

- In this test:
1. Over-the-top applications of 1 oz/A of Roundup had no visible effect on growth of cotton.
  2. Karmex symptoms appeared in tops of cotton about two weeks after applications of Roundup from June 4 to August 27.
  3. Over-the-top applications of 1 oz/A of Roundup had no effect on cotton yield, boll components, or fiber properties.

DATES AND RATES OF DIRECTED APPLICATIONS  
OF ROUNDUP IN COTTON

K.C. Hamilton and H.F. Arle

Planted: April, in moist soil, but irrigated April 24 to improve stand.

Variety: Deltapine 16.

Soil: Sand 30%, silt 43%, clay 27%, organic matter 1%.

Treated: Treflan (0.5 lb/A) was disced into the soil February 18 before furrowing for the preplanting irrigation. Karmex (1 lb/A) was applied June 5 as a directed spray covering the furrow and base of cotton plants. The test was cultivated three times with a rolling cultivator. On May 28, June 11, July 2, and July 15 when cotton was 6, 12, 22, and 30 inches high, Roundup was applied as a directed spray covering the furrow and base of cotton plants. Roundup was applied in 40 gpa of water.

Harvested: By machine in November.

Plots: Four rows - 41 ft. long - four replications.

Treatment		Boll components <sup>1</sup>			Fiber properties <sup>1</sup>			Yield of seed cotton
Date	Roundup lb/A	Weight grams	Percent lint	Seed per boll	Length inches UHM	Strength breaker	Fineness Micro.	lb/A <sup>2</sup>
Untreated		6.1	37	33	1.14	3.3	4.6	2,520 a
May 28	1.5	6.1	36	35	1.12	3.3	4.5	2,010 b
June 11	1.5	6.2	36	35	1.13	3.2	4.4	1,950 b
June 11	3.0	6.1	36	34	1.13	3.3	4.4	1,670 b
July 2	1.5	6.3	37	35	1.14	3.2	4.7	2,720 a
July 2	3.0	6.1	35	35	1.14	3.3	4.4	2,780 a
July 15	1.5	6.2	37	35	1.14	3.2	4.5	2,580 a
July 15	3.0	6.2	37	35	1.14	3.2	4.6	2,580 a

<sup>1</sup>Based on four 10-boll samples before harvest.

<sup>2</sup>Values followed by the same letter are not significantly different.

- In this test:
1. Roundup applied on May 28 stunted cotton.
  2. Roundup applied on June 11 stunted cotton and caused it to appear wilted for two to three weeks.
  3. Roundup applied on July 2 caused chlorosis of cotton foliage three weeks later.
  4. Roundup applied on May 28 and June 11 reduced yields.
  5. No treatment altered boll components or fiber properties.

PREPLANTING APPLICATIONS OF HERBICIDES INCORPORATED  
BEFORE BED SHAPING FOR NARROW-ROW COTTON

H. Fred Arle and K.C. Hamilton

Herbicide Treatment: Herbicides were applied February 13, 1974 and incorporated by discing (four inches deep) before listing and bed shaping. After cotton emergence diuron was sprayed (May 28) onto the furrows of all plots at the rate of 1.0 lb/A. The test area was not cultivated during the season.

Soil: Sand 28%, silt 45%, clay 24%, organic matter 0.9%.

Weeds Present: Browntop Ponicum, Jungle rice, ground cherry, pigweed.

Planting: On March 21, 1975, Stoneville 213 cotton was planted, two rows on 40-inch beds in moist soil under a dry mulch. Unsuitable temperatures prevented normal emergence and the area was replanted on April 11. Seeding rate was 25 lbs/A. Rows on bed tops were spaced seven inches apart.

Harvest: Cotton from the two middle beds of each plot was picked by a standard spindle picker on November 19.

Treatment	lb/A	% Weed control 11/18/75		Seed cotton lbs/A.
		Broadleaf	Grass	
Weedy check	--	90	85	2614
Karmex +	1.5			
Prowl	.75	100	100	2821
Karmex +	1.5			
Treflan	.75	100	100	2732
Karmex +	1.5			
Prefar	1.5	100	100	2866
Karmex +	1.5			
Cobex	.5	92	100	2812
Caparol +	2.0			
Amex	1.5	95	100	2920
Caparol +	2.0			
Treflan	.75	100	100	2836
USB-3153	.75	100	100	3208

- In this test:
1. Weeds did not become a serious problem even on check plots.
  2. Seed cotton yields were greater on all treatments than on the untreated check. Differences were not significant.

#### PREPLANT APPLICATIONS OF HERBICIDES INCORPORATED IN SHAPED BEDS FOR NARROW-ROW COTTON

H. Fred Arle and K.C. Hamilton

Herbicide Treatment: Herbicides were applied broadcast over shaped beds on February 18, 1975 and incorporated on bed tops with a power-driven mulcher (Univator). The test area was not cultivated during the season.

Soil: Sand 37%, silt 39%, clay 24%, organic matter 0.8%.

Weeds Present: Browntop Ponicum, Jungle rice, ground cherry, pigweed.

Planting: On March 21, 1975 Stoneville 213 cotton seed at the rate of 25 lbs/A was planted in two rows on 40-inch beds in moist soil under a dry mulch. Rows were seven inches apart on each bed. Due to low temperatures emergence was not satisfactory and the area was replanted on April 11.

Harvest: Cotton from the two middle beds (four rows) of each plot was picked by a standard spindle picker on November 19.

Treatment	lb/A	% Weed Control 11/18/75		Seed cotton lbs/A
		Broadleaf	Grass	
Weedy check	--	80	99	2746
Karmex +	1.5			
Prowl	.75	97	100	2619
Karmex +	1.5			
Treflan	.75	89	100	2643
Karmex +	1.5			
Prefar	1.5	95	100	2475
Karmex +	1.0			
Cobex	.5	100	100	2653
Caparol +	2.0			
Amex	1.5	85	100	2435
Caparol +	2.0			
Treflan	.75	95	99	2718
USB 3153	.75	100	100	2960