



2024 Peanut Weed Control Update

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GEORGIA

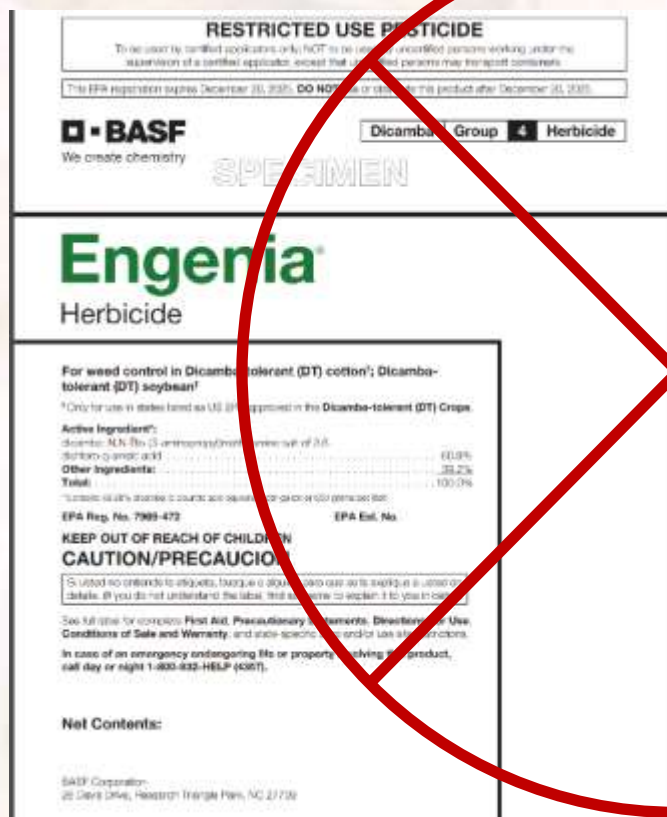
College of Agricultural &
Environmental Sciences

Glyphosate and Peanut





Dicamba is **NOT** labeled for preplant use in peanuts!





Soil-Applied Dicamba Injury on Peanut





Sadly, I have information about peanut response to the following “non-peanut” herbicides:

- 2,4-D
- Dicamba
- Roundup
- Liberty
- Diuron
- Garlon
- Arsenal
- Milestone
- Grazon P+D

 **UGA extension**

Peanut Yield Response to 2,4-D in Georgia

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Department of Crop & Soil Sciences

The herbicide 2,4-D has been used to control broadleaf weeds in numerous grain crops, including field corn, grain sorghum, rice, cereal grains, pastures, and trees, for more than 60 years. The evolution and spread of glyphosate-resistant weeds has led to the development of 2,4-D-resistant crops, including soybean and cotton. Despite adverse effects in both formulation and spray nozzle technologies, planting 2,4-D-resistant crops in close proximity to peanuts increases the risk of 2,4-D injury through off-target movement (drift, volatilizated) and/or spray contamination. Therefore, the objective of this publication is to provide growers, county agents, crop consultants, etc. with information regarding peanut yield response to 2,4-D injury.

2,4-D/Peanut Symptomology

When evaluating peanut fields for suspected off-target movement or sprayer contamination of 2,4-D, it is important to eliminate other potential causes such as drought, nutrient deficiency or systemic plant diseases/diseases. In some instances, these problems might mimic the symptoms caused by 2,4-D or other growth regulator herbicides. Typical peanut injury symptoms caused by 2,4-D include plant stunting, stem twisting (cupping) and occasional leaf burn. Stem injury to peanuts are presented in Figure 1; note that peanut proteins are very similar to soybean and are very sensitive to 2,4-D. However, peanut plants are more sensitive to 2,4-D.

2,4-D/Peanut Yield Loss

Field trials were conducted in Georgia during 2019 to evaluate peanut yield response to various rates of 2,4-D. When applied at 0.1 lb (0.1 lb), only 10% of 2,4-D resulted in a loss of 10%. Generally, average peanut yield when 2,4-D was applied 60 lb/A. At that time, the 80 to 100 lb/A stage of growth (beginning seed) is now has shown that yield losses in soybean (non-genetic sites) 2,4-D was applied during seed growth (100 lb/A). Wu et al. (2009) reported yield losses from 2,4-D applied at 60 lb/A were



Peanut Response to Grazon® P+D

Eric P. Prestele and G. W. Carter, Department of Crop & Soil Sciences



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Perennial Weeds in Peanut



maypop passionflower
J. Hand, Tift Co.
07/06/23



horsenettle
L. Stanley, Montgomery Co.
07/07/23

Revenge Spraying Rarely Works! Timing is Everything!





Gramoxone 3SL @ 16 oz/A + Ultra Blazer 2SL @ 24 oz/A +
2,4-DB 1.75SL @ 16 oz/A + Anthem Flex 4SE @ 3 oz/A +
PowerLock @ 8 oz/A

Applied ~60 DAP/Mid-Afternoon application/12 GPA



07/10/23
~3 DAT



Gramoxone 3SL @ 16 oz/A + Ultra Blazer 2SL @ 24 oz/A +
2,4-DB 1.75SL @ 16 oz/A + Anthem Flex 4SE @ 3 oz/A +
PowerLock @ 8 oz/A

Applied ~60 DAP/Mid-Afternoon application/12 GPA



07/18/23
~11 DAT



Peanut Weed Control - 2023



“The Program”

- 1) Weed-free at planting (tillage/cover crops/herbicides)
- 2) Twin Rows (if possible)
- 3) Multiple Over-Lapping Residuals (PRE/EPOST/POST)
- 4) Timely POST's (3" or less)
- 5) Prevent Seed-Rain from Escapes (hand-weeding, non-selective applicators/mowing)

PE-14-23
July 24
83 DAP

Pre-Plant Burndowns - 2023



NTC



Roundup PowerMax3 5.88SL @ 22 oz/A
2,4-D 3.8SL @ 16 oz/A
Valor EZ 4SC @ 2 oz/A

Pre-Plant Burndowns - 2023



NTC



Gramoxone 2SL @ @ 48 oz/A
2,4-D 3.8SL @ 16 oz/A
Valor EZ 4SC @ 2 oz/A
Induce @ 0.25% v/v



Herbicide Incorporation (Dryland Fields)



- Sonalan
- Prowl
- Strongarm
- Dual Magnum
- Outlook

Incorporation Methods

From Treflan label - Not Labeled in FL Peanut

General Soil Conditions: The soil surface should be smooth enough to allow for uniform application and efficient incorporation of TREFLAN® 4 EC. Break up clods using tillage equipment prior to application of TREFLAN® 4 EC. Apply when soil moisture is sufficient to allow the breakup of large clods and uniform mixing during the incorporation process. Soil compaction and/or non-uniform incorporation may occur if soil is excessively moist.

Incorporation in Bedded Culture: In bedded culture, TREFLAN® 4 EC should be incorporated to a depth of 2 to 3 inches in the final seedbed.

Application Prior to Bedding: Apply TREFLAN® 4 EC and incorporate 1 time with recommended equipment. The bedding operation serves as the second incorporation. Do not expose untreated soil during post-bedding operations such as planting since removal of treated soil during planting can allow weed germination and establishment in the drill row.

Application After Bedding: Knock off beds to planting height before applying TREFLAN® 4 EC. Apply and incorporate TREFLAN® 4 EC with recommended equipment that will conform to the shape of the bed. Do not expose untreated soil.

Cultivation After Planting: Treated crops may be shallowly cultivated without reducing the weed control activity of TREFLAN® 4 EC. Limit depth of cultivation to the zone of treated soil to avoid moving untreated soil to the surface. Exposure of untreated soil may cause loss of weed control.

Incorporation Equipment

Use incorporation equipment capable of mixing TREFLAN® 4 EC uniformly into the top 2 to 3 inches of the final seedbed. Use of inappropriate equipment or improper use of recommended equipment may result in erratic weed control and/or crop injury. Incorporation equipment such as a tandem disc will mix TREFLAN® 4 EC approximately half as deep as the equipment is set to operate. For example, a disc set to cut 4 inches deep will mix most of the TREFLAN® 4 EC within the top 2 inches of soil. Any recommended incorporation implement may be used alone or in combination with any other recommended implement. Two incorporation passes are required when using the following incorporation implements (for single pass incorporation, refer to soil conditions and equipment listed under Single Pass Incorporation Option below):

Tandem Disc: Set equipment to cut 4 to 6 inches deep and operate at 4 to 6 mph.

Rolling Cultivator: Set equipment to cut 2 to 4 inches deep and operate at 6 to 8 mph.

Bed Conditioner (Do-All): Set equipment to cut 2 to 4 inches deep and operate at 4 to 6 mph. One incorporation pass is adequate in bedded culture, while 2 incorporation passes are required in flat planted culture. The Do-All should be used only on coarse and medium textured soils.

Mulch Treader and other similar disc-type implements: Set equipment to cut 3 to 4 inches deep and operate at 5 to 8 mph.

Other Equipment: Other implements including the flexible tine-tooth harrow (Flextine or Melroe), are recommended, but only for certain uses defined in the "Approved Crops" section of this label.

Conservation Tillage Practices: In reduced or minimum tillage situations, fall or spring application and incorporation of TREFLAN® 4 EC may be combined with tillage operations. The first incorporation may utilize equipment such as a tandem disc, combination implement or bedding equipment that provides good soil mixing but leaves a maximum amount of crop residue on the soil surface. The second incorporation may be accomplished with tillage equipment that provides uniform soil mixing used in conjunction with no-till planters (See specific recommendations for reduced or conservation tillage situations for cotton and soybeans in the "Approved Crops" section).

Single Pass Incorporation Option

TREFLAN® 4 EC may be incorporated in a single pass if incorporation conditions allow for thorough and uniform mixing into the top 2 to 3 inches of the final seedbed. Thorough and uniform incorporation may be achieved if the soil at the time of incorporation is of good tilth with moderate moisture, and is relatively free of clods and crop residue. **The following types of equipment can be used to obtain thorough and uniform soil mixing from a single incorporation pass:**

Finishing Disc with disc blades no greater than 22 inches in diameter, spaced no more than 7 1/2 inches apart. Operate at 4 to 6 mph. Best results are obtained when the disc is equipped with harrow, reel, or basket attachments.

Field Cultivator: Set equipment to cut 3 to 4 inches deep and operate at a minimum of 5 mph. A field cultivator is defined as an implement with 3 to 4 rows of sweeps, spaced at intervals of 7 inches or less with sweeps on successive rows staggered so that no soil is left unturned. Chisel points should not be used. Best results are obtained when the field cultivator is equipped with harrow, reel, or basket attachments.

Combination Implements: These implements are defined as 2 or more tillage devices combined to operate as a single tillage unit. For example, 2 to 3 rows of field cultivator C- or S-shaped shanks with successive rows of sweeps staggered so that no soil is left unturned, followed by a spike-tooth or flextine harrow, followed by ground driven reel, basket or incorporator wheels. Combination implements should be set to cut 3 to 4 inches deep and operated at a minimum of 6 mph. Two incorporations are recommended under conditions which prevent optimum soil mixing such as excessive surface residue, roughness, high clay content or soil is too wet or too dry. Combination tools can also be composed of 2 rows of wide crown sweeps that overlap so that the roots of all weeds and plants are severed. This should be followed by 2 gangs of rotating spiked wheels that thoroughly mix TREFLAN® 4 EC into the top 2 to 3 inches of the final seedbed.

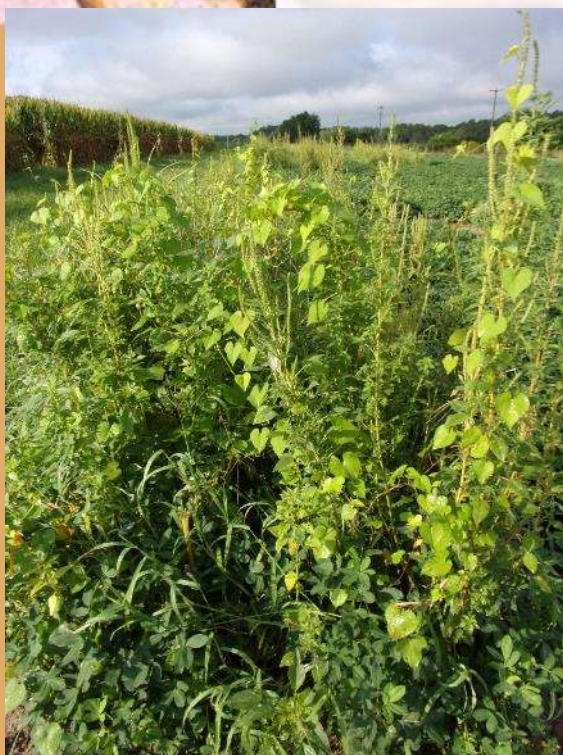
P.T.O.-Driven Equipment (tillers, cultivators, hoes): Adjust equipment to incorporate TREFLAN® 4 EC into the top 2 to 3 inches of the final seedbed with rotors spaced to provide a clean sweep of the soil. P.T.O. equipment should not be operated more than 4 mph.





Peanut Weed Control – 2023

Prowl vs. Sonalan



NTC



5445 lbs/A

Prowl H₂O 3.8SC @ 32 oz/A
Valor EZ 4SC @ 3 oz/A
Strongarm 84WG @ 0.225 oz/A
PRE (1 DAP)
Cadre 2AS @ 4 oz/A
Dual Magnum 7.62EC @ 16 oz/A
2,4-DB 2SL @ 16 oz/A
POST (28 DAP)



5501 lbs/A

Sonalan 3EC @ 32 oz/A
Valor EZ 4SC @ 3 oz/A
Strongarm 84WG @ 0.225 oz/A
PRE (1 DAP)
Cadre 2AS @ 4 oz/A
Dual Magnum 7.62EC @ 16 oz/A
2,4-DB 2SL @ 16 oz/A
POST (28 DAP)

WSSA Group 15 Herbicides?



Outlook[®]
Herbicide

ANTHEM[®]
FLEX
HERBICIDE

Dual Magnum[®]



Zidua[®] SC
Herbicide

Group 15 Herbicide



Tropical Spiderwort/Benghal Dayflower/Spreading Dayflower

- 1) Plow (i.e. bury seed)
- 2) Twin Rows
- 3) **Group 15's (Dual Magnum, Outlook, Zidua, Anthem Flex)**
- 4) Paraquat
- 5) Basagran
- 6) Cadre???
- 7) Strongarm
- 8) Manage after field corn harvest.





Spreading Dayflower in Peanut - 2023



NTC



Gramoxone 2SL @ 12 oz/A

Broadloom 4LC @ 8 oz/A

Dual Magnum 7.62EC @ 16 oz/A



Spreading Dayflower in Peanut - 2023



NTC



Strongarm 84WG @ 0.45 oz/A
Dual Magnum 7.62EC @ 16 oz/A

Future Products

- **Brake 1.2SL**
 - SePRO
 - fluridone
 - WSSA/HRAC Group 12
 - PRE
 - 2023
- **Rexovor 4.17SL**
 - BASF
 - trifludimoxazin
 - WSSA/HRAC Group 14
 - PRE
 - 2025??





Brake Summary

- Testing since 2013
 - 23 field trials
- 8 cultivars
 - GA-06G, GA-12Y, **GA-16HO**, GA-18RU, GA-20VHO, AUNPL-17, FloRun 331, TifNV High O/L
- Need moisture for activation
 - $\geq 0.5''$
- Must be tank-mixed
- 12 oz/A = ~\$17.56
- Proactive resistance mgt?



Peanut Weed Control - 2022

Valor + Strongarm vs. Brake + Strongarm



NTC



PRE (1 DAP)

Prowl + **Valor** + Strongarm

POST (27 DAP)

Cadre 2AS @ 4 oz/A

2,4-DB 2SL @ 16 oz/A

Dual Magnum 7.62EC @ 16 oz/A



PRE (1 DAP)

Prowl + **Brake** + Strongarm

POST (27 DAP)

Cadre 2AS @ 4 oz/A

2,4-DB 2SL @ 16 oz/A

Dual Magnum 7.62EC @ 16 oz/A



I sprayed clethodim and it did not work! What happened?

- Rate
- Timing
- Environment
 - *Hot/dry*
 - *Rain-free period*
- Calibration/Mixing
- Coverage
 - *Droplet size*
 - *Nozzle type, pressure*
 - *Boom height*
 - *Tractor speed*
- Resistance???





Annual Grass Control in Peanut

SelectMax 0.97EC @ 24 oz/A + Agridex @ 1% v/v

15 GPA, 3.5 MPH, AIXR11002 nozzles



07/31/23
0 DAT



08/07/23
7 DAT



08/11/23
11 DAT

Droplet Size and Coverage

Doubling the droplet size – results in 8 times fewer droplets



250 microns | 64 droplets



500 microns | 8 droplets



1,000 microns | 1 droplet

Source: Dr. Connor Ferguson



Florida Beggarweed in Peanut



- Valor - PRE
- Gramoxone - EPOST
- Cadre - POST
 - *< 2" tall*
- Classic - LPOST
 - *variety tolerance*
- Non-selective applicators
 - *paraquat*



UGA Current Classic[®]/Cultivar Use Recommendations

- **NO**

- GA-06G
- Tifguard
- GA-12Y
- *7-13% yield losses*



- **YES**

- Florida-07
- GA Greener
- GA-07W
- GA-09B
 - *No problems 60 DAE or 90 DAE or 105 DAE*
 - *5% yield loss when applied 75 DAE*
- GA-20VHO
- GA-18RU
- AUNPL-17
- TIFNV HIGH O/L
- FLORUN 331
- GA-16HO
 - *No problems at 60 DAE or 85 DAE.*
 - *17% yield loss when applied 75 DAE*
 - *+26-29% TSWV increase*



Hairy Indigo in Peanut



- Plant a Classic tolerant variety
- Valor - PRE
- Gramoxone + Storm - EPOST
- Cobra - POST
- Classic - LPOST



Wild Poinsettia in Peanut

- ALS-resistance?
 - *Very likely*
- Valor - PRE
- Strongarm – PPI/PRE
- Gramoxone - EPOST
- Ultra Blazer - POST
- Cobra - POST
- Cadre - POST





Non-Selective Applicators



Smucker's Top Crop
Super Sponge



GrassWorks Weed Wiper



LMC-Cross Wick-Bar

WeedWiper vs. TopCrop Sponge

50% Solution of Gramoxone Inteon

3.1 MPH, 20" Applicator Height

AMAPA = 36-86" tall, 66" avg.



NTC



WeedWiper



TopCrop



Flail Mower and Peanut - 2021



August 10, 2021
GA-16HO
92 DAP



Flail Mower and Peanut – 2021

Before



August 10, 2021
GA-16HO
92 DAP



Flail Mower and Peanut – 2021

After (2 passes in opposite directions, ~2 MPH)



August 10, 2021
GA-16HO
92 DAP



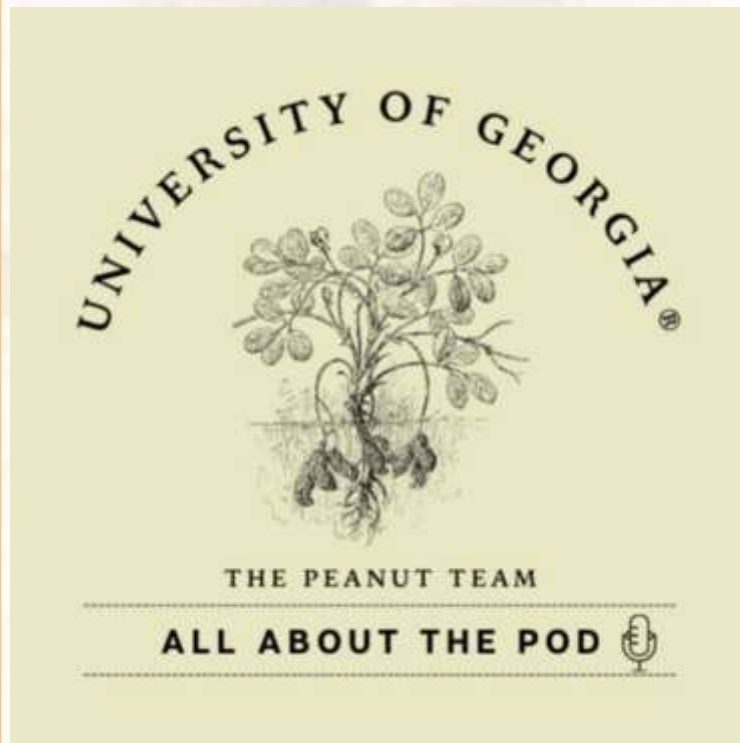
What do the top Georgia peanut growers do?

2022 Georgia Peanut Achievement Club Winners

- 17 growers
 - 101 to 1194 acres (range)
- **5688 lb/A average yield**
 - 4718-6493 lbs/A (range)
 - GA State Avg. = 4250 lb/A
- 94% - irrigated
- 59% - bottom plow
- 76% - twin rows
- 71% did not “crack” spray
- **Herbicides**
 - 53% - Sonalan
 - **76% - Valor**
 - 53% - Dual
 - **65% - Cadre**
 - **65% - 2,4-DB**
 - 41% - Prowl
 - 35% - Strongarm
 - 12% - Zidua
 - 12% - clethodim
 - 29% - paraquat



All About The Pod - Podcast





Questions/Comments

