



Cotton Nematode/Disease Update 2025



Tidewater AREC Plant Pathology Program
Suffolk, VA

Nematode Symptoms



Root-knot



Sting

Nematode Sampling & Thresholds

- **Diagnostic assay**
 - Determines if poor growth in current crop is caused by nematodes
 - Sample “problem spots” during growing season
- **Predictive assay**
 - Determines if nematode populations will affect next year’s crop (based on thresholds)
 - Fall sampling when nematode populations are high

Sampling for Diagnostic Assay



★ = Good

★ = Problem

Sampling for Predictive Assay



We can handle all in-season diagnostic samples and “some” predictive samples.

Instructions for collection and shipping

- Collect about 1 pint of soil
- Use a ziplock bag
- Keep sample cool
- Shipping overnight/next day is best



Cotton Nematode Thresholds

Nematode	Numbers of Nematodes per Pint of Soil (fall count)		
	Slight	Moderate	High
Root-knot nematode	0–749	750–1,499	1,500+
Stubby-root nematode	0–299	300–499	500+
Sting nematode	0*	0*	10+
Lesion nematode	0–99	100–299	300+
Lance nematodes, common	0–999	1,000+	
Lance nematodes, Columbia	0–99	100–499	500+
Reniform nematode	0–999	1,000–1,999	2,000+

* Any detectable number can pose a serious problem.

Available Nematicide Treatments

Seed Treatments



Copeo[®]
Seed Treatment



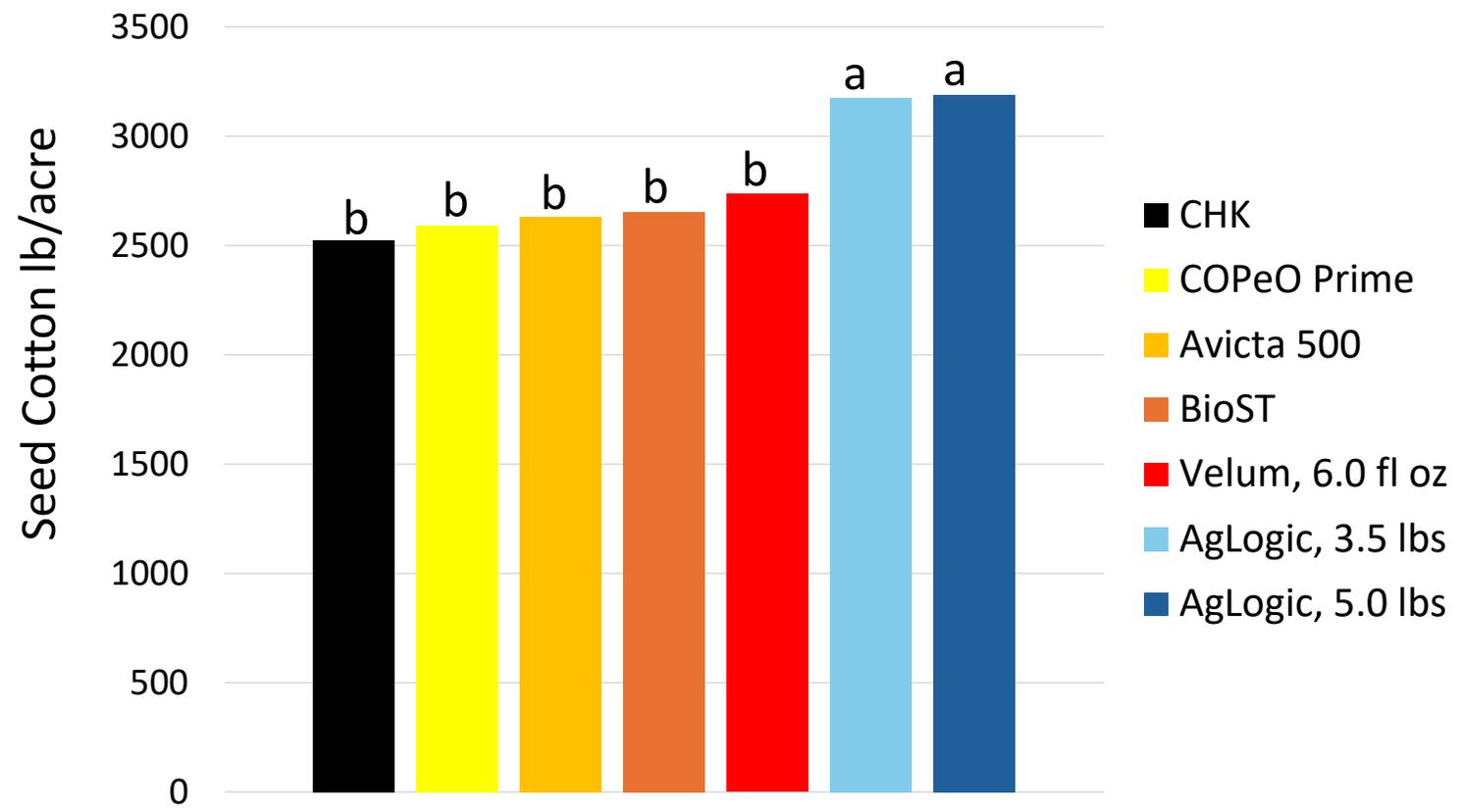
In-furrows

AgLogic[™] 15G
Aldicarb Pesticide



Available Nematicide Treatments

Evaluation of Cotton Nematicides - 2022





AgLogic for Nematodes and Thrips - 2011

Treatment	Thrips Injury	Root Galling	Yield (bales/acre)
<u>Location 1</u>			
Untreated	3.0 a	2.0 a	0.82
Temik, 3.5 lbs	1.5 d	0.1 d	0.56
Temik, 7.0 lbs	1.5 d	0.8 cd	0.87
Avicta Duo	2.5 ab	1.7 ab	0.70
<u>Location 2</u>			
Untreated	3.5 a	-	1.15 bc
Temik, 3.5 lbs	0.8 c	-	1.24 ab
Temik, 7.0 lbs	0.5 c	-	1.25 ab
Avicta Duo	1.5 b	-	1.02 c



Nematicide Treatments Summary

- Take a soil test
- Use varieties resistant to root-knot **IF** you know you have them
- Nematicide seed treatments often don't reduce nematode losses
- AgLogic is a good option **IF** you have nematodes (helps with thrips too)
- Can reduce AgLogic rate to 3.5 lbs to reduce costs

Cotton Foliar Diseases



Target Spot



Areolate Mildew

Cotton Foliar Diseases



Target Spot

- Late July to late August
- Hot, wet weather
- High-yielding, “growthy” varieties at risk
- Control rank growth with N and PGRs
- Preventive/at-onset fungicide apps.
- Use long rotations

Areolate Mildew

- Late July to late August
- Hot, humid weather
- Cultivars vary in susceptibility
- Preventive/at-onset fungicide apps.
- Use long rotations



N.C. State Fungicide Data Areolate/Target Spot Dr. Ahumada 2024

Fungicide	Rate Fl oz/acre	Timing	Target Spot	Areolate Mildew	Defoliation	Yield bales	Fungicide Cost	Cost* Benefit
Untreated	-	-	10	10	9.2	2.9		
Revytek	12	3 rd week of bloom	6.8	2.4	1.4	3.2	\$45	\$52.30
Revylok	5.5	3 rd week of bloom	6.7	4.9	4.7	2.9	\$31.50	-\$32.20
Priaxor	6	3 rd week of bloom	3.4	2.2	1	3.3	\$28	\$108.00
Miravis Top	13.6	3 rd week of bloom	2.4	1.3	6.9	2.8	\$26.32	-\$67.00
Topguard EQ	14	3 rd week of bloom	3.8	2.3	5.6	3.0	\$25.56	-\$0.36
Quadris	8	3 rd week of bloom	4	2.6	8.2	3.0	\$20.94	\$3.56
Xyway	15.2	At-planting	1.3	3.9	10	2.6	\$35	-\$135.45

Deltapine© DP2127 B3XF

*Price of cotton \$0.70

Revytek and Priaxor = Both have pyraclostrobin (Headline) + fluxapyroxad



Virginia Tech Variety Trial - 2024

Variety	Aerolate Mildew Oct 17	Target Spot Oct 10	Yield (seed cotton/A)	Yield (bales/A)
Deltapine [®] DP2038 B3XF	65.5 ab	67.7	1,765 bc	1.4
Deltapine [®] DP2127 B3XF	100.0 a	100.0	2,071 a-c	1.7
NexGen [®] NG5711 B3XF	17.0 c	100.0	1,657 c	1.3
PhytoGen [®] PHY 480 W3FE	12.5 c	90.0	2,124 ab	1.7
PhytoGen [®] PHY 500 W3FE	15.5 c	70.0	2,437 a	2.0
Stoneville [®] ST6000 AXTP	27.5 bc	20.0	2,075 a-c	1.9
<i>P</i> (F)	0.003	0.41	0.02	0.07

Stemphylium Leaf Spot



- Seen every year
- Typically in K-deficient cotton
- **Fungicide not needed!**



Fungicide Treatments Summary

- Higher risk in fields where observed prior
- Varieties less susceptible to foliar pathogens lowers risk
- Earlier sprays more effective in reducing disease
- Typically sprays applied at early disease onset can reduce losses
- If 4-weeks from defoliation, fungicide less likely to be profitable
- Use effective, low cost fungicides



Resources and Survey



Virginia Ag Pest and Crop Advisory

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