

RICE FIELD DAY



Rice Weed Control

A.J. Fischer

W. Brim-DeForest

J.W. Eckert

S. Johnson

California Cooperative Rice Research Foundation, Inc.
United States Department of Agriculture
University of California
Cooperating

August 28, 2013

Drill seeded trial H.R.

Treatment ⁴	Rate (g ai/ha)	Prod./a	Timing ²	Application Date		% Weed Control ^{1,3}					
						ECHPH		ECHOR			LEFFA
						1st	2nd	7/3/2013 (40 DAS)	7/24/2013 (60 DAS)	LEFFA	
Untreated ³	---	---	---	---	---	54	11	30	32	3	
Prowl H2O	1120	2pt	DPRE	28-May	---	12	74	2	25	4	
Prowl H2O fb. SuperWham + COC	1120 fb. 4484	2pt fb. 4qt + 1.25% v/v	DPRE fb. 3-4 lsr	28-May	15-Jun	75	65	73	79	0	
Prowl H2O	1120	2pt	2-3 lsr (AFF)	11-Jun	---	91	0	91	86	0	
Prowl H2O + SuperWham + Clincher + COC	1120 + 4484 + 280	2pt + 4qt + 13oz + 1.25% v/v	2-3 lsr (AFF)	11-Jun	---	97	88	93	98	8	
Clincher + COC fb. Superwham + COC	280 fb. 4480	13oz + 2.5% v/v fb. 4qt + 1.25% v/v	2-3 lsr fb. 3-4 lsr (AFF)	11-Jun	15-Jun	99	92	97	100	33	
Granite SC + COC fb. Clincher + COC	35 fb. 315	2 oz + 2.5% fb. 15 oz + 2.5% v/v	2-3 lsr fb. PPF	11-Jun	19-Jun	96	42	97	100	0	
Granite SC + Prowl H2O + Clincher + COC	35 + 1120 + 315	2 oz + 2pt + 15oz + 2.5% v/v	2-3 lsr	11-Jun	---	96	95	94	98	33	
Granite SC + Clincher + COC fb. SuperWham + COC	35 + 280 fb. 6726	2 oz + 13 oz + 2.5% v/v fb. 6qt + 1.25% v/v	2-3 lsr fb. PPF	11-Jun	19-Jun	96	96	93	99	50	
Abolish + COC	3363	1.5qt + 1.25% v/v	DPRE	28-May	---	0	79	0	19	50	
Abolish fb. SuperWham + COC	3363 fb. 6726	1.5 qt fb. 6 qt + 1.25% v/v	DPRE fb. 3-4 lsr	28-May	15-Jun	73	82	52	88	0	

LSD (P=0.05)

¹ ECHPH (Late watergrass), ECHOR (Early watergrass), SCPMU (Rice field bulrush), CYPDI (Small flower Umbrellaplant), HETLI (Duck salad), LEFFA (Sprangletop), BAORO (Waterhyssop), AMMCO (Redstem), SAGMO (California arrowhead); MOOVA (Monochoria)

² fb. (followed by), lsr (leaf stage of rice), Til (tillers of rice), DPRE (pre emergent), AFF (after final flush), PPF (post permanent flood).

³ Untreated weed control values represent % cover by the respective weed species

⁴ Pro C.O.C. is the brand name of COC (Crop oil concentrate)

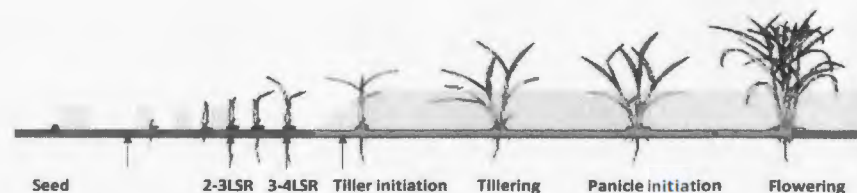
Phytotoxicity Information:

ALS herbicides (Granite) tend to cause stunting of rice and may cause some stand reduction

Trial Information

1. Trial seeded May 25, 2013 with 120 lbs per acre of M206
2. Trial managed as a drill seeded with initial flush on May 26, additional flushes on May 31, June 4, and June 9 with final flood on June 18 (rice was 3-4 lsr).
3. No weeds were visible at delay-pre application May 28.
Watergrass and barnyard grass were 3 leaf, and smallflower was sprouting on June 11.
Watergrass was 1 tiller and smallflower was sprouting on June 15.
Watergrass and barnyard grass were tillering, and smallflower was 1-2 inches on June 19.
4. Spray applications made with 20 gallons/acre using 8003 nozzles.
5. Weather conditions on May 28: Air temperature 78° F, wind 2.5 MPH from the west.
Weather conditions on June 11: Air temperature 77° F, wind 1 MPH from the southeast.
Weather conditions on June 15: Air temperature 98° F, wind 1.5 MPH from the southeast.
Weather conditions on June 19: Air temperature 76° F, water temperature 82° F, wind 1 MPH from the southeast.
6. June 27, 2013- 150lb ammonium sulfate = 30lb nitrogen/acre

Drill Seeded



Application timing ↑

Seeded: May 25

Pre-Emergent Application: May 28

Flushed: May 26, 31, June 4, 9

Applications: June 11, 15

Permanent flood: June 18, 4" water depth

Post-Permanent Flood Applications: June 19

Pinpoint Trial at Hamilton Road

Treatment ⁴	Rate (g ai/ha)	Prod./a	Timing ²	Application Date		% Weed Control ^{1,3}									
				1st	2nd	7/3/2013 (40 DAS)			7/24/2013 (60 DAS)						
						ECHPH	SCPMU	HETLI	ECHPH	ECHOR	LEFFA	SCPMU	HETLI	AMMCO	
Untreated ³	---	---	---	---	---	23	5	26	24	4	1	4	6	5	
Clincher + Granite SC + COC fb. SuperWham + COC	280 + 35 fb. 6726	13oz + 2oz + 2.5% v/v fb. 6qt + 2.5% v/v	3-4 Isr fb. 1-2 Til	18-Jun	2-Jul	100	100	100	100	100	100	93	100	95	
Granite SC + COC	35	2oz + 2.5% v/v	3-4 Isr	18-Jun	---	100	98	100	99	100	25	100	100	97	
Clincher + COC	280	13oz + 2.5% v/v	3-4 Isr	18-Jun	---	97	0	0	97	91	100	0	0	0	
Clincher + COC fb. SuperWham + Grandstand + COC	280 fb. 6726 + 210	13oz + 2.5% v/v fb. 6qt + 8oz + 1.25% v/v	3-4 Isr fb. 1-2 Til	18-Jun	2-Jul	98	0	0	97	100	100	81	81	84	
Granite SC + COC fb. SuperWham + Grandstand + COC	35 fb. 6726 + 210	2oz + 2.5% fb. 6qt + 8oz + 1.25% v/v	3-4 Isr fb. 1-2 Til	18-Jun	2-Jul	97	99	100	100	100	31	100	100	97	
SuperWham + Clincher + COC	4484 + 315	4qt + 15oz + 2.5% v/v	3-4 Isr	18-Jun	---	86	85	0	86	94	100	75	0	100	
Regiment + UAN + NIS	30	0.54oz + 2% + 0.125% v/v	3-4 Isr	18-Jun	---	95	100	100	93	98	25	96	97	72	
Regiment + UAN + NIS fb. SuperWham + Grandstand + COC	30 fb. 6726 + 210	0.54oz + 2% + 0.125% v/v fb. 6qt + 8oz + 1.25% v/v	3-4 Isr fb. 1-2 Til	18-Jun	2-Jul	99	100	100	95	100	31	98	100	75	
Regiment + Abolish	30 + 3363	0.54oz + 1.5qt	3-4 Isr	18-Jun	---	100	100	100	95	100	50	98	100	70	
Clincher SC + Granite SC + Abolish + COC	280 + 35 + 4484	13oz + 2oz + 1.5qt + 2.5% v/v	3-4 Isr	18-Jun	---	99	100	100	94	100	100	100	100	89	

¹ ECHPH (Late watergrass), ECHOR (Early watergrass), SCPMU (Rice field bulrush), CYPDI (Small flower Umbrellaplant), HETLI (Duck salad), LEFFA (Sprangletop), BAORO (Waterhyssop), AMMCO (Redstem), SAGMO (California arrowhead); MOOVA (Monochoria)
² fb. (followed by), Isr (leaf stage of rice), Til (tillers of rice).
³ Untreated weed control values represent % cover by the respective weed species
⁴ Pro C.O.C. is the brand name of COC (Crop oil concentrate), Kinetic is the brand name of NIS (Non-ionic surfactant), UAN (Urea Ammonium Nitrate)

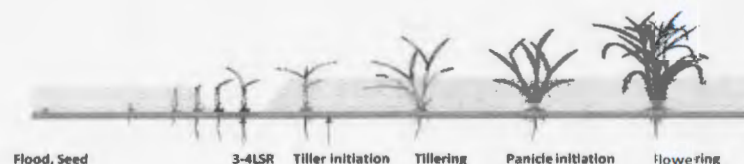
Phytotoxicity Information:

ALS herbicides (Granite and Regiment) tend to cause stunting of rice and may cause some stand reduction

Trial Information

1. Trial seeded May 25, 2013 with 120 lbs per acre of M206
2. Trial managed as a pinpoint flood with flood water drained June 15 reflood June 19 to 3-4 inches.
3. Watergrass was 4 leaf, bulrush was 4 leaf, ducksalad was 1 tiller, smallflower was 4 inches, water hyssop was sprouting-2 leaf, and redstem was sprouting on June 18
 Watergrass was 3 tiller, bulrush was 1-3 tiller, ducksalad was flowering, water hyssop was 6-8 leaf on July 2.
5. Spray applications made with 20 gallons/acre using 8003 nozzles.
6. Weather conditions on June 18: Air temperature 85° F, wind 4 MPH from the south.
 Weather conditions on July 2: Air temperature 83° F, water temperature 79° F wind 3 MPH from the southeast.
6. June 27, 2013- 150lb ammonium sulfate = 30lb nitrogen/acre

Pinpoint Flood



Application timing ↑
 Seeded: May 25, 2013
 Flood: May 24, 3" water depth
 Drained: June 15
 1st Application: June 18
 Reflood: June 19, 4" water depth
 Post permanent flood applications: July 10

Leathers' Trial

Treatment ⁴	Rate (g ai/ha)	Prod./a	Timing ²	Application date			% Weed Control ^{1,3}						
				1st	2nd	3rd	ECHPH	SCPMU	HETLI	BAORO	ECHPH	ECHOR	SCPMU
							7/3/2013 (40 DAS)				7/24/2013 (60 DAS)		
Untreated ³	---	---	---	---	---	---	21	3	10	2	36	3	3
Cerano fb. Superwham + Grandstand + COC	673 fb. 6726 + 210	12lb fb. 6qt + 8oz +1.25% v/v	Post re-flood fb. 1Til	3-Jun	28-Jun	---	93	39	56	0	98	100	96
Granite GR fb. Superwham + Grandstand + COC	40 fb. 6726 + 210	15lb fb. 6qt + 8oz +1.25% v/v	Post re-flood fb. 1Til	3-Jun	28-Jun	---	87	100	100	50	100	100	100
Cerano fb. Granite GR fb. Superwham + Grandstand + COC	448 fb. 40 fb. 6726 + 210	8lb fb. 15lb fb. 6qt + 8oz +1.25% v/v	Post re-flood fb. 2 DAT fb. 1Til	3-Jun	5-Jun	28-Jun	85	100	100	69	100	100	100
Cerano fb. GWN-10252 ⁵ fb. Superwham + Grandstand + COC	448 fb. 250 fb. 6726 + 210	8lb fb. 7.5lb fb. 6qt + 8oz +1.25% v/v	Post re-flood fb. 2 DAT fb. 1Til	3-Jun	5-Jun	28-Jun	89	100	100	81	100	100	100

LSD (P=0.05)

Leathers method where presoaked seed is flown into 1-2 inches of water. When seedling has both root and shoot visible (approx. 2-4 days) lower the water to just a skim, re-flood when root is penetrating soil

¹ ECHPH (Late watergrass), ECHOR (Early watergrass), SCPMU (Rice field bulrush), CYPDI (Small flower Umbrellaplant), HETLI (Duck salad), LEFFA (Sprangletop), BAORO (Waterhyssop), AMMCO (Redstem), SAGMO (California arrowhead); MOOVA (Monochoria)

² fb. (followed by), Isr (leaf stage of rice), Til (tillers of rice).

³ Untreated weed control values represent % cover by the respective weed species

⁴ Pro C.O.C. is the brand name of COC (Crop oil concentrate)

⁵ GWN-10252 is a granular formulation containing 3% benzobicyclon and 0.64% halosulfuron.

Leathers Method

Phytotoxicity Information:

Clomazone (Cerano) can cause bleaching and some stand reduction in rice

Penoxsulam (Granite GR) can cause stunting of rice early in development

Benzobicyclon has minimal phytotoxicity alone, but the combination granule (with halosulfuron) may cause some stunting

Trial Information

1. Trial seeded May 25 with 120 lbs per acre of M206.

2. Flooded to 3 inches May 24, 2013; drained May 29; re-flooded June 2.

3. Watergrass was 1-1.5 leaf, smallflower and ducksalad were sprouting on June 3.

Watergrass was 2 leaf, smallflower, bulrush and ducksalad were sprouting on June 5.

Watergrass was 1-3 tiller, bulrush was 1-3 tiller, water hyssop was 6 leaf and ducksalad was flowering on June 28.

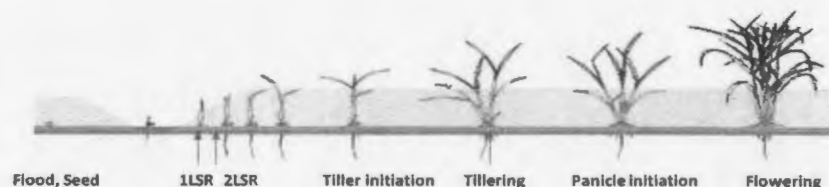
4. Spray applications made with 20 gallons/acre using 8003 nozzles.

5. Weather conditions on June 3: Air temperature 82° F, water temperature 27° C, wind 5 MPH from the north.

Weather conditions on June 5: Air temperature 78° F, water temperature 69° F, wind 0 MPH.

Weather conditions on June 28: Air temperature 85° F, water temperature 77° F, wind 0 MPH.

6. June 27, 2013- 150lb ammonium sulfate = 30lb nitrogen/acre



Application timing ↑

Seeded: May 25

Flood: May 24, 3-4" water depth

Drained: May 29

Re-flood: June 2, 4" water depth

Post-reflood Applications: June 3, June 5, June 28

Gowan Rates and Program

Treatment ⁴	Rate (g ai/ha)	Prod./a	Timing ²	Application Date		% Weed Control ^{1,3}							
				1st	2nd	7/3/2013 (40 DAS)				7/24/2013 (60 DAS)			
				ECHPH	SCPMU	HETLI	MOOVA	ECHPH	ECHOR	SCPMU	MOOVA		
Untreated ³	--	--	--	--	--	51	3	10	3	67	4	2	2
GWN-9796 + Sandea	250 + 52.5	57oz + 1oz	1 lsr	4-Jun	--	88	100	100	100	91	100	100	100
GWN-10252	250 + 52.5	7.5 lb	1 lsr	4-Jun	--	77	100	100	100	84	100	100	98
GWN-10252	303 + 63	9 lb	1 lsr	4-Jun	--	85	100	100	100	89	89	100	100
GWN-10252 fb. Propanil + Granstand + COC	250 + 52.5 fb. 4484 + 210	7.5 lb fb. 4qt + 8oz + 1.25% v/v	1 lsr fb. 3-4 lsr	4-Jun	18-Jun	97	100	100	100	94	100	100	100
GWN-10252 fb. Regiment + NIS	250 + 52.5 fb. 30	7.5 lb fb. 0.54oz + 0.125% v/v	1 lsr fb. 3-4 lsr	4-Jun	18-Jun	97	100	100	100	98	100	100	100
GWN-10252 fb. Clincher + COC	250 + 52.5 fb. 315	7.5 lb fb. 15oz + 1.25% v/v	1 lsr fb. 3-4 lsr	4-Jun	18-Jun	98	100	100	100	100	100	100	94
GWN-10252 fb. Granite SC + COC	250 + 52.5 fb. 35	7.5 lb fb. 2oz + 1.25% v/v	1 lsr fb. 3-4 lsr	4-Jun	18-Jun	100	100	100	100	100	100	100	100
Cerano fb. GWN-10252	673 fb. 250 + 52.5	12lb fb. 7.5lb	DOS fb. 1 lsr	25-May	4-Jun	100	100	100	100	100	100	100	100

LSD (P=0.05)

GWN-10252 is a granular formulation containing 3% benzobicyclon and 0.64% halosulfuron.

GWN-9796 is a liquid suspension formulation consisting of 6% benzobicyclon

Sandea is a granular formulation of 75% halosulfuron.

All applications containing GWN-9796 were made with a 10ft spray boom with nozzles removed to simulate a direct stream application.

All granular formulations were hand dispersed across plot area.

¹ ECHPH (Late watergrass), ECHOR (Early watergrass), SCPMU (Rice field bulrush), CYPDI (Small flower Umbrellaplant), HETLI (Duck salad), LEFFA (Sprangletop), BAORO (Waterhyssop), AMMCO (Redstem), SAGMO (California arrowhead); MOOVA (Monochoria)

² fb. (followed by), lsr (leaf stage of rice), Til (tillers of rice), DOS (Day of Seeding)

³ Untreated weed control values represent % cover by the respective weed species

⁴ Pro C.O.C. is the brand name of COC (Crop oil concentrate), Kinetic is the brand name of NIS (Non-ionic surfactant)

Phytotoxicity Information:

Clomazone (Cerano) can cause bleaching and some stand reduction in rice

ALS herbicides (Granite, Regiment, and Sandea) tend to cause stunting of rice and may cause some stand reduction

Benzobicyclon has minimal phytotoxicity alone, but the combination granule (with halosulfuron) may cause some stunting

Trial Information

1. Trial seeded May 25, 2013 with 120 lbs per acre of M206

2. Trial managed as a permanent flood with flood water at 3-4 inches.

3. No weeds were visible when Cerano was applied on day of seeding May 25.

Watergrass was 1.5-2 leaf, bulrush and ducksalad were sprouting on June 4.

Watergrass was 1 tillers, ricefield bulrush was 8 inches, dusksalad was 3 leaf, waterhyssop was 3 leaf on June 18.

4. Liquid applications of GWN-9796 made with 10 foot boom with nozzles removed.

5. Weather conditions on May 25: Air temperature 82° F, water temperature 87° F, wind 3 MPH from the southeast.

Weather conditions on June 4: Air temperature 74° F, water temperature 72° F, wind 4.5 MPH from the southeast.

Weather conditions on June 18: Air temperature 76° F, water temperature 76° F, wind 7 MPH from the south.

6. June 27, 2013- 150lb ammonium sulfate = 30lb nitrogen/acre

Continuous Flood Gowan



Application timing ↑

Seeded: May 25

Flood: May 24, 3-4" water depth

Day of Seeding Application: May 25

Post-Flood Applications: June 4, June 18

Valent continuous flood trial

Treatment ¹	Rate (g ai/ha)	Prod./a	Timing ²	Application date		% Weed Control ^{1,3}									
				1st	2nd	ECHPH	SCPMU	HETLI	BAORO	ECHPH	ECHOR	SCPMU	MOOVA		
Untreated ³	---	---	---	---	---	6/17/2013 (20 DAS)	7/24/2013 (60 DAS)	30	2	13	3	56	7	1	2
League MVP ⁵ fb. Regiment + UAN + Dyne-Amic	2.8 + 0.11 fb. 37.5	25lb fb. 0.67oz + 2.0% + .375% v/v	2 Isr fb. 1-2 tiller	5-Jun	2-Jul	93	100	98	96	98	100	100	100	100	100
League MVP fb. Regiment + UAN + Dyne-Amic	3.36 + 0.13 fb. 37.5	30lb fb. 0.67oz + 2.0% + .375% v/v	2 Isr fb. 1-2 tiller	5-Jun	2-Jul	87	100	93	100	97	100	100	100	100	100
League MVP fb. Regiment + UAN + Dyne-Amic	3.92 + 0.16 fb. 37.5	35lb fb. 0.67oz + 2.0% + .375% v/v	2 Isr fb. 1-2 tiller	5-Jun	2-Jul	95	100	90	100	99	100	100	100	100	100
Cerano fb. SuperWham + Londax + COC	280 fb. 6726 + 67	5lb fb. 6qt + 1.6oz + 1.25% v/v	DOS fb. 1-2 tiller	25-May	2-Jul	75	31	40	4	91	100	88	18		
Bolero Ultramax fb. Regiment + UAN + Dyne-Amic	3918 fb. 37.5	23.3lb fb. 0.67oz + 2.0% + .375% v/v	2 Isr fb. 1-2 tiller	5-Jun	2-Jul	86	74	55	96	96	100	58	0		

LSD (P=0.05)

¹ ECHPH (Late watergrass), ECHOR (Early watergrass), SCPMU (Rice field bulrush), CYPDI (Small flower Umbrellaplant), HETLI (Duck salad), LEFFA (Sprangletop), BAORO (Waterhyssop), AMMCO (Redstem), SAGMO (California arrowhead); MOOVA (Monochoria)

² fb. (followed by), Isr (leaf stage of rice), Til (tillers of rice), DOS (Day of Seeding)

³ Untreated weed control values represent % cover by the respective weed species

⁴ Pro C.O.C. is the brand name of COC (Crop oil concentrate), Kinetic is the brand name of NIS (Non-ionic surfactant), UAN (Urea Ammonium Nitrate)

⁵ League MVP consists of 10% thiobencarb + 0.46% imazosulfuron

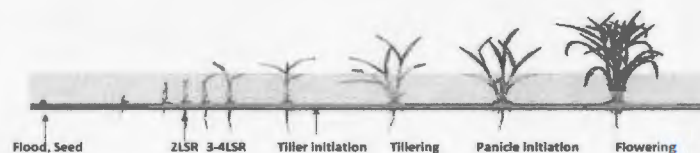
Phytotoxicity Information:

Clomazone (Cerano) can cause bleaching and some stand reduction in rice
 ALS herbicides (Regiment) tend to cause stunting of rice and may cause some stand reduction
 Thiobencarb (Bolero, League MVP) can cause some stand reduction

Trial Information

1. Trial seeded May 25, 2013 with 120 lbs per acre of M-206
2. Trial managed as a permanent flood with flood water at 3-4 inches.
3. No weeds were visible when Cerano was applied on day of seeding May 25.
 Watergrass was 2 leaf, bulrush, smallflower and ducksalad were sprouting on June 5.
 Watergrass was 2-3 tiller, ricefield bulrush arrowhead was 1-3 tiller, monochoria was 1-3 tiller,
 was 1-3 tiller, hyssop was 6 leaf, redstem was 8 leaf, ducksalad was flowering, and sprangletop was 1-3 tiller on July 2.
4. Spray applications made with 20 gallons/acra using 8003 nozzles.
5. Weather conditions on May 25: Air temperature 82° F, water temperature 87° F, wind 3 MPH from the southeast.
 Weather conditions on June 5: Air temperature 92° F, water temperature 95° F, wind 1.5 MPH from the south.
 Weather conditions on July 2: Air temperature 89° F, water temperature 80° F, wind 5.2 MPH from the southeast.
6. June 27, 2013- 150lb ammonium sulfate = 30lb nitrogen/acre

Continuous Flood Valent



Application timing ↑

Seeded: May 25

Flood: May 24, 3-4" water depth

Day of Seeding Application: May 25

Post-Flood Applications: June 5, July 2

Continuous flood trial HR

Treatment ⁴	Rate (g ai/ha)	Prod./a	Timing ²	Application date			Weed Control ^{1,3}					
							7/3/2013 (40 DAS)			7/24/2013 (60 DAS)		
							ECHPH O	SCPMU	HETLI	ECHPH O	ECHOR	SCPMU
Untreated ³	---	---	---	---	---	---	44	4	9	63	6	1
Cerano	673	12lb	DOS	25-May	---	---	84	0	0	89	100	0
Bombard	673	12lb	DOS	25-May	---	---	79	15	0	76	100	0
Cerano	673	12lb	1 Isr	4-Jun	---	---	76	0	0	77	100	0
Bombard	673	12lb	1 Isr	4-Jun	---	---	75	0	0	79	100	0
Granite GR	40	15lb	2.5 Isr	10-Jun	---	---	96	89	92	98	75	100
Cerano fb. Granite GR	673 fb. 40	12lb fb. 15lb	DOS fb 2.5 Isr	25-May	10-Jun	---	99	96	100	99	100	96
Cerano fb. Granite GR	449 fb. 40	8lb fb. 15lb	DOS fb 2.5 Isr	25-May	10-Jun	---	100	93	100	100	100	73
Cerano fb. Granite GR fb. SuperWham + Grandstand + COC	449 fb. 40 fb. 6726 + 210	8lb fb. 15lb fb. 6qt + 8oz + 1.25% v/v	DOS fb 2.5 Isr fb. 1-2 til	25-May	10-Jun	2-Jul	99	89	93	100	100	94
Cerano fb. SuperWham + Grandstand + COC	449 fb. 6726 + 210	8lb fb. 6qt + 8oz + 1.25% v/v	DOS fb. 1-2 til	25-May	2-Jul	---	68	0	0	99	100	100
Cerano fb. Shark H2O fb. SuperWham + COC	673 fb. 210 fb. 6726	12lb fb. 7.5oz fb. 6qt + 1.25% v/v	DOS fb. 2-3 Isr fb. 1-2 til	25-May	10-Jun	2-Jul	78	77	78	92	100	84
Cerano fb. Shark H2O fb. Regiment + UAN + NIS	673 fb. 210 fb. 44.5	12lb fb. 7.5oz fb. 0.79oz + 2% + 0.2% v/v	DOS fb. 2-3 Isr fb. 1-2 til	25-May	10-Jun	2-Jul	82	59	76	100	100	25
Granite GR + Shark H2O fb. SuperWham + COC	40 + 210 fb. 6727	15lb + 7.5oz fb. 6qt + 1.25% v/v	2.5 Isr fb. 1-2 til	10-Jun	2-Jul	---	96	98	95	99	96	100
Shark H2O fb. SuperWham + COC	210 fb. 6726	7.5oz fb. 6qt + 1.25% v/v	1-2 Isr fb. 1-2 til	5-Jun	2-Jul	---	2	82	71	88	78	100
Untreated ³	---	---	---	---	---	---	51	3	9	86	52	75
Bolero	3918	23.3lb	1-2 Isr	5-Jun	---	---	87	60	0	90	99	0
Bolero fb. Propanil + Grandstand + COC	3918 fb. 6726 + 210	23.3lb fb. 6qt + 8oz + 1.25%	1-2 Isr fb. 1-2 til	5-Jun	2-Jul	---	90	0	0	98	100	100
Bolero fb. Granite GR	3918 fb. 40	23.3lb fb. 15lb	1-2 Isr fb. 2-3 Isr	5-Jun	10-Jun	---	99	100	100	100	100	100
Bolero fb. Regiment + UAN + NIS	3918 fb. 22.4	23.3lb fb. 0.4oz + 2.0% + 0.2% v/v	1-2 Isr fb. 1-2 til	5-Jun	2-Jul	---	86	76	0	99	100	94
League MVP ⁵ fb. Regiment + UAN + NIS	3508 fb. 22.4	30lb fb. 0.4oz + 2.0% + 0.2% v/v	2 Isr fb. 1-2 til	5-Jun	2-Jul	---	97	100	93	100	100	100
Granite GR fb. SuperWham + Grandstand + COC	40 fb. 6726 + 210	15lb fb. 6qt + 8oz + 1.25% v/v	2.5 Isr fb. 1-2 til	10-Jun	2-Jul	---	93	86	98	98	95	100
Bolero + Granite GR	4480 + 40	26.8lb + 15lb	2 Isr	5-Jun	---	---	99	100	100	100	100	100
Untreated ³	---	---	---	---	---	---	43	3	12	66	3	1

LSD (P=0.05)

- ¹ ECHPH (Late watergrass), ECHOR (Early watergrass), SCPMU (Rice field bulrush), CYPDI (Small flower Umbrellaplant), HETLI (Duck salad), LEFFA (Sprangletop), BAORO (Waterhyssop), AMMCO (Redstem), SAGMO (California arrowhead); MOOVA (Monochoria)
- ² fb. (followed by), Isr (leaf stage of rice), Til (tillers of rice), DOS (Day of Seeding)
- ³ Untreated weed control values represent % cover by the respective weed species
- ⁴ Pro C.O.C. is the brand name of COC (Crop oil concentrate), Kinetic is the brand name of NIS (Non-ionic surfactant), UAN (Urea Ammonium Nitrate)
- ⁵ League MVP consists of 10% thibencarb + 0.46% imazosulfuron

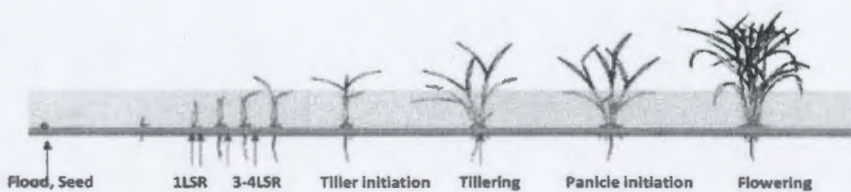
Phytotoxicity Information:

- Clomazone (Cerano and Bombard) can cause bleaching and some stand reduction in rice
- Penoxsulam (Granite GR) can cause stunting of rice early in development
- Carfentrazone (Shark) can cause some injury to rice if applied too early
- ALS herbicides (Granite and Regiment) tend to cause stunting of rice and may cause some stand reduction
- Thibencarb (Bolero) can cause some stand reduction
- Thibencarb (Bolero) and Penoxsulam (Granite GR) cause stand reduction when applied at the same time, but when applied separately, phytotoxicity is reduced

Trial Information

1. Trial seeded May 25, 2013 with 120 lbs per acre of M206
2. Trial managed as a permanent flood with flood water at 3-4 inches.
3. No weeds were visible when Cerano was applied on day of seeding May 25.
 - Watergrass was 1.5-2 leaf, bulrush and ducksalad were sprouting on June 4.
 - Watergrass was 3 leaf, ricefield bulrush, smallflower, and ducksalad were 2-4 inches on June 10.
 - Watergrass was 2-3 tiller, ricefield bulrush was 1-3 tiller, hyssop was 6 leaf, arrowhead was 1-3 tiller, redstem was 8 leaf, ducksalad was flowering, monochoria was 1-3 tiller, and sprangletop was 1-3 tiller on July 2.
4. Spray applications made with 20 gallons/acre using 8003 nozzles.
5. Weather conditions on May 25: Air temperature 82° F, water temperature 87° F, wind 3 MPH from the southeast.
 - Weather conditions on June 4: Air temperature 74° F, water temperature 72° F, wind 4.5 MPH from the southeast.
 - Weather conditions on June 10: Air temperature 61.5° F, water temperature 65° F, wind 2.5 MPH from the southeast.
 - Weather conditions on July 2: Air temperature 89° F, water temperature 80° F, wind 5.2 MPH from the southeast.
6. June 27, 2013- 150lb ammonium sulfate = 30lb nitrogen/acre

Continuous Flood



Application timing ↑

Seeded: May 25

Flood: May 24, 3-4" water depth

Day of Seeding Application: May 25

Post-Flood Applications: June 4, June 5, June 10, July 2