

Preparing for Harvest

V-C Peanut News

David Jordan

As we move into September, one thing tends to be on our mind – digging and combining peanuts and moving them along to the buying point. Logistics and acreage combined with rain (or dry, hard soil) and freeze damage can bring a lot of stress into the picture. How can we minimize risk to the crop we have worked hard to grow and the stress that comes with getting it out? With a crop that is in the ground and requires two steps to get out of the field, we are always going to have a lot on our mind when it comes to peanuts in the fall. Here are some things I have thought about that might help you this fall.

First, stay on top of your leaf spot control program. We gain the greatest flexibility in digging when we have a healthy peanut plant. Pod shed occurs naturally but not as quickly or dramatically when we have a healthy plant. We know that when an epidemic starts it expands quickly. For example, if you have 10% of the canopy with lesions this week, it will likely be 20% next week and then 40% followed by 80% over the following two weeks. Defoliation (and pod shed) is not far behind and that is where we get yield loss. If leaf spot gets away from you, we recommend digging at 40% defoliation regardless of pod maturity. Take a close look at pre-harvest intervals in fungicides and adjust accordingly. Chlorothalonil gives us a lot of protection late in the season as we build on our earlier sprays. Keep in mind that we might think we will dig at a certain time only to be forced to leave peanuts for another week or so. If weather conditions are favorable for leaf spot into late September, we could be in jeopardy for leaf spot epidemics. You might be able to get across fields with a sprayer for another level of protection from leaf spot when fields are too wet to dig. That extra spray might make a big difference, especially if we get into a wet cycle. We also know that infection occurs before we see lesions. If you get to 20% of the canopy with lesions, additional sprays will not help in most cases. When you see 20% of the canopy with lesions, it is likely that 60% of the canopy is already infected and our fungicides are primarily protectants with very limited curative action.

Secondly, take a close inventory of your digging and combining equipment relative to your acreage. We have some calculations on this in *2022 Peanut Information* (page 43.) Generally, we assume we can cover 30 acres (4-row digger) and 40 acres (6-row digger) per day (10-hour workday) if we drive 3 mph. In many cases, we ought to be driving slower, closer to 2.5 mph to minimize pod loss. When we make that calculation, we can cover about 25 and 33 acres a day with the 4-row and 6-row diggers, respectively. There is excellent information from Kendall Kirk at Clemson showing that for each mph above 2 mph, digging losses can be at least 200 pounds per acre, even under good digging conditions. In a recent on-farm trial in North Carolina, if you jumped from 2.6 mph to 4.0 mph, yield decreased from 6,520 pounds per acre to 5,735 pounds

per acre. Going faster is not the best solution to getting peanuts dug in a timely manner. Greater digging capacity is captured in more equipment and the people to run it.

We also assume a 6-row self-propelled combine can pick 20 acres a day driving at 1.5 mph (10-hour days, which can be a stretch during some weeks in the fall when the dew lifts late in the morning or falls early in the evening.) We often think of yield losses occurring when we dig too early (5-8% of yield potential not realized if we dig a week early) or losses if fields get wet when we are at optimum maturity (We actually have about a 2-week buffer when we first get to optimum maturity – yields tend to stay at the peak for that period.) Nevertheless, sometimes our losses can occur after digging if peanuts stay in the field for several weeks. Warm and wet temperature contribute to this, especially when vines get wet and then dry and the cycle is repeated over three or more weeks. In 2015, we lost up to 40% of yield in some fields because the moment the combine touched the vines the pods fell off before they could enter the machine. Creating greater harvesting capacity can help us take advantage of the windows we have to harvest a higher percentage of our crop. Of course, it is one thing for me to encourage you to spend more money on overlapping residual herbicides early in the season or an extra chlorothalonil sprays at the end of the season and completely different to encourage you to purchase more equipment. I get it.

It is important to adjust equipment for digging and combining on a day-to-day basis and a field-to-field basis when it comes to digging. Sometimes there is a challenge in fields that have mixed soil types (which is almost all of our fields to some degree in the coastal plain,) but setting the digger in a manner that prevents as much pod loss as possible goes a long way to realizing our yield potential. Gary Roberson and Jason Ward have a good instructional video on our NC State Peanut Extension portal that can help you set up a digger (<https://peanut.ces.ncsu.edu/digger-shaker-inverter/>).

Digging peanuts when they are mature is important, with the caveat that we cannot dig them all on the same day. Unfortunately, our Virginia market types reach optimum maturity on the same day (Bailey II, Emery, and Sullivan when planted on the same day and grown under the same conditions.) Additionally, we can only gain so much by having different planting dates. A three-week difference in planting in May translates into about a week's difference in optimum maturity in the fall. The late-planted peanuts often do a good job of catching up with earlier plantings because they are growing during more days with higher temperatures, resulting in greater heat unit accumulation in fewer days. Of course, this might not hold up when you start comparing fields and areas of your production – we know dry weather and other stresses can result in differences in maturity.

Unfortunately, “the numbers” do not care about our logistics and the weather patterns that contribute to our challenges with getting the crop out. Here are some of the important ones. Pods with a brown mesocarp color weigh about 95% of pods with a black mesocarp color. Pods in the orange or rust fraction weigh about 75% of pods with a black mesocarp color. Yellow pods weight about half as much as the most mature

Pods. If we are early in our digging, we will sacrifice yield and quality. It takes 7-10 days to move through each major color category on the peanut profile board. We also need 72 hours to pass after we dig and before we get a frost/freeze. We cannot get around that. If we get two nights in a row with temperatures in the high 40s, the development and maturation process will come to a halt and it will be difficult for it to get going again. We might not see a change in pod maturity for the remainder of the fall (unless we have a prolonged warm spell.) In 2020, we experienced a great weekend in late September for Wolfpack football but not for a crop that was already late and needed more time to reach optimum maturity.

Then there is the status of peanuts among all of the other crops, the weather you have experienced, and where you are in the state. If you have cotton and/or corn only, peanuts are likely to take priority. However, if you have tobacco and/or sweetpotato, well, enough said.

We do encourage everyone to reach out to our local NC State Extension agent to help with determining pod maturity. However, you can also assess maturity on your own. Our most recent maturity charts are self-explanatory and have a lot of information on them. You can easily make a wire basket and get an inexpensive pressure washer with a rotating nozzle to process your samples. With that said, it never hurts to get a second opinion and there will be plenty of those around the pod blasting clinics this fall. It is also good to check maturity at least twice in a field and preferably three times. It helps you get a sense of how quickly maturity is changing, and that can help you prepare more easily for what is ahead. At some point, you simply start digging and keep going once you do. Results from pod blasting can help you get the order of fields correct, based on differences in maturity.