

Weed Control and Crop Tolerance Trial in Roundup Ready Field Corn – 2014. Mick Canevari, Michelle Leinfelder-Miles, Donald Colbert and Randall Wittie. Cooperative Extension San Joaquin County, Stockton, CA.

OBJECTIVE: Evaluate postemergence applications of Laudis and Callisto applied alone and tank mixed with Roundup for controlling common barnyardgrass and RR resistant junglerice in field corn.

MATERIALS & METHODS: Trial was established on June 19, 2014 in a Roundup Ready field corn field located near Galt, CA. Plots were 10 by 15 ft. arranged in a randomized complete design with three replicates. Applications were made with a CO₂ backpack sprayer, 35 psi in 21.5 gpa of water. First postemergence application “A” was made on June 19, 2014. Growth stages prior to application were: Corn variety Eureka 7649 = 3 to 5 leaf, 4 to 8 inch height. Common barnyardgrass (*Echinochloa crus-galli*) = 3 to 4 leaf, 2 to 4 inch height. Junglerice (*Echinochloa colons*) = 2 to 4 leaf, 2 to 3 inch height. Common purslane (*Portulaca oleraceus*) = 3 to 5 leaf, 1 to 2 inch height. Growth stages prior to postemergence application “B” July 1, 2014 were: Corn = 6 to 8 leaf, 14 to 20 inch height. Common barnyardgrass = 3 tillers, 4 to 8 inch height. Junglerice = 2 to 3 tillers, 3 to 7 inch height. Common purslane = 3 to 10 inch height. Pertinent trial information: Field corn planted on May 20, 2014. Flood irrigated corn up on May 25, 2014. Second and third irrigations occurred on June 12, 2014 and July 11, 2014, respectively.

Field Corn Injury

All herbicide treatments showed excellent corn tolerance.

% Weed Control – Days After Treatment (DAT)

Early Postemergence Application “A”

Laudis 0.082 lb ai/A + Hasten 1.0% V/V: 19 & 26DAT: 90- 97% control of barnyardgrass and junglerice, with poor purslane control.

Laudis 0.082 lb ai/A + Roundup Powermax 1.38 lb ai/ A + Activator 90 0.25% V/V: 19DAT: 95% barnyardgrass control, 89% junglerice and 90% common purslane control. **26DAT:** Barnyardgrass control dropped to 87%, junglerice control stayed the same 89% and purslane control was reduced to 84%.

Roundup Powermax 1.38 lb ai/A + Activator 90 0.25% V/V: 19DAT: 97% control of purslane, 98% control of barnyardgrass and poor junglerice control. **26DAT:** Barnyardgrass control reduced to 70% with 98% purslane control and poor control of junglerice. Is this Roundup resistant junglerice?

Matrix 0.0156 lb ai/A + Hasten 1.0% V/V: 19 & 26DAT: 97-98% control of barnyardgrass and junglerice with no control of purslane.

Laudis 0.082 lb ai/A + Matrix 0.0156 lb ai/a+ Hasten 1.0% V/V: 19DAT: 93% control of barnyardgrass and junglerice with poor purslane control. **26DAT:** Barnyardgrass control dropped to 89% with 95% junglerice control, poor purslane control.

Callisto 0.094 lb ai/A+ Herbicide Activator 1.0% V/V: 19 & 26DAT: Very poor control of all weeds.

Callisto 0.094 lb ai/A + Touchdown 1.04 lb ai/A + Activator 90 0.25% V/V: 19DAT: 92% barnyardgrass control, 58% junglerice with 99% purslane control. **26DAT:** Barnyardgrass control dropped to 53%, junglerice 38% with excellent purslane control.

Callisto 0.188 lb ai/A + Touchdown 1.04 lb ai/A + Activator 90 0.25% V/V: Similar results to the above Callisto + Touchdown tank mixture. Doubling the Callisto rate did not increase weed control.

Callisto 0.094 lb ai/A + 2.08 lb ai/A Touchdown + Activator 90 0.25% V/V: 19DAT: 96% and 98% control of barnyardgrass and purslane, respectively with poor junglerice control. **26DAT:** 90% barnyardgrass control, 99% purslane and poor junglerice control.

Halex GT 2.2 lb ai/A + Activator 90 0.25% V/V: 19DAT: 95% barnyardgrass control, 85% purslane with poor junglerice control. **26DAT:** Barnyardgrass control reduced to 33%, purslane control 87%. Poor control of junglerice.

Late Postemergence Application “B”

Laudis 0.082 lb ai/A + Hasten 1.0% V/V and Roundup Powermax 1.38lb ai/A + Activator 90 0.25% %V/V: 7 & 14 DAT: Poor control of all weeds.

WEED CONTROL IN ROUNDUP READY FIELD CORN

2014





Callisto 3.0floz 6DAT

Callisto TD 6floz + 1 qt 6DAT





Callisto 3.0 floz/A 19 DAT



Callisto+Touchdown 3.0 floz + 1.0 qt/A. 19DAT



Callisto+Touchdown 6.0 floz+1.0 qt/A. 19DAT



Callisto+Touchdown 3.0 floz+2.0 qt/A. 19DAT

LAUDIS + HASTEN 3 FLOZ/A +1.0% V/V



6 DAT



13 DAT



19 DAT

26 DAT
POST-IRRIGATION

CALLISTO+TOUCHDOWN 3 FLOZ+ 2QT/A



6 DAT



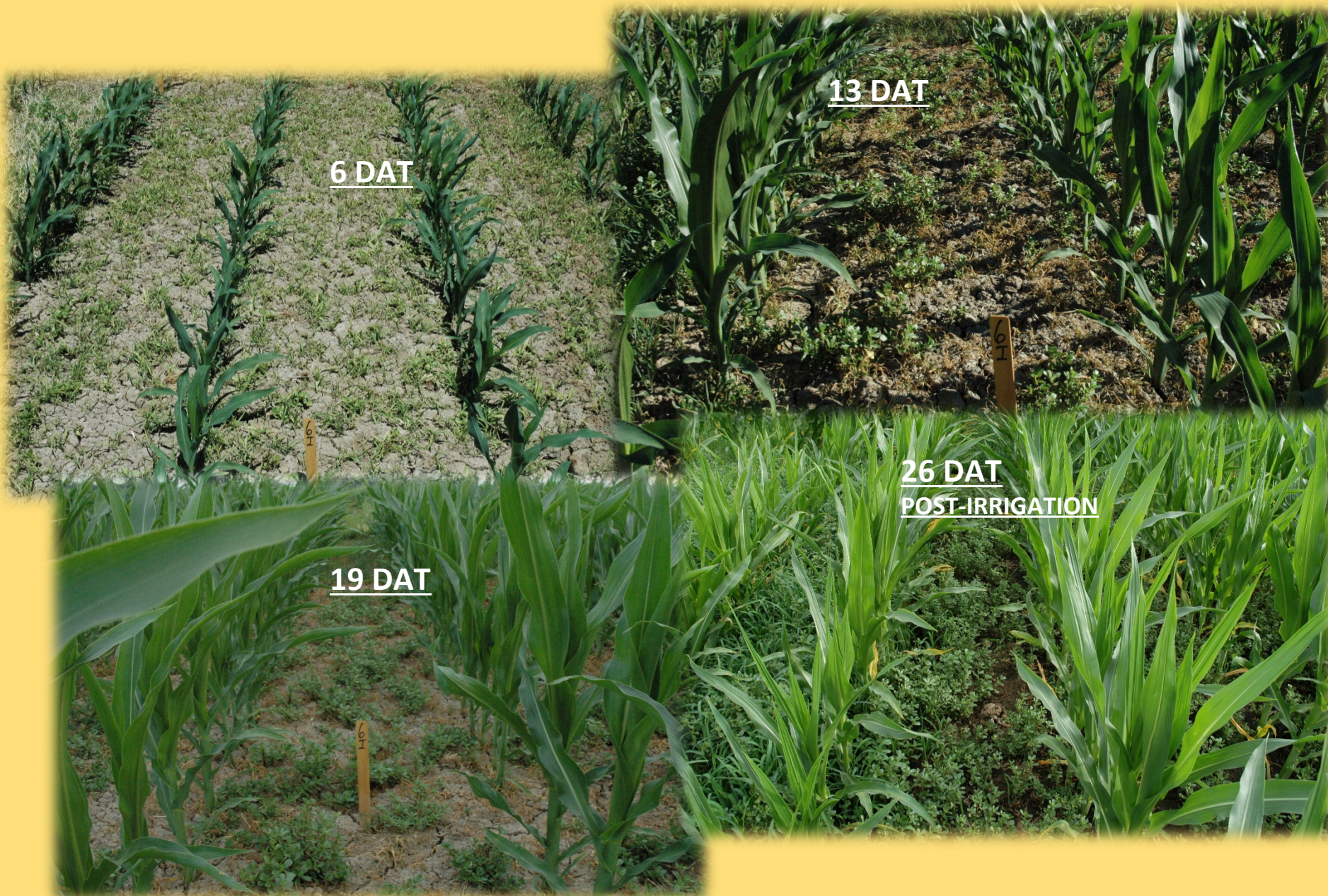
13 DAT



19 DAT

26 DAT
POST -
IRRIGATION

LAUDIS + MATRIX + HASTEN 3.0 FLOZ+1.0 OZWT + 1.0% V/V



6 DAT

13 DAT

19 DAT

26 DAT
POST-IRRIGATION



Laudis + Matrix

61

A photograph of a corn plant in a field. The plant is tall and green, with several leaves visible. In the foreground, a wooden marker is stuck in the ground, labeled with the number '5' and the Roman numeral 'II'. The text 'Matrix + MSO' is overlaid on the image in white. The background shows other corn plants and some weeds. The image is framed by a yellow border.

Matrix + MSO

5
II



Laudis + Roundup



Untreated