rows

Pre-irrigated beds before planting



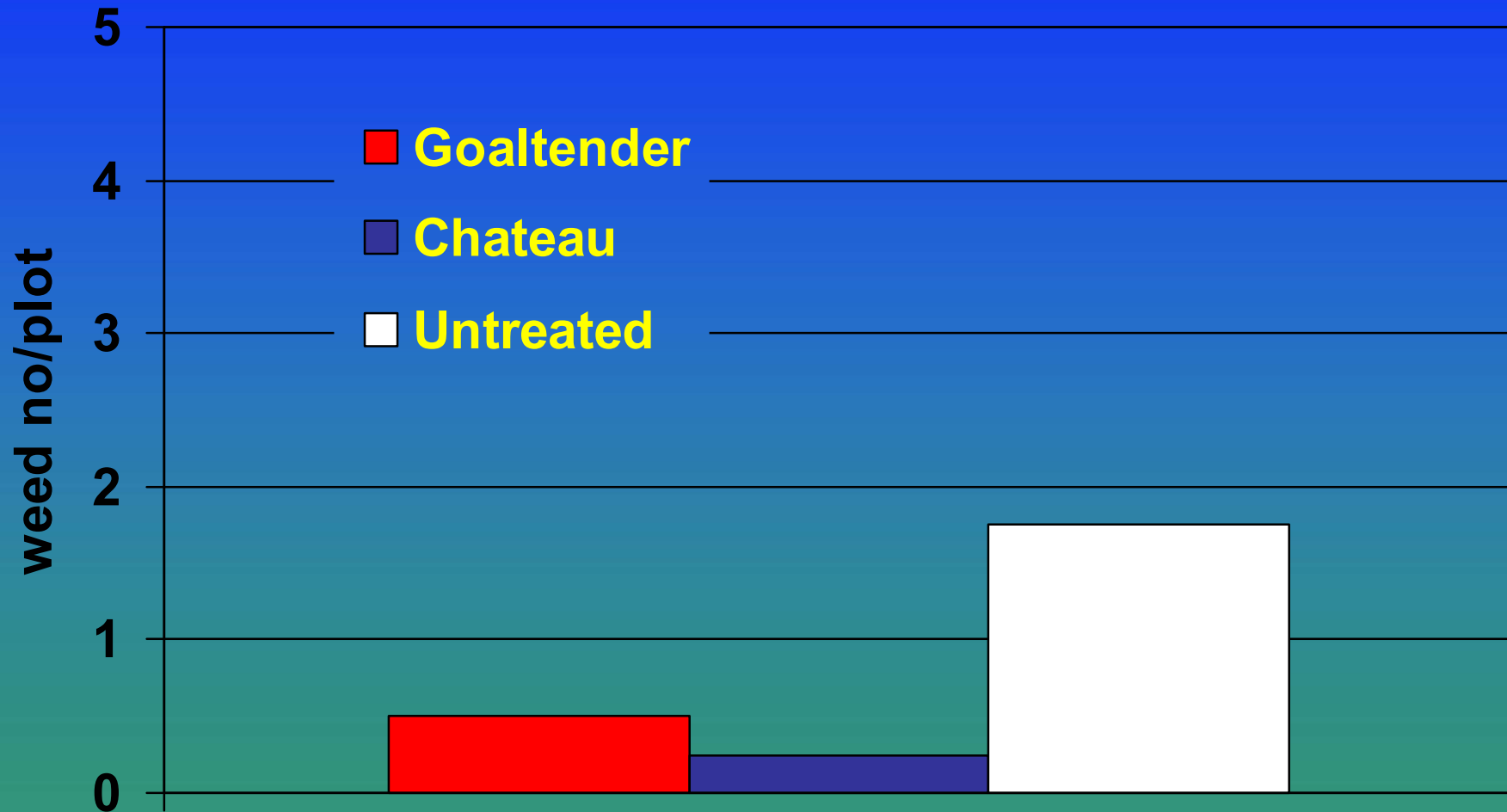
Dry beds before drip installation and planting





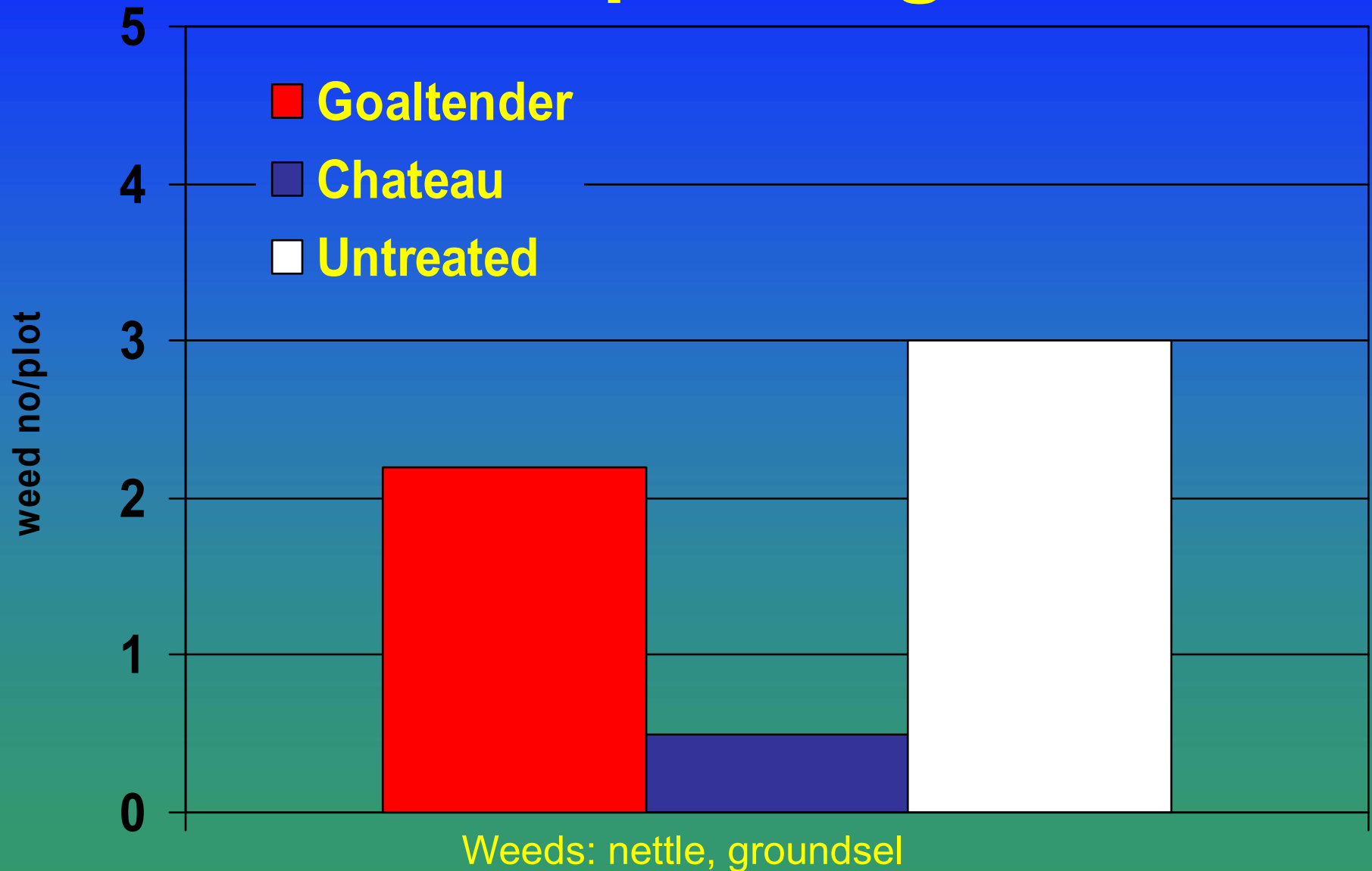
Results: Oxnard

Weeds in celery: pre-irrigated beds, 2 weeks after planting



Weeds: nettle, groundsel

Weeds in celery: dry beds, 2 wks after planting



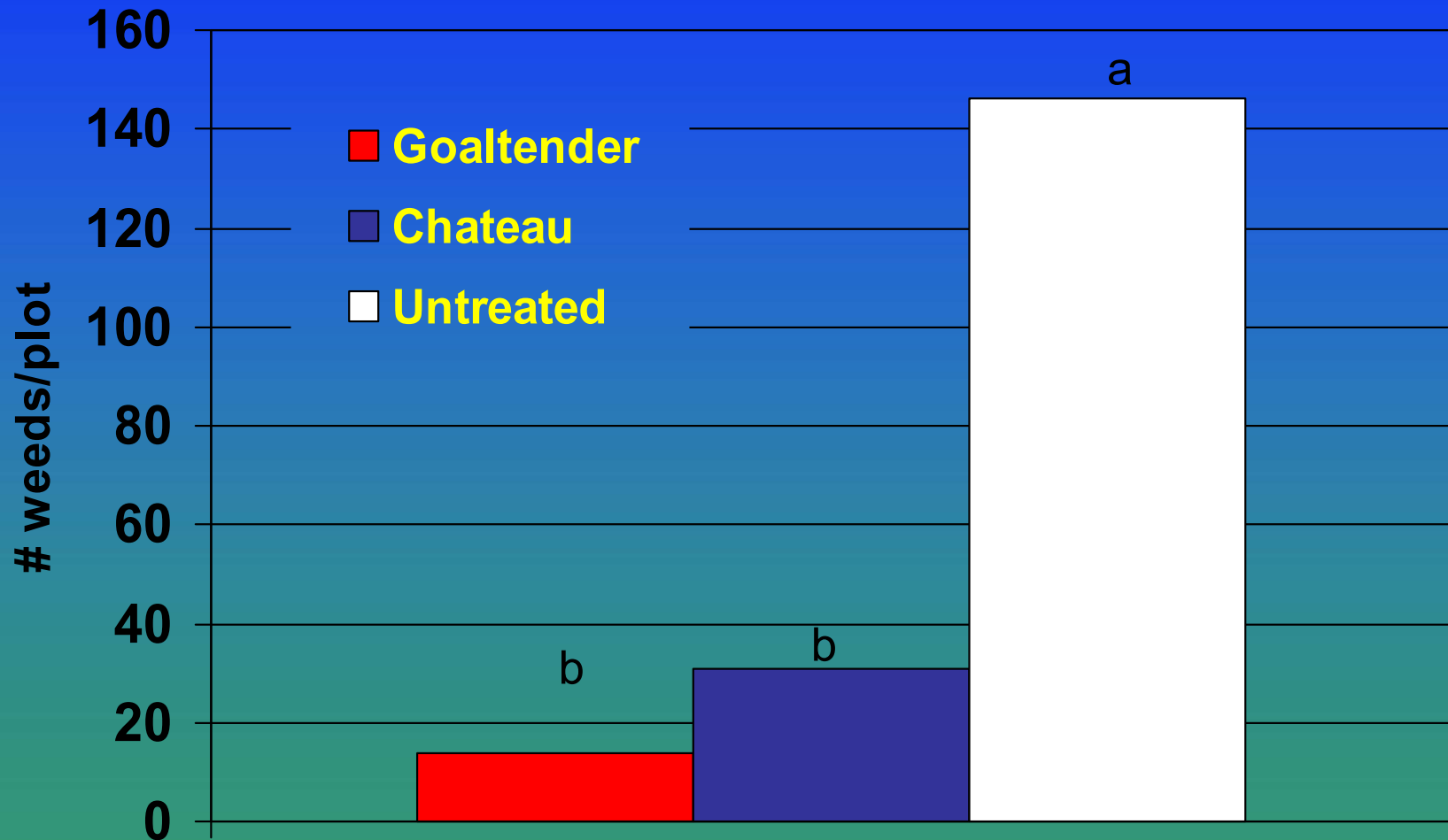
**Injury to celery:
0 (none) to 10 (dead)**

Untreated = Chateau = Goaltender

<1

Results: Santa Paula

Weeds in celery: pre-irrigated beds, 2 weeks after planting



Weeds: goosefoot, mustards, nettle

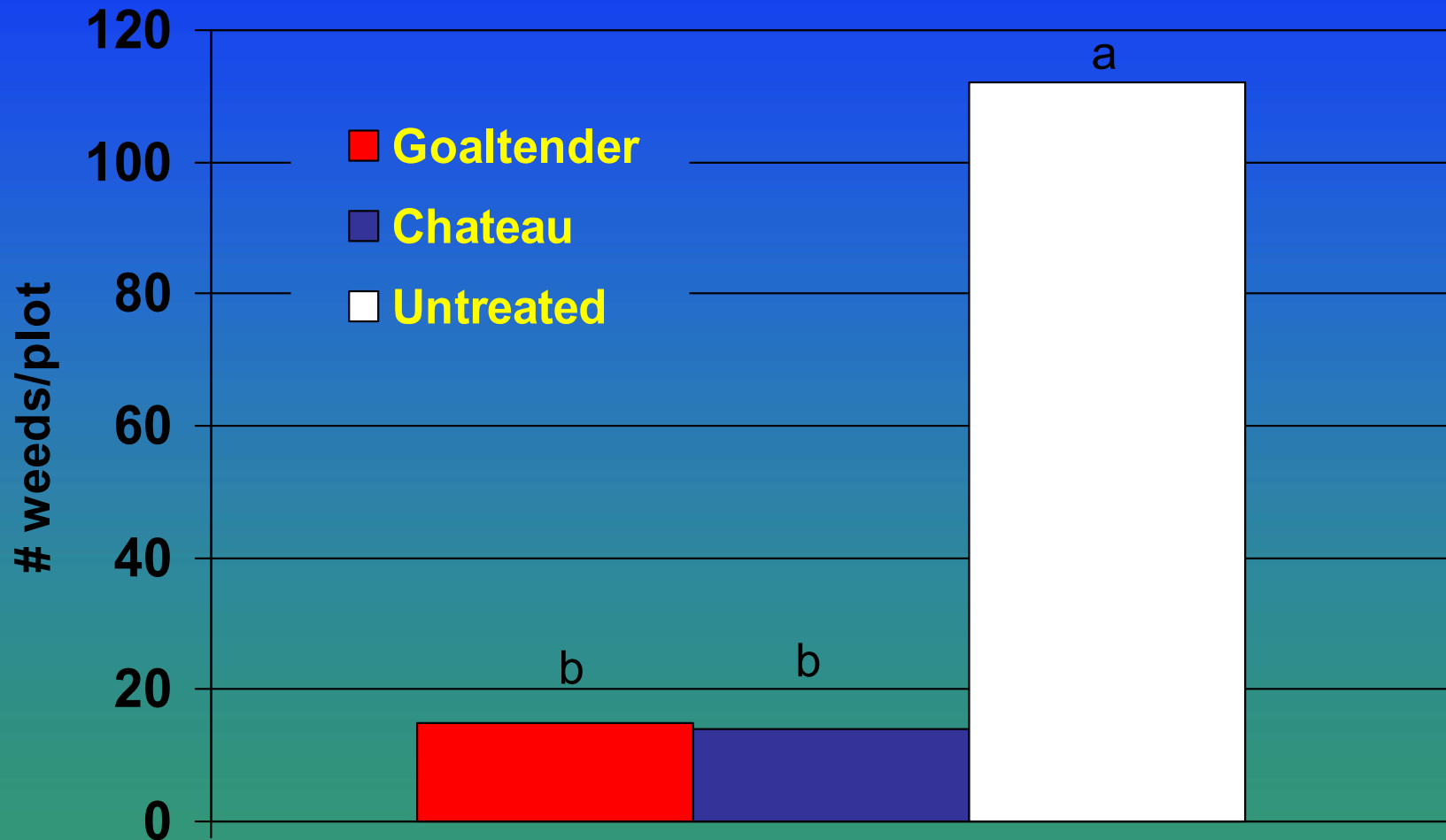
Pre-irrigated beds: Chateau vs Untreated



Pre-irrigated beds: GoalTender vs Untreated



Weeds in celery: dry beds, 2 weeks after planting



Weeds: goosefoot, mustards, nettle

Dry beds: Chateau vs Untreated



Dry beds: GoalTender vs Untreated



Injury to celery: 0 (none) to 10 (dead)

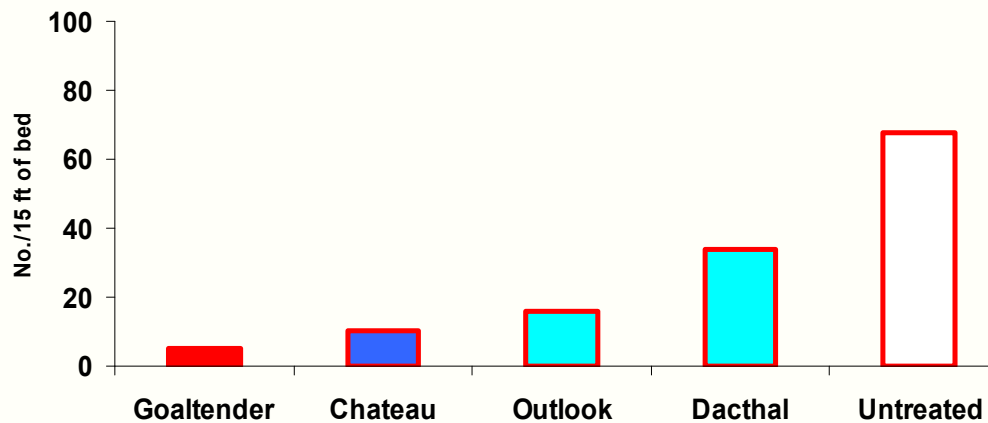
Untreated = Chateau = Goaltender

Pre-irrigated	1.5	1.7	1.6
Dry	2.4	2.5	2.1

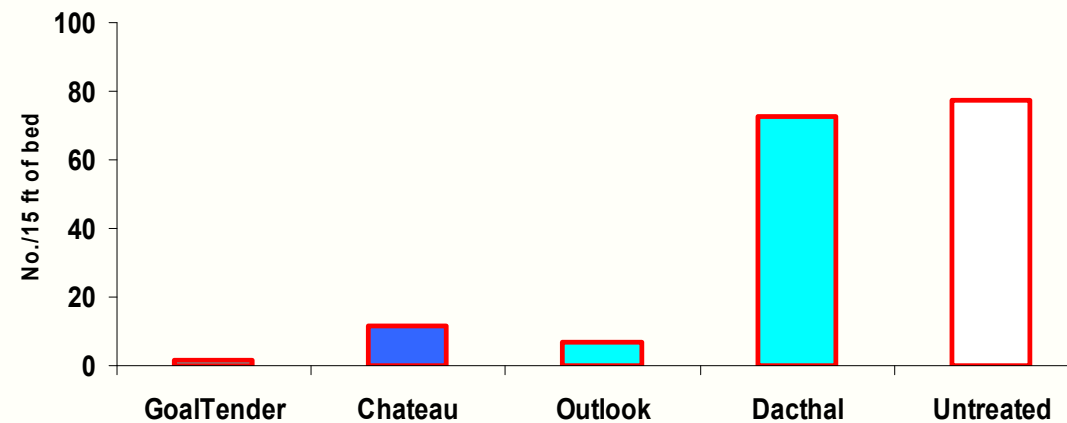
NO SIGNIFICANT INJURY

How does this compare to sprinkler activation?

BROCCOLI: Total weed number

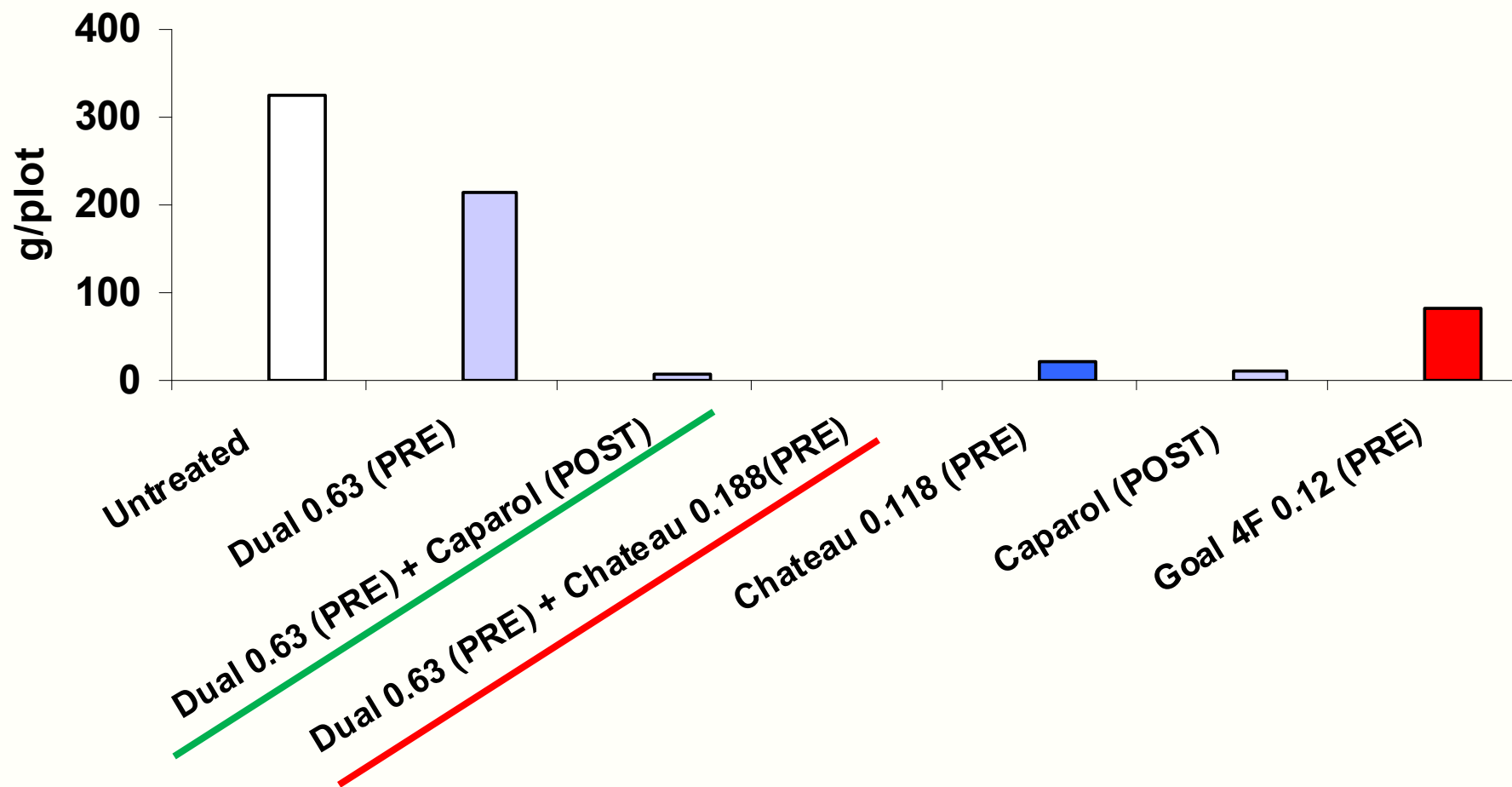


CABBAGE: Total weed number



How does this compare to sprinkler activation?

CELERY: Total weed biomass



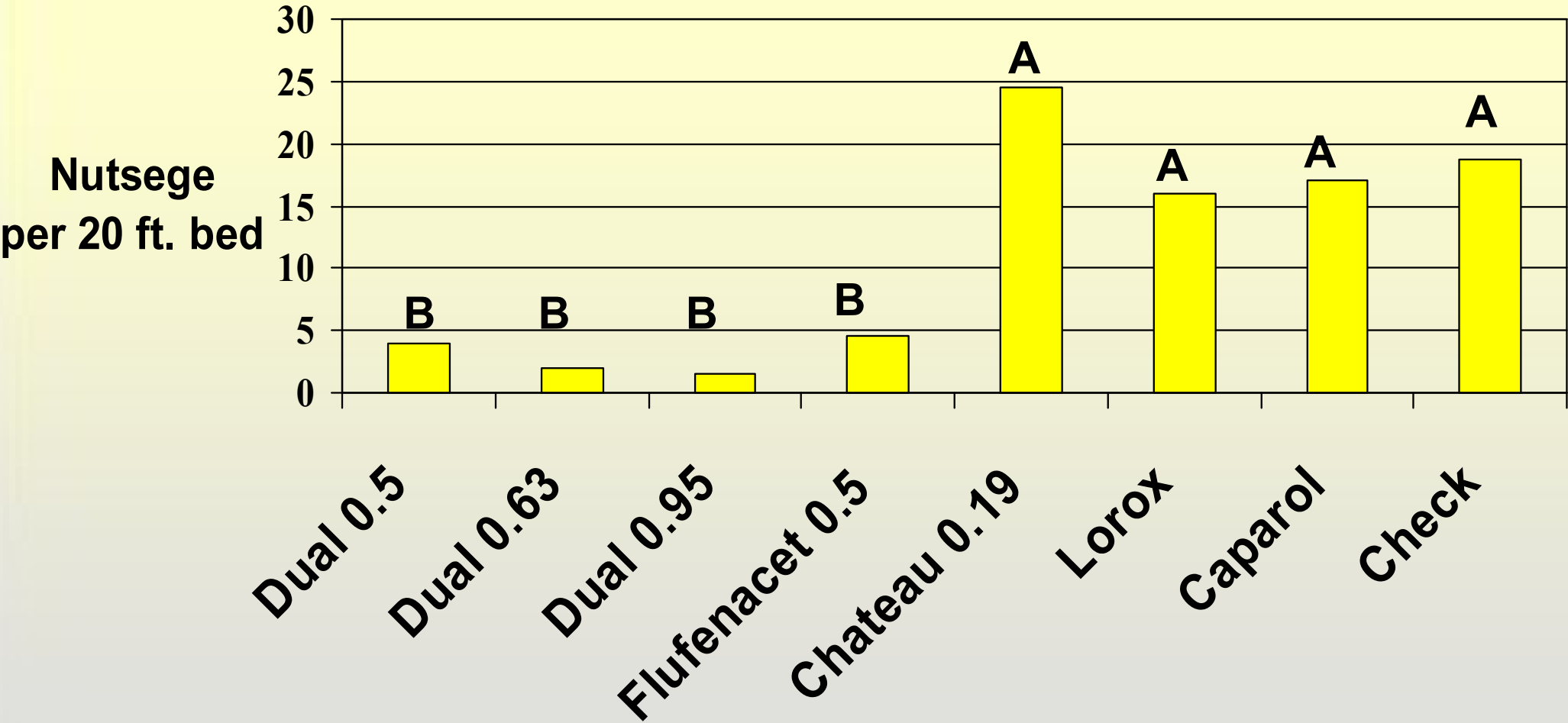
Summary: drip activation

- Pre-wetted and dry beds :
effective and non-injurious
- Goaltender – available, **Chateau – ?**

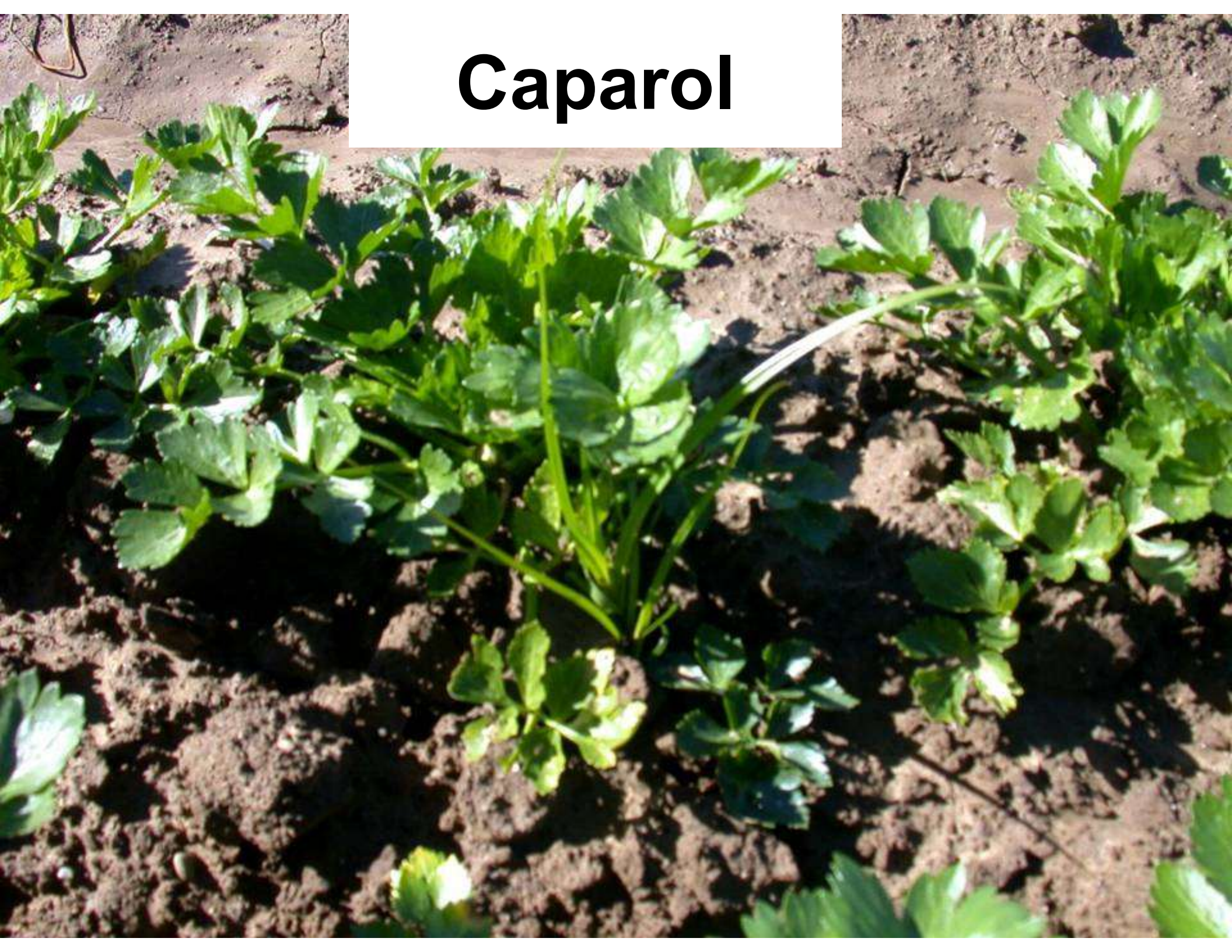
A photograph of a celery field. The plants are arranged in neat rows, with a long, light-colored irrigation pipe running alongside them. Several orange flags are placed in the field, likely to mark specific areas for study or treatment. The soil is dark and appears to be well-maintained.

Nutsedge in celery

Nutsege numbers – Oxnard, moderate density



Caparol



Dual Magnum 0.63 lb ai/A



High density - Oxnard

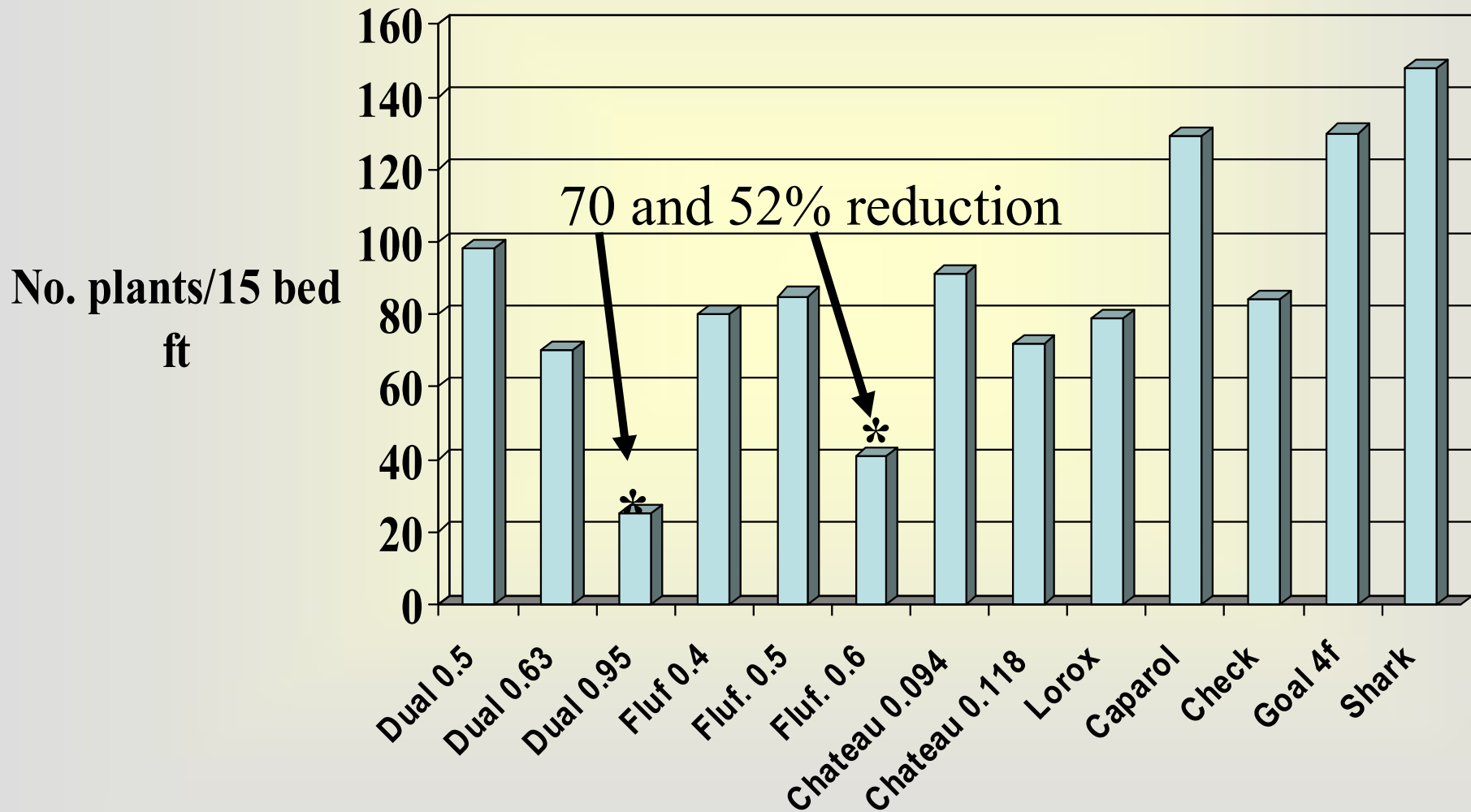
Pre-plant



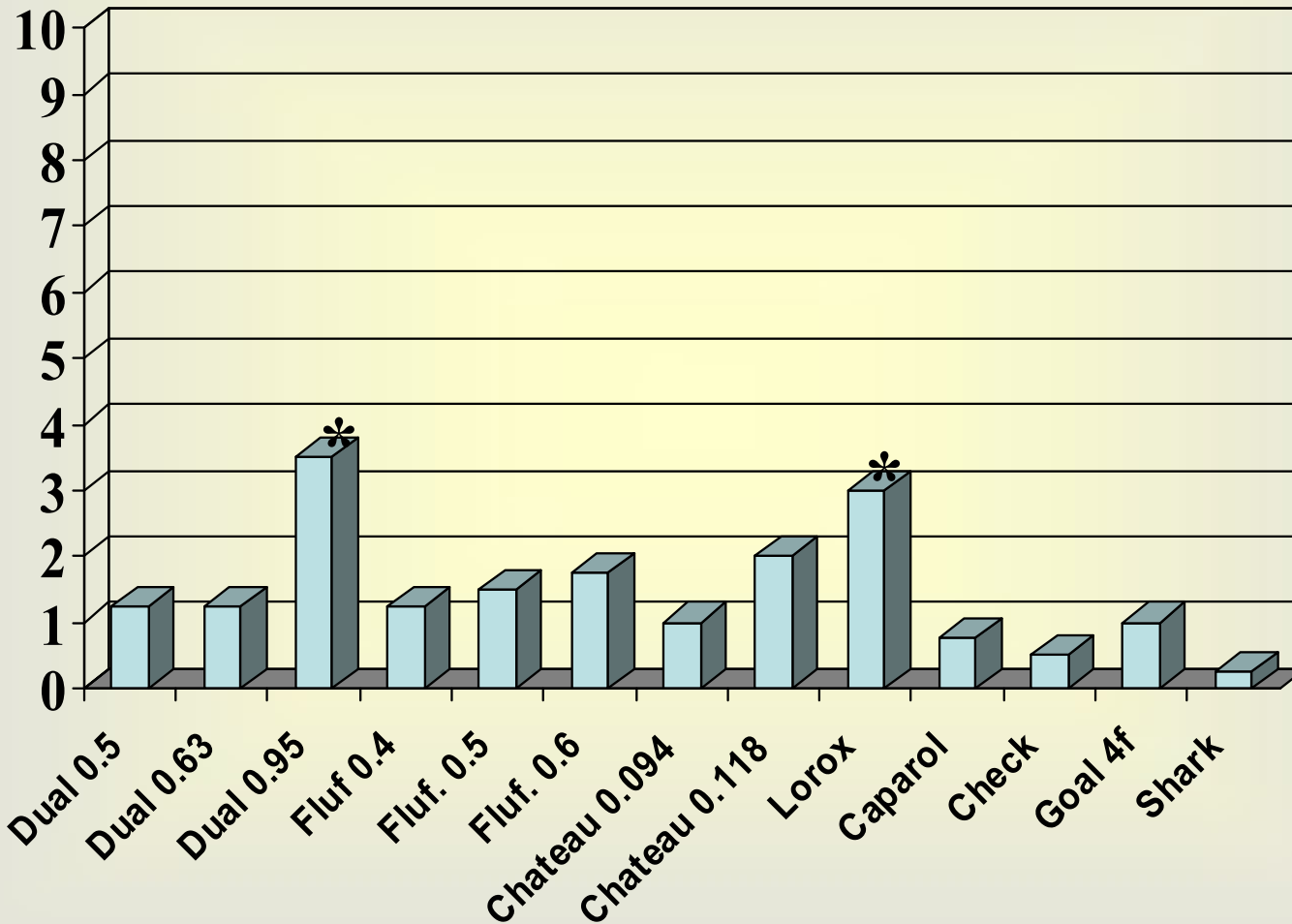
Post-plant



Nutsedge number- Oxnard



Crop Injury (1-10) – Oxnard



**NO MARKETABLE YIELD REDUCTION
FROM DUAL MAGNUM OR FLUFENACET**

Cilantro on drip, 2024 Oxnard

- 0, 0.33, 0.66 and 1 pint/A **Dual Magnum**
- Sprayed after seeding, before emergence
- Nustedge control and crop safety assessed

Cilantro on drip, 21 DAT



0 = untreated

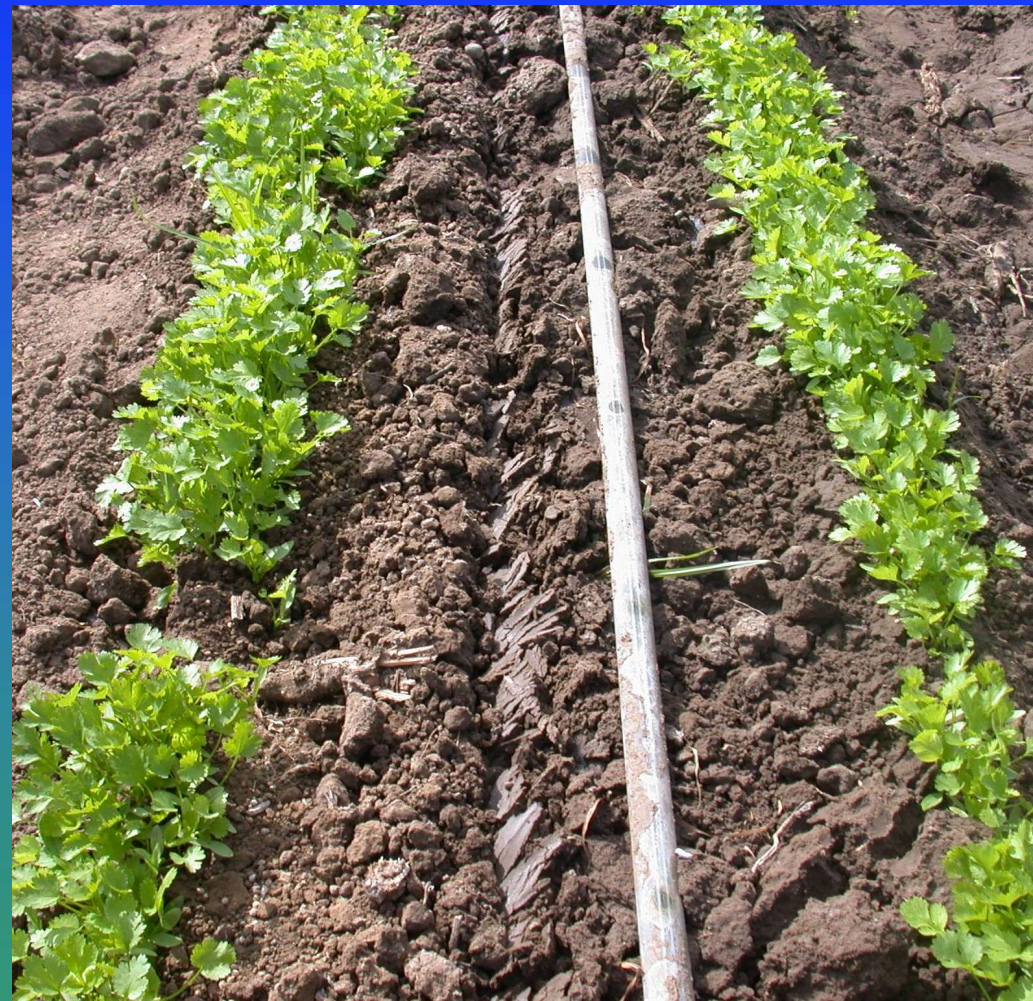


0.33 DM

Cilantro on drip, 21 DAT

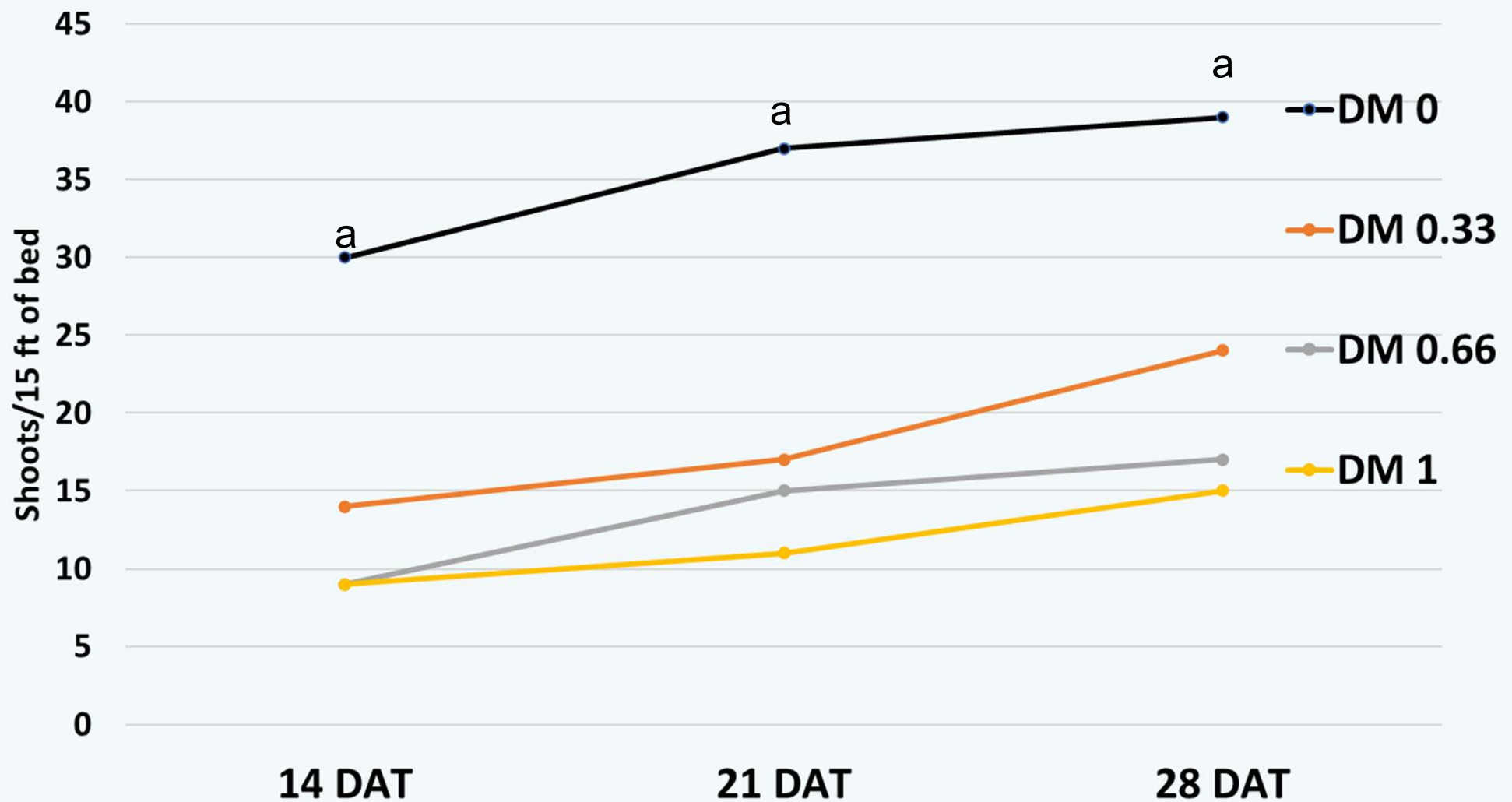


0.66 DM



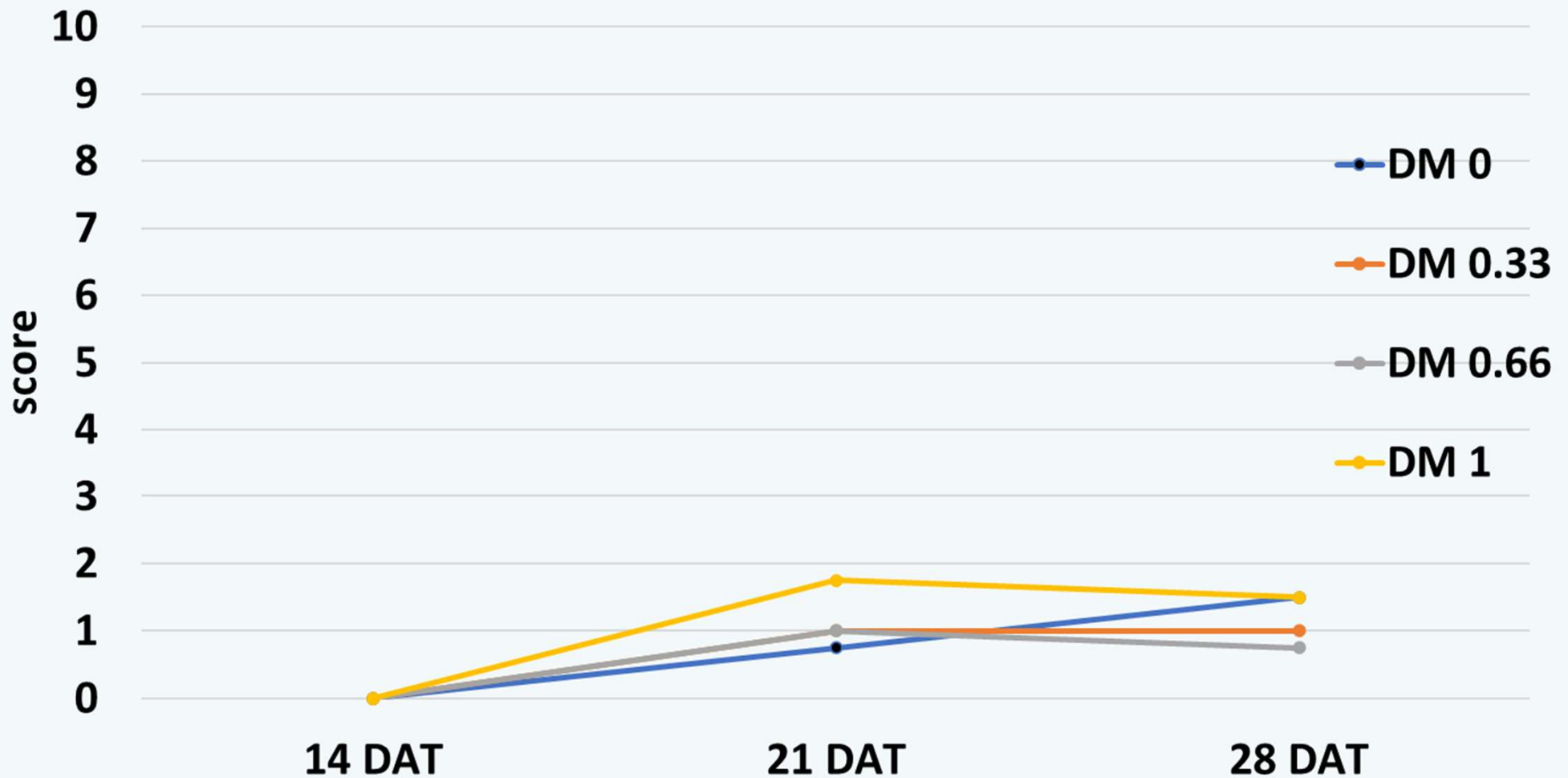
1 DM

Nutsedge Shoots

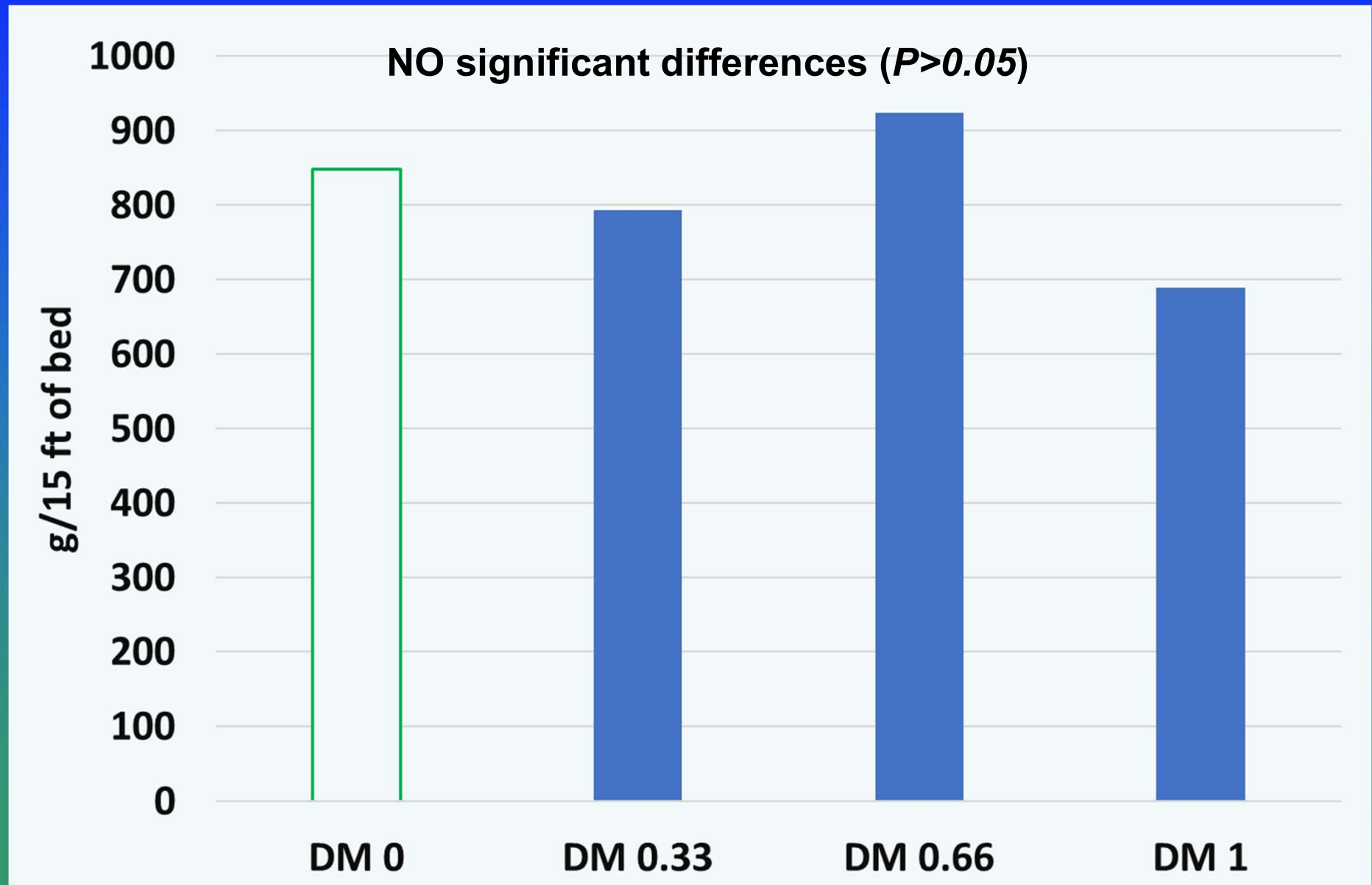


Cilantro injury score: 0 (none) - 10 (dead)

NO significant differences ($P=0.3-0.9$)



Cilantro marketable biomass





Questions/comments?

Thank you for hosting trials (Mike Nauman and Will Terry)!

Broomrape: parasitic weed in tomato

Can also attach and feed on:

- Celery,
- cabbage,
- lettuce

