

2008 Summary of Syngenta Data - Onion Experiments in Colorado

Bactericide Trials

Treatment*	AVRC	Plot Weight (lbs) - 20 sq. ft.						% Xanth	Storage Rot %		
		Colossal	Jumbo	Medium	Prepack	Col + Jum	Total		15-Oct	14-Nov	17-Dec
1. Control		2.35	21.98	8.60	0.13	24.33	32.93	5.0 a	12.50	17.50	16.25
2. Actigard @ 0.75 oz		4.18	25.93	5.70	0.78	30.10	35.81	1.0 b	17.50	7.50	18.75
3. A 6001 @ 20 fl oz		0.68	21.45	6.18	0.25	22.13	28.30	1.0 b	13.75	17.50	17.50
4. Actigard + A16001		5.03	25.05	5.18	0.28	30.08	35.25	1.0 b	18.75	16.25	10.00
5. Kocide 3000 @ 1 lb		5.93	21.05	4.73	0.23	26.98	31.70	1.0 b	20.00	8.75	6.25
6. Actigard + Kocide		2.18	20.70	7.43	0.28	22.88	30.30	1.0 b	12.50	13.75	17.50
CV		99.21	19.12	38.07	106.68	20.54	10.92	0	73.91	75.74	58.75
Prob		0.2828	0.4249	0.2528	0.9511	0.1894	0.0646	0.0001	0.8916	0.601	0.2704
LSD 0.05		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	0	n.s.	n.s.	n.s.

* Trt 2-6 with Kinetic @ 0.125%v/v in 25 gal/Acre Onion 'X 202' planted 03/13, harvested 09/15

Trt Dates: 07/03, 07/14, 07/24, 08/04, 08/14, 08/26 Inoculation Date: 07/25

Severe Hail Damage Date: 09/07/08 Trace infection noted on 08/19/08

SUMMARY: Col + Jumbo yield components increased by 24% for Trt 2 & 4 vs # 1; poor bacterial disease pressure due to dry conditions

Treatment*	ARDEC	20 bulb wt (lb)		% Rot	
		26-Aug		27-Sep	
1. Control		12.70		72.5	
2. Actigard @ 0.75 oz		11.95		50.0	
3. A16001 @ 20 fl oz		11.50		68.8	
4. Actigard + A16001		13.40		55.0	
5. Kocide 3000 @ 1 lb		13.00		70.0	
6. Actigard + Kocide		12.30		65.0	
CV		9.41		26.51	
Prob		0.2742		0.3782	
LSD 0.05		n.s.		n.s.	

* Trt 2-6 with Kinetic @ 0.125%v/v in 25 gal/Acre Onion 'Exacta' transplanted 05/01/08

Trt Dates: 07/10, 07/21, 07/30, 08/11 Inoculation Date: 08/12

Severe Hail Damage Date: 08/14/08 No disease notes or yield taken; 20 bulbs for storage rot 08/26

Storage Rot (% of 20 bulbs) made by cutting bulbs in half on Sept. 27 - primarily Botrytis Rot

SUMMARY: Storage Rot reduced by Actigard 31% for Trt 2 & 24% for trt 4 vs # 1; poor bacterial disease pressure due to severe hail damage and defoliation

IYSV Trials

Treatment*	AVRC	Pre-bulb	Plot Weight (lbs) - 20 sq. ft.						Storage Rot - % bulbs rotted			
			Col	Jum	Med	Pre	Col + Jum	Total	15-Oct	14-Nov		17-Dec
1. Control		0	3.43	20.80	5.03	0.28	24.23	29.25	6.25	7.50	bc	16.25

2. Actigard @ 0.75 oz	6,5,4,3	2.48	22.05	7.15	0.45	24.53	31.68	12.50	2.50	c	22.50
3. Actigard + W @ 3.84 oz + L @ 1.5 oz	6,5,4,3	0.00	18.20	8.53	0.28	18.20	26.73	10.00	11.25	ab	15.00
4. Actigard + W + L	6,4,2	1.45	18.53	8.43	0.25	19.98	28.40	5.00	5.00	bc	11.25
5. Actigard + A16001 @ 20 oz + W + L	6,5,4,3	1.05	18.38	8.60	0.33	19.43	28.03	12.50	16.25	ab	17.50
6. Warrior + Lannate	6,5,4,3	1.70	24.13	4.48	0.15	25.83	30.30	15.00	8.75	bc	11.25
7. Actigard / Warrior + Lannate	6,5,4,3	1.05	17.60	5.60	1.05	18.65	24.25	8.75	7.50	bc	18.75
CV		152.44	25.81	37.41	131.71	30.27	18.09	80.24	68.38		65.38
Prob		0.5657	0.5184	0.1293	0.2919	0.4822	0.522	0.5763	0.0714		0.8777
LSD 0.05		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	7.037		n.s.

* Trt 2-7 with Kinetic @ 0.125%v/v in 25 gal/Acre; W = Warrior, L = Lannate; Onion 'X202' seeded 03/13, harvested 09/15

Trt Dates: 06/09, 06/17, 06/23, 06/30, 07/07; trace IYSV noted on 08/19/08

SUMMARY: insufficient disease pressure, no yield or storage rot response to Actigard treatments

Treatment*	ARDEC	Pre-bulb	Plot Weight (lbs) - 25 sq. ft.				Storage Rot - % bulbs rotted		
			TOTAL	IYSV%	Thrips 1	Thrips 2	25-Sep	27-Oct	26-Nov
1. Control		0	42.05	52.50	180.75 b	187.00 d	57.50	66.25	83.25
2. Actigard @ 0.75 oz		6,5,4,3	39.80	73.75	200.75 b	215.00 cd	52.50	68.75	84.85
3. Actigard + W @ 3.84 oz + L @ 1.5 oz		6,5,4,3	39.55	66.25	355.00 a	459.75 a	48.75	61.25	71.00
4. Actigard + W + L		6,4,2	41.30	67.50	323.75 a	307.25 b	58.75	53.75	65.00
5. Actigard + A16001 @ 20 oz + W + L		6,5,4,3	38.75	68.75	338.00 a	422.50 a	38.75	53.75	57.50
6. Warrior + Lannate		6,5,4,3	42.25	58.75	338.75 a	417.00 a	51.25	68.75	80.00
7. Actigard / Warrior + Lannate		6,5,4,3	37.55	67.50	323.75 a	273.00 bc	43.25	53.75	62.50
CV			6.60	17.23	21.46	17.53	37.18	26.07	24.05
Prob			0.1647	0.2058	0.0030	0.0001	0.7782	0.5771	0.2180
LSD 0.05			n.s.	n.s.	93.833	84.902	n.s.	n.s.	n.s.

* Trt 2-6 with Kinetic @ 0.125%v/v in 25 gal/Acre Onion 'Exacta' transplanted 05/01/08

Trt Dates: 06/19, 06/26, 07/03, 07/10, 07/17; IYSV Evaluation (% incidence on 25 plants) on 08/08; Thrips/10 plants - 1 on 07/07 & - 2 on 07/14

Severe Hail Damage Date: 08/14/08

SUMMARY: good disease & thrips pressure; but the control had lower disease and thrips pressure prior to severe damage by hail; Storage rots were reduced 15-25% by Actigard + Insecticide Treatments 3, 4 & 5, and Trt 5 with A16001 reduced storage rots by 31% on the last evaluation date.

Treatment*	PECKHAM	Pre-bulb	Plot Weight (lbs) - 25 sq. ft.					Storage Rot - % bulbs rotted			
			Total	Jumbo	Medium	IYSV% 1	IYSV% 2	Thrips 1	17-Sep	16-Oct	17-Nov
1. Control		0	30.33	12.43 c	14.98	15.0	78.5	151.75	3.75	15.00	26.50 d
2. Actigard @ 0.75 oz		6,5,4,3	31.25	13.75 bc	15.00	7.0	65.5	195.25	7.50	21.25	60.00 a
3. Actigard + W @ 3.84 oz + L @ 1.5 oz		6,5,4,3	37.75	14.45 bc	14.75	14.5	75.0	184.25	8.75	21.25	40.00 bcd
4. Actigard + W + L		6,4,2	32.20	16.60 bc	13.15	8.5	72.0	164.75	2.50	32.50	45.00 abc
5. Actigard + A16001 @ 20 oz + W + L		6,5,4,3	35.15	19.13 bc	13.03	5.5	70.0	160.00	10.00	15.00	50.25 ab
6. Warrior + Lannate		6,5,4,3	39.10	25.60 a	10.85	5.0	73.0	154.25	7.50	27.50	47.25 ab

7. Actigard / Warrior + Lannate

6,5,4,3	33.85	18.53 bc	12.98	8.0	70.0	118.25	6.25	28.75	27.50 cd
CV	13.56	24.20	30.20	85.48	15.37	31.82	95.86	57.33	35.15
Prob	0.1648	0.0056	0.7679	0.3971	0.7577	0.4948	0.6336	0.4206	0.0505
LSD 0.05	n.s.	6.1864	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	18.257

* Trt 2-6 with Kinetic @ 0.125%v/v in 25 gal/Acre Onion 'Granero' transplanted 05/01/08, harvested 08/18/08

Trt Dates: 06/09, 06/16, 06/23, 06/30, 07/07; IYSV Evaluation (% incidence on 50 plants) on 07/07 & 08/05; Thrips/10 plants on 07/01

Disease & Thrips data were also analyzed as log-transformed (square-root), and differences were not significant

SUMMARY: good disease & thrips pressure; disease was reduced 4-17% and jumbo yield was increased 11-54% with Actigard treatments 2-5 & 7; storage rots were lowest for the untreated control, possibly influenced by the lower proportion of jumbo bulbs available for storage. Trts 3 & 7 had the lowest rots of the Actigard treatr