

# DRAFT Peanut Producers Guide to Preparing for and Recovering from Hurricanes in the Southeast US

*This is a draft of guidance being developed by the USDA SE Climate Hub to help peanut producers prepare for and recover from hurricane damage.*

## This section will focus on:

- Long and short-term planning and preparation to mitigate the impacts of hurricanes on peanut production
- Potential impacts of wind and water on peanut production
- Rebuilding and recovery after passage of hurricanes

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## I. Pre-Hurricane Planning – Long-term Preparedness

Many factors affect the potential value of individual management practices, just as many factors affect the potential profitability of an individual peanut crop. The use of an individual practice should be based on what works best for your situation. This may or may not be directly related to limiting the risk of losses from a hurricane.

### Initial Site Planning

Where possible, select fields that have good drainage and are free of low lying areas. Increased sand content improves drainage, whereas higher silt and clay content reduce drainage and can increase pod loss at digging. In soils prone to developing a hard pan, deep tillage using a sub-soil implement such as a “ripper bedder”, or strip tillage can help improve soil percolation and reduce the time that water stands in flooded areas.

### Site Establishment

- Fields should be rotated for a minimum of two years out of peanut with a non-legume (corn, cotton, sorghum, grass pasture). Longer rotations of three to four years or more out of peanut can more effectively limit overall pest pressure and help reduce development of disease should field access become restricted due to a hurricane.
- Planting on beds can improve drainage and facilitate digging, though other factors may more strongly prioritize tillage and seed bed preparation practices. Bedding could reduce the time from excess rainfall until digging can begin.
- Varieties with leaf spot resistance can help slow the development of disease if sprayer or digger access to a field is limited due to weather and soil conditions. Effective fungicide programs for

leaf spot disease can improve overall plant health and can prevent premature shedding of pods if delays in digging are required due to excessive rainfall from tropical events.

- In fields with poor drainage, planting runner market type varieties may somewhat reduce the risk of increased pod loss due to potential over maturity or soil-moisture related digging losses. Virginia market type cultivars generally are at a greater risk of digging losses under unfavorable digging conditions.
- To help maintain the most protection against unforeseen events like hurricanes, peanuts should be planted before the final planting day for crop insurance in your state. This may vary by county, so verify the date that applies to your situation. The final planting date for Alabama, Florida, Georgia, and most of South Carolina is June 5. Final planting date in North Carolina and Virginia is June 10. Mississippi and some parts of Georgia have a final planting date of May 31. The late planting period continues 15 days beyond the final planting date, with coverage being reduced 1% per day. Look closely at insurance policies to determine specific details in the event that requirements change.

### **Seasonal Considerations Outside of Hurricane Season**

- Testing generators weekly and inspecting monthly is generally recommended, both outside and inside hurricane season. New generators generally require more frequent oil changes.
- Trimming trees around field edges and removing weak, dying or dead trees can help to minimize debris removal if a hurricane strikes.
- Buildings should be inspected to ensure they are structurally sound.

### **Monthly Considerations During Hurricane Season**

- Verify spraying and harvest equipment is in proper operating condition, and make repairs as necessary. Inspecting and maintaining harvest equipment at least one month before anticipated harvest can help reduce unanticipated problems.
- Manage peanut fields to control weeds, insects, diseases and to maintain general crop health. Healthy vines have the best chance of weathering inclement weather.

### **Annual Considerations**

- Develop a written plan of pre- and post-hurricane responsibilities and job descriptions for personnel.
  - Purchasing or having access to additional harvest equipment (e.g., diggers and combines) or increasing row capacity may reduce the total amount of time required to harvest portions of available peanut acreage under time-limited windows.
  - Service generators at least annually.
  - Depending on your generator and use frequency (e.g., if the generator is run at < 30% of its kW rating for  $\geq 30$  min/month), you may need to test using load banks annually.
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## II. Pre-hurricane Planning – Short-term Preparedness

### When a Hurricane Is Forecast to Impact Your Area (1 to 7 days before)

- Document the status of your peanut crop – field by field. If flooding is likely to be an issue in certain fields, pull some plants to document their pre-storm status (maturity and general health) and take pictures. This could aid in determining crop losses.
- If flooding is likely in certain fields, it is probably better to delay digging until after the storm because the peanut plants can float and be pushed by the wind across flooded fields. Freshly dug plants that are still green are less likely to be blown around by the wind, but plants that have dried are more susceptible to be moved by wind and wind-blown rain.
- Consider application of fungicide to slow epidemics that could develop from pathogens and subsequent disease.

### One Day Before a Hurricane is Forecast to Impact Your Area

- Pivots should be parked in locations that are accessible to repair in case they topple, and out of low-lying areas that might flood as well as areas where trees and other debris could impact systems.
- Move equipment to protected areas away from trees or debris that could cause damage during high winds.

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## III. Post-hurricane Recovery

Injuries and fatalities often occur during the immediate and short-term, post-hurricane recovery, so regardless of the recovery activities, err on the side of caution due to the unstable nature and potentially injurious situations presented by weakened trees, damaged structures and equipment, and damaged electrical systems. Never prioritize recovery activities before personal safety.

Immediate and latent damage will vary widely by the stage of the crop when the hurricane strikes. Hurricanes that strike during vegetative and early reproductive stages of peanut growth are less likely to cause immediate damage to the crop because the plants are low-growing and minimally susceptible to wind damage, the harvestable crop is belowground, and because the crop has more time to recover before harvest. However, there is potential for latent/indirect damage to occur from early-season hurricanes largely due to interruptions in crop inputs such as fertilizers, fungicides, herbicides or insecticides. Hurricanes that occur near the time of harvest can cause significant, immediate damage to the crop either directly, or through delayed/prevented harvest.

### Immediately After the Hurricane has Passed

- Conduct a broad assessment of crop and infrastructure damage.
  - Create a damage inventory, and take pictures of flooded field areas and damaged equipment/facilities. This should be conducted to easily compare to the inventory and crop assessment done a week before the hurricane arrived (as described in Section II).

- Determine the impact of equipment damage on upcoming harvest operations. This will help in developing a plan for the coming weeks and months.
- Contact insurance agents to consult on high priority items that will/could affect production potential.
- Verify that electrical breakers and switches are turned off to pivots, buildings, and other areas until the power is restored.
- Determine if water that stands across peanut fields is from ponding as a result of slow drainage from rainfall in the field or backflow from adjacent water sources such as drainage ditches, creeks or rivers. Water from backflow that stands in peanut fields requires peanut to be considered adulterated and cannot enter the commercial trade.
- Peanut plants that are submerged for 3 days or more will die prematurely and likely will provide limited peanut pods for harvest.

### **Within a Week Following Hurricane Impacts**

- Make plans to repair damaged equipment that will be needed most urgently such as sprayers, tractors and harvest equipment. If repair is unfeasible, leasing needed equipment may be an option.
- Remove trees and other debris from field turn-rows that could impede tractor and implement traffic.
- Scout the peanut fields to determine priorities for fungicide or insecticide applications and/or harvest.
- Identify fields that are in most immediate need of fungicide application and make plans to apply by ground when the conditions allow. If it appears that the time-frame for ground-based application will extend too long, make arrangements for aerial application. Note that aerial applications of fungicides are less effective than applications by ground.
- For fields that had been dug and inverted, determine the likely time-frame for harvest. Keep in mind that buying points may not yet have electrical power required to dry the crop and adjust the harvest time accordingly.
- Continue to document damage in both writing and through pictures.
- If the electrical power is restored, note that it can be unstable for several weeks and even months after the storm, so protect sensitive equipment such as computerized pivot controls, etc.
- Ensure that buildings and storage sheds that will be used for crop maintenance and harvest operations are safe for occupancy and stable.

### **Within a Month Following Hurricane Impacts**

- Gather quotes from qualified vendors to make repairs to facilities and equipment.
  - Vendors are often overwhelmed in the months following a hurricane, so making contact soon after the storm is important for an expedient response.
- Remove debris (both construction and natural) from yards, fields and other areas where it may impede work progress and/or create a hazardous situation for workers.

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