Peanut Production and Pest Management

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Topics

Zinc recommendation

Inoculation failure

Varieties

Kudos OD

Brake Herbicide

Herbicide Selection Tool

Burrower Bug

New Recommendation

If pH is higher than 6.5, do not plant peanuts if Zinc Index exceeds 1,000

If pH is 6.0 to 6.5, do not plant peanuts if Zinc Index exceeds 500

If pH is less than 6.0, do not plant peanuts if Zinc Index exceeds 250

Assumes pH uniformity across the field

Causes of Inoculation Failure

Old product

Mishandled product

Chlorinated water

Sitting in tank too long after mixing

Shallow planting

Other products in tank

Caving of soil after seed drop before spray enter furrow

Orifice stopped up


NC 20

Variety Trials in Large Plots

Bailey II yielded more than commercially available Valencia/Runner varieties but yielded lower than TUFRunner 297, TUFRunner 511, and Georgia 16 OH in one trial

Bailey II, Emery, and NC 20 yielded the same in 5 of 8 trials

Bailey II yielded more than NC 20 in one trial and more than Emery in 2 trials

NC 20 yielded as well as Emery in all trials

Kudos OD

Do not apply Kudos OD with anything else except adjuvant and water conditioning agent as recommended by the manufacturer

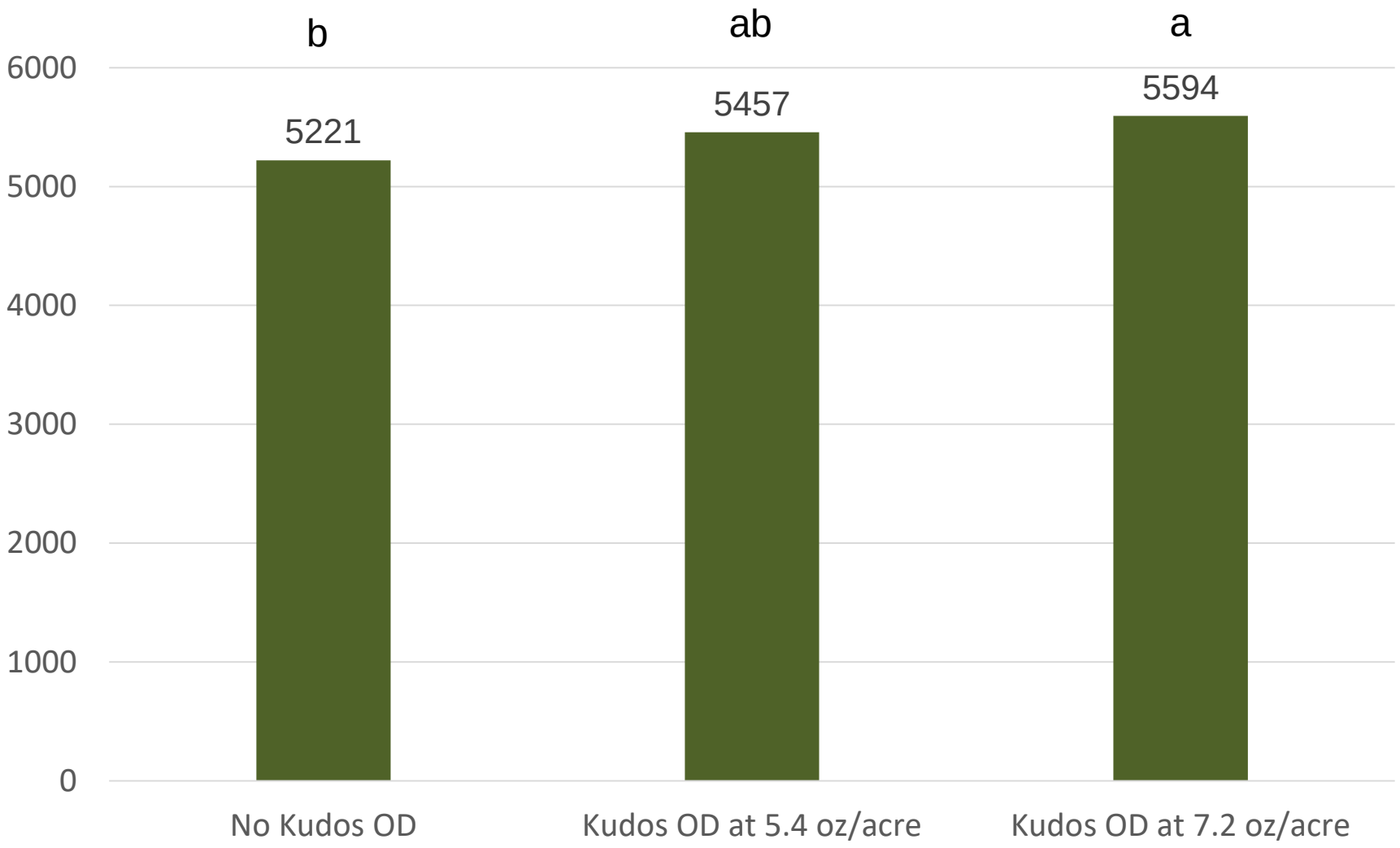
In NC and VA trials, some pesticides and micronutrients can increase leaf burn from Kudos OD

When applied at 7.2 oz/acre, row visibility was improved the same when Kudos OD, Kudos WDG, Apogee, and Cryova were compared

Can the rate of Kudos OD be lowered from 7.2 oz/acre to 5.4 oz/acre?

Peanut Yield (lbs/acre) with Kudos OD at 5.4 and 7.2 oz/acre Applied Twice

Pooled over 6 large-plot trials in 2024



Brake Herbicide

New MOA

Important for resistance management

Requires Group 15 partner

Valor SX complement (3-way mixture)

Weed control generally the same for Brake programs and Dual Magnum plus Valor SX

In fields where Valor SX is performing poorly, Brake is a good complement herbicide

Rotation restriction for tobacco and wheat for grain production

Adult Burrower bug. Photo by dan40165, BugGuide.net (Creative Commons: https://creativecommons.org/licenses/by-nd-nc/1.0/).

This close up photo shows discolored, sunken lesions caused by burrower bugs on a peanut seed. (Photo by Mark Abney)

Burrower Bug Impact

Yield generally not affected

Quality is the issue

Seg 1 to Seg 2 ($535/ton to $120/ton)

Damage is not apparent unless skin is removed

3.5% damage is the maximum allowed

*Damage from burrower bug was reported in multiple counties in North Carolina in 2022 and 2023

*No damage in 2024 (no reports of Seg 2 peanuts)

Burrower Bug Management

Summary from UGA (Mark Abney)

Soil pest but mobile

Field history – not a good predicator of damage

Monitoring – not a good predictor of infestation

Insecticide – not available (Lorsban)

Variety – unknown in Georgia and other states

Irrigation – generally less but not always

Planting date – no effect in Georgia

Crop rotation – no effect in Georgia

Tillage – deep tillage is effective

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North Carolina Herbicide Selection Tool

Crop

Select crop for herbicide recommendation by clicking on crop name.

Crop management resources.

- NC Extension Peanut Portal
- 2024 Peanut Information
- 2024 N.C. Agricultural Chemicals Manual

Weeds

Select or unselect weeds for herbicide recommendation by clicking on a weed name.

amaranth, Palmer	johnsongrass	panicum, fall
anoda, spurred	rhizome	pigweed
beggarweed, Florida	seedling	redroot
bermudagrass	lambsquarters, common	smooth
carpetweed	millet, Texas	purslane, common
cocklebur, common	morningglory	ragweed, common
crabgrass, large	entireleaf	sicklepod
croton, tropic	ivyleaf	sida, prickly
crowfootgrass	pitted	signalgrass, broadleaf
dayflower, spreading	blue	smartweed, Pennsylvania
eclipta	red	spurge
foxtail, green	purple/tall	velvetleaf

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amaranth, Palmer
EPPO: AMAPA
Competitive Index: 4
Resistant Biotype:
- ○ Nonresistant
- ○ (02) ALS Inhibitors
- ○ (05) Photosystem II Inhibitors
- ○ (09) EPSP Synthase Inhibitors
- ○ (14) PPO Inhibitors
- ○ (27) HPPD Inhibitors
- ◉ (02) ALS Inhibitors + (14) PPO Inhibitors

Links: NC STATE VIRGINIA TECH

anoda, spurred
beggarweed, Florida
bermudagrass
johnsongrass
rhizome
seedling
lambsquarters, common
millet, Texas
morningglory
entireleaf
ivyleaf
pitted
blue
red
purple/tall
panicum, fall
pigweed
redroot
smooth
purslane, common
ragweed, common
sicklepod
sida, prickly
signalgrass, broadleaf
smartweed, Pennsylvania
spurge
velvetleaf

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Weeds

Select or unselect weeds for herbicide recommendation by clicking on a weed name.

crabgrass, large
EPPO: DIGSA
Competitive Index: 0.2
Resistant Biotype:
◉ Nonresistant
Links: NC STATE VIRGINIA TECH

purple
EPPO: CYPRO
Competitive Index: 0.2
Resistant Biotype:
◉ Nonresistant
Links: NC STATE VIRGINIA TECH

croton, tropic

crowfootgrass

dayflower, spreading

eclipta

foxtail, green

yellow

goosegrass
EPPO: ELEIN
Competitive Index: 0.2
Resistant Biotype:
◉ Nonresistant

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Resistant Biotype:
◉ Nonresistant

Set weed density levels by clicking on a density range bar or by clicking and sliding a red bar. The competative load column indicates potential impact each weed has on the crop. Higher competative load values indicate greater impact and need for control.

Selected Weed *(Resistance)*	Comp. Index	Relative Weed Density	Comp. Load *(Density)*
amaranth, Palmer *(02) ALS Inhibitors + (14) PPO Inhibitors*	4.0		10.0 *(2.5)*
crabgrass, large *Nonresistant*	0.2		10.0 *(50.0)*
purple, nutsedge *Nonresistant*	0.2		10.0 *(50.0)*
goosegrass *Nonresistant*	0.2		10.0 *(50.0)*

Clear Selected Weeds

Herbicide Recomendations

Show or hide herbicide informtion by clicking on herbicide line.

Herbicide	Rating	
Clethodim + Pursuit 2 L + Butyrac 200 2 L (POSTR)	79 FG	▼
Clethodim + Pursuit 2 L + Cobra 2 EC (POSTR)	79 FG	▼
Storm 4 L + Gramoxone 2 SL (POST)	77 F	▼
Storm 4 L + Parazone 3 SL (POST)	77 F	▼
Basagran 4 L + Gramoxone 2 SL (POST)	76 F	▼
Basagran 4 L + Parazone 3 SL (POST)	76 F	▼
Cadre 2 AS + Butyrac 200 2 L + Cobra 2 EC (POSTR)	71 F	▼
Cadre 2 AS + Butyrac 200 2 L + Ultra Blazer 2 L (POSTR)	71 F	▼
Impose 2 AS + Butyrac 200 2 L + Cobra 2 EC (POSTR)	71 F	▼
Impose 2 AS + Butyrac 200 2 L + Ultra Blazer 2 L (POSTR)	71 F	▼
Cadre 2 AS + Butyrac 200 2 L + Basagran 4 L + Cobra 2 EC (POSTR)	71 F	▼
Cadre 2 AS + Butyrac 200 2 L + Basagran 4 L +Ultra Blazer 2 L (POSTR)	71 F	▼
Impose 2 AS + Butyrac 200 2 L + Basagran 4 L + Cobra 2 EC (POSTR)	71 F	▼
Impose 2 AS + Butyrac 200 2 L + Basagran 4 L +Ultra Blazer 2 L (POSTR)	71 F	▼
Clethodim + Butyrac 200 2 L + Basagran 4 L (POST)	64 F	▼
Clethodim + Butyrac 200 2 L + Basagran 4 L + Cobra 2 EC (POST)	64 F	▼
Clethodim + Butyrac 200 2 L + Basagran 4 L + Ultra Blazer 2 L (POST)	64 F	▼
Clethodim + Butyrac 200 2 L + Storm 4 L (POST)	64 F	▼
Cadre 2 AS (POSTR)	61 F	▼
Impose 2 AS (POSTR)	61 F	▼
Cadre 2 AS + Cobra 2 EC (POSTR)	61 F	▼
Cadre 2 AS + Ultra Blazer 2 L (POSTR)	61 F	▼
Impose 2 AS + Cobra 2 EC (POSTR)	61 F	▼
Impose 2 AS + Ultra Blazer 2 L (POSTR)	61 F	▼
Clethodim + Butyrac 200 2 L (POST)	58 F	▼
Clethodim + Butyrac 200 2 L + Ultra Blazer 2 L (POST)	58 F	▼
Clethodim + Basagran 4 L (POST)	54 F	▼
Clethodim + Basagran 4 L + Cobra 2 EC (POST)	54 F	▼
Clethodim + Basagran 4 L + Ultra Blazer 2 L (POST)	54 F	▼
Clethodim + Storm 4 L (POST)	54 F	▼
Pursuit 2 L + Butyrac 200 2 L (POST)	53 F	▼
Clethodim Products (POST)	47 P	▼
Poast 1.5 EC (POST)	47 P	▼
Poast Plus 1 EC (POST)	47 P	▼
Clethodim + Cobra 2 EC (POST)	47 P	▼
Clethodim + Ultra Blazer 2 L (POST)	47 P	▼
Pursuit 2 L + Cobra 2 EC (POSTR)	42 P	▼
Butyrac 200 2 L + Basagran 4 L + Cobra 2 EC (POST)	20 N	▼
Butyrac 200 2 L + Basagran 4 L (POST)	18 N	▼
Butyrac 200 2 L (POST)	11 N	▼
Butyrac 200 2 L + Ultra Blazer 2 L (POST)	11 N	▼
Butyrac 200 2 L + Storm 4 L (POST)	11 N	▼
Basagran 4 L + Cobra 2 EC (POST)	10 N	▼
Basagran 4 L + Ultra Blazer 2 L (POST)	10 N	▼
Basagran 4 L (POST)	7 N	▼

Herbicide Control Rating Key

E	Excellent 93% or better	PF	Poor/Fair 48% to 53%
GE	Good/Excellent 88% to 93%	P	Poor 28% to 48%
G	Good 83% to 88%	NP	Very Poor/Poor 23% to 28%
FG	Fair/Good 78% to 83%	N	None/Very Poor 0% to 23%
F	Fair 53% to 78%		

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⚠ Clethodim or Poast grass control may be lower due to antagonism when co-applied with broadleaf and sedge herbicides and some fungicides. Increasing rates can partially minimize the antagonism.

Active Ingredient(s):
clethodim + imazethapyr + 2,4-DB

Chemical Family:
Cyclohexanedione (DIMs) + Imidazolinone + Phenoxy-carboxylic-acid

Mode of Action (WSSA):
01 Inhibits the enzyme acetyl-CoA carboxylase (ACCase)
02 Inhibits acetolactate synthase (ALS), also called acetohydroxyacid synthase (AHAS)
04 Affects cell wall plasticity and nucleic acid metabolism

Weed Control:

Weed	%Eff	Rating
amaranth, Palmer *(02) ALS Inhibitors + (14) PPO Inhibitors*	50	PF
nutsedge, purple *Nonresistant*	80	FG
crabgrass, large *Nonresistant*	90	GE
goosegrass *Nonresistant*	90	GE

Application and Rate Information:
2024 N.C. Agricultural Chemicals Manual
2024 Peanut Information - Weed Management

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