

# Evaluation of Helena Fertility Products in Dark Tobacco 2008 - UKREC, Princeton, KY

- Dark tobacco variety: PD 7302LC
- Transplanted May 31, 2008
  - 4900 plants/A (40" row spacing, 32" in-row plant spacing)
- Standard fertility program applied to all plots:
  - 275 lbs N/A (150 lbs N/A preplant urea, 125 lbs N/A sidedress UAN at 4 wks)
  - Soil test P and K (0 P<sub>2</sub>O<sub>5</sub>, 0 K<sub>2</sub>O needed)
- Experimental design: randomized complete block with 4 replications.
- Plots 4 rows, 40-ft. long
- Foliar applications made with 10X hollow cone nozzles, 2 nozzles per row, 15 gal/A
- In-season stand counts and vigor ratings taken on all 4 rows
- Yield data collected from center 2 rows

# Evaluation of Helena Fertility Products in Dark Tobacco 2008 - UKREC, Princeton, KY Treatments

Trt	Treatment	Rate/A	Application Timing (date)
1	Standard fertility program plus: NC0801 NC0802 NC0803	1 gal/A 2 qt/A 1 qt/A	Setter water (tank mix May 31)
2	Standard fertility program plus: NC0801	1 qt/500 gal float water	2 wks prior to transplanting (May 8)
3	Standard fertility program only		
4	Standard fertility program plus: NC0804 NC0802	1 gal/A 1 qt/A	Foliar prebloom (tank mix July 8 and August 1)
5	Standard fertility program plus: NC0805	1 qt/A	Foliar prebloom (tank mix July 8 and August 1)
6	Standard fertility program plus: NC0802	2 qt/A	Foliar post-topping (August 26)

# Evaluation of Helena Fertility Products in Dark Tobacco 2008 - UKREC, Princeton, KY

In-season Vigor and stand count: July 14 (6.5 wks after setting)

Trt	Treatment	Crop Vigor (1-10)	Stand Count (max 60 plants/plot)
1	Standard fertility program plus: NC0801 NC0802 NC0803	8	58
2	Standard fertility program plus: NC0801	8	60
3	Standard fertility program only	7	59
4	Standard fertility program plus: NC0804 NC0802	7	60
5	Standard fertility program plus: NC0805	8	59
6	Standard fertility program plus: NC0802	7	58
	LSD <sub>0.05</sub>	2.2	2.0

# Evaluation of Helena Fertility Products in Dark Tobacco 2008 - UKREC, Princeton, KY

In-season Vigor and stand count: August 1 (9 wks after setting)

Trt	Treatment	Crop Vigor (1-10)	Stand Count (max 60 plants/plot)
1	Standard fertility program plus: NC0801 NC0802 NC0803	8	58
2	Standard fertility program plus: NC0801	8	60
3	Standard fertility program only	8	59
4	Standard fertility program plus: NC0804 NC0802	8	60
5	Standard fertility program plus: NC0805	8	59
6	Standard fertility program plus: NC0802	8	58
	LSD <sub>0.05</sub>	1.3	1.8

# Evaluation of Helena Fertility Products in Dark Tobacco 2008 - UKREC, Princeton, KY

## Final Yield/A by stalk position and total

Trt	Treatment	Trash (lbs/A)	Lug (lbs/A)	Second (lbs/A)	Leaf (lbs/A)	Green (lbs/A)	Total (lbs/A)
1	Standard fertility program plus: NC0801 NC0802 NC0803	16	458	702	1622	119	<b>2917</b>
2	Standard fertility program plus: NC0801	15	422	679	1574	147	<b>2837</b>
3	Standard fertility program only	12	385	629	1599	210	<b>2834</b>
4	Standard fertility program plus: NC0804 NC0802	9	454	696	1548	70	<b>2777</b>
5	Standard fertility program plus: NC0805	13	308	635	1647	291	<b>2894</b>
6	Standard fertility program plus: NC0802	16	399	634	1606	174	<b>2829</b>
	LSD <sub>0.05</sub>	12	176	205	266	296	<b>343</b>

# Evaluation of Helena Fertility Products in Dark Tobacco 2008 - UKREC, Princeton, KY

## Final Grade Index/Leaf Quality Data (0-100 scale)

Trt	Treatment	Mean Grade Index* (0-100 scale)
1	Standard fertility program plus: NC0801 NC0802 NC0803	20.6
2	Standard fertility program plus: NC0801	18.4
3	Standard fertility program only	20.4
4	Standard fertility program plus: NC0804 NC0802	18.5
5	Standard fertility program plus: NC0805	22.1
6	Standard fertility program plus: NC0802	22.2
	LSD <sub>0.05</sub>	12.5

\*Mean Grade Index based on USDA grading standards for Type 22 Eastern dark-fired tobacco. Mean grade index is a weighted average of grade indexes for lug, second, and leaf stalk positions.