

Peanuts across the V-C region have received less rain during the past 3 weeks compared with amounts received earlier in the growing season. This has become a major issue in some areas, in part because excessive rain earlier in the season resulted in less root growth because soil water was easily accessible. Limited water has been experienced in the lower V-C region more so than the upper V-C region.

Heat unit accumulation at six locations across the V-C region through September 3 is provided for various intervals reflecting the broad range of planting dates across the region. Adequate heat unit accumulation is not a limiting factor at the present time. However, heat unit accumulation is of limited value when peanut do not have adequate soil moisture for growth and development. The cultivar Bailey is the predominant Virginia market type cultivar in the V-C region, requiring approximately 2600 heat units from emergence to optimum pod maturity. Based on heat units only, this cultivar would be at optimum maturity by September 11 (Wakefield, VA), September 7 (Lewiston, NC), September 4 (Kinston, NC), and September 3 (Whiteville). Based on heat units only peanut emerging in mid-May are ready to dig. However, optimum maturity is slower, in part due to biological stresses related to part to excessive water or not enough water in many areas. For example, peanut emerging in mid-May at Whiteville most likely will reach optimum maturity late during the week of September 10. Maturity at Lewiston is also slower in actuality than heat units suggest. However, some fields in the upper V-C under irrigation will need to be dug around September 7. Peanut in fields planted later and without irrigation are projected to be dug in early October, especially in the upper V-C region.

Many growers are applying their fifth fungicide spray for leaf spot and are no longer focused on stem rot in the upper V-C region. Growers in the lower V-C region are on their sixth spray depending on planting date and pod maturation, also with a focus on leaf spot. Growers in the upper V-C region have anticipated Sclerotinia blight outbreaks but actual incidence has been limited. While some weed escapes have been observed and foliar-feeding insects are present, growers are not applying herbicides at this point in the season and insect populations are below economic thresholds. Some fields have experienced nutrient-related deficiencies, however applications of fertilizers are generally not recommended unless peanut was planted in early or mid-June. Even though some fields are very dry, spider mite outbreaks have not been reported.

Growers in the V-C region are beginning to dig some peanut fields but most digging in the upper V-C region will not occur until the mid to last week of September. Digging will occur even later in the fall for peanut planted in early June. In the lower V-C region growers are beginning to dig some of the earliest planted fields and most likely will continue. Soil in some fields across the region needs rainfall in order for digging to begin. Soils in these fields have become hard and significant pod loss could occur if growers are forced to dig under these conditions.

Yield potential for the V-C region has been lowered to 4,260 kg/ha (3,800 lbs/acre) due to a combination of early and mid-season stresses and the dry conditions that are present across the region during the critical pod filling time of the growing season.

**2018 Rainfall and Heat Unit Accumulation ( $DD_{56}$ )<sup>†</sup>**

<b>Parameter and time interval</b>	<b>Wakefield VA</b>	<b>Lewiston NC</b>	<b>Kinston NC</b>	<b>Whiteville NC</b>	<b>Florence SC</b>	<b>Orangeburg SC</b>
<b><i>Rainfall (inches)</i></b>						
May 15-Sep 3	27.9	31.1	23.0	19.5	19.2	19.1
August 14-Sep 3	2.4	1.5	2.5	0	0	0.3
<b><i>Heat units (<math>DD_{56}</math>)</i></b>						
May 15-Sep 3	2452	2516	2590	2618	2846	2706
May 25-Sep 3	2261	2321	2387	2424	2632	2508
June 5-Sep 3	2036	2090	2144	2186	2371	2257
June 15-Sep 3	1859	1903	1924	1979	2138	2031

†Data are from the State Climate Office of North Carolina - CRONOS Database (<https://climate.ncsu.edu/cronos>)

**2018 Days from Peanut Emergence to Possible Optimum Maturity<sup>†</sup>**

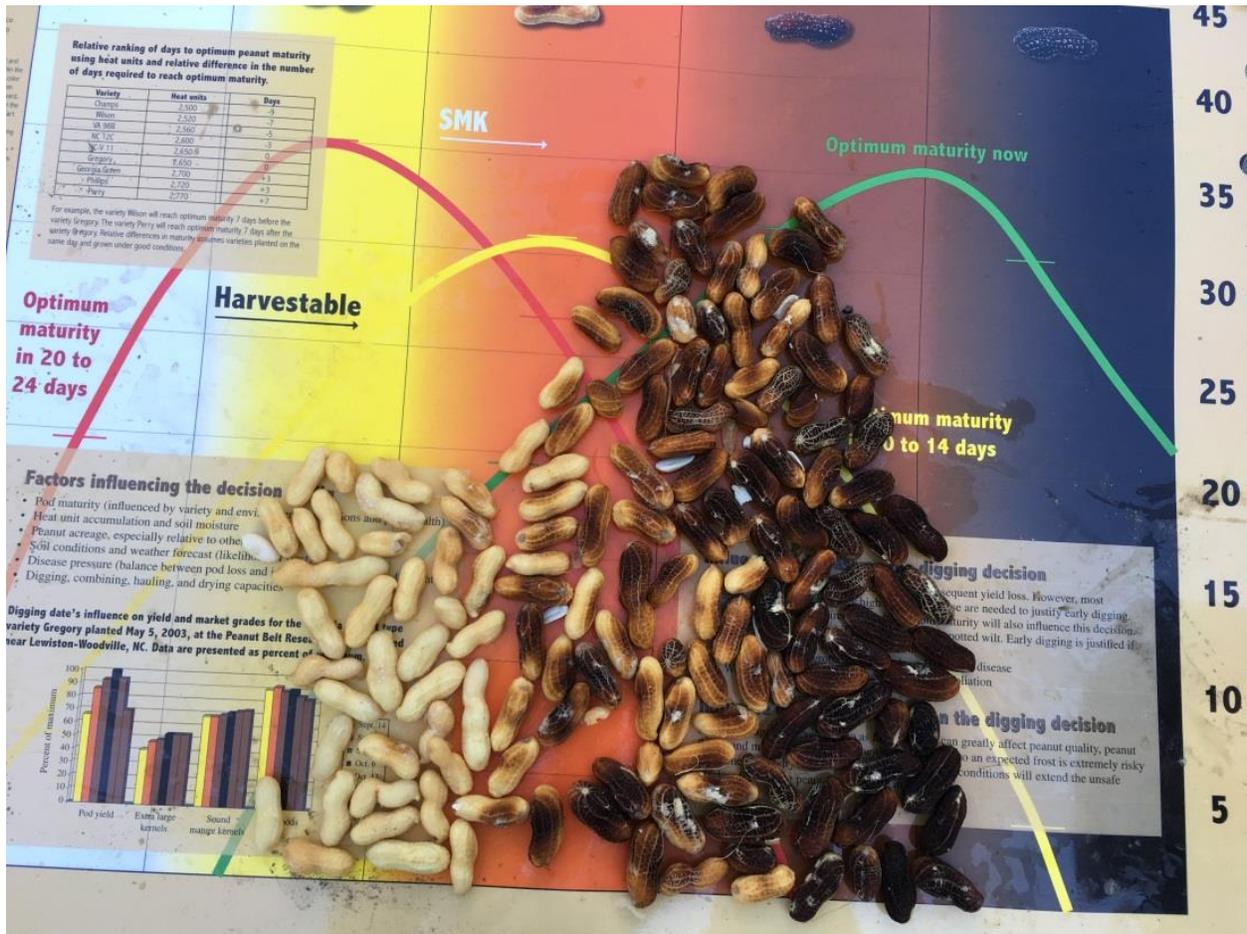
<b>Parameter and time interval</b>	<b>Wakefield VA</b>	<b>Lewiston NC</b>	<b>Kinston NC</b>	<b>Whiteville NC</b>	<b>Florence SC</b>	<b>Orangeburg SC</b>
<b><i>Days</i></b>						
May 15-Sep 3	8	4	1	0	-12	-5
May 25-Sep 3	18	15	11	9	-2	5
June 5-Sep 3	30	27	24	22	12	18
June 15-Sep 3	40	37	36	33	24	30
<b><i>Calendar Date</i></b>						
May 15-Sep 3	11-Sep	7-Sep	4-Sep	3-Sep	25-Aug	29-Aug
May 25-Sep 3	21-Sep	18-Sep	14-Sep	6-Sep	1-Sep	8-Sep
June 5-Sep 3	3-Oct	24-Sep	21-Sep	19-Sep	9-Sep	15-Sep
June 15-Sep 3	13-Oct	3-Oct	7-Oct	3-Oct	21-Sep	29-Sep

†Data are from the State Climate Office of North Carolina - CRONOS Database (<https://climate.ncsu.edu/cronos>)

Dry peanut in the upper V-C region.



Pod maturity for the variety Bailey at Whiteville on August 27 when peanut emerged on May 18.



Pod maturity for the variety Bailey on August 27 when peanut emerged on June 5.

**Relative ranking of days to optimum peanut maturity using heat units and relative difference in the number of days required to reach optimum maturity.**

Variety	Heat units	Days
Chango	2,500	-9
Wilson	2,520	-7
WV 888	2,560	0
NC 12C	2,600	-5
NC-V 11	2,650	-3
Gregory	2,650	0
Georgia Green	2,700	+3
Phillips	2,720	
Perry	2,720	

For example, the variety Wilson will reach optimum maturity 7 days earlier than the variety Gregory. The variety Perry will reach optimum maturity 3 days later than the variety Gregory. Relative differences in maturity assumes varied same day and grown under good conditions.

**Optimum maturity in 20 to 24 days**

**SMK**

**Optimum maturity now**

**Optimum maturity in 10 to 14 days**

**Factors influencing maturity**

- Pod maturity
- Heat units
- Plant vigor
- Soil moisture
- Disease
- Digging

**Digging date**

**Influence of disease on the digging decision**

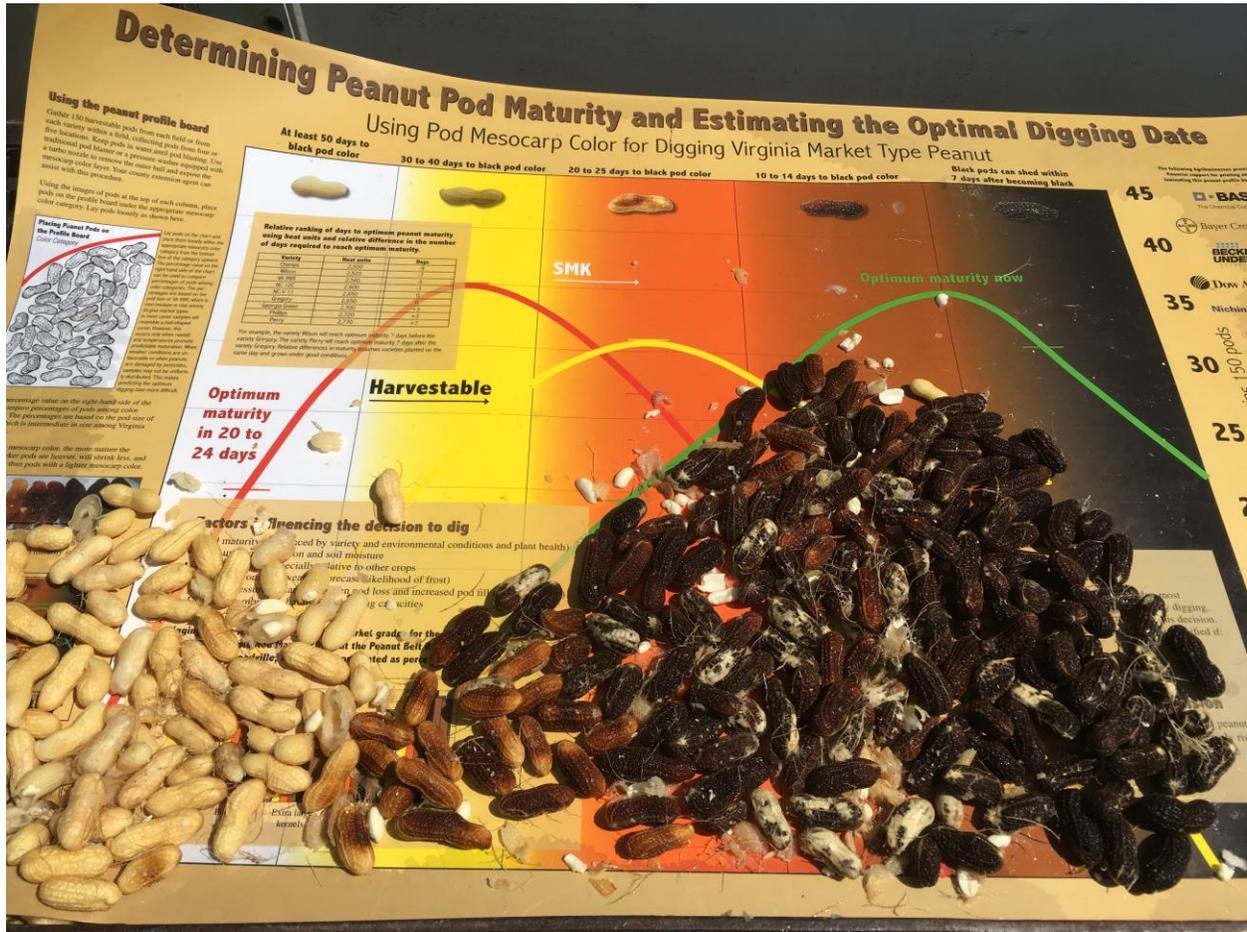
Diseases can dramatically affect pod shed and subsequent yield loss. However, most research suggests that extremely high levels of disease are needed to justify early digging. Dig strength and time required to reach optimum maturity will also influence this decision. Early digging is not justified if plants have tomato spotted wilt. Early digging is justified if:

- CBR (black root rot), at least 40 percent disease
- White mold or Sclerotinia blight, at least 50 percent disease
- Web blight and leaf spot, at least 50 percent defoliation

**Influence of freeze potential on the digging decision**

Freeze damage, often referred to as frost damage, can greatly affect peanut quality, peanut flavor, and market value. Digging within 3 days prior to an expected frost is extremely risky even when good drying conditions exist. Poor drying conditions will extend the unsafe window for digging peanut to greater than 3 days.

Pod maturity for the variety Bailey on September 6 after planting in early May near Windsor, NC under irrigation.



Peanut pods and cloddy soil near Rocky Mount, NC on September 1.



Leaf spot in the lower portion of the peanut canopy on August 27 near Whiteville, NC.



