PEANUT INSECT CONTROL

Mark R. Abney, Research and Extension Entomologist

PEST	INSECTICIDE	MOA	AMOUNT OF FORMUALTION PER ACRE	LB ACTIVE INGREDIENT PER ACRE	REI/PHI (Hours or Days)	REMARKS
Beet armyworm[1,6]	*chlorantraniliprole* Vantacor	28	1.2–2.5 fl oz	0.047–0.098	4 H/ 1 D	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year.
	diflubenzuron Dimilin 2L	15	4–8 fl oz	0.06–0.125	12 H/ 28 D	Do not make more than 3 applications/season.
	indoxacarb Steward 1.25EC	22	9.2–11.3 fl oz	0.09–0.11	12 H/ 14 D	Do not apply more than 45 fl oz/A/season. Minimum interval between treatments is 5 days.
	methoxyfenozide Intrepid 2F	18	6–10 fl oz	0.09–0.16	4 H/ 7 D	
	novaluron Diamond 0.83 EC	15	6–12 fl oz	0.039–0.077	12 H/ 28 D	Do not apply more than 36 fl oz/A/season. Do not feed treated peanut hay or vines to livestock.
	spinetoram Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	spinosad Blackhawk 36WG	5	1.7–3.3 oz	0.038–0.074	4 H/ Harvest 3 D Forage 14 D	Do not apply more than 12.4 oz/A/crop. Do not make applications less than 7 days apart.
Corn earworm[2]	*chlorantraniliprole* Vantacor	28	1.2–2.5 fl oz	0.047–0.098	4 H/ 1 D	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year.
	indoxacarb Steward 1.25EC	22	9.2–11.3 fl oz	0.09–0.11	12 H/ 14 D	Do not apply more than 45 fl oz/A/season. Minimum interval between treatments is 5 days.
	methomyl Lannate 90SP Lannate 2.4LV	1A	0.25–1 lb 0.75–3 pt	0.225–0.9	48 H/ 21 D	Do not make more than 3 applications. Do not feed treated vines to livestock.
	spinetoram Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	pyrethroids *beta-cyfluthrin* Baythroid XL 1EC	3A	1.8–2.4 fl oz	0.014–0.019	12 H/ 14 D	Do not exceed 3 applications/season of 2.8 fl oz/10-day interval.

1. The treatment threshold for combined foliage feeders is 4–8 per foot of row depending on the size and condition of the peanut plants. Use a lower threshold for very young plants or plants that are stressed from other factors. Use a higher threshold for healthy plants with ample vine growth.
2. Performance of pyrethroids used for corn earworm management may vary due to insecticide resistance.
3. Thrips control is recommended only during the first 3–4 weeks after emergence and is more important when herbicide-induced stress also occurs during early season growth. Attempts to control tomato spotted wilt by controlling the thrips vectors are not economically justified.
4. Suppresses tomato spotted wilt.
5. Risk of burrower bug is generally reduced in conventional tillage situations.
6. Performance of Group 28 insecticides used for beet armyworm may vary due to insecticide resistance.

PEST	INSECTICIDE	MOA	AMOUNT OF FORMUALTION PER ACRE	LB ACTIVE INGREDIENT PER ACRE	REI/PHI (Hours or Days)	REMARKS
Corn earworm[2] (*continued*)	*bifenthrin* Brigade 2EC		2.1–6.4 fl oz	0.033–0.1	12 H/ 14 D	Do not apply more than 0.5 lb ai/A/season. Do not feed peanut hay to livestock.
	esfenvalerate Asana XL 0.66EC		2.9–5.8 fl oz	0.015–0.03	12 H/ 21 D	Do not exceed 0.15 lb ai/A/season. Do not feed or graze livestock on treated vines.
	lambda-cyhalothrin Warrior II Zeon 2.08CS		1.28–1.92 fl oz	0.02–0.03	24 H/ 14 D	Do not apply more than 1 pt/A/season. Do not graze livestock in treated areas or use treated vines for animal feed.
	zeta-cypermethrin Mustang Maxx 0.8EC		3.2–4 oz	0.02–0.025	12 H/ 7 D	Do not apply more than 0.15 lb ai/season. Do not graze livestock in treated areas. Do not use treated vines for animal feed.
Cutworm[1]	*indoxacarb* Steward 1.25EC	22	9.2–11.3 fl oz	0.09–0.11	12 H/ 14 D	Do not apply more than 45 fl oz/A/season. Minimum interval between treatments is 5 days.
	methomyl Lannate 90SP Lannate 2.4LV	1A	0.5–1 lb 1.5–3 pt	0.45–0.9	48 H/ 21 D	Spray late in the afternoon for maximum efficacy. Do not feed treated vines to livestock.
	pyrethroids *beta-cyfluthrin* Baythroid XL 1EC	3A	1–1.8 fl oz	0.008–0.014	12 H/ 14 D	Do not exceed 3 applications per season of 2.8 fl oz/10-day intervals.
	bifenthrin Brigade 2EC		2.1–6.4 fl oz	0.033–0.1	12 H/ 14 D	Do not apply more than 0.5 lb ai/A/season. Do not feed peanut hay to livestock.
	esfenvalerate Asana XL 0.66EC		9.6 oz	0.05	12 H/ 21 D	Do not exceed 0 .15 lb ai/A/season. Do not feed or graze livestock on treated vines.
	lambda-cyhalothrin Warrior II Zeon 2.08CS		1.28–1.92 fl oz	0.015–0.025	24 H/ 14 D	Do not apply more than 1 pt/A/season. Do not graze livestock in treated areas or use treated vines for animal feed.
	zeta-cypermethrin Mustang Maxx 0.8EC		1.28–4 oz	0.008–0.025	12 H/ 7 D	Do not apply more than 0.15 lb ai/season. Do not graze livestock in treated areas. Do not use treated vines for animal feed.
Fall armyworm[1]	*chlorantraniliprole* Vantacor	28	1.2–2.5 fl oz	0.047–0.098	4 H/ 1 day	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year.
	diflubenzuron Dimilin 2L	15	4–8 fl oz	0.06–0.125	12 H/ 28 D	Do not make more than 3 applications/season.
	indoxacarb Steward 1.25EC	22	9.2–11.3 fl oz	0.09–0.11	12 H/ 14 D	Do not apply more than 45 fl oz/A/season. Minimum interval between treatments is 5 days.

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2. Performance of pyrethroids used for corn earworm management may vary due to insecticide resistance.
3. Thrips control is recommended only during the first 3–4 weeks after emergence and is more important when herbicide-induced stress also occurs during early season growth. Attempts to control tomato spotted wilt by controlling the thrips vectors are not economically justified.
4. Suppresses tomato spotted wilt.
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Fall armyworm[1] (*continued*)	*methomyl* Lannate 90SP Lannate 2.4LV	1A	 0.25–0.5 lb 0.75–1.5 pt	0.225–0.45	48 H/ 21 D	Do not feed treated vines to livestock.
	methoxyfenozide Intrepid 2F	18	 6–10 fl oz	0.09–0.16	4 H/ 14 D	Do not make more than 3 applications/year.
	novaluron Diamond 0.83 EC	15	 6–12 fl oz	0.039–0.077	12 H/ 28 D	Do not apply more than 36 fl oz/A/season. Do not feed treated peanut hay or vines to livestock.
	spinetoram Radiant 1SC	5	 3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	spinosad Blackhawk 36WG	5	 1.7–3.3 oz	0.038–0.074	4 H/ Harvest 3 D Forage 14 D	Do not apply more than 12.4 oz/A/crop. Do not make applications less than 7 days apart.
Green cloverworm[1]	*methoxyfenozide* Intrepid 2F	18	 6–10 fl oz	0.09–0.16	4 H/ 14 D	Do not make more than 3 applications/year.
	novaluron Diamond 0.83 EC	15	 6–12 fl oz	0.039–0.077	12 H/ 28 D	Do not apply more than 36 fl oz/A/season. Do not feed treated peanut hay or vines to livestock.
	spinetoram Radiant 1SC	5	 3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	spinosad Blackhawk 36 WG	5	 1.7–3.3 oz	0.038–0.074	4 hours/ Harvest 3 D Forage 14 D	Do not apply more than 12.4 oz/A/crop. Do not make applications less than 7 days apart.
Lesser cornstalk borer	*chlorantraniliprole* Vantacor	28	 1.2–2.5 fl oz	0.047–0.098	4 H/ 1 D	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year.
	novaluron Diamond 0.83 EC	15	 6–12 fl oz	0.039–0.077	12 H/ 28 D	Do not apply more than 36 fl oz/A/season. Do not feed treated peanut hay or vines to livestock.
Peanut burrower bug[5]	No registered insecticide is currently available.					
Potato leafhopper	*acephate* Orthene 97	1B	 12–16 oz	0.72–0.97	24 H/ Digging 14 D	Do not feed treated forage or hay to livestock or allow animals to graze treated areas.
	carbaryl Sevin XLR or 4F Sevin 80S	1A	 1 qt 1.25 lb	1	12 H/ 14 D	

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2. Performance of pyrethroids used for corn earworm management may vary due to insecticide resistance.
3. Thrips control is recommended only during the first 3–4 weeks after emergence and is more important when herbicide-induced stress also occurs during early season growth. Attempts to control tomato spotted wilt by controlling the thrips vectors are not economically justified.
4. Suppresses tomato spotted wilt.
5. Risk of burrower bug is generally reduced in conventional tillage situations.

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Potato leafhopper (*continued*)	*pyrethroids* *beta-cyfluthrin* Baythroid XL 1EC	3A	1–1.8 fl oz	0.008–0.014	12 H/ 14 D	Do not exceed 3 applications per season of 2.8 fl oz/10-day intervals.
	bifenthrin Brigade 2EC		2.1–6.4 fl oz	0.033–0.1	12 H/ 14 D	Do not apply more than 0.5 lb ai/A/season. Do not feed peanut hay to livestock.
	esfenvalerate Asana XL 0.66EC		2.9–5.8 fl oz	0.015–0.03	12 H/ 14 D	Do not exceed 0.15 lb ai/A/season. Do not feed or graze livestock on treated vines.
	lambda-cyhalothrin Warrior II Zeon 2.08CS		0.96–1.6 fl oz	0.015–0.025	24 H/ 7 D	Do not apply more than 1 pt/A/season. Do not graze livestock in treated areas or use treated vines for animal feed.
	zeta-cypermethrin Mustang Maxx 0.8EC		1.76–4 oz	0.011–0.025	12 H/ —	Do not apply more than 0.15 lb ai/season. Do not graze livestock in treated areas. Do not use treated vines for animal feed.
Rednecked peanut worm	*spinetoram* Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	pyrethroids *beta-cyfluthrin* Baythroid XL 1EC	3A	1–1.8 fl oz	0.008–0.014	12 H/ 14 D	Do not exceed 3 applications per season of 2.8 fl oz/10-day intervals.
	bifenthrin Brigade 2EC		2.1–6.4 fl oz	0.033–0.1	12 H/ 14 D	Do not apply more than 0.5 lb ai/A/season. Do not feed peanut hay to livestock.
	esfenvalerate Asana XL 0.66EC		2.9–5.8 fl oz	0.015–0.03	12 H/ 21 D	Do not exceed 0.15 lb ai/A/season. Do not feed or graze livestock on treated vines.
	lambda-cyhalothrin Warrior II Zeon 2.08CS		0.96–1.6 fl oz	0.015–0.025	24 H/ 14 D	Do not apply more than 1 pt/A/season. Do not graze livestock in treated areas or use treated vines for animal feed.
	zeta-cypermethrin Mustang Maxx 0.8EC		1.28–4 oz	0.008–0.025	12 H/ 7 D	Do not apply more than 0.15 lb ai/season. Do not graze livestock in treated areas. Do not use treated vines for animal feed.
Southern armyworm[1]	*spinetoram* Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
Southern corn rootworm / Banded cucumber beetle	No registered insecticide has provided consistent control of rootworm in peanut. Consult your UGA Extension agent for management options.					

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3. Thrips control is recommended only during the first 3–4 weeks after emergence and is more important when herbicide-induced stress also occurs during early season growth. Attempts to control tomato spotted wilt by controlling the thrips vectors are not economically justified.
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Soybean looper[1]	*chlorantraniliprole* Vantacor	28	1.7–2.5 fl oz	0.067–0.098	4 H/ 1 D	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year.
	indoxacarb Steward 1.25EC	22	9.2–11.3 fl oz	0.09–0.11	12 H/ 14 D	Do not apply more than 45 fl oz/A/season. Minimum interval between treatments is 5 days.
	methoxyfenozide Intrepid 2F	18	6–10 fl oz	0.09–0.16	4 H/ 7 D	Do not make more than 3 applications/year.
	novaluron Diamond 0.83 EC	15	6–12 fl oz	0.039–0.077	12 H/ 28 D	Do not apply more than 36 fl oz/A/season. Do not feed treated peanut hay or vines to livestock.
	spinetoram Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	spinosad Blackhawk 36WG	5	1.7–3.3 oz	0.038–0.074	4 H/ Harvest 3 D Forage 14 D	Do not apply more than 12.4 oz/A/crop. Do not make applications less than 7 days apart.
Spider mite	*fenpropathrin* Danitol 2.4EC	3A	10.6–16 fl oz	0.2–0.3	24 H/ Digging 14 D	Do not feed treated forage or dried hay within 14 days of last application. Do not exceed 0.8 lb ai/A /season.
	fenpyroximate Portal	21A	1–2 pt	0.05–0.10	12 H/ 1 D	Do not apply more than 0.2 lb ai per acre per year. Do not make more than 2 applications per year.
	propargite Comite 6.55EC	12C	2 pt	1.64	48 H/ 14 D	Do not apply more than twice per season. Do not graze or feed livestock on treated areas or cut treated forage for hay. When temperatures are greater than 90°F with high humidity, some leaf phytotoxicity may occur.
	Comite II 6EC		2.25 pt	1.68	48 H/ 14 D	Do not apply more than twice per season. Use a minimum of 20 gal/A for ground application and 5 gal/A for aerial application.
	Omite 30WS		3–5 lb	0.9–1.5	48 H/ 14 D	Do not apply more than twice per season. Do not graze or feed livestock on treated areas or cut treated forage for hay. Do not plant unregistered crops within 6 months of last application.
Three cornered alfalfa hopper	*carbaryl* Sevin XLR or 4F Sevin 80S	1A	1 qt 1.25 lb	1	12 H/ 14 D	
	pyrethroids *beta-cyfluthrin* Baythroid XL 1EC	3A	1.8–2.4 fl oz	0.014–0.019	12 H/ 14 D	Do not exceed 3 applications per season of 2.8 fl oz/10-day intervals.
	bifenthrin Brigade 2EC		2.1–6.4 fl oz	0.033–0.1	12 H/ 14 D	Do not apply more than 0.5 lb ai/A/season. Do not feed peanut hay to livestock.
	lambda-cyhalothrin Warrior II Zeon 2.08CS		0.96–1.6 fl oz	0.015–0.025	24 H/ 14 D	Do not apply more than 1 pt/A/eason. Do not graze livestock in treated areas or use treated vines for animal feed.

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Thrips[3]	*aldicarb* AgLogic 15GG	1A	7 lb	1.05	48 H/ 90 D	Apply granules in the seed furrow and immediately cover seed and granules with 1-inch or more of soil. Do not apply more than 17 pounds per acre per year. Do not feed hay or vines to livestock.
	acephate Orthene 97	1B	6–12 oz	0.36–0.73	24 H/ Digging 14 D	Do not feed treated forage or hay to livestock or allow animals to graze treated areas. Good results have been obtained by tank mixing with early post-emergence herbicides such as *paraquat* combinations in lieu of in-furrow treatments. However, timing is critical for adequate thrips control and may not coincide with optimum timing for post-emergence weed control.
	imidacloprid Admire Pro 4.6F	4A	7–10.5 fl oz	0.25–0.377	12 H/ 14 D	Apply as an in-furrow spray at planting. Do not apply more than 10.5 oz/crop season. Do not apply to Virginia type varieties.
	phorate Thimet 20G[4]	1B	5–7.5 lb	1	48 H/ See note	Apply in the furrow at planting. Do not graze or feed treated hay or forage to livestock. In furrow applications for single rows use 5.5 oz of 20G/1000 ft of row. Do not exceed 7.5 lbs/A for twin rows. Soil moisture is necessary for adequate uptake. Young seedlings may exhibit varying degrees of leaf damage.
Tobacco budworm[1]	*chlorantraniliprole* Vantacor	28	1.2–2.5 fl oz	0.047–0.098	4 H/ 1 D	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year.
	indoxacarb Steward 1.25 EC	22	9.2–11.3 fl oz	0.09–0.11	12 H/ 14 D	Do not apply more than 45 fl oz/A/season. Minimum interval between treatments is 5 days.
	spinetoram Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai *spinetoram*)/A/year. Do not allow grazing of peanut hay.
	spinosad Blackhawk 36WG	5	1.7–3.3 oz	0.038–0.074	4 H/ Harvest 3 D Forage 14 D	Do not apply more than 12.4 oz/A/crop. Do not make applications less than 7 days apart.
	NOTE: Lannate as applied for corn earworm gives good control.					
Velvetbean caterpillar[1]	*chlorantraniliprole* Vantacor	28	1.2–2.5 fl oz	0.047–0.098	4 H/ 1 D	Do not apply more than 0.2 lb ai of *chlorantraniliprole*/A/year
	diflubenzuron Dimilin 2L	15	2–4 fl oz	0.03–0.06	12 H/ Harvest 28 D	Do not make more than 3 applications/season.
	methoxyfenozide Intrepid 2F	18	6–10 fl oz	0.09–0.16	4 H/ 7 D	Do not make more than 3 applications/year.
	novaluron Diamond 0.83 EC	15	6–12 fl oz	0.039–0.077	12 H/ 28 D	Do not apply more than 36 fl oz/A/season. Do not feed treated peanut hay or vines to livestock.
	pyrethroids *beta-cyfluthrin* Baythroid XL 1EC	3A	1–1.8 fl oz	0.008–0.014	12 H/ 14 D	Do not exceed 3 applications per season of 2.8 fl oz/10-day intervals.
	bifenthrin Brigade 2EC		2.1–6.4 fl oz	0.033–0.1	12 H/ 14 D	Do not apply more than 0.5 lb ai/A/season. Do not feed peanut hay to livestock.

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Velvetbean caterpillar[1] (*continued*)	*esfenvalerate* Asana XL 0.66EC		2.9–5.8 fl oz	0.015–0.03	12 H/ 21 D	Do not exceed 0.15 lb ai/A/season. Do not feed or graze livestock on treated vines. Suspected resistance has been observed in lower SW Georgia.
	lambda-cyhalothrin Warrior II Zeon 2.08CS		0.96–1.6 fl oz	0.015–0.025	24 H/ 14 D	Do not apply more than 1 pt/A/season. Do not graze livestock in treated areas or use treated vines for animal feed. Suspected resistance has been observed in lower SW Georgia.
	zeta-cypermethrin Mustang Maxx 0.8EC		1.28–4 oz	0.008–0.025	12 H/ 7 D	Do not apply more than 0.15 lb ai/season. Do not graze livestock in treated areas. Do not use treated vines for animal feed.
	spinetoram Radiant 1SC	5	3–8 fl oz	0.023–0.063	4 H/ 3 D	Do not apply more than a total of 24 fl oz of Radiant SC (0.188 lb ai spinetoram)/A/year. Do not allow grazing of peanut hay.
	spinosad Blackhawk 36WG	5	1.7–3.3 oz	0.038–0.074	4 H/ Harvest 3 D Forage 14 D	Do not apply more than 12.4 oz/A per crop. Do not make applications less than 7 days apart.
Wireworm	No registered insecticide is currently available.					

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PREMIXED OR CO-PACKED INSECTICIDE PRODUCTS:

Products listed below are available as premixes or co-packages of two insecticidal active ingredients. When using premixed or co-packaged products, be sure the use of all of the active ingredients is necessary. Unnecessary applications or use of reduced rates of an active ingredient may lead to or intensify insecticide resistance.

imidacloprid, *cyfluthrin* (Leverage 2.8 fl oz/A)

lambda-cyhalothrin, *chlorantraniliprole* (Besiege 5–10 fl oz/A)

methoxyfenozide, *spinetoram* (Intrepid Edge 4–8 fl oz/A)

bifenthrin, chlorantraniliprole (Elevest 4.8–9.6 fl oz/A)

Bob Kemerait, Extension Plant Pathologist
Tim Brenneman and Albert Culbreath, Plant Pathologists

PEST	FUNGICIDE	MOA	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
Seedling Disease	*azoxystrobin* Abound 2.08F	11	6 fl oz		Abound is active against Rhizoctonia damping off and Aspergillus crown rot.
Southern Stem Rot (White Mold) and Rhizoctonia Limb Rot	*azoxystrobin* Abound 2.08F and Quadris	11	18.5–24.6 fl oz 12.3 fl oz (dryland only) These rates are for soilborne diseases to include suppression of CBR and for leaf spot diseases. **Note:** There is some evidence that the efficacy of *strobilurin* fungicides for management of leaf spot is not as strong as it once was. Therefore, growers should consider tank-mixing additional fungicides for management of leaf spot when using a *strobilurin* fungicide.	4 H/ 14 D	For increased disease control, growers should consider tank-mixing Alto (*cyproconazole*, 5.5 fl oz/A) with Abound (12–24.5 fl oz/A) 60–90 days after planting. Apply Abound, AzoxyStar, Artisan (26–32 fl oz/A), Evito, or Convoy (26 fl oz/A) as a foliar spray at 50–60 days after planting and reapply 28 days later. **Note:** Convoy and Artisan may also be applied on a 4-spray program. Consult label for more information. Begin treating immediately if active white mold is observed before the first scheduled application. Consult label for application strategies concerning the use of each product. **Note:** A fungicide to control leafspot must always be mixed with Convoy. Additional leaf spot control may not be needed if Artisan is used twice in a season at 26–32 fl oz/A (but tank-mixing and additional fungicide may be a good idea); however, if Artisan is applied in four applications, additional fungicides such as *chlorothalonil* or *thiophanate methyl* (e.g. Topsin M) must be added to supplement control of leaf spot. Maximum rate is 49 fl oz/A/season. Due to regulation from the European Union, current use of any product that contains *propiconazole*, such as Artisan, may be problematic. Growers should seek additional information before using such products.
	azoxystrobin Azoxystar others	11	12–24.5 fl oz see note	4 H/ 14 D	Do not apply more than 49 fl oz/A/season. Under heavy disease pressure and/or where there is high rainfall and/or irrigation, use 18.5–24.5 fl oz/A. For light disease pressure or dry environmental conditions, (non-irrigated, low rainfall) use 12–24.5 fl oz/A. **Note:** There is some evidence that the efficacy of *strobilurin* fungicides for management of leaf spot is not as strong as it once was. Therefore, growers should consider tank-mixing additional fungicides for management of leaf spot when using a *strobilurin* fungicide. **Note:** there are a number of *azoxy* fungicides available now, e.g., Arius. Please consult label for any specific differences of requirements.
	azoxystrobin + *benzobendiflupyr* (*solatenol*) Elatus	11 + 7	0.5–0.65 fl oz/1000 linear feet 7.3–9.5 fl oz/A Elatus is effective against soilborne and leafspot diseases.	12 H/ 30 D	For suppression of stem rot/white mold, CBR and other diseases. Apply in a 7–10" band 14–21 days after planting. For foliar diseases begin 30–40 days after planting. Apply 7.3 fl oz/A on a 14-day schedule, or 9.5 fl oz/A on a 21–28 day interval. For soilborne diseases apply 7.3 fl oz/A 3 times on a 14-day interval, or 9.5 fl oz/A 2 times on a 21–28 day interval beginning 45–60 days after planting. Do not apply more than 21.9 fl oz/A per season
	azoxystrobin + *chlorothalonil* Arius Advance	11 + M5	30 fl oz	12 H/ 14D	
	azoxystrobin + *flutriafol* TopGuard EQ	11 + 3	8 fl oz	12 H/ 14 D	**Note:** TopGuard EQ, 5–7 fl oz/A, can be used for management of foliar diseases of peanut.

PEANUT DISEASE CONTROL

PEST	FUNGICIDE	MOA	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
Southern Stem Rot (White Mold) and Rhizoctonia Limb Rot (*continued*)	*azoxystrobin* + *tebuconazole* HELMSTAR Plus SC	11 + 3	13 fl oz (approximately 60 and 90 days after planting)	12 H/ 14 D	Do apply more than 51.6 fl oz/A in one season.
	bixafen *flutriafol* LUCENTO	7 + 3	5.5 fl oz	12 H/ 14 D	Lucento is a component of an overall white mold management program. For resistance management, do not make moer than 2 sequentail applications per year before alternating to another fungicide with a mode of action different than Group 7 or Group 3. Do not apply more than 11 fl oz of product per year.
	fluazinam + Vantana	29	16–24 fl oz/A	12 H/ 30 D	Do not use more than 64 fl oz/A per year; Vantana is for managment of southern blight/ white mold. Requires tank-mix partner for management of leaf spot diseases.
	flutolanil Convoy	7	2 pt (1 application) 1–2 pt (2 applications) 0.5–1 pt (4 applications)	12 H/ 40 D	Convoy has no activity against leaf spot diseases. Therefore, a full-rate of an additional fungicide which is effective against leaf spot diseases should be tank-mixed with Convoy at each application. Maximum rate is 64 fl oz/A/season.
	flutolanil + *flutriafol* UMBRA	7 + 3	25–38 fl oz (2 applications) 16–19 fl oz (4 applications)	12 H/ 40 D	UGA recommends mixing a leaf spot material, e.g., 1.0 pt/A *chlorothalonil* or equivalent, with each application of UMBRA to further protect against leaf spot.
	flutolanil + *propiconazole* Artisan	7 + 3	26 or 32 fl oz (2 applications) 13 or 16 fl oz (4 applications)	12 H/ 40 D	The *propiconazole* in Artisan is an effective fungicide for the control of leaf spot diseases; however there are concerns for the potential of resistance to occur. When Artisan is applied at the 13–16 fl oz/A rates, the amount of *propiconanzole* is not sufficient to control leaf spot and additional fungicide should be tank-mixed to improve efficacy. At the 26–32 fl oz/A rates of Artisan, the amount of *propiconazole* may be sufficient; however growers are advised to add additional fungicide to ensure adequate leaf spot protection. Maximum rate is 84 fl oz/A/ season. NOTE: Because of issues with *propiconazole* and the European Union, growers are not encouraged to use Artisan at this time.
	fluxapyroxad + *pyraclostrobin* Priaxor	7 + 11	8 fl oz	12 H/ 14 D	Priaxor has proven to be a very good replacement product for Headline in peanut disease management programs. Priaxor at a rate of 4 fl oz/A is appropriate for management of leaf spot; the 8 fl oz rate is appropriate for management of leaf spot and soilborne diseases. Maximum rate is 24 fl oz/A/season.
	fluoxastrobin Evito 480 SC	11	5.7 fl oz	12 H/ 14 D	Evito 480 SC is in the same chemical class as Abound, Headline, and Stratego and should not be used in the same program with these products. Maximum rate is 22.8 fl oz/A/ season.
	fluoxastrobin + *tebuconazole* Evito T	3 + 11	9–11.2 fl oz	12 H/ 14 D	For control of white mold (stem rot), Rhizoctonia limb rot, and foliar diseases of peanut. Maximum rate is 44.8 fl oz/A/season.
	inpyrfluxam (*Indiflin*) Excalia	7	2–4 fl oz	12 H/ 40 D	For control of white mold (stem rot) and, Rhizoctonia limb rot. Apply up to 4 applications of Excalia fungicide per year so long as the total rate does not exceed 8 fl oz/A. For leaf spot control, Excalia must be tank-mixed with a labeled rate of another active against the target pathogen but with a different mode of action. Excalia is not labeled for aerial application.
	metconazole Quash	3	2.5–4 fl oz	12 H/ 14 D	

PEST	FUNGICIDE	MOA	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
Southern Stem Rot (White Mold) and Rhizoctonia Limb Rot (*continued*)	*mefentrifluconazole* Provysol	3	5–7 fl oz	12 H/ 14 D	Note that Provysol is labeled for the suppression of Rhizoctonia limb rot and white mold and compliments, but does not replace, a full-season soilborne fungicide program.
	penthiopyrad Fontelis	7	12–24 fl oz	12 H/ 14 D	Fontelis is a new fungicide in the SDHI class for disease management in peanut and will work well with *triazole* and strobilurin fungicides for resistance management. Make no more than 3 sequential applications before switching to a fungicide with a different mode of action. Maximum rate is 72 fl oz/A/season.
	pyraclostrobin Headline	11	12–15 fl oz	12 H/ 14 D	Headline at this rate is an effective component of a soilborne program that also includes use of Provost, *tebuconazole*, Convoy, Quash, or Artisan. Note: There is recent concern that *strobilurin* fungicides are now less effective against leaf spot diseases and growers may consider tank-mixing additional fungicides with *strobilurin* fungicides for added protection from leaf spot. Maximum rate is 45 fl oz/A/season.
	LABELED FORMULATIONS OF *TEBUCONAZOLE* INCLUDE, AMONG OTHERS:				Apply *tebuconazole* products, or Quash (*metconazole*) 4 times per season starting at the second or third leaf spot spray. Growers are typically advised to tank-mix an additional leaf spot fungicide with *tebuconazole* products. Growers may also wish to tank-mix a fungicide with Quash for additional leaf spot control where leaf spot resistance to *triazole* fungicides has occurred. Maximum rate is 16.02 fl oz/A/season. The lower rate is generally considered effective for low-to-moderate pressure from white mold (stem rot) and Rhizoctonia limb rot. The higher rate is appropriate for more severe pressure from these diseases. **Note:** Research has shown that *tebuconazole* is often less effective in control of leaf spot than in the past. Where leaf spot is likely to be a problem, growers may consider tank-mixing *tebuconazole* with 0.75–1 pt/A *chorothalonil* or 5 fl oz Topsin (1st and 3rd applications only) to ensure adequate leaf spot control.
	tebuconazole Orius 3.6F, TriSum 3.6F, Integral 3.6F, T ebustar 3.6F, Muscle 3.6F, Tebuzol 3.6F, many others	3	7.2 fl oz Maximum rate is 28.8 fl oz/A/season, except for Muscle 3.6 F (16 fl oz)	12 H/ 14 D	
	tebuconazole + *chlorothalonil* Muscle ADV	3 + M05	2 pt	12 H/ 14 D	Muscle ADV is a pre-mix of *tebuconazole* and *chlrothalonil*. Growers should note that the rate of Muscle ADV is 2 pt/A.
	tebuconazole + *prothioconazole* Provost Silver	3	11–13 fl oz	12 H/ 14 D	Provost is a new fungicide labeled for the control of leaf spot diseases, peanut rust, white mold, and Rhizoctonia limb rot. It is also labeled for suppression of CBR. Provost is applied in a 4-block program. Higher rates can be used in fields where disease is a particular problem. Maximum rate is 52 fl oz/A/season.
Early emergence applications for management of White Mold and other Soilborne Diseases	*azoxystrobin* Abound 2.08F	11	0.4–0.8 fl oz/1000-row feet	4 H/ 14 D	Banded at 100% emergence for suppression of white mold. For greatest efficacy, concentrate the entire broadcast rate into a band wide enough to cover the peanuts. Check with your local Cooperative Extension office for recommendations on optimum timing of an early emergent application of Proline. Apply in a 4–6" band at 100% emergence. **Abound:** maximum rate is 49 fl oz/A/season. **Proline:** maximum rate is 22.8 fl oz/A/season.
	prothioconazole Proline 480SC	3	5.7 fl oz	24 H/ 14 D	

PEANUT DISEASE CONTROL

PEST	FUNGICIDE	MOA	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
FOLIAR DISEASES					
Late leafspot (*Cercosporidium personatum*), Early leafspot (*Cercospora arachidicola*) and Rust (*Puccinia arachidis*)	*bixafen* + *flutriafol* LUCENTO	7 + 3	5.5 fl oz	12 H/ 14 D	For management of fungal pathogen resistance, do not make more than two sequential applications per year.
	cyproconazole Alto 100SL	3	5.5 fl oz	12 H/ 30 D	**See note for tetraconazole Domark 230ME.**
	flutriafol Rhyme	3	3.5–7 fl oz	12 H/ 7 D	
	TopGuard	3	7–14 fl oz		
	fluoxastrobin + *tebuconazole* Evito T	3	6–9 fl oz	24 H/ 14 D	Fungicide resistance management should be considered when this product is used with other *tebuconazole* products, Evito, Evito T, Stratego, Abound, Headline, Absolute, and Evito. Maximum rate is 44.8 fl z/A/season.
	fluxapyroxad + *pyraclostrobin* Priaxor	7 + 11	4-8 fl oz	12 H/ 14 D	Priaxor has proven to be a very good replacement product for Headline in peanut disease management programs. Priaxor at a rate of 4 fl oz/A is appropriate for management of leaf spot; the 6–8 fl oz rate is appropriate for management of leaf spot where the first fungicide application is made approximately 45 days after planting. Maximum rate is 24 fl oz/A/season.
	mefentrifluconazole Provysol	3	2.5–7.0 fl oz	12 H/ 14 D	Lower rates are for tank mix options only. 5–7 fl oz/A are recommended as solo applications but can also be tank mixed with other leaf spot/whitemold products to increase efficacy in high risk fields.
	picoxystrobin + *cyproconazole* Aproach Prima	11 + 3	5–6.8 fl oz	12 H/ 30 D	
	propicanazole + *trifloxystrobin* Stratego	3	7 fl oz.	24 H/ 14 D	Fungicide resistance management should be considered when this product is used with *tebuconazole* products, Absolute, Evito, Evito T, Headline, or Abound. Maximum of 6 applications/season.
	prothioconazole Phobos FC	3	6.7–7.6 fl oz		
	pydiflumetofen Miravis	7	3.4 fl oz	4 H/ 14 D	Apply on a 21-to-28 day interval. Note: Miravis is NOT effective against peanut rust disease.
	pyraclostrobin Headline	11	6–9 fl oz	24 H/ 12 D	**NOTE:** all soilborne fungicides described in the section "Control of Southern stem rot/white mold" area also active against leaf spot diseases EXCEPT for Convoy. Efficacy of these fungicides ranges from fair/good for *tebuconazole* to excellent for Provost and Headline. Most of the fungicides listed above fall into the "good" category. Headline (*pyraclostrobin*) is a *strobilurin* fungicide and is in the same chemical class as Abound, Evito, the *fluoxastrobin* component of Evito T, and the *trifloxystrobin* component of Stratego and Absolute. To best adhere to fungicide resistance management guidelines, Headline should not be used in the same program with these fungicides. Maximum rate is 45 fl oz/A/ season.

PEST	FUNGICIDE	MOA	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
			FOLIAR DISEASES (*continued*)		
Late leafspot (*Cercosporidium personatum*), Early leafspot (*Cercospora arachidicola*) and Rust (*Puccinia arachidis*) (*continued*)	*tetraconazole* Domark 230ME Andiamo	3	 5.25–6.9 fl oz 4.0–7.0 fl oz	12 H/ 14 D	**NOTE:** For foliar disease control, apply Alto 100SL up to two times as a part of a season-long disease management program; especially as a tank-mix partner for Abound. Alto maximum rate is 11 fl oz/A/season. Domark 230ME (2.5 fl oz/A) can be applied, but only if tank mixed with *chlorotahlonil* (16.0 fl oz/A) or other leaf spot material. Do not apply more than 13.8 fl oz/A/ of Domark per season. Rates may vary slightly between products; refer to product label before use.
	tetraconazole + *chlorothalonil* Andiamo Advance	3 + M5	 2 pt	12 H/ 14 D	**Note:** Rate of Mazinga ADV is 2 pt/A
	tetraconazole + *thiophanate methyl* Acropolis	3 + 1	 23 fl oz	24 H/ 14 D	Do not make more than four applications of this product per year.
	tebuconazole + *trifloxystrobin* Absolute Maxx	3 + 11	 3.5 fl oz	12 H/ 14 D	Absolute is a combination of *tebuconazole* and *trifloxystrobin*. Fungicide resistance management should be considered when this product is used with *tebuconazole* products, Stratego, or Abound. Maximum of 4 applications/season.
Foliar Diseases	*chlorothalonil* Bravo Ultrex Bravo Weather Stik Chemnut 720 Chlorothalonil 720 Terranil 6L Echo 90DF Echo 720 Equus 720 Equus DF GK-Agragold 720	M5	 1.36 lb 1.5 pt 1.5 pt 1.5 pt 1.5 pt 1.25 lb 1.5 pt 1.5 pt 1.36 lb 1.5 pt	12 H/ 14 D Except for Bravo S (24 H)	Apply *chlorothalonil* or *chlorothalonil + copper* on a 10–14 day interval. The exact interval between applications depends on rotation, weather, etc. **Do not feed peanut hay treated with *chlorothalonil* to livestock.** If rust is found in a field, and the peanuts are more than 3 weeks from expected harvest, apply *chlorothalonil* every 10 days until 2 weeks from harvest. If peanuts are 2 weeks or less from harvest, no control is necessary.
	Tank-mix combinations of *chlorothalonil* and *copper hydroxide chlorothalonil* + Kocide 4.5LF	M5	 (0.75 lb ai/A) 1 pt		Do not mix any *copper* fungicide with *tebuconazole.*
	tebuconazole + *prothioconazole* Provost Silver	3	 11–13 fl oz	12 H/ 14 D	Provost is a new fungicide labeled for the control of leaf spot diseases, peanut rust, white mold, and Rhizoctonia limb rot. It is also labeled for suppression of CBR. Provost is applied in a 4-block program. Higher rates can be used in fields where disease is a particular problem. Maximum rate is 52 fl oz/A/season.

PEANUT DISEASE CONTROL

PEST	FUNGICIDE	MOA	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
			FOLIAR DISEASES *(continued)*		
Foliar Diseases (*continued*)	Tank-mix combinations of *chlorothalonil* Bravo + Tilt *propiconazole chlorothalonil* + Tilt	M5, 3	(0.75 lb ai/A) 2 oz	12 H/ 14 D	The rate of *chlorothalonil* when tank mixed with Tilt will vary depending on formulation (ie. 6 lb/gal would require 16 oz and 4.2 3 lb/gal would require 22.6 oz) **If RUST is detected and peanuts are more than 3 weeks from expected harvest, use a full rate of *chlorothalonil* every 10 days until 2 weeks from harvest. Using DMIs (ie. Folicur and Tilt) full season increases the possibility for fungal resistance. If DMIs are used full season make the last leaf spot application with *chlorothalonil*.** Tilt does not control rust. NOTE: Due to current considerations with the European Union, use of any product containing *propiconazole* is not recommended on peanuts. Maximum rate is 12 pints/A/season.
	chlorothalonil + *propiconazole* Echo-PropiMax	M5, 3	(0.75 lb ai/A) 2 oz	12 H/ 14 D	
	chlorothalonil + *propiconazole* Tilt/Bravo	M5, 3	1.5 pt	12 H/ 14 D	
	thiophanate methyl Topsin M 70WP T-Methyl 70W Topsin 4.5FL Miramar Topsin 4.5 FL + *tebuconazole*	1	½ lb ½ lb 10 fl oz 10.9 fl oz 5 fl oz + 7.2 fl oz	24 H/ 14 D	Neither Topsin, *thiophanate methyl* 85WDG nor any other formulation of *thiophanate methyl* should be used alone for control of foliar diseases of peanut, but should be tank mixed and/ or rotated with other non-*benzimidazole* fungicides such as *chlorothalonil*. Use of *thiophanate methyl* should be restricted to a single solo application or 2 tank-mix applications per season. The maximum rate of *thiophanate methyl* 85WDG is 1.65 lb/A/season. The rate for ELAST 400F is 12.8 fl oz if it is tank-mixed with another fungicide, e.g. *tebuconazole* for added control of peanut leaf spot. The rate is 15 fl oz if it is used alone or tank-mixed with a fungicide that is not effective against leaf spot.
	Thiophanate Methyl 85WDG	1	0.4 lb	24 H/ 14 D	
	dodine ELAST 400F	U12	12.8–15 fl oz	48 H/ 14 D	
	mancozeb Koverall	M3	1–2 lbs	24 H/ 14D	
Cylindrocladium Black Rot (CBR)	*metam sodium* 42%	M3	10 gal/A		To be effective, the fumigant *metam sodium* must be applied very carefully. To avoid injury to the seed and the seedlings, the fumigant must be applied at least 14 days before planting to a depth of 8–10". *Metam sodium* should be applied only when the soil temperature is greater than 60°F and when the soil moisture is like it would be for suitable seed germination. It is critical to get a good seal on the chisel trace left after fumigation so that the *metam sodium* does not escape directly into the atmosphere. The rows must be marked so that seed can be planted directly above where the fumigant was applied. **Growers who are using this treatment for the first time may want to consult with their local county Cooperative Extension agent.**
	prothioconazole Proline 480SC *prothioconazole* Phobos FC”	3	0.4 fl oz/1000 row ft 5.7 fl oz/A 7.6 fl oz/A	48 H/ 14 D	Proline 480SC is applied in-furrow for the management of CBR. See label for rate information and additional application strategies for management of CBR and perhaps white mold (stem rot). Maximum rate is 22.8 fl oz/A/season.
	tebuconazole Abound 2.08F *tebuconazole* 3.6F Priaxor Headline Provost Fontelis Elatus	11 3 11 + 7 11 3 7 11 + 3	18.5–24.6 fl oz 7.2 fl oz 12-15 fl oz 8–10.7 fl oz 8 fl oz/A 16–24 fl oz 7.3–9.5 fl oz	12 H/ 14 D Except Headline— 4 H	Provost *tebuconazole*, Abound, Elatus, Fontelis, Priaxor, and Headline are labeled for the "suppression" of CBR. This means that they may have some limited benefit to the grower in the management of this disease. However neither is likely to result in significant reduction in CBR when compared to the benefits of *metam sodium*.

RECOMMENDATIONS SET FORTH BY THE NORTH AMERICAN FUNGICIDE RESISTANCE ACTION COMMITTEE

1. Reduce initial inoculum (fungal populations) through good cultural practices.
2. Do not use less than the minimum label rate alone or in tank mixtures.
3. If more than four sprays of DMI (for example *tebuconazole* and *propiconazole*) fungicides will be made in a season, it is strongly recommended that all DMI sprays be mixed with an effective non-DMI fungicide.
4. Use in a preventative application schedule.
5. Calibrate sprayer and configure spray tips to ensure thorough coverage of peanut foliage.
6. DMI fungicides are not recommended for season-long use alone. Use alternating blocks of sprays of DMI fungicides with non-DMI fungicides, ORuse tank mixes of DMI and non-DMI fungicides. See label directions!
7. Alternating sprays or tank mixtures with other DMI fungicides will not help prevent resistance development.
8. When using a *strobilurin* fungicide as a solo product, for example Headline, Abound, or Evito, the number of applications should be no more than ⅓ (33%) of the total number of fungicide applications per season.
9. For *strobilurin* mixes (e.g. Absolute, Evito T and Stratego) in programs which tank mixes or pre-mixes a *strobilurin* with mixing partners of a different mode ofaction are used, the number of *strobilurin* containing applications should be no more than ½ (50%) of the total number of fungicide applications per season.
10. In programs in which applications of *strobilurin* fungicides are made with bothsolo products and mixtures, the number of *strobilurin* containing applications should be no more than ½ (50%) of the total number of fungicide applications per season.

PEANUT SEED TREATMENT

Bob Kemerait, Extension Plant Pathologist
Tim Brenneman and Albert Culbreath, Plant Pathologists

Trebuset (*azoxystrobin + fludioxinil + mefanoxam + pydiflumetofen + sedaxane*)	2 fl oz/100 lb
Vitavax PC	4–5 oz/100 lb
Rancona VPL (*ipconazole + carboxin + metalaxyl + thiophanate methyl)*	3.2 fl oz/100 lb seed

PEANUT NEMATODE CONTROL

Bob Kemerait, Extension Plant Pathologist
Tim Brenneman and Albert Culbreath, Plant Pathologists

PEST	NEMATICIDE	AMOUNT PER ACRE	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
Nematodes	*fluopyram* + *imidacloprid* Velum Total	18 fl oz	12 H/ 14 D	Apply specified dosage in the following methods: 1) In-furrow spray during planting directed on or below seed; 2) Chemigation into the root-zone through low pressure drip or trickle irrigation. Do not apply more than 19 fl oz/A of Velum Total per year. Do not apply Velum Total within 30 days of harvest. Regardless of formulation or method of application, apply no more than 0.5 lb imidicloprid or 0.45 lb *fluopyram* ai/A/year, including seed treatment, soil and foliar uses.
	fluopyram Velum	6.5–6.84 fl oz	12 H/ 7 D	Velum will replace Velum Prime as Bayers nematicide. All Velum Total uses in Georgia will switch to the new Velum product. While there may be some Velum Total still available on-farm in 2021, there should not be any Velum Total sold commercially. Note that without the *imidicloprid* component, Velum will not control thrips. In-furrow use of Velum is labeled for early-season suppression of leaf spot diseases and white mold.
	Aldicarb AgLogic 15G	7 lb/A at-plant followed by 10 lb/A post-emergence.		**At Planting:** Apply granules in the seed furrow and immediately cover seed and granules with 1-inch or more of soil. **Post-Emergence:** Side-dress granules in a furrow that is 8 to 12 inches to both sides of plant row and 1 to 3 inches deep. Immediately cover granules with soil by closing furrow. Adjust applications to minimize root pruning.
	Telone II	4.5–9 gal	5 D Post application/ —	Apply 6–9 gal/A rates broadcast with a moldboard plow. Apply 4.5–6 gal/A rates with a single chisel in-row application. All applications should be made at least 7–14 days before planting.
	Vydate C-LV	17–34 fl oz	48 H/ —	Vydate C-LV is used to supplement use of a pre-plant or at-plant application of a nematicide. (If Vydate is used at-plant, it should be applied at 34.0 fl oz/A.) Recommended foliar application is a split application of 17 fl oz/A at 14–28 days after planting followed by a second application of 17 fl oz/A 14 days later. Best used in low nematode fields. Maximum rate is 136 fl oz/A/season.
	A nematicide application at pegging is recommended regardless of which nematicide is used at planting. **DO NOT FEED PEANUT HAY TREATED WITH THESE NEMATICIDES TO LIVESTOCK**.			

Note: PROPULSE (*fluopyram* + *prothioconazole*) can be applied at 13.6 fl oz/A at pegging time for additional control of nematodes following an in-furrow application of Velum Total. Propulse offers additional nematode control through chemigation that uses overhead irrigation equipment. Applications should be made using 0.1 to 0.25 acre-inch of water to move PROPULSE into the soil.

NEMATICIDE CONTROL RATING

Nematicides listed below are rated on a scale of excellent, good, fair and poor. Those listed as poor to fair would be acceptable in low nematode population fields, but should not be used in fields where root-knot nematodes cause severe problems.

NEMATICIDE	RATING
Telone II	excellent
Vydate	poor to fair

PEANUT WEED CONTROL

Eric P. Prostko, Extension Agronomist—Weed Science

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION/A	LBS ACTIVE INGREDIENT/A		
EARLY PRE-PLANT FOLIAR BURNDOWN OF EMERGED ANNUAL WEEDS AND/OR COVER CROPS IN REDUCED TILLAGE SYSTEMS					
glyphosate various trade names 3 lb ae/gal 3.73 lb ae/gal 4 lb ae/gal 4.17 lb ae/gal 4.50 lb ae/gal 4.80 lb ae/gal 5 lb ae/gal	9	 16–48 oz 13–39 oz 12–36 oz 11.7–35 oz 11–32 oz 10.1–30 oz 10–29 oz	0.38–1.13 ae	4 H/ —	Apply any time prior to planting to control emerged weeds. Refer to specific label for weeds controlled, application rates, adjuvants, and precautions. *Glyphosate* does not adequately control cutleaf eveningprimrose or Carolina geranium, and may not provide acceptable control of wild radish. For cover crop control only, use the following rates: wheat < 12", 0.56 lb ae/A; wheat > 12", 0.75 lb ae/A; rye < 18", 0.56 lb ae/A; rye > 18", 0.75 lb ae/A. *Glyphosate* can also be tank-mixed with Valor (2 oz/A), Aim (1–2 oz/A), or ET (0.5–2 oz/A) to improve the spectrum of control, particularly for annual morningglories. Refer to specific comments for Valor. Sequence 5.25EC (*glyphosate* + *S-metolachlor*) is also labeled for pre-plant use in peanut at 2.5–3.4 pt/A. Sequence at 3.4 pt/A is equivalent to 1.28 lb ai/A of *S-metolachlor* + 0.96 lb ai/A *glyphosate*. **Applications of *glyphosate* to wheat and rye should be made before the boot stage or after the small grain is fully headed.**
paraquat various trade names 2SL 3SL	22	 40–60 oz 27–40 oz	0.63–0.94	12 H/ —	Apply prior to planting to control emerged weeds. Add non-ionic surfactant at 1qt/100 gals or crop oil at 1 gal/100 gals. *Paraquat* will not adequately control horseweed, swinecress, purslane speedwell, curly dock, cutleaf eveningprimrose, and larger wild radish. For cover crop control only, use the following rates: wheat, 0.63 lb ai/A (2.5 pt/A of 2 lb/gal or 1.7 pt/A of 3 lb/gal); rye, 0.50 lb ai/A (2 pt/A of 2 lb/gal or 1.3 pt/A oz/A of 3 lb/ gal). Cover crops must be mature (seedheads) for adequate control. Can also be tank-mixed with Valor (2 oz/A) to improve the spectrum of control and provide residual weed control. Refer to specific comments for Valor. ****All applicators of *paraquat* must be certified applicators and complete the EPA's training program before mixing, loading, and applying.**
2,4-D amine various trade names 3.8 lb/gal	4	 8–16 oz	0.24–0.48	48 H/ —	Tank-mix with *glyphosate* or *paraquat*. *2,4-D* is the most cost-effective option available for burndown of cutleaf eveningprimrose. *2,4-D* does not control Carolina geranium. Some *2,4-D* products are labeled for application to previous crop stubble or fallow land. In this case, the label directs the user to not plant a crop "until 3 months after application or until the product disappears from the soil." UGA research suggests that peanut can be planted 7 days after a pre-plant burndown application of *2,4-D*.
thifensulfuron + *tribenuron* FirstShot 50SG	2	 0.5–0.8 oz	0.008–0.013 + 0.008–0.013	12 H/ —	Tank-mixed with *glyphosate* or *paraquat*. FirstShot will help improve the control of many broadleaf weeds such as henbit, wild radish, Carolina geranium, and chickweed. Peanut can be planted 30 days after application. Add a NIS at 0.25% v/v or COC at 1% v/v unless tank-mixed with a loaded *glyphosate* formulation.
carfentrazone Aim 2EC	14	 1–2 oz	0.016–0.031	12 H/ 7 D	Tank-mix with *glyphosate* to improve the burndown control of annual morningglory, tropical spiderwort, and small pigweed (< 1" tall). Apply prior to planting or up until 24 hours after planting. Add a NIS at 0.25% v/v or COC at 1% v/v unless tank-mixed with a "loaded" *glyphosate* formulation.
pyraflufen ET 0.208EC	14	 0.5–2 oz	0.001–0.003	12 H/ 7 D	Tank-mix with *glyphosate* to improve the burndown control of annual morningglory and small pigweed (< 1" tall). Apply as pre-plant burndown or after planting but before crop emergence. Add a COC at 1% v/v unless tank-mixing with a "loaded" *glyphosate* formulation.
tiafenacil Reviton 2.83SC	14	 1–2 oz	0.022–0.044	12 H/ NA	Tank-mix with *glyphosate* for improved weed control. Reviton will improve the control of several species including wild radish, morningglory, cutleaf evening primrose, and grasses. Reviton provides little to no residual weed control. Peanuts can be planted in 0 days (1 oz/A) or 7 days (2 oz/A). **Rain-free period is 1 hour.**

PEANUT WEED CONTROL

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION/A	LBS ACTIVE INGREDIENT/A		
PRE-PLANT SOIL INCORPORATED					
ethalfluralin Sonalan HFP 3EC	3	32 oz	0.75	24 H/ —	Controls annual grasses and small-seeded broadleaf weeds. Soil incorporate 2–3 inches deep within 2 days of application. Incorporation with implements other than power tiller requires two passes, preferably at cross angles. May be tank-mixed with Outlook or Dual for control of mixed infestations of annual grasses and nutsedge. Sonalan may also be applied as a surface application to freshly prepared seedbeds but must be incorporated by 0.5–1" of rainfall or irrigation within 2 days after application.
pendimethalin Prowl/Pendimax 3.3EC Prowl H20 3.8 ACS	3	29–38 oz 32 oz	0.75–1 0.95	24 H/ —	Controls annual grasses and small-seeded broadleaf weeds. Soil incorporate 1–2 inches deep within 7 days of application. Incorporation with implements other than power tiller requires two passes, preferably at cross angles. Use high rate for Texas panicum or where heavy weed populations are anticipated. May be tank-mixed with Outlook, Dual, or Pursuit for control of mixed infestations of annual grasses and nutsedge. Prowl can be applied immediately after planting to a freshly prepared seedbed up to 2 days after planting but before crop emergence. However, adequate incorporation in the form of 0.75" of irrigation or rainfall is needed within 48 hours for optimum activation when applied by this method. In strip-tillage systems with heavy cover (not bare-ground or sparse weeds), the rate of *pendimethalin* should be increased to 42 oz/A (Prowl 3.3EC) or 35 oz/A (Prowl H_2O).
metolachlor Stalwart, Parallel PCS, Me-Too Lachlor 8EC	15	16 oz	1.0	24 H/ 90 D	Controls some annual grasses (not Texas panicum) and small-seeded broadleaf weeds. May provide limited Florida beggarweed suppression. Controls or suppresses yellow nutsedge but not purple nutsedge. Incorporation with implements other than power tiller requires two passes, preferably at cross angles. Deep incorporation may reduce effectiveness. May be tank-mixed with Prowl/Pendimax or Sonalan to control mixed infestations of annual grasses and yellow nutsedge. PPI treatments generally provide better control of nutsedge. Heavy rainfall after planting and/or non-uniform incorporation may result in crop injury expressed as delayed emergence and stunted growth of emerging plants. The generic formulations of *metolachlor* (Parallel PCS, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials.
S-metolachlor Dual Magnum 7.62EC Dual II Magnum 7.64EC EverpreX 7.62EC		16 oz	0.95		
diclosulam Strongarm 84WG Diclom 84WG	2	0.45 oz	0.024	12 H/ 30 D	Provides general broadleaf weed control. Incorporate into top 1–3" of final seedbed. Good to excellent control of many species including bristly starbur, wild poinsettia, eclipta, and copperleaf. Should be tank-mixed with a grass herbicide. **Poor control of sicklepod.** Control of nutsedge has been variable and inconsistent. Can also be applied preemergence. Crop rotation restrictions: soybeans—0 months; wheat, barley—4 months; oats, rye—6 months; cotton—10 months; corn, sorghum, tobacco—18 months; other crops—30 months. Pre-slurry in water before adding to larger spray/mix tank.
imazethapyr Pursuit 2AS	2	4 oz	0.063	4 H/ 85 D	Controls purple and yellow nutsedge, wild poinsettia, wild radish, pigweed, burgherkin, and several other annual species. Does not control Florida beggarweed or sicklepod. Shallow incorporation is preferred. May be tank-mixed with Dual, Prowl/Pendimax, or Sonalan. Incorporated treatments are more persistent than pre-emergence or post-emergence applications and are more likely to result in carryover. Rotation intervals for various crops include the following: peanut, peas, southern pea, soybean—anytime; snap bean—2 months; rye and wheat—4 months; field corn—8.5 months; barley, tobacco—9.5 months; cotton, oat, sorghum, sunflower, sweet corn—18 months.

HERBICIDE	MOA	BROADCAST RATE/ACRE: AMOUNT OF FORMULATION/A	BROADCAST RATE/ACRE: LBS ACTIVE INGREDIENT/A	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
CHEMIGATION					
dimethenamid-P Outlook 6EC	15	12.8 oz	0.60	12 H/ 80 D	Can be applied PPI, PRE or POST (80 DBH) for the residual control of certain annual grasses, yellow nutsedge, and pigweed. When applied POST, Outlook can be tank-mixed with either *paraquat* or Cadre or Cobra or Ultra Blazer. Expect weed control similar to other Group 15 herbicides such as *S-metolachlor*, *acetochlor*, and *pyroxasulfone*. Two applications can be made and the total amount of Outlook that can be used in a single season is 21 oz/A.
metolachlor Stalwart, Parallel PCS Me-Too-Lachlor	15	Refer to PPI section for rates			May be applied by injection through center pivot irrigation systems. Use at normal recommended rates. Apply after planting but before crop emergence. Requires proper system calibration and safety devices (check valves, cutoff switches, etc.) to provide effective weed control and prevent environmental contamination. Accurate herbicide application through chemigation may provide superior weed control compared to conventional ground applications. The generic formulations of *metolachlor* (Parallel PCS, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials.
S-metolachlor Dual Magnum 7.62E Cinch 7.64EC	15	Refer to PPI section for rates			
pendimethalin Prowl/Pendimax 3.3EC Prowl H20 3.8ACS	3	Refer to PPI section for rates			
PREEMERGENCE					
imazethapyr Pursuit 2AS Pursuit 70DG	2	4 oz 1.44 oz	0.063	4 H/ 85 D	See comments for Pursuit PPI. Controls the same weeds as listed for Pursuit PPI but with greater dependency on rainfall or irrigation for activation.
metolachlor Stalwart Parallel PCS Me-Too-Lachlor	15	16 oz	1.0–1.33	24 H/ 90 D	Controls some annual grasses (not Texas panicum) and small-seeded broadleaf weeds. Provides some suppression of sicklepod and Florida beggarweed. Apply after planting and before crop and weeds emerge. If Dual is used as a PPI treatment, any additional application of Dual should be delayed until peanuts begin emerging (AC). Multiple applications—pre-plant incorporated followed by at-cracking treatments—improve control of sicklepod, Florida beggarweed, and yellow nutsedge. Pre-emergence treatments generally provide better broadleaf weed control/ suppression Do not apply more than 2.66 pt/A/year of Stalwart/Parallel/Me-Too-Lachlor or 2.8 pt/A/ year of Dual Magnum/Dual II Magnum/Cinch formulation. The generic formulations of *metolachlor* (Parallel, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials. PPI or PRE applications of Dual should be avoided if excessive rainfall is anticipated.
S-metolachlor Dual Magnum 7.62EC Dual II Magnum 7.64EC Cinch 7.64EC		16 oz	0.96–1.27		
diclosulam Strongarm 84WG Diclom 84WG	2	0.45 oz	0.024	12 H/ —	Refer to PPI section.
flumioxazin Valor SX 51WG Valor EZ 4SC Panther 51WG Panther 4SC Rowel 51WG Red Eagle Flumioxazin 51WG	14	3 oz	0.096	12 H/ —	Apply immediately after planting but no later than 2 days after planting. Plant peanuts at least 1.5" deep. **DO NOT** irrigate when peanuts are cracking. Rainfall or irrigation at cracking will cause temporary crop injury that should not result in reduced yields if applied according to the label. Valor will provide good to excellent control of many broadleaf weeds including Florida beggarweed, Palmer amaranth, and tropic croton. **Valor will not control annual/perennial grasses, sicklepod, nutsedge, and cocklebur.** Valor can be tank-mixed with Prowl, Sonalan, Dual Magnum, Outlook, or Warrant. Dual or Warrant tank-mixes with Valor would only be suggested when planting in fields with a history of tropical spiderwort and/or yellow nutsedge. Can also be used in strip-tillage peanut production systems in combination with *glyphosate* or *paraquat* to improve burndown control. Rotation restrictions include the following: soybeans—0 months; field corn—1 month; cotton, tobacco, wheat—2 months. Refer to current product label for additional rotational restrictions. **Completely clean spray equipment THE SAME DAY OF USE as directed on the herbicide label!** Pre-slurry all *flumioxazin* formulations in water before adding to larger spray/mix tank.
sulfentrazone + *carfentrazone* Spartan Charge 3.5L	14 + 4	3–3.75 oz	0.074–0.092 + 0.008–0.01	12 H/ —	Will provide good to excellent residual control of pigweed. Can be tank-mixed with Prowl or Dual. Can be tank-mixed with *glyphosate* or *paraquat* pre-plant burndown in strip-tillage systems. Can be applied up to 3 days after planting. However, do not apply after peanut emergence, at cracking, or if seedling is close to the soil surface. Do not use on soils classified as sand, which have less than 1% OM. Do not irrigate when peanuts are cracking. Rotation Restrictions: soybeans, sunflowers, tobacco—anytime; field corn, small grains—4 months; sorghum—10 months; cotton—18 months; canola—24 months.

PEANUT WEED CONTROL

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION/A	LBS ACTIVE INGREDIENT/A		
PREEMERGENCE (*continued*)					
acetochlor Warrant 3ME	15	48 oz	1.125	12 H/ Forage 90 D	Can be applied PRE and/or early POST (after crop emergence up through the R1 stage of growth. R1 ends when 50% of plants have a visible peg (R2). Will provide good to excellent control of annual grasses (except Texas panicum), pigweed, and tropical spiderwort. Crop injury potential will increase if used in cold/wet soils. In wet years or environments, the length of residual control with Warrant may be reduced.
dimethenamid-P Outlook 6EC	15	12.8 oz	0.60	12 H/ 80 D	Can be applied PPI, PRE or POST (80 DBH) for the residual control of certain annual grasses, yellow nutsedge, and pigweed. When applied POST, Outlook can be tank-mixed with either *paraquat* or Cadre or Cobra or Ultra Blazer. Expect weed control similar to other Group 15 herbicides such as *S-metolachlor*, *acetochlor*, and *pyroxasulfone*. Two applications can be made and the total amount of Outlook that can be used in a single season is 21 oz/A.
fluridone Brake 1.2SC	12	12–16 oz	0.1125–0.15	48H/	An alternative MOA for the control of Palmer amaranth and other small seeded broadleaf and grass weeds. Brake will cause temporary peanut injury in the form of bleaching. Plant peanut at least 1.5" deep. Apply prior to planting (up to 14 days) or preemergence within 36 hours after planting. Brake needs at least 0.5" of moisture for activation as soon as possible. Brake has been tested on the following peanut cultivars; GA-06G, GA-12Y; GA-16HO; GA-18RU; GA-20VHO; AUNPL-17; TIFNV HIGH O/L; FLORUN 331. GA-16HO may exhibit more foliar injury (bleaching) than other cultivars (cosmetic/no yield loss). The tolerance of other peanut cultivars has not been evaluated by UGA. Brake should be used in combination with other at-plant residual herbicides such as Dual Magnum, Outlook, Prowl, Sonalan, Strongarm, Valor, Warrant. Crop rotation restrictions: cotton/peanut = 0 months; soybean/sweet potato = 2 months; wheat/barley/rye = 8 months (grain) or 5 months (cover crop only); corn/sorghum = 10 months; sunflower = 18 months; tobacco = 18 months. Do not apply Brake to the same field more than 2 years in a row.
AT CRACKING OR EARLY POSTEMERGENCE					
imazethapyr Pursuit 2AS 70DG	2	 4 oz 1.44 oz	0.063	4 H/ 95 D	See comments for Pursuit PPI and PRE. Provides effective control of nutsedge, wild poinsettia, wild radish, bristly starbur, prickly sida, and several other annual species. Weed size is especially critical for effective control of nutsedge, bristly starbur, and prickly sida. If weeds are emerged, surfactant or crop oil concentrate should be included. May be tank-mixed with *paraquat* or *2,4-DB* for broader spectrum control of emerged weeds.
metolachlor Stalwart Parallel PCS Me-Too-Lachlor 8EC	15	16 oz	1.0	24 H/ 90 D	See comments for Dual PPI and PRE. Compared to PPI and PRE treatments, AC applications provide better control of non-emerged broadleaf weeds such as Florida beggarweed and sicklepod. May be tank-mixed with *paraquat* + Basagran, *paraquat* + Storm or Cadre or Cobra treatments for improved contact activity and for suppression/control of problem broadleaf weeds and yellow nutsedge. Do not apply more than 2.66 pt/A/year of Stalwart/Parallel/Me-Too-Lachlor or 2.8 pt/A/year of Dual Magnum. Research has shown that Dual will provide good to excellent residual control of tropical spiderwort if applied before weed emergence. The generic formulations of *metolachlor* (Parallel PCS, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials. Adjuvants are not needed when Dual is tank-mixed with POST treatments.
S-metolachlor Dual Magnum 7.62EC (various others)		16 oz	0.95		
acetochlor Warrant 3ME	15	48 oz/A	1.125	12 H/ Forage 90 D	Can be applied after emergence through the R1 (flowering) stage of growth. R1 ends when 50% of plants have a visible peg (R2). Can be tank-mixed with *paraquat* + Basagran, or *paraquat* + Storm treatments or Cadre or Cobra. Total amount of Warrant that can be applied PRE + early POST = 8 pt/A/year. Use a NIS at 0.25% v/v when tank-mixed with POST herbicides.
pyroxasulfone Zidua 4.17SC	15	2.5 oz	0.081	12 H/ 0 D	Apply postemergence for the residual control of certain annual weed species, including Palmer amaranth, Florida beggarweed, and annual grasses. Tank-mix with *paraquat*, Cadre, Cobra, or Ultra Blazer. Can be applied from V2 stage thru beginning of pod development stage (R3). **Do not apply preemergence to peanuts.** A total of 2 applications (5.0 oz/A of 4.17SC/year total) can be applied. When applied POST with other herbicides, use a NIS at 0.25% v/v.

HERBICIDE	MOA	BROADCAST RATE/ACRE: AMOUNT OF FORMULATION/A	BROADCAST RATE/ACRE: LBS ACTIVE INGREDIENT/A	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
AT CRACKING OR EARLY POSTEMERGENCE *(continued)*					
pyroxasulfone + *carfentrazone* Anthem Flex 4SC	15 + 14	3 oz	0.087–0.006	12 H/ ?	Apply from V2 stage through pod development (R3 stage). DO NOT APPLY PREEMERGENCE. Will provide residual control of certain annual grasses and pigweed. Can be tank-mixed with *paraquat*, Cadre, Cobra, or Ultra Blazer. Anthem Flex will cause temporary peanut injury in the form of leaf burn and will increase injury when tank-mixed with other pesticides (transient). Two POST applications can be applied (at least 14 days apart). Use with a NIS @ 0.25% v/v (1 qt/100 gals).
paraquat various trade names 2SL 3SL	22	 8.0 oz 5.3 oz	0.125	12 H/ —	Provides effective, broad-spectrum weed control. Provides some suppression of yellow nutsedge. Apply anytime up to 28 days after ground crack. Include NIS at 0.25% (1 qt/100 gal) with all *paraquat* treatments. The success of "at-crack" sprays can be greatly improved by: 1) applying herbicides in a minimum of 15 GPA; 2) using flat fan nozzles; 3) decreasing ground speed; and 4) using lower spray pressures (30 PSI). Research indicates no adverse effects of adding chlorothalonil products with *paraquat* tank-mixtures where fungicide treatments are needed. *Warrant 3ME (48 oz/A) or Dual Magnum/generic *metolachlor* (16 oz/A) or Zidua (1.5 oz/A of 85WG or 2.45 oz/A of 4.17SC) or Anthem Flex (3 oz/A) or Outlook (12.8 oz/A)) can be used in combination with this treatment to provide residual control of pigweed and tropical spiderwort. NIS is not recommended if Dual Magnum/generics or Outlook is used with *paraquat* + Storm. ****All applicators of *paraquat* must be certified applicators and successfully complete the EPA's training program before mixing, loading, and applying.** Growers who prefer to make their own Storm for use in "cracking" sprays can tank-mix Ultra Blazer 2L @ 16 oz/A + Basagran 4EC @ 8 oz/A
paraquat 3 SL or 2SL + *bentazon* + *acifluorfen* Storm 4EC	22 + 6 + 14	 8 oz 12 oz + 16 oz	0.188 + 0.33 + 0.17	48 H/ 75 D	
paraquat 3 SL or 2SL + *bentazon* Basagran, Broadloom 4EC 5EC	22 + 6 + 14	8 oz 12 oz + 8–16 oz 6.4–12.8 oz	0.189 + 0.25 + 0.5	48 H/ Forage 50 D	Provides effective, broad-spectrum weed control. Provides some suppression of yellow nutsedge. Generally reduces peanut injury compared to other *paraquat* treatments. The lower rate of Basagran (0.5 pt) is usually sufficient to reduce peanut foliar burn and provide control of smallflower morningglory. The higher rate (1 pt) is necessary for control of weeds such as bristly starbur and prickly sida. Apply anytime up to 28 days after ground crack. Include NIS at 1 qt/100 gal spray solution with all *paraquat* treatments. The success of "at-crack" sprays can be greatly improved by 1) applying herbicides in a minimum of 15 GPA; 2) using flat fan nozzles; 3) decreasing ground speed; and 4) using lower spray pressures (30 PSI). Research indicates no adverse effects of adding *chlorothalonil* products with *paraquat* tank-mixtures where fungicide treatments are needed. *Warrant (48 oz/A) or Dual Magnum or generic *metolachlor* (16 oz/A) or (Zidua 2.5 oz/A of 4.17SC) or Anthem Flex (3 oz/A) or Outlook (12.8 oz/A) can can be used in combination with this treatment to provide residual control of pigweed and tropical spiderwort. NIS is not recommended if Dual Magnum/generics or Outlook is used with *paraquat* + Basagran.
diclosulam Strongarm 84WG Diclom 84WG	2	0.45 oz	0.024	12 H/ 30 D	24(c) label for use in Georgia. The only weed on current 24(c) label is tropical spiderwort but Strongarm also has POST activity on annual morningglory, bristly starbur, common cocklebur, common ragweed, eclipta, horseweed, and wild radish. Can be applied up until 30 days after planting. Use in combination with a NIS at 0.25% v/v (1 qt/100 gals). **When applied postemergence in peanut, cotton rotation restriction is 18 months.** Follow other rotation restrictions listed in PPI section. Label must be in the possession of user at the time of application. **Rain-free period = 2 hours.**

PEANUT WEED CONTROL

HERBICIDE	MOA	BROADCAST RATE/ACRE: AMOUNT OF FORMULATION/A	BROADCAST RATE/ACRE: LBS ACTIVE INGREDIENT/A	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
POSTEMERGENCE					
acifluorfen Ultra Blazer 2L	14	 16–24 oz	0.25–0.38	—/ 75 D	Especially useful for control of morningglories, tropic croton, wild radish, wild poinsettia, hophornbeam copperleaf, and spider flower. Adjust rate according to weed size and species as noted on the label. Use 16 oz/A or less for control of highly sensitive species such as hemp sesbania and showy crotalaria. Slight to moderate peanut foliage burn may result. Do not apply more than 2 pt/A per season as a postemergence treatment. Apply with nonionic surfactant at 1 qt/100 gal spray solution (0.25% v/v). May be tank-mixed with *2,4-DB* (1 pt/A). The Blazer + *2,4-DB* tank mixture is generally more injurious to peanuts than either product alone. May be tank-mixed with Basagran for improved control of broadleaf weeds such as cocklebur, and prickly sida. A pre-packaged mix of *acifluorfen* + *bentazon* is marketed as Storm. Ultra Blazer can be tank-mixed with Dual Magnum or Warrant or Zidua or Anthem Flex or Outlook + *2,4-D*B. Generic formulation of *acifluorfen* is sold as Avalanche Ultra (Winfield) but has not been tested by UGA. **Rain-free period for Ultra Blazer is 4 hrs.**
bentazon Basagran, Broadloom 4EC 5EC	6	 24–32 oz 19–26 oz	0.75–1	48 H/ Forage-50 D	Apply for postemergence control of yellow nutsedge, cocklebur, bristly starbur, smallflower morningglory, prickly sida, and certain other weeds. Treat when broadleaf weeds are small and actively growing. Adjust rate according to weed size as noted on label. Two applications (7–10 days apart) will be required for control of yellow nutsedge. For yellow nutsedge, include crop oil concentrate at 1 qt/A. Do not foliarly apply sulfur 14 days before or after use of crop oil concentrate to minimize risk of peanut foliage burn. May be tank-mixed with *2,4-DB* 2L (0.5 pt/A) for improved control of morningglories. Early-season applications of *bentazon* at high rates following in-furrow applications of Di-Syston may infrequently result in SEVERE peanut injury. **Rain-free period for Basagran is 4 hours.**
bentazon + *acifluorfen* Storm 4EC	6 + 14	 24 oz/A	0.5 + 0.25	48 H/ 75 D	Controls morningglories, cocklebur, prickly sida, ragweed, eclipta, tropic croton, and several other broadleaf weeds with less injury than Blazer alone. Application timing is critical—weeds must be small. Include surfactant or crop oil concentrate. Can be mixed with *2,4-DB* for control of larger weeds and for control of sicklepod. May be tank-mixed with *paraquat*. **Rain-free period for Storm is 4 hours.**
2,4-DB 1.75SL 2SL	4	 14.4–18.3 oz 13–16 oz Rate depends on formulation. Check product labels.	 0.20–0.25 0.20–0.25 0.22–0.38 0.22–0.40	48 H/ 60 D	Apply up to 2 applications per season as an over-the-top treatment for broadleaf weed control. Use rates and application timing varies by specific product label. Apply in the seedling stage for control of morningglory and citronmelon. Cocklebur that is 1 foot or more in height can be controlled; however, earlier treatment is preferred. Also effective for control of escaped sicklepod. Do not apply if peanuts are under drought stress. Research indicates no adverse effects of adding *chlorothalonil* products with *2,4-DB* where fungicide treatments are needed. Rain-free period for *2,4-D*B is 1 hour. **Do not tank-mix with post-emergence grass herbicides. If *2,4-DB* is tank-mixed with grass herbicides, such as Poast or Select, reduced control of grasses can occur (approximately 8–15% reduction in control about 50% of the time).**
imazethapyr Pursuit 2 AS 70 DG	2	 4 oz 1.44 oz	0.25–0.38	4 H/ 85 D	See comments for Pursuit PPI, PRE, and AC/EP. Generally should be used early post-emergence when weeds are extremely small. Controls wild radish, pigweeds, morningglories, cocklebur, and several other annual species. Compared to PPI, PRE, and AC/EP treatments, POST applications are less effective on nutsedge, wild poinsettia, and some other species. Applications should be made before nutsedge exceeds 3–4 inches and bristly starbur exceeds 2". May be tank-mixed with *paraquat* or *2,4-D*B. Post control of escaped wild poinsettia is greatly enhanced in combination with *paraquat*. **Rain-free period for Pursuit is 1 hour.**

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION/A	LBS ACTIVE INGREDIENT/A		
POSTEMERGENCE *(continued)*					
imazapic Cadre/Impose 2AS	2	 4 oz	0.063	12 H/ 90 D	Provides excellent control of many broadleaf and grass weeds and both purple and yellow nutsedge. Apply as an early post-emergence treatment when weeds are less than 2–3 inches in height. Under conditions of heavy weed pressure, applications of Cadre 10–14 days following an at-cracking treatment (*paraquat* combination) has resulted in superior weed control. Use with NIS (0.25% v/v) or COC (1 qt/A). **Tank-mixing Select or Poast with Cadre can result in a 10–25% reduction in grass control.** A better alternative to this tank-mix would be to apply the grass herbicide first, then apply Cadre 3 days later. Rotation restrictions include: wheat, rye—4 months; corn, snapbean, southern peas, soybeans, tobacco—9 months; cotton, oats, sweet corn, grain sorghum—18 months; canola—40 months. See label for additional restrictions. **Rain-free period for Cadre is 3 hours.** Cadre can be tank-mixed with Anthem Flex, Dual Magnum, Outlook, Warrant, or Zidua.
lactofen Cobra 2EC	14	 12.5 oz	0.195	12 H/ 45 D	Apply after peanuts reach 6 true leaf stage of growth. Use a crop oil concentrate at 1% v/v (1 gal/100 gals). Provides good control of pigweeds, morningglories, ragweed, copperleaf, wild poinsettia, and eclipta. Cobra can be tank-mixed with Anthem Flex, Basagran, Cadre, Outlook, Pursuit, Select, Warrant, Zidua, and *2,4-DB*. **Rain-free period is 30 minutes.**
sethoxydim Poast 1.5EC Poast Plus 1EC	1	 16–24 oz 24–36 oz	0.19–0.28	12 H/ 40 D	For control of annual and perennial grasses. Apply when annual grasses are small (1–6 inches) and actively growing. Under favorable conditions, large Texas panicum can be controlled. For perennial grass control, two applications are usually required for satisfactory control. Apply with a COC at 1% v/v (1 gal/100 gal). Tank-mixtures with other herbicides, such as *2,4-DB*, may reduce grass control. Do not apply sulfur 14 days before or after application to minimize risk of peanut foliage burn. Reduced spray volumes (10 GPA) may improve grass control. Refer to Table 1 at the end of this chapter for more specific information about grass control. **Rain-free period for Poast is 1 hour.**
clethodim Select, Arrow, others 2EC Select Max/TapOut 0.97EC Section Three, Shadow 3EC	1	 6–8 oz 12–16 oz 3.84–5.33 oz	0.09–0.125	24 H/ 40 D	For control of annual and perennial grasses. Apply when grasses are small (< 6 inches) and actively growing. Under favorable conditions, large Texas panicum and bermudagrass can be effectively controlled. Heavy bermudagrass pressure or larger Texas panicum requires a follow-up treatment. When tank-mixing with a broadleaf herbicide or controlling perennial grasses, increase rates (8–16 ozs/A-Select; 16–32 oz/A-Select Max/TapOut). Do not apply more than 21.33 oz/A/year (Section Three, Shadow), 32 oz/A/year (Select) or 64 oz/A/year (Select Max/TapOut). Always apply with a crop oil concentrate at 1% v/v (Select/Arrow). A NIS (0.25% v/v) can be used with Select Max/TapOut to reduce crop injury potential. May be tank-mixed with Basagran, Blazer, Storm, or Orthene. **Do not tank-mix with *chlorothalonil* products or reduced grass control can occur.** Refer to Table 1 at the end of this chapter for more specific information about grass control. **Rain-free period is 1 hour.**
fluazifop-P Fusilade DX 2EC	1	 8–24 oz	0.125–0.375	12 H/ 40 D	For the control of annual and perennial grass weeds. Use rate depends on weed and weed size. Refer to table at the end of this section for specific information about rates and timings. Do not apply more than 48 oz/A/season. Do not apply more than 24 oz/A/application. Maintain a minimum of 14 days between applications. Use a NIS at 0.25% v/v or COC at 1% v/v. Refer to Table 1 at the end of this chapter for more specific information about grass control. **Rain-free period is 1 hour.** Fusilade also has some activity on bristly starbur (i.e. goathead or Texas sandspur).

PEANUT WEED CONTROL

HERBICIDE	MOA	BROADCAST RATE/ACRE: AMOUNT OF FORMULATION/A	BROADCAST RATE/ACRE: LBS ACTIVE INGREDIENT/A	REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
POSTEMERGENCE *(continued)*					
chlorimuron Classic 25DF	2	0.5 oz	0.008	12 H/ 45 D	Make one application per season as an over-the-top treatment for mid-season Florida beggarweed and bristly starbur control or suppression. Under favorable conditions—good soil moisture, moderate temperatures, and high relative humidity—other species such as cocklebur, ragweed, and sicklepod may be suppressed. Avoid applications during periods of drought/heat stress because of potential for poor weed control and crop injury. **Applications of Classic may not provide acceptable control of Florida beggarweed that has escaped control or is re-growing after a previous application of Cadre.** Include nonionic surfactant at 1 qt/100 gals spray solution with all Classic applications. Addition of *ammonium sulfate* (2 lb/A) or feed grade *urea* (2 gal/A) improves activity on bristly starbur. Classic can be applied from 60 days after peanut emergence to within 45 days of harvest. **APPLICATIONS OF CLASSIC APPLIED FROM 60 DAYS AFTER CROP EMERGENCE TO 45 DAYS BEFORE HARVEST MAY CAUSE A SLIGHT INCREASE IN TSWV SYMPTOMS.** Temporary yellowing of peanut foliage and reduction of canopy growth sometimes can occur. Can be tank-mixed with Bravo or *2,4-DB*. However, combinations of Classic + *2,4-DB* can result in significantly more foliar crop injury compared to Classic alone. Do not use on Spanish peanut. Do not tank-mix with elemental *sulfur*. **Rain-free period for Classic is 1 hour.** Classic should **NOT** be used on GA-06G or Tifguard due to potential yield losses (7–11%). The following peanut varieties have demonstrated adequate tolerance to Classic in UGA replicated/weed-free field trials: Florida-07; GA-Greener; GA-07W; GA-18RU, AUNPL-17, TIFNV High O/L, GA-20VHO, and FloRun™ 331. GA-09B yields were reduced 5% when Classic was applied 74 DAE but yields were not affected when applied at 60, 92, or 105 DAE. GA-16HO yields were reduced by 13% when applied at 70 DAE but not 60 DAE or 85 DAE. GA-12Y yields were reduced 7% when applied 60 DAE but not at 70 DAE or 85 DAE.
NON-SELECTIVE APPLICATOR (NSA)					
paraquat 2SL 3SL	22	50% solution (2 lb ai/gal) 33% solution (3 lb ai/gal)		24 H/ 30 D	For the salvage control/suppression of Palmer amaranth and Florida beggarweed. To prevent seed production in Palmer amaranth, apply within 2 weeks of pollen shed. Tractors should be operated at speeds of 5 MPH or less. NSAs that have performed well (> 85% control) in UGA tests include the following: GrassWorks Weed Wiper, Smucker's Top Crop Super Sponge, and LMC-Cross Wick-Bar. Do not apply more than 1 pt/A of a labeled *paraquat* formulation. In order for NSA's to be effective, at least 60–70% of the weed must be wicked/wiped. Additionally, this treatment may also be more effective on pigweed plants that are just starting to produce seed-heads. **Rain-free time is 30 minutes.** ****All applicators of *paraquat* must complete the EPA's training program before mixing, loading and applying Refer to the following web-site for more information: https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators**
HARVEST AID					
carfentrazone Aim 2EC	14	1–2 oz	0.156–0.031	12 H/ 7 D	Apply 7 days before digging for the late-season desiccation/defoliation of annual morningglories (Ipomoea spp.). Aim is less effective on smallflower morningglory. Use in combination with either a NIS (0.25% v/v) or COC (1% v/v). Aim may cause peanut leaf spotting or burning. Use at least 15 GPA for optimum results. Do not graze or feed peanut hay to livestock. Only 1 application per season is permitted. **Rain-free period is 6–8 hours.**

WEED RESPONSE TO BURNDOWN HERBICIDES USED IN PEANUT

Eric P. Prostko and A. Stanley Culpepper, Extension Agronomists—Weed Science

WEED SPECIES	BURNDOWN TREATMENT[1]								
	2,4-D[3]	*GLYPHOSATE ACID*[2]	*GLYPHOSATE ACID*[2] + *2,4-D*[3]	*GLYPHOSATE ACID*[2] + VALOR	*GLYPHOSATE ACID*[2] + AIM OR ET	*GLYPHOSATE* + REVITON	*PARAQUAT*	*PARAQUAT* + *2,4-D*	*PARAQUAT* + VALOR[4]
GRASSES / SEDGES									
annual bluegrass	N	E	E	E	E		G–E	G–E	
bermudagrass	N	F	F	F	F	E	P	P	
crabgrass	N	E	G–E	E	E		G		
goosegrass	N	E	G–E	E	E		F–G		
Italian ryegrass	N	G–E	G	G	G		P–F	P–F	
johnsongrass	N	G–E	G	G–E	G–E		P		
little barley	N	E	E	E	E		G	G	
sandbur	N	E	G–E	E	E		G		
Texas panicum	N	E	G–E	E	E		G		
volunteer corn	N	E	E	E	E		F–G		
purple nutsedge	N	F–G	F–G	G	F–G		P–F		
yellow nutsedge	N	F	F	F	F		P–F		
BROADLEAVES									
bristly starbur	G	G–E	G–E	E	E		E		
buttercup	G	G–E	E	G–E	G–E		E		
Carolina geranium	F	P–F	G	G	F–G	G–E	G–E	G–E	
chickweed	P	E	E	E	E	E	E	E	
citronmelon	F	G–E	E	E	E		F		
cocklebur	E	E	E	E	E		G–E		
coffee senna	G	E	E	E	E		F		
corn spurry	P–F	G–E	G–E			G–E	F–G		
cowpea	G	E			E		E		
cudweed	P–F	G–E	G–E	E			F–G		
curly dock	P–F	F	F–G	F	F		P	P–F	
evening primrose	E	P–F	E	F–G	F	G–E	P–F	E	F–G

WEED RESPONSE TO BURNDOWN HERBICIDES USED IN PEANUT

WEED SPECIES	BURNDOWN TREATMENT[1]								
	2,4-D[3]	*GLYPHOSATE ACID*[2]	*GLYPHOSATE ACID*[2] + *2,4-D*[3]	*GLYPHOSATE ACID*[2] + VALOR	*GLYPHOSATE ACID*[2] + AIM OR ET	*GLYPHOSATE* + REVITON	*PARAQUAT*	*PARAQUAT* + *2,4-D*	*PARAQUAT* + VALOR[4]
BROADLEAVES *(continued)*									
eclipta	P	F			G–E		F		G
Florida beggarweed	P–F	E	E	E	E		E		
Florida pusley	F	F	G	F–G	G		F		G
field pansy	P–F	F–G	F–G	G			G–E		
hemp sesbania	G–E	P–F	E		G–E		F		
henbit	P–F	F	G–E	E	E	G–E	G	G–E	
horsenettle	F	F			P–F		P–F		
Horseweed ALS-resistant *Glyphosate*-resistant	F–G F–G F–G	F–G F–G P	G–E G–E F–G	F–G F–G P	G G F		F F F	G G G	F F F
lambsquarters	E	G	G		G–E		F–G		
morningglory, Ipomoea	G	F	E	E	E		F–G		
morningglory, smallflower	F	G	E	E	G–E		P		
Pennsylvania smartweed	F	G	G		G–E		P		
pigweed ALS-resistant *Glyphosate*-resistant	G–E G–E G–E	G–E G–E P	E G–E F–G	E E P	E E F		G G G	G–E G–E G–E	G–E G–E G–E
prickly sida	F–G	F–G	G		F–G		P–F		
purslane	G–E	F–G	G–E	G	F–G		G		
ragweed	E	G	E		G–E		G		
redweed	F	G			G–E	G	F		
shepherdspurse	G	G			G		G	G–E	
sicklepod	F–G	G–E	E	E	G–E		E		
speedwell	P–F	G–E	G–E	E	E		F	G	
spurred anoda	F–G	G			G		F–G		
swinecress	F–G	F–G	G	F–G	F–G	G–E	P	P–F	
tropic croton	F	G–E	G–E	E	G–E		F		

WEED SPECIES	BURNDOWN TREATMENT[1]								
	2,4-D[3]	*GLYPHOSATE ACID*[2]	*GLYPHOSATE ACID*[2] + *2,4-D*[3]	*GLYPHOSATE ACID*[2] + VALOR	*GLYPHOSATE ACID*[2] + AIM OR ET	*GLYPHOSATE* + REVITON	*PARAQUAT*	*PARAQUAT* + *2,4-D*	*PARAQUAT* + VALOR[4]
BROADLEAVES *(continued)*									
tropical spiderwort	G–E	P	G–E	F	Aim = G–E ET = P–F		G	G–E	
velvetleaf	F–G	G			E		P		
vines (maypop, trumpet creeper, bigroot mg)	F	P–F			P–F		P		
Virginia pepperweed	G–E	G			G		P–F	G–E	
volunteer peanuts	P	F	F	F–G	F	F	P	P	F–G
volunteer sweet potato	G		G		F–G				
wild lettuce	G	G	G–E	E	G–E		P		
wild poinsettia	F–G	G			G–E		G–E		
wild radish	G	F–G	E	G	G	G–E	F	F–G	G
COVER CROPS									
clover	F	F	F–G		F		F–G		
lupine	G	G	G		G		F–G		
small grains	N	E	G–E	E	E		G		G
vetch	G	F	G–E	F	F		F		

Key:

E—90% or better control

G—80% to 90% control

F—60% to 80% control

P—30% to 60% control

N—< 30% control

1. Application rates per acre: *2,4-D*, 1 pt; *glyphosate acid*, 0.75 lb a.e.; *paraquat*, 0.63 lb a.i.; Valor, 1 to 2.0 oz (Note: if 3 oz/A of Valor is used, burndown control may be better than indicated and residual control will be increased); Aim, 1–2 oz/A; ET, 0.5–2 oz/A.
2. Mixing herbicides with *glyphosate* occasionally reduces grass control (including cover crops). This is more likely to occur with large weeds in dry conditions.
3. Labels for *2,4-D* are ambiguous concerning the waiting period between application and planting.
4. Use a NIS (0.25% v/v) or COC (1% v/v) with this tank-mixture. A COC may be preferred if weeds are large

NOTE: *DICAMBA* IS NOT REGISTERED FOR PRE-PLANT BURNDOWN USE IN PEANUT!

WEED RESPONSE TO HERBICIDES USED IN PEANUTS

Eric P. Prostko, Extension Agronomist—Weed Science

	PPI/PREEMERGENCE[1,2]					PREEMERGENCE					POSTEMERGENCE	
	PROWL PENDIMAX SONALAN	DUAL MAGNUM[3]	OUTLOOK	PURSUIT	STRONGARM	WARRANT	SPARTAN CHARGE	VALOR	ZIDUA[4]	BRAKE	*PARAQUAT*	*PARAQUAT* + STORM
PERENNIALS												
bermudagrass	P	P	P	P	P	P		P	P	P	P	P
johnsongrass—rhizome	P	P	P	P	P	P		P	P	P	P	P
nutsedge, purple	P	P	P	G	P–F	P		P	P	P	P–F	F
nutsedge, yellow	P	F–G	F	F–G	P–F	F		P	P	P	P–F	F–G
GRASSES												
broadleaf signalgrass	G–E	F–G	F	P	P	F–G		P	F–G	F–G	G	G
crabgrass	E	E	E	F	P	E		P	E	F–G	F–G	F–G
crowfootgrass	E	E	E	P	P	E		P	E		G	G
fall panicum	G	G	G	P–F	P	G		P	G		G	G
goosegrass	E	E	E	F	P	E		P	E	F–G	F–G	F–G
johnsongrass—seedling	E	F	F	G	P	F		P		P	G	G
sandbur	E	F–G	F–G		P	F–G		P	F–G		F	F–G
Texas panicum	G–E	P–F	P	P–F	P–F	P–F		P	P–F	P–F	G–E	G–E
BROADLEAVES												
bristly starbur	P	P	P	F	E	P		F			P–F	F–G
burgherkin	P	P	P	E	G	P		G			F	G
carpetweed	G	P–F	G	F–G	G	P					F–G	G
citronmelon	P	P	P	P	G	P		G			F	G
cocklebur	P	P	P	G–E	G–E	P		P		G	G	G–E
coffee senna	P	P	P	F–G	P	P		P–F			F	E
copperleaf, hophornbeam	P	P	F	P	G–E	P		G–E			P	G

	PPI/PREEMERGENCE[1,2]					PREEMERGENCE					POSTEMERGENCE	
	PROWL PENDIMAX SONALAN	DUAL MAGNUM[3]	OUTLOOK	PURSUIT	STRONGARM	WARRANT	SPARTAN CHARGE	VALOR	ZIDUA[4]	BRAKE	*PARAQUAT*	*PARAQUAT* + STORM
BROADLEAVES *(continued)*												
cowpea	P	P	P	P	P	P		P–F			F–G	F
crotalaria, showy	P	P	P			P		G				F–G
croton, tropic	P	P	P	P	F–G	P		G		G	P	G
dayflower, Benghal tropical spiderwort	P	G–E	G–E	G	G	G–E		F	G–E	P	G	G
eclipta	P	P–F	P–F	P	G–E			G–E			P–F	F–G
Florida beggarweed	P	P–F	P–F	P	F–G	P–F		G–E	F	P	G–E	G–E
Florida pusley	E	G–E	G–E	G	G–E	G		G–E			P	P
groundcherry, cutleaf	P	G	G		F–G							
jimsonweed	P			G	G–E			G			P	F
hairy indigo	P	F						G			F	
hemp sesbania	P	P	P	P	P–F	P		G–E	F–G			G
horseweed						P		G–E			P	P
lambsquarters	E	F	G	F	G–E	F		G–E			F	F–G
morningglory spp.	P	P	P	G	F–G	P		F–G		F	P	F
cypressvine	P	P	P	G		P		G		F	F–G	F–G
entireleaf/ivyleaf	P	P	P	G	F–G	P		F–G		F	F	G
pitted	P	P	P	G	F–G	P		F		F	F	G
purple moonflower	P	P	P			P					F	G
red	P	P	P	G	F	P		G		F	F	G
smallflower	P	P	P	E	G	P		G–E		F	P	G–E
tall	P	P	P	G		P		F–G		F	F	G
pigweed ALS-resistant	G G	G G	G G	E P	G P	G G	G–E G–E	E E	G G	G–E	F F	G–E G–E

WEED RESPONSE TO HERBICIDES USED IN PEANUTS

	PPI/PREEMERGENCE[1,2]					PREEMERGENCE					POSTEMERGENCE	
	PROWL PENDIMAX SONALAN	DUAL MAGNUM[3]	OUTLOOK	PURSUIT	STRONGARM	WARRANT	SPARTAN CHARGE	VALOR	ZIDUA[4]	BRAKE	*PARAQUAT*	*PARAQUAT* + STORM
BROADLEAVES *(continued)*												
poorjoe										G-E		
prickly sida	P	P	P	G–E	F–G	P		G–E	P–F		F	G
primrose, cutleaf evening											P	G *(+2,4–DB)*
purslane	G–E	G	G	G		G		G–E		F-G	G	G
ragweed, common	P	P	F–G	P	G–E			G–E		F-G	P–F	G
redweed	P				G			G–E			F	G
spurred anoda	P	P	P		F–G			F		G	P	G
sicklepod	P	P	P	P	P	P		P		P	G–E	G–E
smartweed	P			G	G			P–F			G–E	G
spider flower	P	P	P	G								
spurge spp.	P	P–F	P–F					G–E				
sunflowers												
velvetleaf	P	P	P	P–F	G–E			F			F	F–G
wild poinsettia	P	P	P	E	G–E			P–F			F	G
wild radish	P	P	P	E	G–E	P	P	F–G	P–F	F	F	G

Abbreviations:

E—Excellent (> 90%)

G—Good (80–89%)

F—Fair (70–79%)

P—Poor (< 70%)

If no letter is given, response is unknown.

PPI = Pre-plant Incorporated

PRE = Preemergence

1. Ratings for Pursuit PPI and PRE are similar.
2. Ratings for Dual, Warrant, and Outlook/Propel PRE and AC are similar. See remarks for additional information.
3. The generic formulations of *metolachlor* (Parallel PCS, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials.
4. **Zidua/Anthem Flex should not be applied PRE in peanut due to potential injury concerns. Zidua/Anthem Flex provides residual control of certain weeds when tank-mixed with POST herbicides such as Cadre, Cobra, or Ultra Blazer.**

	POSTEMERGENCE												
	STRONGARM[1]	*PARAQUAT* + BASAGRAN	*2,4-DB*	PURSUIT	BASAGRAN	ULTRA BLAZER	COBRA	STORM	CADRE	FUSILADE	SELECT	POAST	CLASSIC
PERENNIALS													
bermudagrass	P	P	P	P	P	P	P	P	P	G	G	F–G	P
johnsongrass-(rhizome)	P	P	P	P	P	P	P	P	F–G	G–E	G	F–G	P
nutsedge, purple		F	P	G	P	P	P	P	G–E	P	P	P	P
nutsedge, yellow		F–G	P	F–G	G	P	P–F	F	G–E	P	P	P	F–G
GRASSES													
broadleaf signalgrass	P	G	P	P	P	P	P–F	P	G	G	G–E	G–E	P
crabgrass	P	F–G	P	P–F	P	P	P–F	P	G	G	G–E	G–E	P
crowfootgrass	P	G	P	P–F	P	P	P	P	G	F–G	G	F–G	P
fall panicum	P	G	P	P	P	F	P	P	G	G–E	G–E	G–E	P
goosegrass	P	F–G	P	P	P	P	P	P	F	G	G	G	P
johnsongrass-seedling	P	G	P	F	P	P	P	P	F–G	G–E	G–E	G–E	P
sandbur	P	F–G	P		P	P	P–F	P	G	G	G	G	P
Texas panicum	P	G–E	P	P–F	P	P	P	P	F–G	G	G–E	G–E	P
BROADLEAVES													
bristly starbur	E	F	P–F	P–F	G	P–F	G	F–G	F	F	P	P	F
burgherkin		F	F	F	P	G	G	F	G–E	P	P	P	P
carpetweed		P	P	F–G	P	G–E	G–E	G	F–G	P	P	P	
citronmelon		F	G	P	P	F	G	F	G	P	P	P	P
cocklebur	E	G	E	E	E	G	G–E	E	E	P	P	P	F
coffee senna		E	F–G	F	G	P	P–F	F	G	P	P	P	P
copperleaf, hophornbeam	P	P	P	P	P	G–E	G–E	F	P–F	P	P	P	P
cowpea		P–F	P–F	P	P	P–F	P–F	P–F	P–F	P	P	P	F–G
crotalaria, showy					P	E	E	G–E		P	P	P	

WEED RESPONSE TO HERBICIDES USED IN PEANUTS

	POSTEMERGENCE												
	STRONGARM[1]	*PARAQUAT* + BASAGRAN	*2,4-DB*	PURSUIT	BASAGRAN	ULTRA BLAZER	COBRA	STORM	CADRE	FUSILADE	SELECT	POAST	CLASSIC
BROADLEAVES *(continued)*													
croton, tropic	P	P	P	P	P	E	E	G–E	P	P	P	P	P
dayflower, Benghal tropical spiderwort	G	G	P	F–G	G	P	P	P	F–G	P	P	P	F
eclipta	G–E	F	P	P	F–G	F	F	G	P–F	P	P	P	P
Florida beggarweed	P–F	G–E	P	P	P	P	P–F	P	F–G	P	P	P	F–G
Florida pusley		P	P	P	P	P	F–G	P	P	P	P	P	P
groundcherry, cutleaf		F–G			P	G	F–G	F–G		P	P	P	P
jimsonweed		E	P	F–G	E	E	E	G	E	P	P	P	P
hairy indigo	P		F	P	P	G	G	F	F	P	P	P	G
hemp sesbania	P			P	P	E	E	G–E	P	P	P	P	F–G
horseweed ALS-resistant	G P	P	P	P	P	P	P	P	P	P	P	P	F P
lambsquarters		F	F	P	F	P–F	P–F	F	P–F	P	P	P	P
morningglory spp.	G–E	F–G	F–G	G	F	G–E	G–E	G	G	P	P	P	P–E
cypressvine		G–E	F	G	G	G	G–E	G	G	P	P	P	P
entireleaf/ivyleaf	G–E		G	F–G	P	G	F–G	F	G	P	P	P	F–G
pitted	G–E		F–G	G	P	G–E	G	F–G	G	P	P	P	G
purple moonflower	F–G		F–G	P	P	G–E	G–E	G	F	P	P	P	P
red			G		F–G	G–E	G–E	G–E		P	P	P	G–E
smallflower	G–E	G–E	F	E	E	G–E	G–E	G–E	E	P	P	P	G–E
tall			G		P	G	G	F–G	G	P	P	P	P–F
pigweed ALS-resistant	P P	F–G F–G	F F	E P	P P	G–E G–E	G–E G–E	G G	E P	P P	P P	P P	F–G P
poorjoe			F			G	G			P			
prickly sida		G	P	P–F	G	P	G	G	G	P	P	P	P

	POSTEMERGENCE												
	STRONGARM[1]	*PARAQUAT* + BASAGRAN	*2,4-DB*	PURSUIT	BASAGRAN	ULTRA BLAZER	COBRA	STORM	CADRE	FUSILADE	SELECT	POAST	CLASSIC
BROADLEAVES *(continued)*													
primrose, cutleaf evening	P	F (+*2,4-DB*)	F	P	P	P	P	P	P	P	P	P	P
purslane		G	G	P–F	G	E	E	G–E	P–F	P	P	P	
ragweed, common	E	F	F	P	F	E	E	G	F	P	P	P	P–F
redweed		G	P	P	G	P	F	G	G	P	P	P	P
spurred anoda		F–G	P		G	P	P	F	G	P	P	P	
sicklepod	P	G	F	P	P	P	P–F	P	G–E	P	P	P	P–F
smartweed		G	P	G–E	G–E	G–E	G–E	G–E	F–G	P	P	P	P
spider flower				F–G		G	G	F	F–G	P	P	P	F
spurge spp.			P	P	P	F	F	F		P	P	P	P
velvetleaf		G	P	P–F	G	P–F	G	F–G		P	P	P	
wild poinsettia	P–F	G–E	P	P–F	P	G–E	G–E	G	E	P	P	P	P
wild radish	G–E	F	P	G–E	P–F	E	E	G	G–E	P	P	P	P

Abbreviations:

E—Excellent (> 90%)

G—Good (80–89%)

F—Fair (70–79%)

P—Poor (< 70%)

If no symbol is given, response is unknown.

1. 24(c) label for use in Georgia only for tropical spiderwort.

SUMMARY OF PEANUT GRASS HERBICIDES

	HERBICIDE					
	FUSILADE DX	POAST	POAST PLUS	SELECT/ARROW/ OTHERS (2 LB AI/GAL)	SELECTMAX/TAPOUT/ INTENSITY ONE (0.97 LB AI/GAL)	SECTION THREE SHADOW (3 LB AI/GAL)
Maximum Rate/A/Season	48 oz	40 oz	60 oz	32 oz	64 oz	21.33 oz
Maximum Rate/A/Application	24 oz	24 oz	24 oz	16 oz	32 oz	10.67 oz
broadleaf signalgrass	12 oz (2–4")	16 oz (up to 8")	24 oz (up to 8")	6–8 oz (2–6")	9–16 oz (2–6")	3.33 oz
crabgrass	12 oz (1–2")	16 oz (up to 6")	24 oz (up to 6")	6–8 oz (2–6")	9–16 oz (2–6")	3.33 oz (1–4")
crowfootgrass	NL[1]	NL	NL	6–8 oz (2–6")	9–16 oz (2–6")	NL
field sandbur	12 oz (2–4")	20 oz (up to 3")	30 oz (up to 3")	6–8 oz (2–6")	9–16 oz (2–6")	NL
goosegrass	8 oz (2–4")	16 oz (up to 6")	24 oz (up to 6")	6–8 oz	9–16 oz (2–6")	NL
Texas panicum	12 oz (2–8")	16 oz (up to 8")	24 oz (up to 8")	6–8 oz (2–6")	9–16 oz (2–6")	3.33 oz (1–4")
rhizome johnsongrass	12–24 oz (1st) (8–18") 8–24 oz (2nd) (6–12")	24 oz (1st) (up to 25") 16 oz (2nd) (up to 12")	36 oz (1st) (up to 25") 24 oz (2nd) (up to 12")	8–16 oz (1st) (12–24") 6–8 oz (2nd) (6–18")	12–32 oz (1st) (12–24") 9–24 oz (2nd) (6–18")	5.33–10.67 oz (1st) (12–24") 4–5.33 oz (2nd) (6–18")
bermudagrass	12–24 oz (1st) (4–8" runners) 8–24 oz (2nd) (4–8" runners)	24 oz (1st) (up to 6" stolon) 16 oz (2nd) (up to 4" stolon)	36 oz (1st) (up to 6" stolon) 24 oz (2nd) (up to 4" stolon)	8–16 oz (1st) (3–6" runners) 8–16 oz (2nd) (3–6" runners)	12–32 oz (1st) (3–6" runners) 12–32 oz (2nd) (3–6" runners)	5.33–10.67 oz (1st) (up to 6" runners) 5.33–10.67 oz (up to 6" runners)
volunteer corn	6 oz (12–24" tall)	16 oz (≤ 20" tall)	24 oz (≤ 20" tall)	4–6 oz (4–12" tall)	≤ 12" = 6–12 oz 13–24" = 9–14 oz 25–36" = 12–16 oz	≤ 12" = 2.67–4 oz 13–24" = 4–5.33 oz 25–36" = 5.33–6.67 oz

1. NL = crowfootgrass was not listed on the product label.

SUGGESTED HERBICIDE PROGRAMS FOR THE CONTROL OF TROPICAL SPIDERWORT (BENGHAL DAYFLOWER) IN PEANUT***

PROGRAM 1

a) **PRE Immediately After Planting:** Valor at 3 oz/A + Dual Magnum 7.62EC or generic *metolachlor* (Stalwart, Parallel PCS, Me-Too-Lachlor) at 1 pt/A or Warrant 3ME at 3 pt/A or Outlook 6EC @ 12.8 oz/A **and**

b) POST when spiderwort is 1–2" tall: Cadre/Impose 2AS at 4 oz/A or Strongarm 84WG at 0.45 oz/A + Dual Magnum 7.62EC or generic *metolachlor* (Stalwart, Parallel PCS, Me-Too-Lachlor) at 1 pt/A or Warrant 3ME at 3 pt/A or Zidua 4.17SC @ 2.5 oz/A or Anthem Flex 4SC @ 3 oz/A or Outlook 6EC @ 12.8 oz/A.

* ***At plant applications of Dual/Warrant/Outlook are more effective for TSW/BD control at later peanut planting dates (May 15 or later) because the majority of emergence occurs after June 1.***

PROGRAM 2

a) AT-CRACK (within 28 days after peanut cracking): Apply *paraquat* 2SL formulations at 12 oz/A A or *paraquat* 3SL formulations at 8 oz/A Storm 4EC at 16 oz/A or Basagran 4EC @ 8 oz/A + Dual Magnum 7.62EC or generic *metolachlor* (Stalwart, ParallelPCS, Me-Too-Lachlor) at 1 pt/A or Warrant 3ME at 3 pt/A or Zidua 4.17SC @ 2.5 oz/A or Anthem Flex 4SC @ 3 oz/A or Outlook 6EC @ 12.8 oz/A **and**

b) POST (~2–3 weeks after at-crack spray): Apply Cadre/Impose 2AS at 4 oz/A or Strongarm 84WG at 0.45 oz/A + Dual Magnum 7.62EC or generic *metolachlor* (Stalwart, Parallel PCS, Me-Too-Lachlor) at 1 pt/A or Warrant 3ME at 3 pt/A or Zidua 4.17SC @ 2.5 oz/A or Anthem Flex 4SC @ 3 oz/A or Outlook 6EC @ 12.8 oz/A.

* When using Dual Magnum/generics or Outlook in combination with Cadre/Impose, *paraquat*, or Strongarm, additional spray adjuvants (NIS, COC) are not necessary.
The maximum amount/A/year of Dual Magnum that can be applied is 2.8 pt/A. The maximum amount/A/year of Stalwart, Parallel PCS, or Me-To-Lachlor that can be applied is 2.66 pt/A.
The maximum amount of Warrant that can be applied PRE + POST is 8 pt/A/year
Maximum amount of Zidua that can be applied is 8.5 oz/A/year of 4.17SC.
When Warrant or Zidua is applied POST, a NIS (0.25% v/v) is needed.
Maximum amount of Outlook that can be appplied is 21 oz/A/year (i.e. 2 applications at 10.5 oz/A).
Maximum amount of Anthem Flex that can be applied is 9.12 oz/A/year.

** **Zidua/Anthem Flex should not be applied prior to peanut emergence due to potential injury concerns.**

*** **Twin rows and conventional tillage (plowing) are also useful for the management of tropical spiderwort/Benghal dayflower.**

HERBICIDE PROGRAMS FOR PEANUT IN GEORGIA

SYSTEM	TILLAGE	TIMING: PRE-PLANT BURNDOWN[1]	PPI	PRE	EPOST (~10–20 DAP[2])	POST (~30–45 DAP)	LPOST (~60 DAP)
non-irrigated (dryland)	strip-till[3]	Glyphosate or Paraquat + *2,4-D amine*		No Rain in 7–10 DAP Paraquat + Prowl	Paraquat + Storm or Basagran + Anthem Flex or Dual Magnum or Outlook or Warrant or Zidua	**ALS Resistance:** Cobra or Ultra Blazer + (Anthem Flex or Dual Magnum or Outlook or Warrant or Zidua) + *2,4-DB* **No ALS Resistance:** Cadre[4] + (Anthem Flex or Dual Magnum or Outlook or Warrant or Zidua) + *2,4-DB* ** A 4–way tank-mixture can be used if required (Cadre + Cobra or Ultra Blazer + *2,4-D*B + Dual Magnum or Warrant or Zidua)	(for the extended residual control of Palmer amaranth, annual grasses, spiderwort) Dual Magnum or Outlook ***PHI (days)*** Dual Magnum = 90 Outlook = 80 ***Max Total Rate/A/Season (oz)*** Dual Magnum = 44 Outlook = 21 ***Use of other Group 15 herbicides is limited by peanut stage of growth and should not be applied late-postemergence:** Anthem Flex = R3 (beginning pod) Warrant = R1 (beginning bloom) Zidua = R3 (beginning pod)
				Rain in 7–10 DAP a) Paraquat + Prowl + Valor + Strongarm[4] or b) Paraquat + Prowl + Brake + Strongarm[4] or c) Paraquat + Prowl + Valor + Brake[5]			
	conventional		Prowl or Sonalan + Strongarm[4]	No PRE if rain is not expected in 7–10 DAP	Paraquat + Storm or Basagran + Anthem Flex or Dual Magnum or Outlook or Warrant or Zidua		
				Rain in 7–10 DAP Valor or Brake[5] or Valor + Brake[5]			
irrigated	strip-till[3]	Glyphosate or Paraquat + *2,4-D amine*		a) Paraquat + Prowl + Valor + Strongarm[4] or b) Paraquat + Prowl + Brake + Strongarm[4] or c) Paraquat + Prowl + Valor + Brake[5]			
	conventional			a) Prowl or Sonalan + Valor + Strongarm[4] or b) Prowl or Sonalan + Brake[5] + Strongarm[4] or c) Prowl or Sonalan + Valor + Brake[5]			

1. Apply at least 7 days before planting. If there will be a long delay between the burndown application and planting (> 10 days), consider adding a residual pigweed herbicide (Valor or Dual Magnum or Warrant or Outlook) to the burndown treatment.
2. DAP = days after planting.
3. Annual grass control in strip-tillage systems is often more difficult thus additional applications of a postemergence grass herbicide (i.e. Fusilade, Poast, and Select) will be needed.
4. Before using Cadre and/or Strongarm, rotational crop restrictions must be considered.
5. Do not apply Brake to the same field more than 2 years in a row.

** **SPECIAL NOTE: Dual Magnum/Outlook/Warrant are in the same herbicide family (chloroacetamide) and have the same mode of action (inhibit very long chain fatty acid synthesis, WSSA MOA #15). Anthem Flex/Zidua are not in the same herbicide family (isoxazoline) but have the same mode of action. Multiple applications (> 2) of these herbicides in a single year should be avoided to prevent or delay the evolution of resistance. These herbicides have no postemergence activity.**

PLANT GROWTH REGULATOR FOR RUNNER TYPE PEANUTS POSTEMERGENCE

Scott Monfort, Extension Peanut Agronomist

HERBICIDE	MOA	BROADCAST RATE/ACRE		REI/PHI (Hours or Days)	REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION/A	LBS ACTIVE INGREDIENT/A		
prohexadione calcium Apogee or Kudos 27.5 WDG		3.63–5.44 oz	0.061–0.092	12 H/ 45 D	**To Suppress Excessive Vine Growth:** Use the recommended reduced rate range as the labeled rate of 7.25 oz/Acre is too excessive on runner type peanuts. The use of a growth regulator is only recommended on irrigated acres where vine growth is excessive. Use of a growth regulator in non-irrigated or in irrigated fields with reduced vine growth will lead to stunted growth and potential yield loss. The growth regulator is **NOT** recommended on non-irrigated peanuts or in fields that are under stress due to lack of moisture, disease pressure, or other stress conditions. First application = when greater than 50% lateral vines are touching in the row middles (not at 50% lapped—this will be too early). Second application = 14 to 21 days after 1st application. Apply in a minimum of 20 GPA of water. Always add a *nitrogen* source with Apogee or Kudos. Apply 1 lb of spray grade *ammonium sulfate* per acre or one pint of UAN (28%, 30% or 32% *nitrogen* solution) per acre. Add 1 quart/acre of Crop Oil Concentrate. May not need depending on tank mix partners. For example: do not add crop oil when mixing the growth regulator and *nitrogen* source with a fungicide. Remember, the more products you add can increase risk for foliage burn. **Rain fastness is 6–8 hours.**

AERIAL APPLICATIONS OF PEANUT HERBICIDES

TRADE NAME	ACTIVE INGREDIENT(S)	AERIAL APPLICATION LABELED
Aim	*carfentrazone*	yes
Anthem Flex	*pyroxasulfone + carfentrazone*	yes
Basagran	*bentazon*	yes
Brake	*fluridone*	no
Butyrac 200	*2,4-DB*	yes
Cadre	*imazapic*	no
Classic	*chlorimuron*	yes
Cobra	*lactofen*	yes
Dual Magnum	*S-metolachlor*	yes
Gramoxone	*paraquat*	yes
Fusilade	*fluazifop-P*	yes
Outlook	*dimethenamid-P*	yes
Prowl H_2O	*pendimethalin*	yes
Pursuit	*imazethapyr*	yes
Select Max	*clethodim*	yes
Sonalan	*ethalfluralin*	yes
Storm	*acifluorfen + bentazon*	yes
Strongarm	*diclosulam*	no
Ultra Blazer	*acifluorfen*	yes
Valor	*flumioxazin*	yes
Warrant	*acetochlor*	yes