The peanut crop in the Virginia-Carolina region experienced extremes from the beginning of the season through completion. The following is a summary of the 2019 growing season in North Carolina, South Carolina and Virginia.

Early spring was wet in many areas of the region when farmers were initially preparing fields for planting. In many instances, farmers were able to get fields prepared for the normal planting window (the month of May) but in some cases, soil moisture was completely dissipated by the time primary tillage operations were complete in early to mid-May. This occurred in some areas across most of the coastal plan with the exception of the northern section of the region. Fields in the southeastern region of the North Carolina became too dry to plant by mid-May. This also occurred in scattered fields in other areas of the region but was a major issue in southeastern North Carolina.

Extremely high temperatures and limited soil moisture set the stage for delays in planting. An estimated 15% of acreage in North Carolina and South Carolina was planted in June. Some plantings were the result of dry soils and the need to wait on planting until rainfall occurred. In other fields, growers planted in soils with insufficient soil moisture to achieve adequate stands, forcing planting in mid-June. Research in North Carolina has shown that planting in early June often results in a reduction in yield of 15% compared with mid-May plantings. An additional 15% reduction in yield is often noted when planting occurs around June 15-20. This is a general response and is dependent upon summer and fall temperatures and moisture that have a major impact of peanut pod and kernel maturation. With the exception of a relatively small number of fields, either planted for the first time when soil moisture was adequate or planting the second time when peanut stands were inadequate, peanut populations were considered sufficient for achieve optimum yield potential.

Rainfall during the season was adequate in most areas of Virginia and in portions of northeastern North Carolina. In contrast, rainfall was much more sporadic in the central and southern regions of North Carolina. South Carolina also experienced sporadic rainfall, and in the southern part of the state dry conditions were prolonged. Dry conditions along with high temperatures in June and July in some areas affected pollination and pod set and ultimately yield.

Unlike the previous two growing seasons, disease was lower and growers were able to minimize canopy defoliation and dig based on optimum maturity. This was due to a combination of using more effective fungicide spray programs and weather conditions that were not favorable for extreme epidemics of leaf spot disease. Sclerotinia blight, a disease that is more often experienced in North Carolina and Virginia, was not a major issue in 2019. In contrast, high temperatures caused some challenges in controlling stem rot disease. Tomato spotted wilt was more pronounced in the lower South Carolina region than in Virginia and North Carolina. Fields with lower peanut stands were often the most vulnerable. Some growers experienced pod rot (caused by *Rhizoctonia*) in combination with dry soils during pegging and limited calcium uptake into developing kernels and pods. However, this issue was sporadic across the region.

Thrips injury was typical for the region in 2019. Adequate control is needed to protect yield, especially in the upper Virginia-Carolina region, and most farmers were able to

suppress thrips adequately with a combination of systemic in-furrow sprays or foliar applications of insecticide. Liquid in-furrow products in some areas were less effective than granular materials, and the difference in performance was attributed to dry conditions and uptake of systemic insecticide into peanut plants. Foliar-feeding insect outbreaks were sporadic and relatively minor across the region. Some outbreaks of spider mites were noted while burrower bug was not a major issue.

Weed control across most of the region was adequate to protect yield. Peanut planted in mid-May often occurred in fields where rainfall was limiting for the first few weeks after planting, limited efficacy of preemergence herbicides. Many growers were able to apply contact herbicides after weeds and peanuts emerged along with additional residual herbicides to extend control further into the season. While farmers often were forced to make a considerable number of applications of herbicides throughout the season, these applications proved effective in protecting yield and enabling efficient harvest in most cases.

Tropical weather events that plagued the Virginia-Carolina region during the previous two growing seasons. Substantial rainfall from Hurricane Dorian was received along with other smaller rainfall events, but the impact was relatively minor for peanut and in some cases rainfall was needed to further mature peanut planted in June. Rainfall from this storm also enabled farmers to more efficiently dig peanuts and invert vines. Weather conditions throughout the month of September and into the early October were considered ideal across most of the region for digging and harvesting, and farmers took advantage of these conditions with a substantial percentage of the crop harvested by the second week of October.

Peanut in many fields reached optimum maturity more quickly than in previous years, typically a week earlier than normal predictions. However, cooler temperatures that occurred sporadically in September slowed the pace of maturity and ultimately resulted in peanut digging beginning at the normal time in many fields.

The month of October was less favorable for digging and harvesting operations in many areas of the region. While many farmers had completed digging and harvest by early October, the final push on harvesting was more challenging. Farmers were forced to work around wet soils and poor drying conditions affected the speed of harvest. Some relatively minor issues with aflatoxin were noted across the region, and more recently, freeze damage has occurred as farmers have been forced to dig and harvest in November. Issues with Segregation 2 and 3 peanuts have been relatively low in the broader context; they can be catastrophic for individual growers.

Across the region, yield and quality have been good but lower than yields observed in 2014. The combination of delayed planting and sporadic rainfall limited yield potential. However, in some areas across the region and in particular Virginia, yields have been outstanding. The final projection of yield in the Virginia-Carolina region is 4,420 kg/ha (3,950 pounds/acre.)

Peanut field in late summer near Oak City, North Carolina.

Peanut field near Oak City, North Carolina that was recently dug.

Peanut field near Oak City, North Carolina that is ready for harvest.

Harvested peanut field near Oak City, North Carolina with small grain cover crop planted.