

AVOIDING COLD INJURY

In S. C. we have enough of a peanut growing season to minimize the risk of cold injury in most years. However, having a significant acreage planted late (after 25 May) and drought stress during pod fill are factors that delay harvest and increase the risk of cold damage.

A peanut planted on 26 May will reach 140 DAP on the 13th of October. It's not a problem to have some peanuts planted the last week of May and even a few in early June. We typically still have excellent combining conditions in mid-October. The problem comes when a lot of acres are planted late and need to be combined in mid to late October. Any glitch in the weather gets us behind and pushes combining toward 1 Nov. when cold injury risk climbs every day.

A mid season drought also delays harvest if we have enough rain in August to set a late crop of pods that we have to wait on.

Peanuts are usually most susceptible to frost the day they are dug because the kernel moisture content is high. Kernels with freeze injury are included in the "damaged kernel" category and like anything that contributes to damaged kernels, can potentially cause catastrophic loss. **When total damaged kernels reach 2.5 %, the peanuts are assigned to segregation 2 (the oil market) and can be sold for as low as 35 % of loan (\$125/ton) if they can't be cleaned below 2.5 % total damage.**

Fortunately, when we get a predicted frost risk in late Oct. to early Nov. in the S. C. coastal plain, it is usually a one or two day event followed by warmer weather. So it makes sense to watch the forecast and plan on interrupting digging for a day or two until the front moves through if a hard frost is predicted. Peanuts which have dried for three days have relatively low frost injury risk.

Predicting ground level frost is tricky since forecast lows are based on temperatures about 5 ft above ground height. The actual temperature on dug peanuts is kept warmer by heat radiating from the soil. Local terrain and air drainage complicates the issue, because low pockets in fields are sinks for cold air and may frost.

The bottom line is that with lows predicted at 38 F we keep digging, at 34 F predicted we wait a day for sure, and in between at 35 – 37 F you have to decide how much faith you have in the weatherman not being off target in your field.

What about frost damage to the foliage of peanuts still in the ground? Peanuts in the ground are safe. A light frost will cause some terminal browning that the plant can tolerate. Even if a hard frost in November kills 50% of the leaves or more, the peanuts will hold on the plant for a week until more favorable harvest weather arrives.

After the frost moves through we can go back at it. Don't count on severely frost-singed peanut vines maturing more, but don't feel like they have to be dug the day after frost hits the leaves either. We have seen runners with 50 % of the leaves burned green back up with new foliage. Just get to them as soon as you have good digging conditions. In November we run out of growing season for a peanut anyway since there is little progress during any part of the day below 60 F.

In summary, whatever you do, don't dig right before a potential hard frost is forecast.