2021 Arkansas Peanut Quick Facts

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DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

2020 Facts

- 37,000 acres harvested
- 4,800 lbs. per acre state avg.
- 10% moisture is considered dry

Growth and Development

Approximate *DAP	Growth Stage	Description
7	Emergence (VE)	Cotyledons near emergence
8	(VO)	Cotyledons flat or open
10 - X	(V1 – VX)	Number of open tetrafoliate leaves
35	Beginning Bloom (R1)	One open flower
45	Beginning Peg (R2)	One elongated peg
50	Beginning Pod (R3)	One peg in soil with swollen ovary
60	Full Pod (R4)	One fully expanded pod
70	Beginning Seed (R5)	One fully expanded pod with seed cotyledon
75	Full seed (R6)	One pod with cavity filled by seed
100	Begin Maturity (R7)	One pod with visible natural color
130-140	Harvest Maturity (R8)	65 – 75% pods showing colored pericarp
150	Over Mature Pod (R9)	Orange-tan colored testa

*DAP = Days after planting

Site Selection

- Select deep, well drained, sandy soils.
- Sandy soils are preferred for peg development and ease of harvest.

Cultivar Selection

The most widespread runner-type peanut cultivars grown are Georgia 09B (high O/L) and Georgia 06G (standard). Some cultivars adapted for production in the state with agronomic characteristics are listed below.

Runner-type peanut cultivars

Cultivar	High - oleic	Seed Size	TSWV	Southern Blight	Leaf Spots
Georgia 09B	Yes	Med	R	S	S
Georgia 06G	No	Med	R	S	S
Georgia 16HO	Yes	Med	R	S	S
TUF Runner 297	Yes	Large	R	MS	S
FloRun 331	Yes	Med	R	MS	S
AU NPL 17	Yes	Large	R	S	S

Nitrogen Fertility/Inoculants

- Peanut inoculants contain a specific strain of *Rhizobium* that are necessary for nodule production and nitrogen fixation. Generally, 15-25 nodules/plant is a good count for peanut.
- Inoculant storage is important as it contains a living bacteria:
  - Do not use expired inoculants
  - Apply inoculants into moist soil below the seed with 5-8 gal/A water
  - Do not mix with fertilizers, non-labeled insecticides, or chlorinated water.
  - Do not expose to heat
  - Treat inoculant that sits in tank o/n as water, add fresh inoculant
  - Twin row requires 1x rate/A per seed furrow

Fertility and Soil pH Recommendations

- A good range of pH for peanut production is 6.0 to 6.8.
- Zinc toxicity can occur at low pH (<6.0) and high zinc (>12 mg/kg = ~24 lb. /A) levels. Zinc toxicity causes peanut stems (in contact with the soil line) to split.
- Optimum phosphorus level ranges from 26 to 50 ppm and potassium from 131 to 175 ppm.
- Calcium levels are rarely below optimum (<600 ppm), but a Ca:K ratio should be at least 3:1.
- Gypsum is often used at bloom to provide calcium to developing pod, especially in large seeded runner-type peanuts.

Planting Considerations

- Preferred planting dates: April 15 and May 15.
- Plant when soil temperature at 4-in. depth is consistently (3 d) greater than 65°F. Higher soil temperatures will result in quicker germination and seedling emergence.
- Plant at 1.0 to 1.5 in. deep in moist soil at rate of 5 to 6 seed per ft. with a target of 4 plants/ft. final population.
- Spot-replanting within 2 weeks of planting.

Seeding Chart: 38-in. row spacing

Seed Size Seed/lb.	4 Seed/row ft.	5 Seed/row ft.	6 Seed/row ft.
450	122	153	183
500	110	138	165
550	100	125	150
600	92	115	138
650	85	106	127
700	79	98	118
750	73	92	110
800	69	86	103
850	65	81	97
900	61	76	92

*For 36-in. or 30-in. row spacing; multiply seed/lb by 1.05 or 1.27 and seed/ft by 0.95 or 0.789 for 36-in. and 38-in. spacing, respectively.

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Seed Treatments

All peanut seed are treated, but additional insecticides or fungicides can be added in-furrow when insect or disease pressure is problematic.

Insect Control

- An insecticide such as imidacloprid or Thimet applied in-furrow at planting can suppress early season thrips and potato leaf hopper injury.
- Refer to MP 144 Insecticide Recommendations for Arkansas for latest insecticide recommendations.

Weed Control

Weed control programs are targeted at ALS resistant pigweeds. For PPO-resistant pigweed, use #2 below.

- Program 1: Prowl preplant incorporated, followed by (fb) Valor, followed by Cobra or Ultra Blazer + Zidua or 2,4-DB + Zidua or Dual on 3" or smaller pigweed.
- Program 2: Valor (3oz) plus 16 oz Outlook or 1.3 pt/A Dual Magnum PRE fb paraquat + Storm + Zidua 21-28 DAP fb either Anthem Flex, Warrant, or Outlook at 14-21 days after previous application. Add Ultra Blazer or Storm plus 2,4-DB, if necessary, for morningglory
- Add Select Max (clethodim) for grasses.
- ALS peanut herbicides include Cadre, Pursuit and Strongarm. Check label for rotation restrictions.
- Refer to See MP 44 Recommended Chemicals for Weed and Brush Control for latest weed control recommendations

Disease Control

Common diseases: Tomato spotted wilt, southern blight, Sclerotinia blight, early leaf spot, and late leaf spot.

- Always select the least susceptible cultivar for peanut disease management.
- Fungicide programs often start ~60 days after planting (DAP) and continuing every 14-21 days for 3 to 4applications/ year. More application are needed as disease pressure increases or as field are rotated back in peanut for 3rd time.
- For soilborne diseases fungicides are best washed off leaves by overhead irrigation or before rainfall for optimum control. Spraying fungicides at night when peanut leaves are folded aids in reducing contact with open leaves.
- Southern blight is the most common soilborne disease and is often first observed in early July.
  - Select a fungicide with good efficacy and apply before disease development.
  - Subsequent fungicide applications are often necessary for adequate disease control.
- Late leaf spot is of primary concern later in cropping season and often first observed in early to mid- to late-September.
  - In field with a history of disease an additional fungicide maybe needed to minimize defoliation the last 30 days before harvest.
  - A systemic fungicide that does not was off leaves can provide better protection.
- Sclerotinia blight is of primary concern late in the cropping season, often late August to early Sept.
  - Counties with Sclerotinia blight consist of Lawrence and Randolph counties.
  - Georgia (e.g. GA O9B and GA O6G) are generally less susceptible than some of the Florida cultivars.
  - Fungicides can suppress disease development when applied prior to detection. Good coverage into the lower canopy is needed.
- Refer to MP 154 Arkansas Plant Disease Control Products Guide for latest fungicide recommendations.

Plant Growth Regulators

Plant growth regulators such as Apogee or Kudos are used to control excessive vine growth, which can be helpful on 30-in. row spacing. Though products can suppress vine growth yield benefits have been inconsistent in university trials. Tests in AR have shown ability to increase digging speed and improve harvest efficiency in all row spacings.

Irrigation

General irrigation considerations for peanut minus rainfall events.

Plant growth stage	Approx. in./week	Significance
Emergence	0.1 - 0.2	Stand establishment Pre-emerge herbicide activity
Flowering to pegging	0.75 - 1.0	Enhance post-emerge herbicide activity
Early pod fill to late pod fill	1.0 – 1.75	peak water use during pod fill
Late pod fill to maturity	0.75 – 1.0	Prevent aflatoxin Moisture for digging

Harvest

Peanut plants are dug and field dry for a few days before thrashed.

- Peanut maturity (dig date) is based on pod maturity rather than DAP.
- Pod pericarp color based on hull-scrape method is used to confirm pod maturity and estimate a digging date.
- Stop digging peanut 3 days prior to a freeze (<34°F) event as to avoid freeze in jury on peanut seeds.
- Peanuts in the ground are safe. Light frost is not a problem.
- Once 50% of leaves are killed by freeze peanuts should be dug within a week.

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