

Rainfall during the past two weeks improved peanut growth and development in many areas in the Virginia-Carolina region. One example of pod set near Whiteville, North Carolina is provided. Some fields are showing water stress from heavy rains while other fields continue to be dry. Generally, the peanut crop in the Virginia-Carolina region is in good shape but needs optimum conditions between now and harvest to realize the projected yield potential. The wide range of planting dates and the limited versus adequate rainfall in some areas of the region will require patience and flexibility from farmers with digging and harvesting operations. Heat unit accumulation and rainfall are provided in Tables 1 and 2 from representative weather stations across the region (North Carolina State Climate Office.) These locations generally reflect rainfall but some pockets of greater and lesser amounts likely have occurred. The majority of peanut in North Carolina and Virginia are Virginia market types (primarily the varieties Bailey and Sullivan.) In South Carolina there is approximately an equal balance of runner and Virginia market types. When soil moisture is not limiting the heat unit requirement for the primary Virginia market type varieties is 2600 DD₅₆. Most peanuts would have emerged after May 10 (emergence is the most accurate beginning point for heat unit accumulation models.) Based on heat units for peanut emerging May 15 and assuming 26 DD₅₆ per day in Florence, peanuts could be ready to dig by August 21. However, dry conditions during the season often slows the rate of maturation and a more modest estimate of optimum maturity would be the first of September. Clinton, North Carolina is a central point in the Virginia-Carolina region and the estimate for optimum maturity if peanut emerged May 15 is September 1 (assuming 25 DD₅₆ per day.) At Wakefield and Lewiston-Woodville, estimates of optimum maturity for peanut emerging May 15 (assuming 23 DD₅₆ per day) is approximately September 10. These estimates are contingent upon adequate soil moisture in the coming weeks and the assumption that no major stresses occurred that would delay maturation; they represent the earliest possible dates of maturation under ideal growing conditions. Each year, and most especially for 2019, this would not be the case for many peanut fields in the Virginia-Carolina region. We are too early in the process to make calculations for peanuts emerging June 1 and June 15.

Growers in the lower Virginia-Carolina region are beginning their fifth spray for leaf spot and stem rot control. Growers in the mid and northern areas of the Virginia-Carolina Region are applying their third and in some cases forth sprays for these diseases. Leaf spot is now beginning to show in some areas but is not widespread and is mostly in the lower Virginia-Carolina region (in sprayed fields.) Some fields have experienced stem rot incidence. This disease often is a major issues under hot conditions that have been experienced in the region during much of the growing season. Tomato spotted wilt of peanut is present in some fields, and symptoms of this disease are often more pronounced under hot and dry conditions and when plant populations are lower than optimum. A combination of these challenges, including stand establishment and late

planting, has been observed across much of the region. Sclerotinia blight has not been reported at high levels in the upper Virginia-Carolina region primarily because of drier conditions and high temperatures. While conditions continue to be favorable for spider mite development there have been no major outbreaks. Many growers are more judicious in pesticide use and this has likely prevented or delayed outbreaks. Fewer growers are applying insecticides for southern corn rootworm and in most areas foliar-feeding insect outbreaks have been limited. However, some areas are beginning to experience a buildup in foliar-feeding insects. Herbicide applications are rare at this point in the season and most growers applying prohexadione calcium have made their final spray.

Yield potential for the region remains at 4,150 kg/ha (3,700 pounds/acre.) Estimates for planted area in the region remain at 40,480 ha (100,000 acres) in North Carolina, 26,300 ha (65,000 acres) in South Carolina, and 9,700 ha (24,000 acres) in Virginia.

Table 1. Rainfall totals (inches) across the Virginia-Carolina region in May, June, July, and through August 13, 2019.

Location	May	June	July	Through August 13
Wakefield, VA	5.3	9.8	5.3	0.5
Lewiston-Woodville, NC	1.5	2.7	6.1	3.5
Rocky Mount, NC	2.4	3.8	2.5	4.3
Clinton, NC	2.0	4.3	5.5	2.7
Whiteville, NC	0.1	0.1	4.3	2.4
Florence, SC	2.4	3.6	5.5	3.4
Orangeburg, SC	1.3	1.9	2.9	4.3

Table 2. Heat unit accumulation (DD₅₆) from May 1, May 15, June 1, and June 15 through August 13, 2019.

Location	May 1	May 15	May 30	June 15
Wakefield, VA	2202	1996	1666	1429
Lewiston-Woodville, NC	2235	2029	1669	1429
Rocky Mount, NC	2297	2079	1718	1467
Clinton, NC	2369	2137	1754	1492
Whiteville, NC	2359	2134	1759	1488
Florence, SC	2661	2399	1972	1668
Orangeburg, SC	2460	2220	1819	1540

Peanut growth and development near Whiteville, NC when peanut was planted May 1 with images recorded August 12 for the cultivar Bailey.









Expression of tomato spotted wilt of peanut at Whiteville, NC on August 12 with the cultivar Bailey planted May 1.







Peanut near Edenton, NC in the upper Virginia-Carolina region on August 7 expressing nitrogen deficiency likely due to issues with seed bed preparation and delivery of *Bradyrhizobia* inoculant or equipment malfunction.



