

EVALUATION OF OMEGA APPLIED BY CHEMIGATION FOR CONTROL OF POWDERY SCAB ON POTATO, 2004

Researchers: Richard T. Zink and Andrew Houser, Colorado State University, SLVRC

Location: Off-station trial, San Luis Valley, CO

Cultivar: Chipeta, cut seed, 2-4 oz.

Objective: To evaluate the efficacy of applying Omega fungicide in controlling powdery scab on potato.

Application: Omega was applied through center pivot chemigation in two separate fields on a four-acre section per field.
For Omega Application: Chemical was mixed with 20 gal. of water and was irrigated on with 0.5 inches of water.

Treatments:

1. Control, no treatment A
2. Control, no treatment B
3. Omega @ 3.0 pt./A, applied on August 18, 2004

	Field # 1	Field #2
Planted:	May 21, 2004	May 17, 2004
Plot Design:	Randomized sampling within treatment blocks.	Same
Plot Size:	1- 4 acre plot of ground per treatment	Same
Plant Spacing:	12 inches	Same
Row Spacing:	34 inches	Same
Replications:	Four	Same
Irrigation:	Center pivot sprinkler, rate based on ET	Same
Fertilizer:	50N preplant, 48N topdress	50N preplant, 57.5N topdress
Herbicide:	Dual Magnum, 1.33 pt./A + Trifluralin, 0.67 pt./A + Sencor, 1.33 oz./A	Same
Insecticide:	Asana, 0.4 pt./A + Vydate, 1.0 qt./A + Leverage, 4.3 floz./A	Asana, 0.6 pt./A + Vydate, 2.0 qt./A + Leverage, 4.3 floz./A
Fungicide:	Bravo Ultrex, 0.9 lb./A + Amistar, 2.0 oz./A	Same
Vine Killer:	Sulfuric acid	Same
Harvested:	September 2 & 3, 2004	Same

DATA

Disease: Mean percent of 100 tubers per replication, taken from four locations per replication per treated area, showing powdery scab lesions post harvest and the number of lesions found per tuber post harvest.

Table 1. Effect of Omega fungicide, applied by chemigation, on the incidence of powdery scab on tubers in the cultivar Chipeta, San Luis Valley, Colorado, 2004.

Cultivar	% infected ^a	% with 1-5 lesions ^b	% with 6-10 lesions ^c	% with 11-20 lesions ^d	% with 21-30 lesions ^e	% with >21 lesions ^f	% with >30 lesions ^g
1. Control, no treatment A	42.6 ab	50.0	14.3	12.4	9.0 a	23.4	14.4
2. Control, no treatment B	39.3 b	50.9	15.8	14.7	3.6 b	18.6	15.0
3. Omega @ 3.0 pt./A, applied on August 18, 2004	49.9 a	54.9	11.7	10.5	7.5 ab	22.9	15.4
LSD(P=0.05)	7.72	NS	NS	NS	4.28	NS	NS

^a Percent tubers with powdery scab lesions, 100 8 to 10 oz. tubers/treatment/replication, mean of eight replications (four reps. per site).

^b Percent tubers with 1-5 lesions/treatment/replication, mean of eight replications (four reps. per site).

^c Percent tubers with 6-10 lesions/treatment/replication, mean of eight replications (four reps. per site).

^d Percent tubers with 11-20 lesions/treatment/replication, mean of eight replications (four reps. per site).

^e Percent tubers with 21-30 lesions/treatment/replication, mean of eight replications (four reps. per site).

^f Percent tubers with >21 lesions/treatment/replication, mean of eight replications (four reps. per site).

^g Percent tubers with >30 lesions/treatment/replication, mean of eight replications (four reps. per site).