

2023 Cook County Peanut White Mold Fungicide Trial



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INTRODUCTION



Georgia peanut producers are bombarded by peanut fungicide options. Knowing which fungicides are most effective against disease is critical to sustainable peanut production. Choosing the wrong fungicide can cost a peanut producer significantly.



One challenge peanut producers face during production is disease management which impacts yield and profit. White Mold (WM), (*Sclerotium rolfsii*) is considered one of the most damaging diseases in peanut production. The disease desiccates vines (fig. 1) and is characterized by its white mycelial growth that originates near ground level (fig. 2). The disease can also infect peanuts underground (fig. 3). According to University of Georgia's "2020 Plant Disease Loss Estimates", WM caused the greatest damage (\$54.2 million) and was the highest cost to control (\$32.6 million) compared to other diseases. UGA Extension Cook County, UGA Plant Pathologist and a Cook County Producer collaborated to install a trial evaluating fungicide programs for disease efficacy in a commercial peanut field.

OBJECTIVE

The objective of the Cook County Peanut White Mold Fungicide Trial is to evaluate and compare multiple fungicide programs and products for peanut disease efficacy and to disseminate data generated to peanut producers from which to base their peanut disease management decisions.

METHODS & MATERIALS

Planting Date: 5 May
Inverted: 22 Sept.
Harvest: 2 Oct.
Var. Planted: GA06G
Tillage: Conventional
Irrigation: Overhead

Leafspot Rating: 21 Sept. (FLA Scale 1 - 10)
WM Rating: 22 Sept. (1' hits/200' row)
Spray Vol: 20 gal./A
Fung Cost: avg - 6 sources

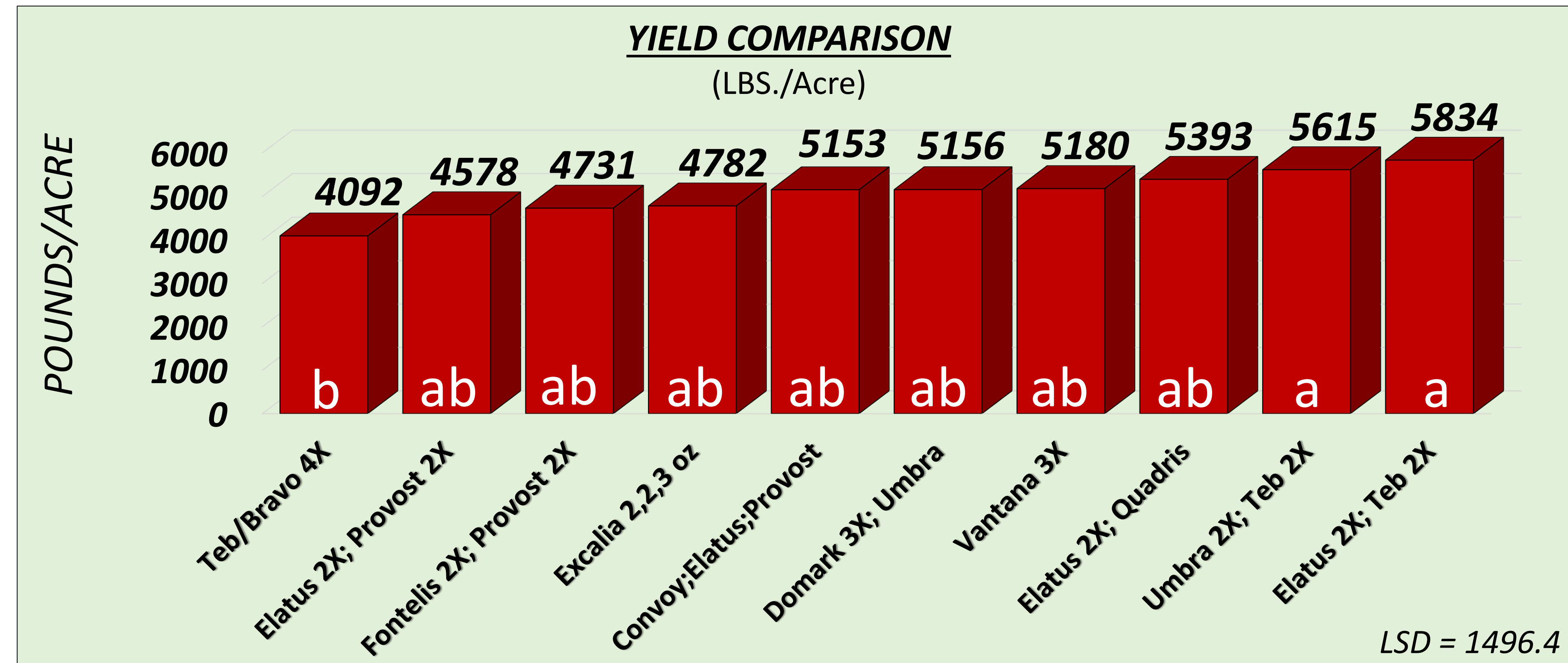
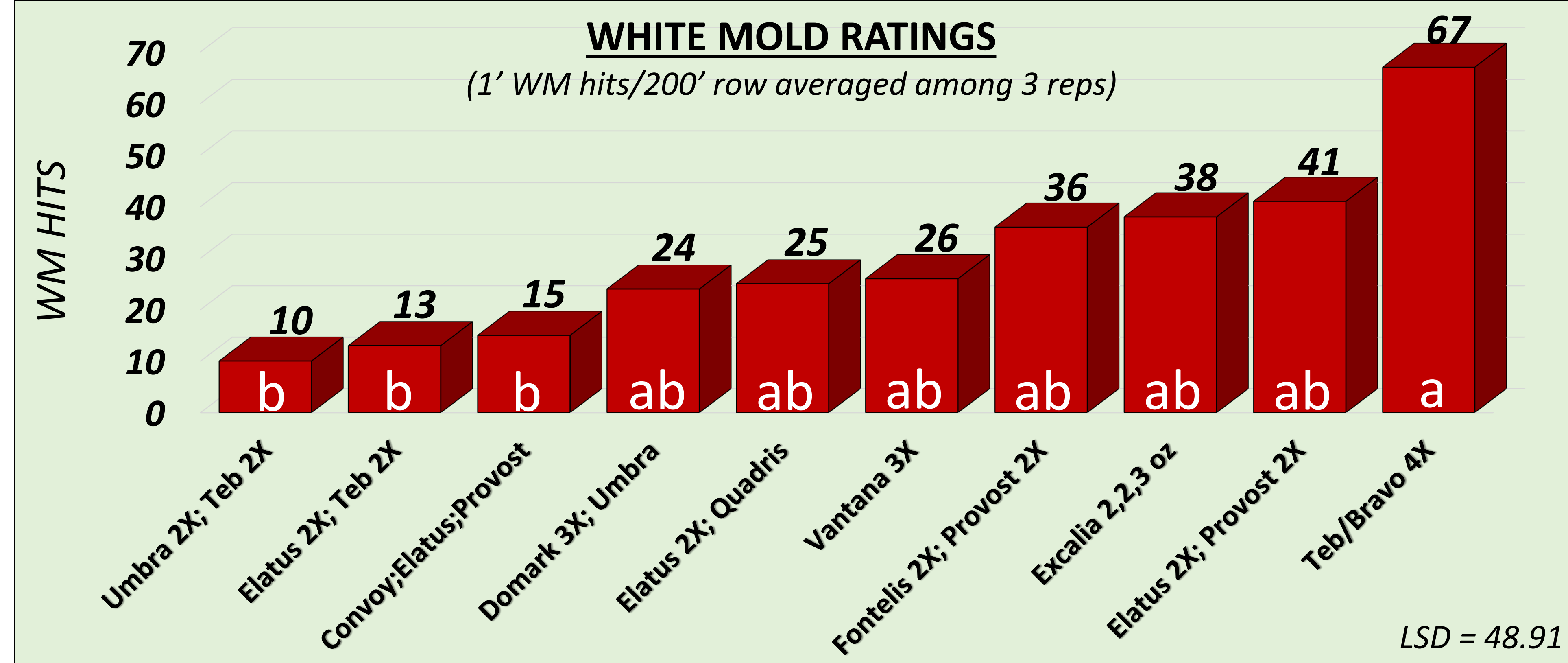
Row Spacing: 38"
Replications: 3X
Experimental Design: Randomized Complete Block
WM Pressure: Moderate - Heavy

Trial Protocol

Trt #	30 Day	45 Day	60 Day	75 Day	90 Day	105 Day	120 Day
1 \$38/A	Bravo 1.5 pt	Bravo 1.5 pt	Tebuconazole 7.2oz Bravo 1 pt	Tebuconazole 7.2oz Bravo 1 pt	Tebuconazole 7.2oz Bravo 1 pt	Tebuconazole 7.2oz Bravo 1 pt	Bravo 1.5 pt
2 \$123/A		AbsoluteMax 3.5oz	Propulse 13.7 oz	Elatus 7.3 oz	Provost Silver 13oz	Elatus 7.3 oz	Provost Silver 13 oz
3 \$99/A		Lucento 5.5 oz	Umbra 36 oz Bravo 1 pt	Tebuconazole 7.2oz Bravo 1 pt	Umbra 36 oz Bravo 1 pt	Tebuconazole 7.2oz Bravo 1 pt	Bravo 1.5 pt
4 \$121/A	Bravo 1.5 pt	Lucento 5.5 oz	Convoy 32 oz Bravo 1.5 pts.	Lucento 5.5 oz	Elatus 9.5 oz	Provost Silver 13 oz	Bravo 1.5 pt
5 \$117/A	Bravo 1.5 pt	Priaxor 6 oz	Vantana 16 oz. Bravo 1.5 pt	Tebuconazole 7.2oz Bravo 1.5 pt	Vantana 16 oz. Bravo 1.5 pt	Vantana 16 oz. Bravo 1.5 pt	Bravo 1.5 pt
6 \$108/A		Aproach Prima 6.8 oz	Fontelis 16 oz	Provost Silver 13 oz	Fontelis 16 oz	Provost Silver 13 oz	Tebuconazole 7.2oz Bravo 1.5 pt
7 \$128/A	Bravo 1.5 pt	Bravo 1.5 pt Alto 5.5 oz	Elatus 9.5 oz Miravis 3.4 oz		Elatus 9.5 oz Miravis 3.4 oz	Quadris 18 oz Alto 5 oz	Bravo 1.5 pt Tebuconazole 7.2oz
8 \$129/A		Priaxor 6 oz	Elatus 9.5 oz Bravo 1 pt	Provisol 3 oz Tebuconazole 7.2 oz	Elatus 9.5 oz Bravo 1 pt	Provisol 3 oz Tebuconazole 7.2 oz	Provost Silver 13 oz
9 \$104/A	Bravo 1.5 pt	Excalia 2 oz Bravo 1.5 pt	Excalia 2 oz Bravo 1.5 pt	Bravo 1.5 pt Microthiol sulfur 3 lbs	Excalia 3 oz Bravo 1.5 pt	Provost Silver 13 oz	Bravo 1.5 pt
10 \$85/A	Domark 2.5 oz Bravo 1 pt	Domark 2.5 oz Bravo 1 pt	Umbra 36 oz Bravo 1 pt	Tebuconazole 7.2oz Bravo 1.5 pt	Tebuconazole 7.2oz Bravo 1.5 pt	Domark 5.25 oz	Provost Silver 13 oz

RESULTS

This data shows that compared to other treatments, (Umbra 2X; Tebuconazole 2X), (Elatus 2X; Teb 2X) and (Convoy; Elatus; Provost Silver) programs have significantly lower incidence of WM. The (Teb/Bravo 4X) program's WM incidence was significantly highest. There was no statistical difference among other treatments. WM ratings generally corresponded with yields. (Umbra 2X; Tebuconazole 2X) and (Elatus 2X; Teb 2X) showed a statistically highest yields (5,615 and 5,834 lbs./A respectively) while (Teb/Bravo 4X) showed statistically lowest yield among all treatments at 4,092 lbs./A.



IMPACT AND DISCUSSION

In order to maximize profits, a peanut producer may be tempted to use a cheaper fungicide that has efficacy against WM. This data shows you get what you pay for when it comes to peanut fungicides. In this trial, the (Elatus 2X; Teb 2X) was the most expensive (\$129/A) of the programs tested however it generated the greatest profit (\$903/A). Comparatively, the least expensive program in the trial (Tebuconazole/Bravo 4X) cost \$38/A and produced the least (\$685/A) in profits. (Profit determined using Tons X \$355 (USDA Loan Rate) - Fungicide Costs). and tomato spotted wilt virus had no effect on yield in this trial. According to this data, a producer who farmed 500 acres peanuts under moderate to heavy WM pressure could earn an increase of **\$10,907** by using an Elatus; Teb vs. Teb; Bravo program. This is an annual trial and plans are to continue to evaluate new and existing peanut fungicides for efficacy in 2024. The data generated from this trial is a resource for UGA ANR Agents, Specialists, and Ag Industry from which to make peanut disease control recommendations and is disseminated to clientele and directly to peanut producers via UGA County Delivery System.

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