

TITLE:

Evaluation of Topguard fungicide on peanut leaf spot at AG-CARES, Lamesa, TX, 2009.

AUTHORS:

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MATERIALS AND METHODS:

Plot size: 2-rows by 50 feet, four replications
Soil type: Amarillo fine sandy loam
Planting date: 30-Apr
Cultivars: Flavorrunner 458 (Runner), and Gregory (Virginia)
Fungicides: Treatments were comprised of combinations of Abound (24.5 fl oz/A),
Bravo WeatherStik (26 fl oz/A), and Convoy (26 fl oz/A). Detailed
descriptions of the treatments evaluated are presented in Tables 1 and 2.
Application timing: 75, 105, and 120 days after planting
Digging date: 14-Oct (Gregory) and 23-Oct (Flavorrunner 458)
Harvest date: 2-Nov

RESULTS AND DISCUSSION:

Topguard (active ingredient flutriafol) is an experimental triazole fungicide seeking a label in peanuts. Topguard is active against early and late leaf spot. Field trials were conducted on Runner and Virginia- type peanuts to evaluate the performance of increasing rates of Topguard under low to moderate leaf spot pressure. Despite dry conditions early, appreciable levels of leaf spot developed late in the growing season. Rhizoctonia pod rot and Southern blight were observed at low levels in this trial (data not shown). Early leaf spot was the primary disease observed in the field, with initial symptoms being observed in mid-July (data not shown). Leaf spot intensity approached 20% defoliation in non-treated Flavorrunner 458 plots (Table 1). All fungicide programs resulted in improved leaf spot control compared to non-treated plots, and increasing rates of Topguard lead to improved leaf spot control. No differences among treatments were observed with regard to yield. Overall, leaf spot levels were lower for Gregory when compared to Flavorrunner 458 (Table 2). Differences in leaf spot were observed with Topguard at 28 fl oz/A providing levels of leaf spot control similar to commercial programs containing Folicur or Provost. Despite differences in leaf spot control, yields and grades for all treatments were similar.

These results indicate that fungicide applications can reduce damage caused by leaf spot; however, disease levels experienced were relatively low. Additional studies evaluating these products in fields with soilborne disease pressure are needed, so that we can better identify the proper use of these products on the Southern High Plains of Texas.

Table 13. Effect of increasing Topguard rates on leaf spot intensity and yield of Flavorruner 458 peanuts at AG-CARES in 2009

Treatment	Description	Rate/A	Application timing (DAP)[†]	Leaf spot (1-10scale)	Pod yields (lb/A)
1	Non-treated control	-----	-----	5.5 a	4085
2	Bravo WeatherStik Topguard	24 fl oz 7 fl oz	60 75 & 105	4.9 b	3557
3	Bravo WeatherStik Topguard	24 fl oz 10 fl oz	60 75 & 105	3.5 c	3293
4	Bravo WeatherStik Topguard	24 fl oz 14 fl oz	60 75 & 105	3.3 cde	4396
5	Bravo WeatherStik Topguard	24 fl oz 28 fl oz	60 75 & 105	2.5 f	4712
6	Bravo WeatherStik Folicur	24 fl oz 7.2 fl oz	60 75 & 105	2.9 ef	4194
7	Bravo WeatherStik Provost	24 fl oz 8 fl oz	60 75 & 105	3.0 de	4089
8	Bravo WeatherStik Topguard + Bravo WeatherStik	24 fl oz 7 fl oz 16 fl oz	60 75 & 105	3.4 cd	4151
LSD (P<0.05)				0.5	ns

Table 14. Effect of increasing Topguard rates on leaf spot intensity and yield of Gregory peanuts at AG-CARES in 2009

Treatment	Description	Rate/A	Application timing (DAP)[†]	Leaf spot (1-10scale)	Pod yields (lb/A)	Damaged kernels (%)	Extra large kernels (%)	Grade (%)
1	Non-treated control	-----	-----	4.3 a	3980 a	3.3 a	34.3 a	75.6 a
2	Bravo WeatherStik Topguard	24 fl oz 7 fl oz	60 75 & 105	3.6 b	3792 a	4.5 a	31.7 a	73.5 a
3	Bravo WeatherStik Topguard	24 fl oz 10 fl oz	60 75 & 105	3.3 bc	3749 a	4.5 a	33.2 a	75.3 a
4	Bravo WeatherStik Topguard	24 fl oz 14 fl oz	60 75 & 105	3.0 c	3656 a	5.1 a	32.2 a	73.7 a
5	Bravo WeatherStik Topguard	24 fl oz 28 fl oz	60 75 & 105	2.4 d	3713 a	4.7 a	32.7 a	76.6 a
6	Bravo WeatherStik Folicur	24 fl oz 7.2 fl oz	60 75 & 105	2.4 d	3759 a	4.2 a	32.7 a	73.6 a
7	Bravo WeatherStik Provost	24 fl oz 8 fl oz	60 75 & 105	2.4 d	3663 a	5.2 a	32.3 a	74.4 a
8	Bravo WeatherStik Topguard Bravo WeatherStik	24 fl oz 7 fl oz 16 fl oz	60 75 & 105	2.3 d	3719 a	6.4 a	31.3 a	75.8 a
LSD (P<0.05)				0.4	ns	ns	ns	ns

[†] DAP = Days after planting. This timing reflects when fungicides would be applied in a pod rot program. [‡] Means within a column followed by the same letter are not different according to Fisher's protected LSD.