

Evaluation of New and Novel Nematicides

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Trial location: UC South Coast R&E Center

- Sandy loam infested with Southern root-knot nematodes, *Meloidogyne incognita* (average: 62 J2/100 cm³ soil)
- single rows, 20 ft x 2 ft plots
- RCB, 5 reps
- cv Halley 3155 (rkn susceptible)
- June 11 – Sept 1



2015 Trial location: South Coast R&E Center

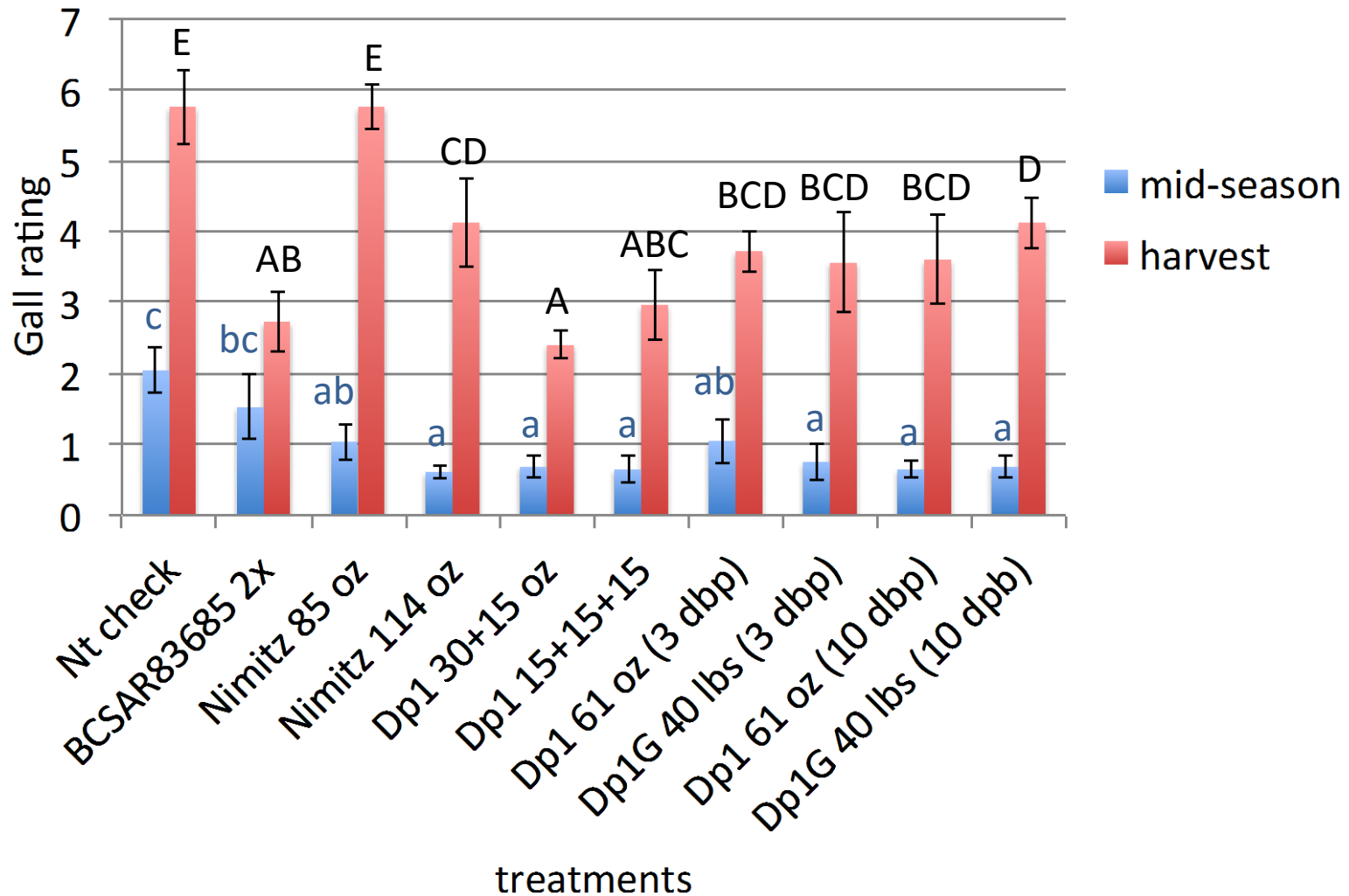
#	Treatment ¹	Rate	Application method and timing
1	Non-treated check		
2	BCSAR83685 + BCSAR83685	8.55 oz 8.55 oz	at planting and 14 dap*, both via drip
3	Nimitz EC	85 oz	14 dbp** incorp
4	Nimitz EC	114 oz	14 dbp** incorp
5	Dp1 + Dp1	30 oz 15 oz	at planting, drip 14 dap, drip
6	Dp1 + Dp1 + Dp1	15 oz 15 oz 15 oz	at planting, drip 14 dap, drip 28 dap, drip
7	Dp1	60 oz	3 dbp incorporated
8	Dp1-G	40 lb/A	3 dbp incorporated
9	Dp1	60 oz	10 dbp incorporated
10	Dp1-G	40 lb/A	10 dbp incorporated

drip applied: surface drip tubing, 1 ft emitter spacing, 0.5 gal/hr output
 incorporated: 1.65 ft band, rototilled

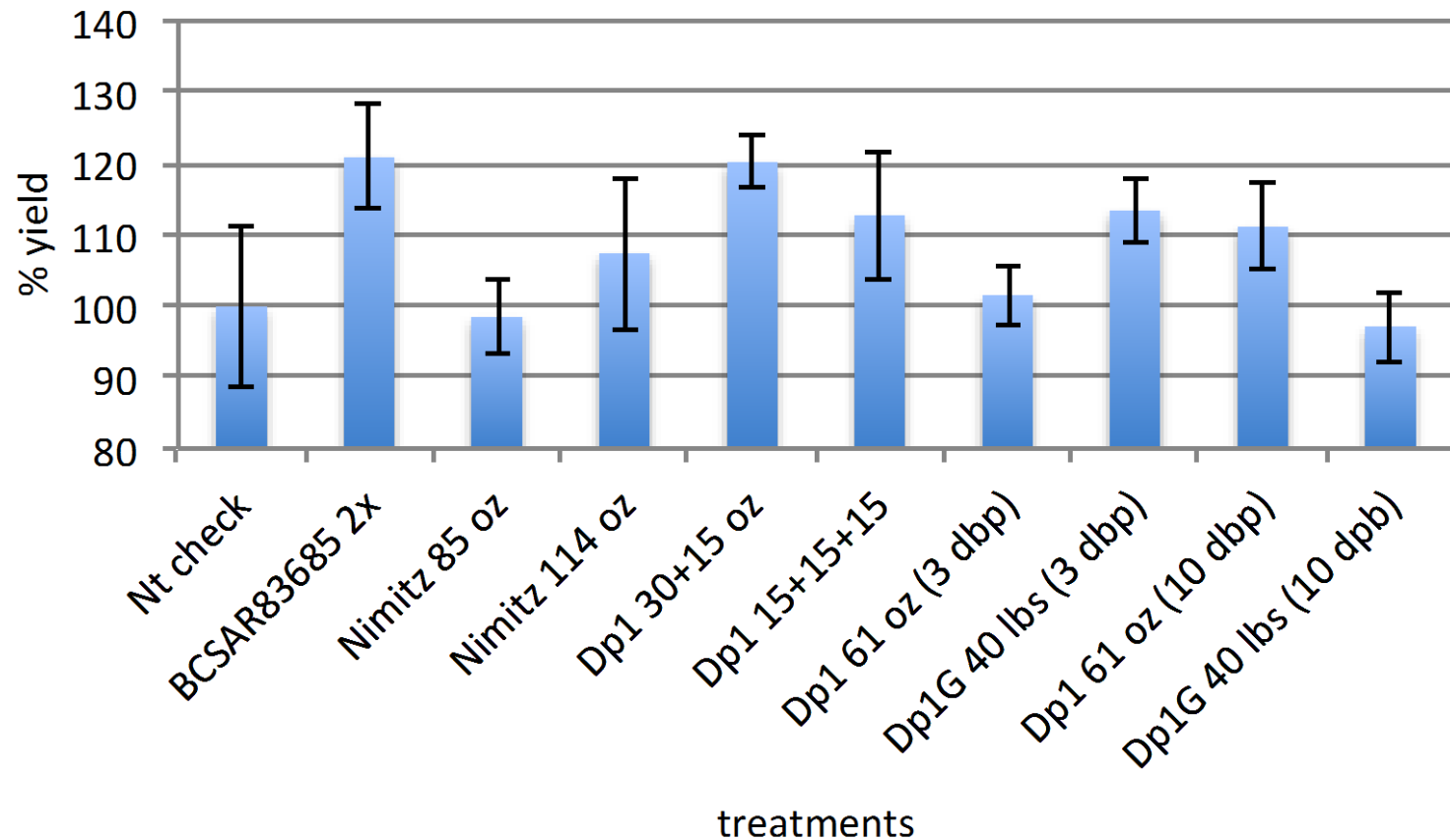
Tomato trial 8 weeks after planting (SCREC)



Treatment effects on rkn-caused root galling at mid-season and harvest (SCREC)



Treatment effects on harvest yield at high rkn-population density (SCREC)



UCCE Shafter Research Farm

- Wasco Sandy Loam Soil
- RKN nursery at research farm
- 60 inch beds by 30 ft plots
- 5 reps, Randomized Complete Block Design
- cv Halley 3155 (rkn susceptible)
- Pre-plant applications 4/2/15
- Planted 4/9/15
- Harvested 8/5/15

Treatments

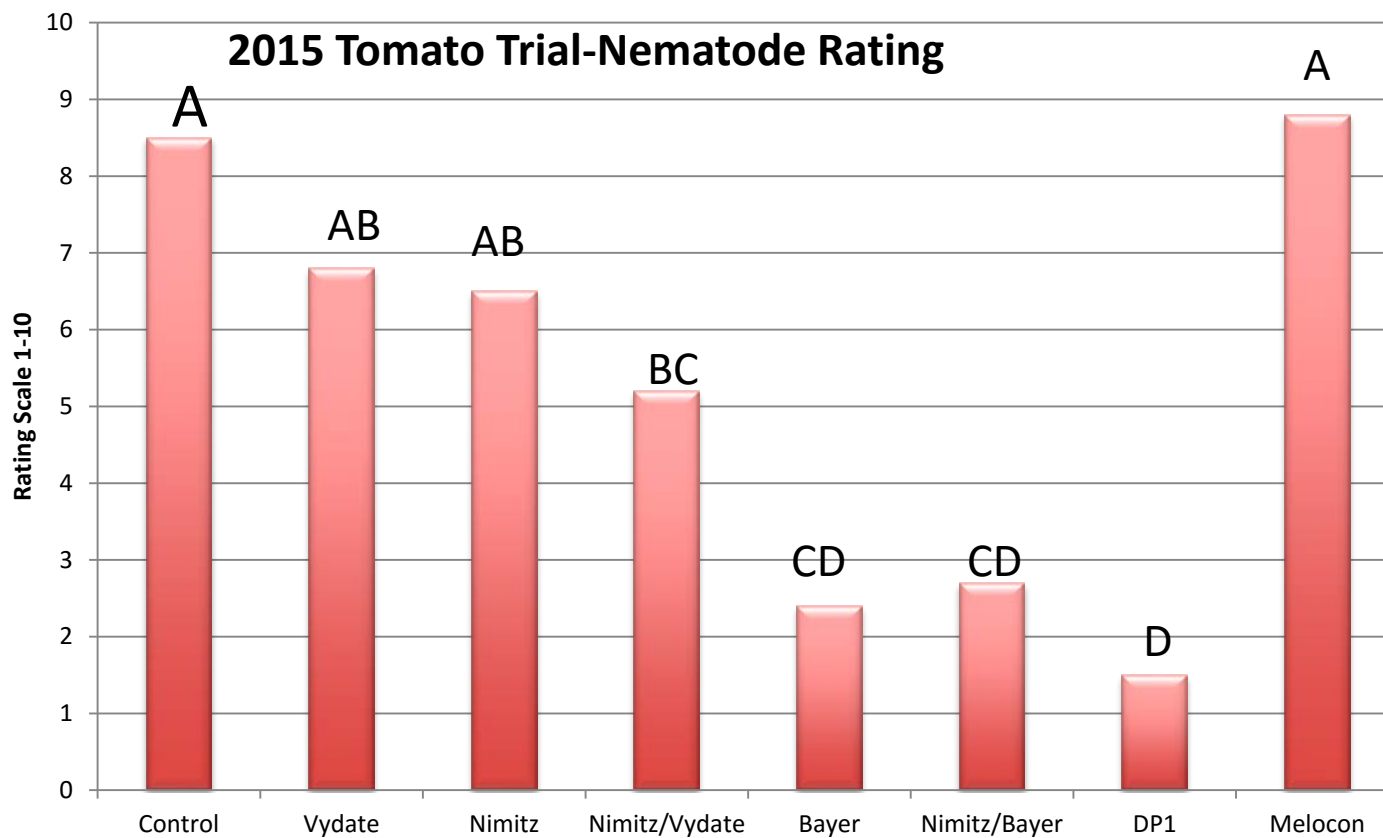
1. Control
2. Vydate pre and 2 post @ 1 gal/A pre
3. Nimitz pre @ 80 oz/A
4. Nimitz pre and Vydate 2 post
5. Bayer pre and 2 post @ 8.55 oz/A
6. Nimitz pre & Bayer 2 post
7. DP At planting (@ 30.7 fl oz/A) & post-plant x 2 (@15.4 fl oz/A)
8. Melocon pre @ 4lbs/A = 6.3 g/ plot

2015 Tomato Nematode Trial at Shafter

	Nematode Rating *	Total Yield 3 plants lbs
1. Control	8.5 A	23.9
2. Vydate @ 1 gal/A 1 pre & 2 post	6.8 AB	28.5
3. Nimitz pre at 80fl oz/A	6.5 AB	37.3
4. Nimitz pre & Vydate 2 post	5.2 BC	44.5
5. Bayer at 8.55 oz/A pre & 2 post	2.4 CD	41.6
6. Nimitz pre & Bayer 2 post	2.7 CD	42.9
7. DP pre at 30.7 fl oz/A & 2 post at 15.4 fl oz/A	1.5 D	32.0
8. <u>Melocon pre at 4 lbs/A</u>	<u>8.8 A</u>	<u>39.8</u>
Probability	0.000	0.1305
% CV	33.84	34.31
LSD _{P=0.01}	3.134	NS**

* Nematode rating 1= 0% infection, 10=100% root infected with RKN

** Not significant





Control



Vydate



Nimitz



Nimitz & Vydate



Conclusions

- Three development products show good to excellent activity against root knot nematodes.
- Nimitz (fluensulfone) has received US EPA registration in fruiting vegetables. Adama's is currently registration of tier 2 group crops (carrot, onions, potatoes).
- Bayer's Velum should be coming to market in 2016 for cotton and peanuts only. Already registered for many crops as Luna fungicide (fluopyram).
- DP1 may be released in 2017

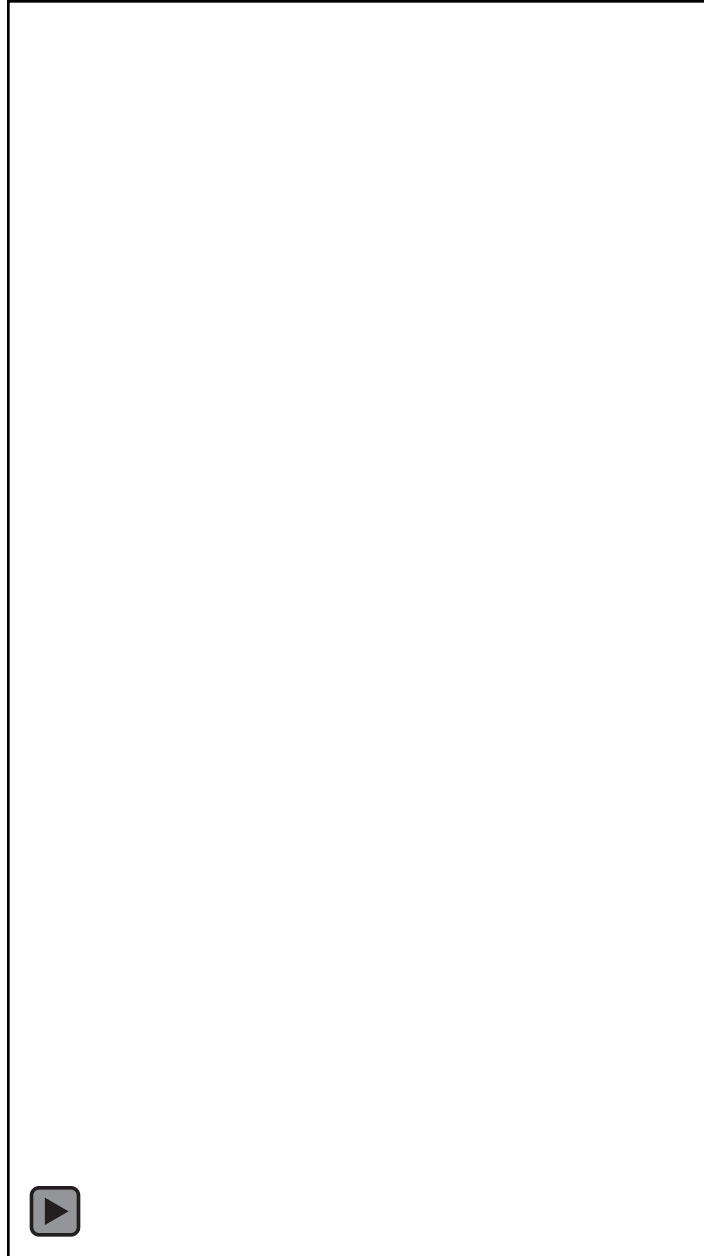
Southern Blight of Tomatoes

Sclerotium rolfsii









Garlic Southern Blight Trial at DM Camp and Sons 2015

<u>Treatment</u>	<u>Percent Rot</u>
1. Control	13.9 A
2. Omega 500F @ 16 fl oz/A	9.8 ABC
3. Convoy @ 32 fl oz/A	11.9 AB
4. Quadris @ 15.5 fl oz/A	10.5 AB
5. Fontelis @ 24 fl oz/A	7.1 BC
6. TebuStar 45W @ 0.45 lb/A	7.1 BC
7. Luna Tranquility @ 16 fl oz/A	4.5 C
8. Luna Tranquility @ 16 fl oz/A & Serenade Soil at 2 qt/A	14.0 A
Probability	0.1015
Coefficient of Variation	49.06
<u>LSD_{P=0.10}</u>	<u>5.868</u>

1st application 3/24/15

2nd application on 4/23/15

Harvested 6/24/15

Thank You!

- California Tomato Research Institute
- Bayer Crop Science
- ADAMA