

**1996-97 PURSELL COATED UREA PRODUCT TRIAL ON KENTUCKY BLUEGRASS
DURING THE COOL SEASON**

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Objectives:

To evaluate the performance of coated urea nitrogen fertilizers applied to established Kentucky bluegrass.

Cultivar:

Kentucky bluegrass blend (Classic and Rugby).

Experimental Site:

A mature plot established at the UCR Turfgrass Field Research Center, Riverside, CA on September 28, 1993. The root zone is a native soil which is classified as a Hanford fine sandy loam; pH = 7.0; Olsen-P = 22 ppm; Extractable K = 117 ppm; Fe = 67 ppm; CEC = 11.7 meq/100g; EC = 1.25 mmhos/cm; ESP = 2%; SAR = 2; soluble Ca = 6.8 meq/L; soluble Na = 5.0 meq/L; soluble Mg = 2.5 meq/L; soluble HCO₃ = 0.6 meq/L; OM = 1.51%; sand = 51%; clay = 9%; silt = 40%.

Experimental Design:

Randomized Complete Block design with four replications. Plot size 4.5 x 6.0 ft.

Mowing:

Once per week with a rotary mower set at 2.0 inches. Clippings collected.

Irrigation:

Plots irrigated to prevent visual drought symptoms and overwatering.

Fertilizer Treatments:

- Treatments applied November 25, 1996.
- Trikoté 42-0-0, Methex 40-0-0, Coarse IBDU 31-0-0, Scotts PCSCU 38-0-0, Polyon 43-0-0, three Pursell experimental fertilizers (BPP-PCU-1 44-0-0, BPP-PCU-2 44-0-0, BPP-PCU-3 44-0-0), and a check (no fertilizer) treatment.
- Test ran for four months (November 25, 1996 to April 4, 1997).

Measurements:

Visual turfgrass color ratings were estimated once every two weeks beginning two weeks after initial treatment applications, using a 1 to 9 scale (1=yellow, 5=acceptable, 9=darkest green kentucky bluegrass).

Please note that the nitrogen response on all plots was uneven or spotty in terms of color. However, a lack of uniformity is not a factor in color ratings, unlike quality ratings (which would be biased by such disuniformity). It also should be noted that such uneven or spotty response to nitrogen treatments has been previously observed on a perennial ryegrass nitrogen product test during the cool season, and that the application procedures for the current trial were tested and found to be uniform.

1996-97 Pursell Coated Urea Product Trial on Kentucky Bluegrass During the Cool Season

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I				II				III				IV		
4	5	--	9	6	1	4	9	2	5	1	7	3	5	6
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
6	2	1	8	5	--	--	--	3	9	8	--	4	7	--
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
3	--	7	3	7	--	2	8	6	4	--	1	9	8	2
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

TREATMENTS

- 1. Trikote 42-0-0
- 2. Nutralene 40-0-0
- 3. IBDU Coarse 31-0-0

- 4. Scotts PCSCU 38-0-0
- 5. Polyon 43-0-0
- 6. BPP-PCU-1 44-0-0

- 7. BPP-PCU-2
- 8. BPP-PCU-3
- 9. Check



1996-97 Pursell Coated Urea Product Trial on Kentucky Bluegrass: Calendar of Activities

Date	Activity
November 25, 1996	Study begins with application of all treatments.
November 27, 1996	First post-application mowing. Mowing continues according to schedule set to once a week at 2", clippings removed.
December 13, 1996	Initial color ratings.
January 3, 1997	Color ratings.
January 10, 1997	Color ratings.
January 24, 1997	Color ratings.
February 7, 1997	Color ratings.
February 21, 1997	Color ratings.
March 7, 1997	Color ratings.
March 21, 1997	Color ratings.
April 4, 1997	Final color ratings.

1996-97 Pursell Coated Urea Product Trial on Kentucky Bluegrass: Visual Color Ratings

Scale: 1-9 (9=greenest Kentucky bluegrass). Products applied November 25, 1996.

Product	Rate (lb N/1000 ft ²)	12/13/96	01/03/97	01/10/97	01/24/97	02/07/97	02/14/97	03/07/97	03/21/97	04/04/97	Overall
Trikote 42-0-0	2.0	6.3	7.5	7.3	6.8	6.6	6.3	6.6	5.9	5.4	6.5
Methex* 40-0-0	2.0	5.8	6.1	5.7	5.3	5.2	5.1	5.3	4.9	5.1	5.4
Coarse IBDU 31-0-0	2.0	5.1	4.6	4.6	4.6	4.7	5.6	5.9	5.4	5.1	5.1
Scotts PCSCU 38-0-0	2.0	5.8	6.1	6.2	5.6	5.5	5.8	6.2	5.8	5.6	5.8
Polyon 43-0-0	2.0	5.1	4.8	5.3	5.1	5.5	6.3	6.8	6.6	6.2	5.8
BPP-PCU-1	2.0	7.3	7.6	7.2	6.8	6.3	6.1	6.4	5.7	5.3	6.5
BPP-PCU-2	2.0	6.8	7.6	7.3	7.2	6.6	6.4	6.5	5.9	5.6	6.6
BPP-PCU-3	2.0	6.4	7.6	7.3	6.9	6.6	6.4	6.5	6.0	5.8	6.6
Check	0.0	4.7	4.1	4.1	3.7	3.0	3.1	3.1	3.4	3.8	3.6
LSD P=0.05		0.3	0.4	0.4	0.4	0.5	0.4	0.3	0.4	0.4	0.1

* Formerly known as Nutralene.

CIMIS environmental measurements from November 24, 1996 to April 5, 1997 in Riverside, CA

Date	Accumulative Weekly ET _o (mm/week)	Accumulative Weekly Precipitation (mm/week)	Average Solar Radiation (W/m ² /day)	Average Daily Temperature (°C)	Average Relative Humidity (%)	Average Daily Soil Temperature at 10.2 cm Depth (°C)
11/24/96 - 11/30	21.39	0.00	142	15	41	14
12/01 - 12/07	12.36	6.00	124	12	55	12
12/08 - 12/14	9.86	14.00	82	14	65	14
12/15 - 12/21	16.21	0.00	121	12	41	12
12/22 - 12/28	8.59	7.00	79	12	61	12
12/29 - 01/04/97	5.71	12.00	65	14	70	14
01/05 - 01/11	15.20	5.00	108	11	49	12
01/12 - 01/18	9.54	57.00	92	10	59	11
01/19 - 01/25	7.14	19.00	82	11	68	12
01/26 - 02/01	17.22	19.00	147	15	55	14
02/02 - 02/08	15.87	0.00	155	11	58	13
02/09 - 02/15	17.44	5.00	142	13	56	12
02/16 - 02/22	23.83	0.00	195	16	50	13
02/23 - 03/01	24.12	2.00	177	12	49	12
03/02 - 03/08	25.36	0.00	224	14	50	13
03/09 - 03/15	28.19	0.00	227	19	50	15
03/16 - 03/22	27.90	0.00	227	19	57	17
03/23 - 03/29	24.68	0.00	205	16	63	18
03/30 - 04/05	23.12	2.00	193	13	61	16

ET_o = Reference evapotranspiration.