In a Nutshell JLA
Getting It Right Before It Ships®
Foy Mills, Jr. Ph.D. -Ed.

Vol. 22 No. 23 December 19, 2015

In Brief

- This issue provides the year-end summary for the US peanut season.
- We maintain that 1,544,030 acres (624,847 ha) of peanuts will be dug and threshed in the US this year. As of December 15, 2015, 2,877,166 tons (2,610,121 MT) had been graded by USDA-FSIS, about 9% more than produced in 2014.
- Overall, we consider the crop to be moderate risk for aflatoxin. We have seen aflatoxin in lots from the SE, SW and V-C. We are seeing about 9% of lots failing USDA specification (avg. >15 ppb).
- Recent rains have helped alleviate dry conditions plaguing the Argentine peanut belt except in the southernmost area. We expect hectares planted to peanuts this season will be about 360,000 ha (889,579 ac), 7% fewer than were sown in the 2014/2015 crop year.
- The Brazilian crop is planted. Overall, the crop is progressing well. Some fields will be dug as early as January 20, 2016.
- Brazilian hectares are projected at 105,000 ha (259,461 ac), about 3-5% below last season's levels. Foy

United States

US Acres, Yield and Tons

- Acreage abandonment will be greater this year due to adverse weather at harvest, particularly in South Carolina and the southern portion of North Carolina. We continue to project that approximately 1,544,030 acres (624,847 ha) of peanuts were harvested in 2015.
- As of December 15, 2015, 2,877,166 tons (2,610,121 MT) had been graded by USDA-FSIS, about 9% more than produced in 2014 (Table 1).

Crop Quality

- As noted, this is a relatively large crop, approximately 9% larger than last year's. This is fortunate as we are seeing some aflatoxin in the 2015 crop.
- Overall, we consider the crop to be moderate risk for aflatoxin. We have seen aflatoxin in lots from the SE, SW and V-C.

Table 1. Percent of peanuts harvested and tonnage delivered to date in the US, 12/15/15.		
State	**Certified Planted Acres**	**Tonnage Delivered**
	USDA-FSA (12/1/15)	**USDA-FSIS (12/15/15)**
SE		
Alabama	194,924	361,181
Florida	184,651	232,149
Georgia	781,929	1,653,362
SW		
Oklahoma	8236	14,380
New Mexico	4902	7361
Texas	163,327	237,151
V-C		
North Carolina	89,307	138,360
South Carolina	110,450	108,698
Virginia	18,093	31,260
SC/Delta		
Arkansas	16,254	37,175
Mississippi	42,000	56,089
US	1,616,722*	2,877,166
*Total US acreage includes peanuts planted in Missouri, Nebraska and Tennessee.		

- The SE crop is essentially three crops by planting dates (early, mid and late).
  - The early crop has a high risk for aflatoxin.
  - The mid-crop is good (approximately 40% of the total crop).
  - The late crop (10-15% of crop) is suspect for aflatoxin due to rain delays at harvest.
- We have seen some aflatoxin in Spanish and runner market-types in the SW.
- Aflatoxin has been observed in V-C peanuts, particularly those distressed peanuts from South Carolina.
- Higher aflatoxin risk is concentrated within smaller kernels (i.e., No. 1's).
- We are seeing about 9% of lots failing USDA specification (avg. >15 ppb). Foy

Southeast

Weather and Planting

- The 2015 SE peanut crop was the second largest ever planted. However, variable weather throughout the season, particularly at harvest, limited production in many areas and also created quality issues.
- Spring rains were welcomed, but delayed planting in April.
- Some farmers not affected by overly saturated field conditions in early April began planting as average ambient temperatures and soil temperatures were above average in late March.
- A cold front passed through the region the first week in May suppressing germination and causing weak plant stands in the earliest planted fields.
- May was also very dry in the SE causing planting delays in non-irrigated fields. Some SE peanut producing regions received less than 1 inch (25.4 mm) of rain the entire month of May.

- Rains picked up in June, but were still below average in many areas. At this point, growers of non-irrigated and irrigated acreage had to plant before running out of time. Peanuts were planted as late as June 30 this year, which is extremely late for this commodity.
- These conditions lengthened the SE planting window longer than normal resulting in three distinct planting windows (early, mid, and late). Each planting window experienced very different growing conditions.
- Figures 1-3 illustrate variable rainfall amounts in Georgia through the growing season.
  - Attapulgus, Georgia, which lies in the southwest corner of the state, received beneficial rains at planting, but experienced drought much of the growing season. Then, rain started again at harvest causing long delays in September and November.

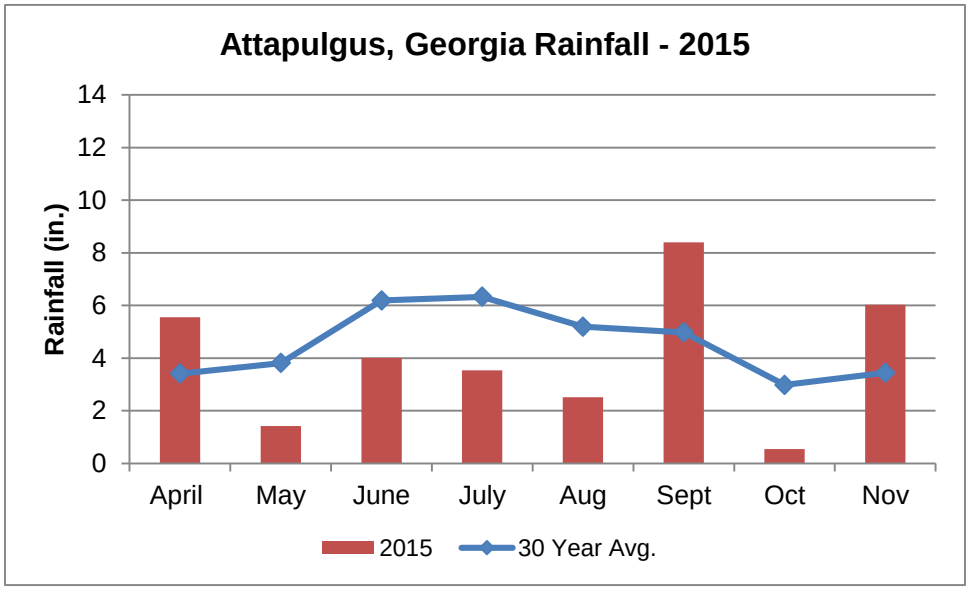

Figure 1. Attapulgus, Georiga received below normal rainfall the majority of the 2015 peanut season. Source: http://www.georgiaweather.net/

  - Tifton, in mid-south Georgia, and the surrounding areas, is a major producer of peanuts. Again, the planting season saw adequate rain, but rains subsided in May and June. Rain returned in July and August, which was beneficial for non-irrigated acreage. However, precipitation was below normal much of the harvest season.
  - In the eastern side of the state around Statesboro, coastal rains are typically more common throughout the growing season. Moisture from Hurricane Joaquin and a couple of low pressure systems generated abundant rains in this area, but also caused long delays in harvest.
- Drought is typically a concern in the SE and this year was no exception. Depending on geographic location, drought was worse in some areas than others, particularly in August (Figure 4).

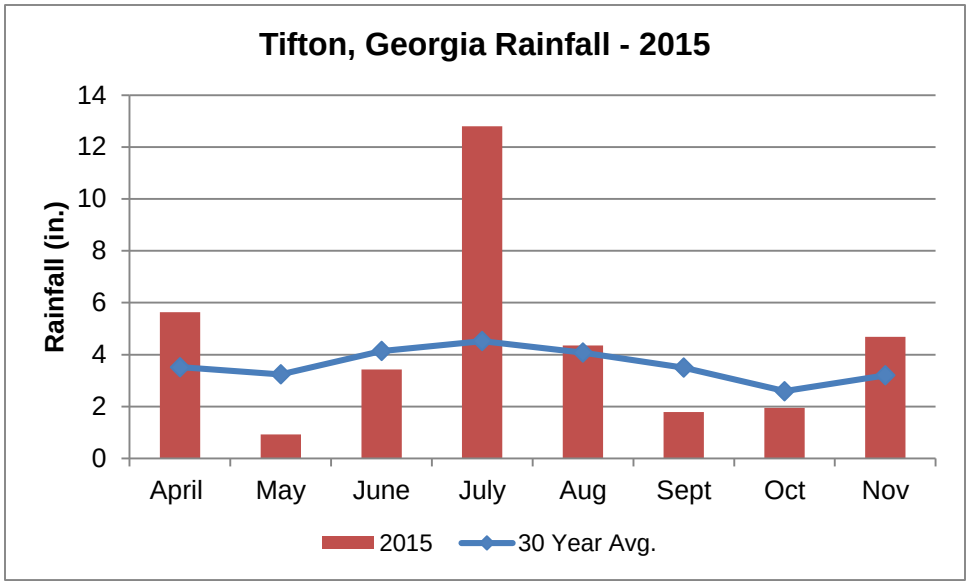

Figure 2. Tifton, Georgia received above average rains in the summer months, which is rare in the SE. Source: http://www.georgiaweather.net/

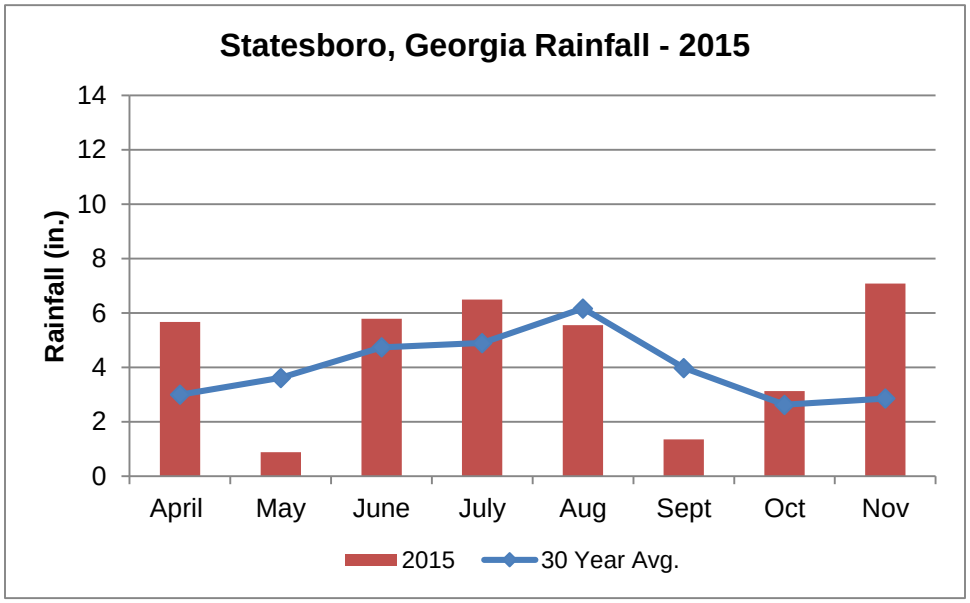

Figure 3. Statesboro, Georgia received above average rains until August when coastal rainfall was slightly below normal. Fall rains delayed harvest. Source: http://www.georgiaweather.net/

- Harvest conditions created challenges for the 2015 crop no matter the planting date. Early planted acreage was harvested in the drier conditions of late August and early September.
- The best acreage planted in May escaped most of the dry conditions, but rains delayed harvest for roughly ten days while peanuts were left turned in the fields exposed to the elements.

- Late planted acreage dealt with extremely long rain delays with peanuts above ground for two to three weeks in many cases. Aflatoxin is a concern with this portion of the crop.

Early Planted Acreage – April/Early May

- Dry conditions in May challenged the early planted crop from the start. Weak plant stands and late germination occurred in non-irrigated areas that lacked moisture.
- The primary stress factor associated with the early planted acreage was drought, particularly in the third trimester of growth. Drought and heat facilitated *A. flavus* growth generating aflatoxin in portions of the non-irrigated and marginally-irrigated crop. East Georgia and southern South Carolina experienced the brunt of the drought.
- Irrigated acreage suffered from white mold outbreaks. White mold can cause yield losses as vines wither and die.
- Whether affected by drought or disease pressure, many growers were forced to dig early in hopes of preventing major yield losses.

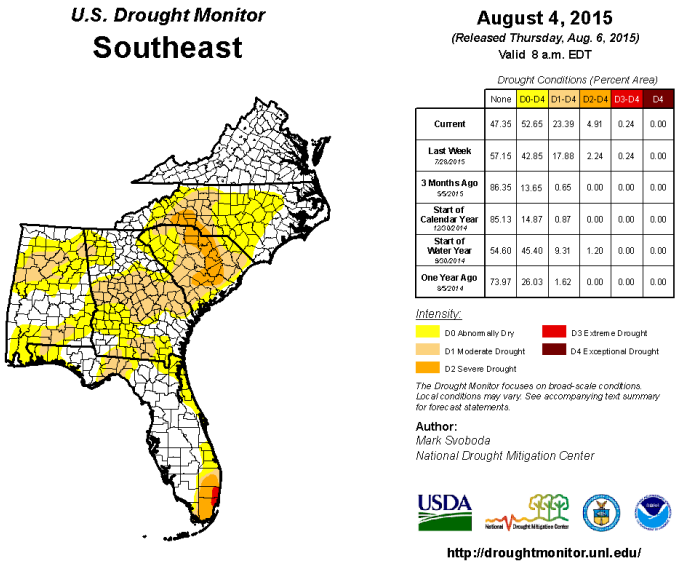

Figure 4. Drought conditions were prevalent across much of the SE peanut belt in August, 2015. Source: http://droughtmonitor.unl.edu

Mid-Planted Acreage – May

- Acreage planted in May got off to a better start. For many peanut production areas, rains returned in late May and into June.
- Moderate to high thrips pressure put a small strain on this crop as Tomato Spotted Wilt Virus developed. However, good management practices and variety selection limited severe damage from thrips.
- Beneficial rains continued throughout the growing season for this portion of the crop. Consequently, *A. flavus* development and the risk of aflatoxin in the non-irrigated acreage is minimal.
- Other than a couple of delays at harvest, this crop experienced excellent growing conditions throughout the entire season. We expect these peanuts to be the best produced this year and comprise about 50% of the 2015 SE crop.

Late Planted Acreage – June

- With a wet April and a dry May, many growers were forced to plant in early June. However, this increases the possibility to frost/freeze damage at harvest.
- Rains in June and July facilitated growth and development of this portion of the SE crop.

- *A. flavus* growth and aflatoxin were effectively avoided on this portion of the crop. Yet, the time needed to reach optimum heat unit accumulation was limited and this portion of the crop is relatively immature.

Harvest

- As a result of the three planting windows for the 2015 crop, harvest was drawn out over 16 weeks compared to normally about 10 weeks devoted to harvest activity.
- Additionally, multiple rain events kept farmers out of the field approximately 30 days.
  - The first rain delays in early October lasted roughly 10-15 days and came just as the bulk of harvestable acres were ready to be dug and combined. Once the rains subsided and fields dried out, some growers experienced field losses as buying points had difficulty turning trailers quickly to the field.
  - The last half of October was favorable for harvest, with just a few showers here and there. Many good peanuts were harvested at this time.
  - The longest harvest delays occurred in November when many fields in south Alabama and southwest Georgia received over 10 inches (254 mm) of rain. Cool temperatures slowed soil drying.
- Peanuts in the windrow at this time endured two to fine rain events with partial field drying between rains. This can affect quality and yield, and introduce aflatoxin.

Yields, Grades and Quality

- SE planted acreage in 2015 increased 40% over acres sown in 2014.
- Though 2015 US acres planted to peanuts were the second largest on record, the SE actually planted more acres in 2015 compared to the record 2012 crop.
- Field losses are sure to bring yields down when compared to the last several crops, although, many growers reported their highest yields ever from peanuts harvested in October.
- Grades were mixed as well in 2015. Damage associated with harvest conditions and lengthened field exposure was high. Many loads graded Seg. 2 due to high damage and some even graded Seg. 3 due to visible molds.
- The best numerical grades were from the mid-planted acreage with values in the mid to upper 70's. The lowest grades, upper 60's, were associated with the early and late planted portions of the crop.
- Quality issues are a concern in about 20-30% of the SE crop. Early planted peanuts will have aflatoxin concerns while late peanuts will be immature.
- A major challenge will be storing SE peanuts as this crop cannot be treated as one crop. Warehousing them together would be problematic due to their compositional differences and differing quality risks.
- Proper segregation and management should be a primary concern when handling the 2015 crop.

Varieties

- GA-06G remains the dominant and best performing variety in the SE. Approximately 75-80% of the SE was planted to GA-06G in 2015.
- Two new high-oleic runner market-types were planted in the SE in 2015. Georgia-13M and TUFRunner '297' were most likely planted for seed for the coming crop year, though Georgia-13M was impacted by late season leaf spot. The push continues for high-oleic varieties and I am sure we will see more released.

However, acreage planted to GA-06G will not change until a worthy competitor emerges.

- Other varieties planted in 2015 included Georgia-12Y, Georgia-09B, Georgia-14N, TifGuard, FloRun '107', Tif NV HOL, and TUFRunners '511' and '727' to name a few.
- No matter the variety, harvest struggles affected them all. Unfortunately, we cannot select for "ill-timed weather" traits just yet and currently all varieties are susceptible to aflatoxin contamination.

David DeShazo, B.S. Biology
JLAI SE Ag Systems Manager

Southwest
Year-End Summary

Harvest Season Stretched

- The harvest season stretched into early December in the SW as it did in the SE.
- A late weather system impacted the entire SW production region with rainfall amounts (including some levels of ice, sleet and/or snow) ranging between 0.75-3.5 inches (19.1-88.9 mm). While this delayed final harvest completion, the prospect of good soil moisture to start the 2016 season is promising.
- Rainfall accumulation across the state (as mentioned throughout the season) was well above average (Figure 5). Significant deviations from long-term averages were observed throughout the High Plains and Rolling Plains.

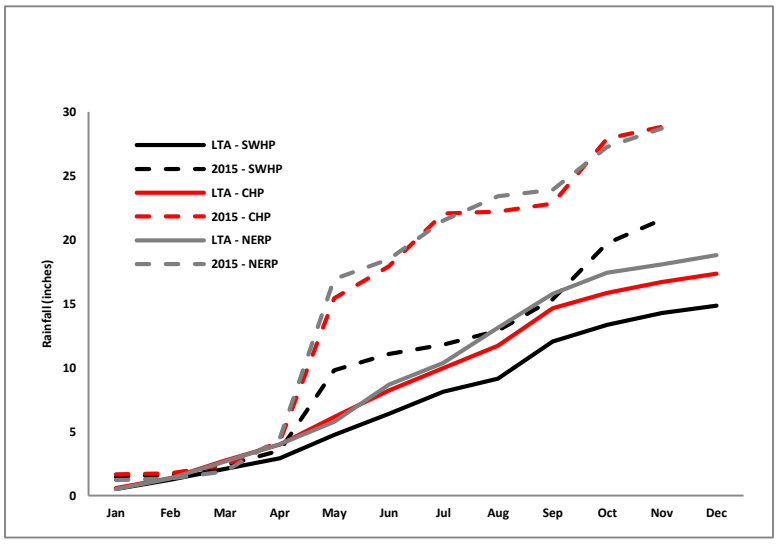

Figure 5. Seasonal rainfall accumulation for three locations Southwest High Plains (SWHP), Central High Plains (CHP) and Northeast Rolling Plains (NERP). Data represent the 10-year long term average (LTA) and estimates from 2015.

- The abundant rains were welcomed across the region helping to leach salts that accumulated in many fields over the past few years.
- The soil moisture status of the SW peanut production region this time of year can be highly variable. Viewing Figure 6, all but a small part of Texas benefited from precipitation received the latter portion of the growing season.

Yield and Quality

- Little has happened to change my estimate of yields and quality.

- JLA laboratories have measured aflatoxin in the SW crop. It has been more noticeable as the season has progressed as fields have been exposed to inclement harvest weather. Regardless, the majority of the crop is relatively aflatoxin free.

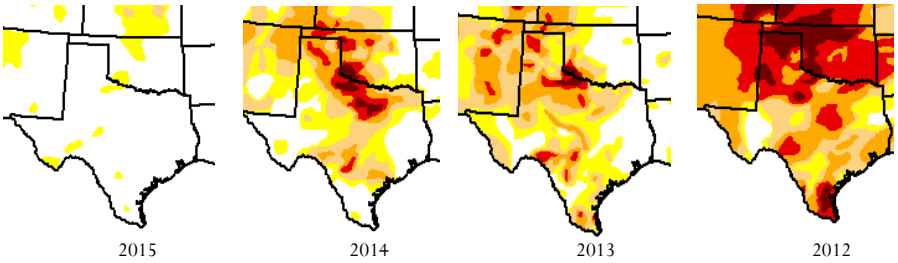

Figure 6. Drought monitor maps for Texas in early December of 2015, 2014, 2013 and 2012. (http://droughtmonitor.unl.edu)

- The SW crop is generally immature due to rain delays at planting and cool temperatures limiting heat unit accumulation.
- Most fields harvested on a timely basis have generated yields at or just below the long-term state average. Yet, there have been numerous reports of 5000-6000 lb/ac (5600-6720 kg/ha) yields from runner and Virginia fields.

Jason Woodward, Ph.D.

Virginia-Carolina's
Year-End Summary

Harvest Completed

- The V-C peanut crop has been gathered after a lengthy harvest period.
- The harvest season this year lasted three months, much longer than in most years. We expect yield and quality will reflect delays in both digging and threshing.
- Lower yield and quality in 2015 is a direct result of dry conditions during much of the summer, especially in South Carolina and the mid and southern regions of North Carolina. These areas also experienced the greatest impact from flooding and prolonged wet weather during much of harvest (Figure 7).

Figure 7. Wet conditions delayed harvest across the VC this year reducing yield and quality in many areas. Source: D. Jordan personal photo

Quality and Yield

- Freeze damage has been almost non-existent across the region as above-average temperatures persisted through November. Estimates continue to be that 1% of the crop will be classified as Seg. 2 (i.e., damaged peanuts). However, the percentage was higher for some growers depending on timing of digging and the amount of time peanuts remained in the field prior to threshing (Figure 8).

- I project peanuts were harvested from 199,000 acres (80,560 ha). This accounts for 8% acreage abandonment in South Carolina and 3% abandonment in North Carolina.
- The V-C yield estimate now stands at about 3000 lb/ac (3360 kg/ha). Yield estimates by state are:
  - South Carolina- 2400 lb/ac (2688 kg/ha)
  - North Carolina- 3200 lb/ac (3763 kg/ha)
  - Virginia- 3900 lb/ac (4368 kg/ha).

David Jordan, Ph.D.

Figure 8. Poor quality Virginia market-type peanuts in the field as weather delayed harvest completion at the end of the season. Source: D. Jordan personal photo

South Central/Delta
Year-End Summary

Emerging Area

- This newest peanut production region in the US is composed of acres in Arkansas, Louisiana, Mississippi and Missouri. About 70% of acres are planted in Mississippi.
- More substantial peanut planting has occurred in this area due to abundant water resources along the Delta and as a contingency for acreage planted in the SE and SW that might be negatively affected by drought and/or quality issues.

Weather

- Planting conditions were generally favorable this year in the SC/Delta. However, growing conditions were a different story.
- The region received beneficial rains in early April ahead of planting. The rains continued in April, into May and even June in some areas causing planting delays, particularly in southeastern Mississippi.
- As temperatures increased in June, drought conditions emerged. In many locations across the region, less than 6 inches (152.4 mm) of rain was recorded from July to September.
- Showers in October slowed initial harvest operations and rainfall in early November caused harvest delays for late planted peanuts.
- The region experienced freezing temperatures in mid-November, but the majority of peanut acreage had been harvested.

Growing Season

- Despite the weather, most of the crop was planted in late April and May. A few acres were sown in early June. Soil temperatures in this region usually do not reach optimal levels for planting until early May. So, growers take a risk with April planting.
- The crop germinated and began rigorous development with adequate rains through June.

- Moderate thrips pressure was observed, but Tomato Spotted Wilt Virus was controlled with proper management programs.
- As the drought intensified in July, weed pressure was suppressed, but insect activity increased, particularly spider mites. These pests can defoliate plants quickly and if not caught early will wipe out an entire field causing total plant death and yield loss.
- Minimal disease pressure was observed due to the dry conditions, but *A. flavus* began to emerge in the hot, arid conditions.
- Late October and November brought precipitation back to the region, but it was too late to combat aflatoxin contamination at harvest.

Harvest

- Like in the SE, harvest was difficult in the SC/Delta region.
- Soils were hardened by the extensive drought and growers without irrigation had to wait for soil moisture to begin digging (Figure 9). Harvesting in hard soils can damage equipment and be devastating to yields when peanuts are dug and stems are torn away from the pods clinging to the ground.
- Showers in October helped loosen soils and the majority of harvest took place at this time.

Yields, Grades and Crop Quality

- Since this region is relatively new to peanut production, the lack of infrastructure often forces growers to purchase seed and sell their crop outside of the region. Therefore, SC/Delta peanuts are shipped to the SW or SE for processing.
- In 2015, Mississippi saw a 25% increase in acreage over the 2014 crop, which was an increase of over 10,000 acres (4047 ha).
- Overall, crop quality will be a major concern for peanuts produced in this region. Molds are visible and many loads graded Seg. 2 and 3 due to damage and molds.

Varieties

- Most acreage in this region was planted to GA-06G, GA-09B, and FloRun 107. Lesser planted acreage includes Florida 07 and TufRunner 727 varieties.
- Increasing demand for high-oleic varieties throughout the entire peanut industry has led to more plantings of Florida 07, FloRun 107, and GA-09B in the S-C/Delta region. Since there is very little variety trial data from this region, we do not know the full extent of how these cultivars will perform. This region has slightly different climatic conditions than those in the SE and SW regions, but all varieties

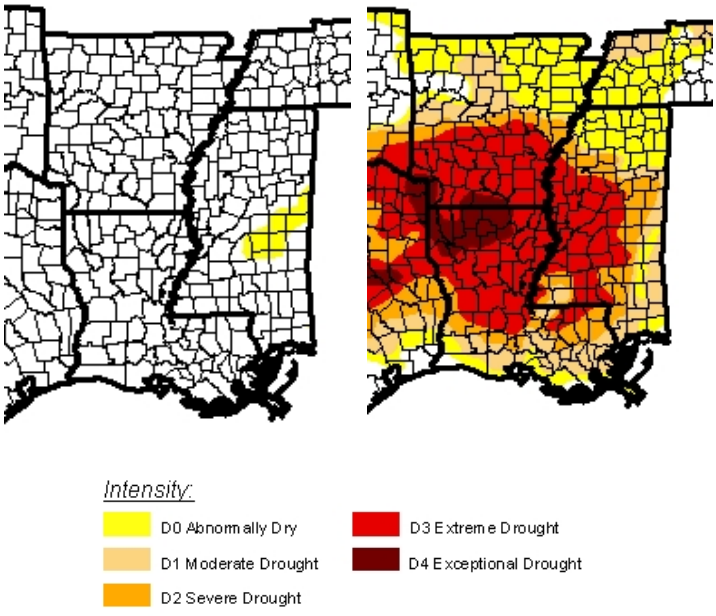

Figure 9. Progression of drought in the SC/Delta region in 2015. The two images above reflect drought development from July 7, 2015 (left) to October 20, 2015 (right). Source: http://droughtmonitor.unl.edu/

planted in the region this year, performed as well as could be expected given adverse growing conditions throughout the season.

David DeShazo, B.S. Biology
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South America
Argentina

Weather

- Maximum daytime temperatures have been seasonable the first ten days in December. Nighttime temperatures have actually been somewhat above normal (Figure 10).

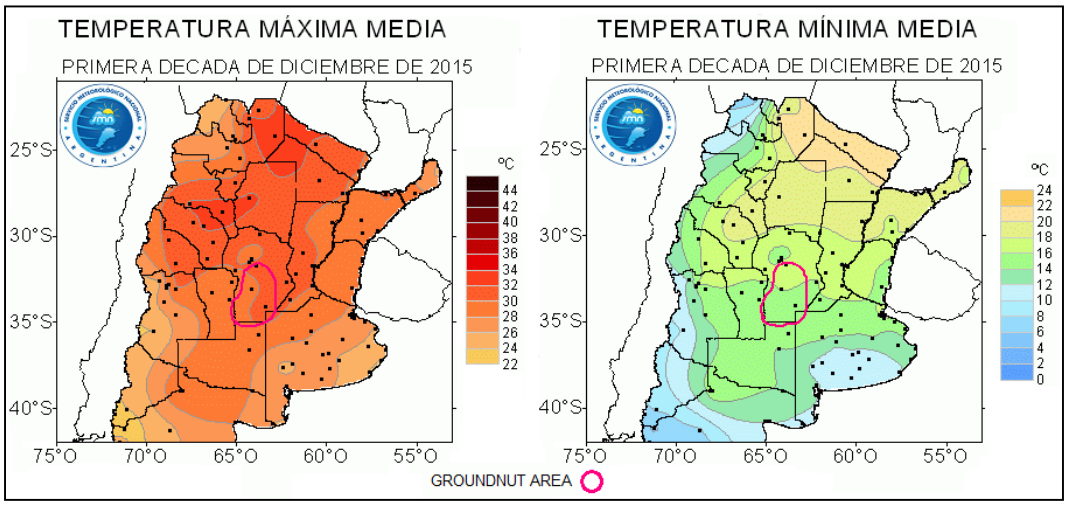

Figure 10. Average maximum temperatures (left) and minimum temperatures (right) across Argentina the first ten days in December. The area outlined in red is the peanut area in Córdoba. Source: National Weather Services (SMN)

- As for precipitation, there have been a number of storms move across the peanut area in recent weeks with some generating hail. The department of Río Cuarto was the most affected. Rain from these storms was enough to mitigate drought conditions, particularly in the western peanut area. As of December 10, only the southern peanut area had useful water reserves of 10% or less (Figure 11).
- Cumulative rainfall the first 15 days in December for select departments in Córdoba were:
  - Tercero Arriba, 14-71 mm (0.55-2.8 in)
  - General San Martín, 44-116 mm (1.73-4.57 in)
  - Unión, 19-92 mm (0.75-3.62 in)
  - Río Cuarto, 14-89 mm (0.55-3.5 in)
  - General Roca, 13-52 mm (0.51-2.05 in)
  - Presidente Roque Sáenz Peña, 12-23 mm (0.47-0.91 in)
  - Juárez Celman, 14-64 mm (0.55-2.52 in)

  Source: Bolsa de Cereales de Córdoba

- Figure 12 shows a partially flooded peanut field near General Cabrera.
- Though the Argentina peanut crop is currently in good condition, forecast of a wet, humid year could create an environment suitable for fungal diseases, especially soil borne fungi.

Crop Situation

- The Ministerio de Agricultura, Ganadería y Pesca de la Nación reported on December 12 that:
  - The peanut crop was growing normally in Río Cuarto, although plant stands were sparse due to cool soil temperatures and slow germination.
  - Planting was completed in Villa Maria with hectares planted to peanuts about the same as last season.
  - In general, peanuts are growing well though development is slightly behind the same point last year due to cooler than normal temperatures.
- Figures 12-14 are of peanut fields located approximately 5 kilometers (3.1 miles) north of General Cabrera.

Sowing Intentions and Progress

- The Argentine peanut crop is sown.
- Though official agencies have yet to provide planting estimates for the 2015/2016 growing season, we project that the area sown to peanuts will be about 360,000 ha (889,579 ac), 7% below hectares planted in 2014/2015.

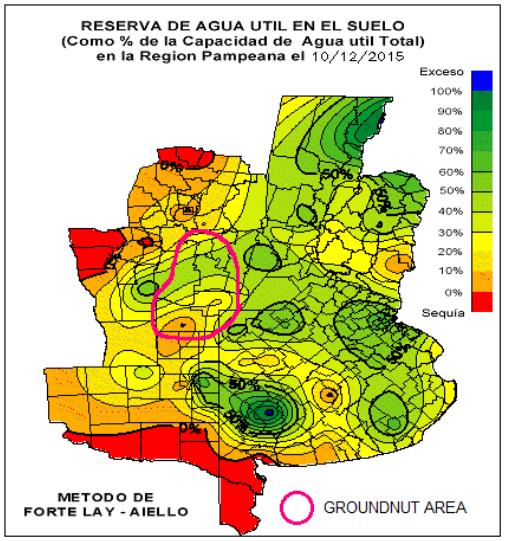

Figure 11. Useful soil moisture reserves available in the Pampa region of Argentina as of 12/10/2015. Source: National Weather Services (SMN)

Figure 12. Portion of a peanut field flooded after recent rains near General Cabrera. Source: M. H. Cavigliasso personal photo taken 12/15/15

Agronomist Marcelo Héctor Cavigliasso
JLA Argentina

Figure 12. Peanuts planted into corn stover on 11/12/15 and 11/14/15. The field is at its vegetative stage. Source: M. H. Cavigliasso personal photo taken 12/15/15

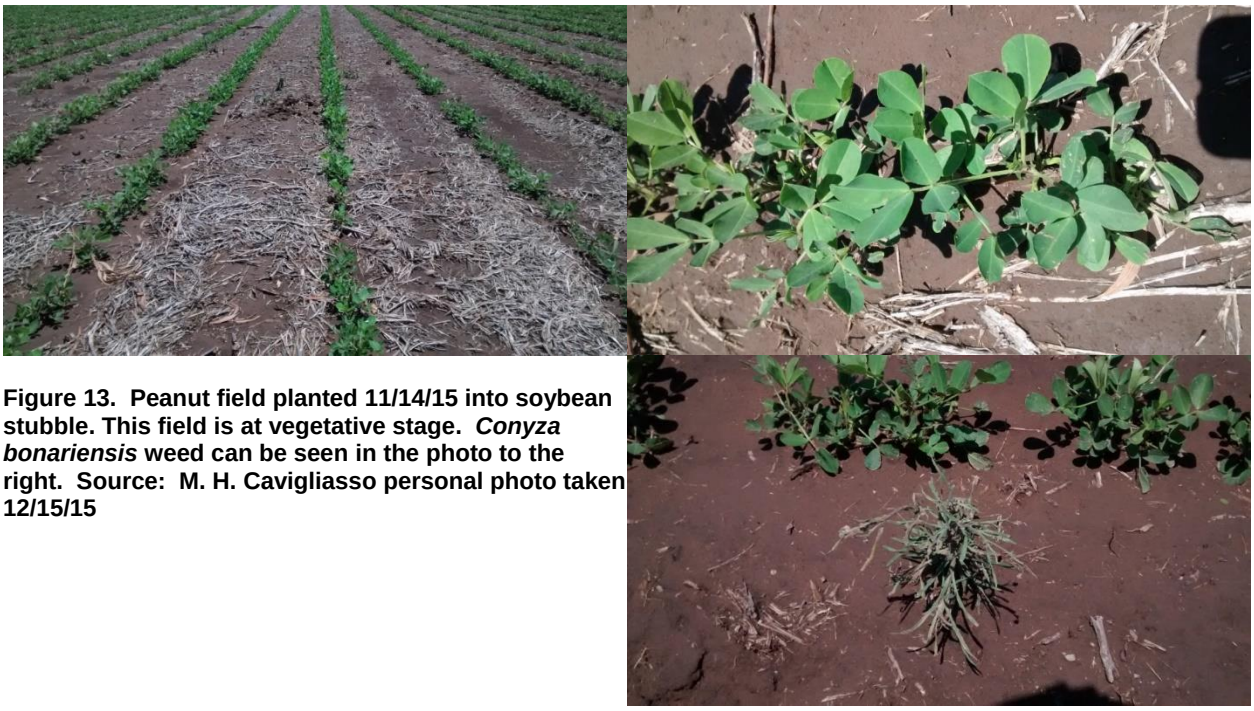

Figure 13. Peanut field planted 11/14/15 into soybean stubble. This field is at vegetative stage. *Conyza bonariensis* weed can be seen in the photo to the right. Source: M. H. Cavigliasso personal photo taken 12/15/15

Figure 14. Located at north of General Cabrera in R1 phenological stage (planting date not available). Paired-row planting with possibility of irrigation. The first symptoms of "leaf spot" can be observed. Source: M. H. Cavigliasso personal photo taken 12/15/15

Brazil

Weather

- Intense rains continue to fall across the Brazilian peanut area.
- The moisture is already generating leaf spot in many fields. We are seeing black spot, which is particularly pathogenic to peanuts. We have also observed scab (Figure 15).
- High humidity and frequent rainfall generate ideal conditions for fungal diseases to spread. Sprays are not having much effect because of the pounding rains taking place. Some growers are applying higher rates in hopes of gaining some control over the diseases.
- Climate predictions project that the El Niño phenomenon and its influence on weather systems in South America should continue until late summer of 2016.

Figure 15. Leaf spot and scab have become an issue in many Brazilian peanut fields due to high humidity and frequent rainfall. Source: L.G.Q. Fernandes personal photo

Crop Progress and Projected Yields

- Generally, peanuts are developing well and are on track for good productivity.
- This season's crop is more advanced compared to the 2014/2015 crop. Some growers project harvest beginning as early as January 20, 2016 (Figure 16).
- Figure 17 provides an initial estimate of yields in Brazil.

Eng. Agr Luiz Gustavo Quiqueto Fernandes
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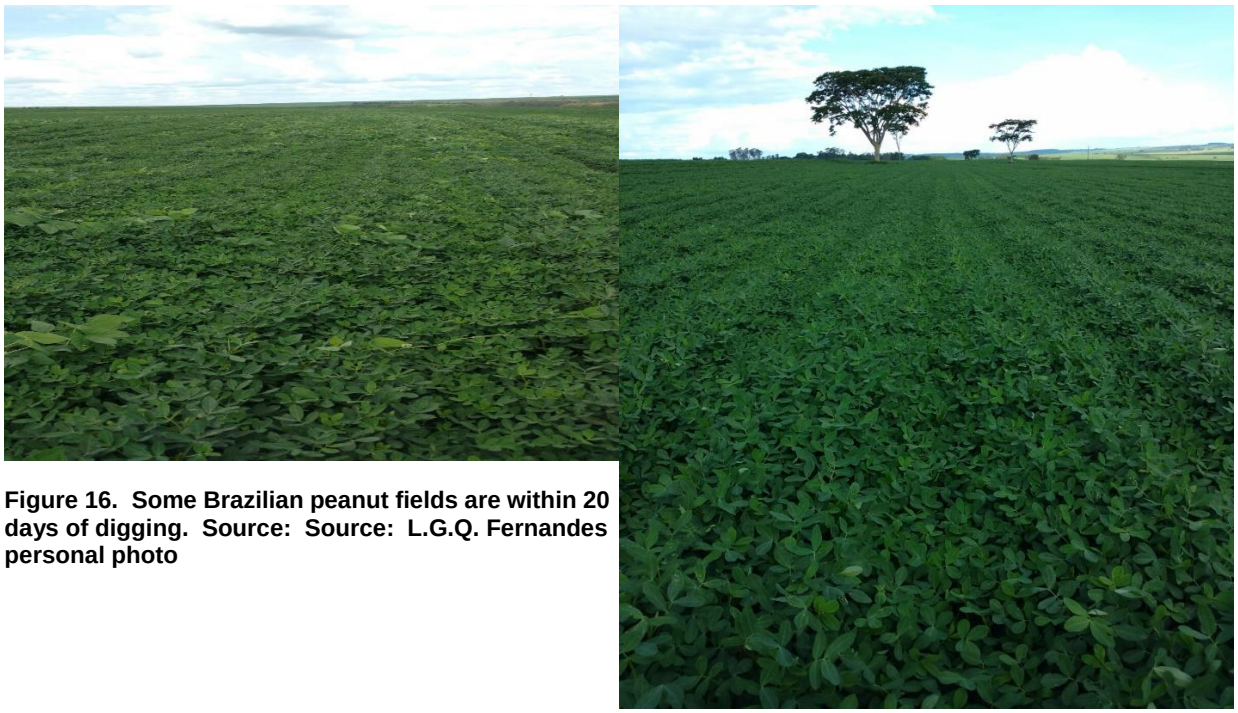

Figure 16. Some Brazilian peanut fields are within 20 days of digging. Source: Source: L.G.Q. Fernandes personal photo

Tabela 25 – Comparativo de área, produtividade e produção – Amendoim total

REGIÃO/UF	ÁREA (Em mil ha)			PRODUTIVIDADE (Em kg/ha)			PRODUÇÃO (Em mil t)		
	Safra 14/15	Safra 15/16	VAR. %	Safra 14/15	Safra 15/16	VAR. %	Safra 14/15	Safra 15/16	VAR. %
	(a)	(b)	(b/a)	(c)	(d)	(d/c)	(e)	(f)	(f/e)
NORTE	2,4	2,2	(8,3)	3.873	4.000	3,3	9,3	8,8	(5,4)
TO	2,4	2,2	(8,3)	3.873	4.000	3,3	9,3	8,8	(5,4)
NORDESTE	3,3	3,3	-	1.156	1.064	(8,0)	3,9	3,5	(10,3)
CE	0,4	0,4	-	662	663	0,2	0,3	0,3	-
PB	0,3	0,3	-	609	692	13,6	0,2	0,2	-
SE	1,1	1,1	-	1.605	1.393	(13,2)	1,8	1,5	(16,7)
BA	1,5	1,5	-	1.068	1.003	(6,1)	1,6	1,5	(6,3)
CENTRO-OESTE	0,2	0,2	-	1.848	2.195	18,8	0,4	0,4	-
MT	0,2	0,2	-	1.848	2.195	18,8	0,4	0,4	-
SUDESTE	97,8	96,2	(1,6)	3.277	3.409	4,0	320,5	327,9	2,3
MG	2,7	2,1	(22,2)	3.338	3.443	3,1	9,0	7,2	(20,0)
SP	95,1	94,1	(1,1)	3.275	3.408	4,1	311,5	320,7	3,0
SUL	5,2	4,7	(9,6)	2.429	2.814	15,8	12,7	13,2	3,9
PR	2,2	1,7	(22,7)	2.400	2.485	3,5	5,3	4,2	(20,8)
RS	3,0	3,0	-	2.450	3.000	22,4	7,4	9,0	21,6
NORTE/NORDESTE	5,7	5,5	(3,5)	2.300	2.238	(2,7)	13,2	12,3	(6,8)
CENTRO-SUL	103,2	101,1	(2,0)	3.231	3.379	4,6	333,6	341,5	2,4
BRASIL	108,9	106,6	(2,1)	3.183	3.320	4,3	346,8	353,8	2,0

Fonte: Conab.

Nota: Estimativa em dezembro/2015.

Figure 17. Projected hectares, production in kg/ha and tonnage for the peanut production areas in Brazil. Source: CONAB