



# Marketing Flood-Impacted Grain in North Carolina After Matthew

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# Important Roles

- **Insurance Agent:** If you have insurance it is paramount that you work with your insurance agent and loss adjusters to ensure that you comply with the claims process and have the information you need to make the best informed decision
  - The possibility of adulterated crops (that must be destroyed) and the possibility of diversion adds some wrinkles to standard procedures. It is critical that nothing is destroyed until it is appraised. Also sampling for testing for diversion should be done by agents or insurance adjusters.
- **Local Grain Buyer:** Taking samples of your damaged crop to local buyers to gauge the amount of quality discounts is crucial in calculating your break-even yield and whether you should harvest your crop.



# Know Your Break-Even Yield

- When marketing flood-impacted grain, to make an informed decision, you should calculate your break-even yield.
- Factors you need to know/estimate
  - The market price in (\$/bu) you would expect to receive for the flood impacted grain. This price is net of all quality discounts applied for damage. The best way to estimate this is to take a sample to your local buyer to be evaluated.
  - The Harvest Cost (\$/acre) is the total cost if you were to harvest the grain and deliver it to you local buyer.
  - **Your break-even yield (bu/acre) is the Harvest Cost (\$/acre) divided by the market price (\$/bu).** This break-even yield can be compared with your expected average yield if you were to harvest the crop. The break-even yield is the minimum yield in order to make it economically profitable to harvest the damaged crop.



# Calculating a Break-Even Yield Matrix Can be Helpful

- Identifies the break-even yield for combinations of Harvest Costs (\$/ac) and net market prices (\$/bu)
  - For example with a harvest cost of \$40/ac and a Net Price of \$9.50/bu the break-even yield is 4.2 bu/ac.

Break-Even Matrix for Decision of Harvesting Soybeans

		Harvest Costs (\$/ac)				
		\$35.00	\$37.50	\$40.00	\$42.50	\$45.00
Net Price (\$/bu)	\$8.00	4.4	4.7	5.0	5.3	5.6
	\$8.25	4.2	4.5	4.8	5.2	5.5
	\$8.50	4.1	4.4	4.7	5.0	5.3
	\$8.75	4.0	4.3	4.6	4.9	5.1
	\$9.00	3.9	4.2	4.4	4.7	5.0
	\$9.25	3.8	4.1	4.3	4.6	4.9
	\$9.50	3.7	3.9	4.2	4.5	4.7
	\$9.75	3.6	3.8	4.1	4.4	4.6
	\$10.00	3.5	3.8	4.0	4.3	4.5

soybean yields (bu/ac)



# To Harvest or Not to Harvest?

1. You should harvest when your expected yield is greater than the break-even yield subject to one other condition:
  - a) Given flooding is involved, before moving forward with harvesting, you need to determine whether the flooding was from “flood waters” or “pooled waters” [see NCDA &CS and FDA guidance on this determination last slide]
    - i. If flooding is from “flood water”, then the crop is considered adulterated and should **NOT** be harvested, as it cannot enter the food chain. The crop should be destroyed and for insurance purposes your production to count would be valued at zero. If there is doubt about the flood water determination or if grower wants to make a diversion request for animal feed only, then sampling tests can be performed by the NCDA&CS to verify safety.
    - ii. If flooding is from “pooled water” (rainfall directly on your field) then you **MAY** harvest. For insurance purposes your production to count will be your actual harvested yield.



# To Harvest or Not to Harvest?....

2. Even if you **MAY** harvest, you should **NOT** harvest when your expected yield is less than your break-even yield
  - You are in a net loss situation if the revenues you would receive for harvesting the crop is less than the cost of doing so. For insurance purposes your production to count will be valued at the appraised value given by the insurance adjuster on “pooled acres”. It is important to know the guaranteed number of bushels per acre prior to making decisions about harvesting damaged acres due to “pooling water” crop. A zero value will be given for contaminated crops that are adulterated from “flooded acres”.



# Example for how appraisal works for soybeans

1. **Unharvest “pooled acres”:** The planted price is \$8.91 and we will assume harvest price is \$10 (sets Nov 1- 30). 36 APH at 75% coverage (Revenue Protection)  $36 \times .75 = 27$  bushels guaranteed. Farmer chooses not to harvest and crop insurance adjuster visits farm to appraise the crop yield. Adjuster appraises yield at 5 bushels per acre.  $27 - 5 = 22$  (notice that the 5 counts like they harvested).  $22$  bushels  $\times$  \$10 harvest price (higher than the \$8.91 plant price) = \$220 per acre in payment.
  2. **Harvested “pooled acres” (without the quality adjustment to keep it simple):**  
Same guarantee as above of 27 bushels. Farmer harvests 6 bushels.  
 $27 - 6 = 21$ .  $21 \times \$10$  harvest price = \$210 per acre in indemnity payment.  
Let's assume grower gets \$9 per bushel on harvested bushels  $6 \times 9 = \$54$   
Grower grosses \$264 per acre but it cost him \$40 to harvest and haul.  
Grower nets \$224.
- ❑ Establishing your appraised yield, damage discounts, harvest cost, and break-even yield if your soybeans have significant damage is critical in determining whether to harvest or not and achieve the largest return per acre. **Underscores the importance of working with your insurance agent and local buyer.**



# Excerpts from Letter to Industry sent by NCDA&CS and FDA 10/21/2016

In order to properly assess how your farm may have been impacted, it is important to understand the difference between flood waters and pooled waters. Flood water can be distinguished from pooled water, as described below in guidance from US Food and Drug Administration (FDA):

*“Flooding is the flowing or overflowing of a field with water outside a grower’s control. Pooled water (e.g., after rainfall) that is not reasonably likely to cause contamination of the edible portions of fresh produce is not considered flooding.”*

FDA also offers the following guidance on crops and commodities exposed to flood waters:

*“If the edible portion of a crop is exposed to flood waters, it is considered adulterated...and should not enter human food channels.*

*There is no practical method of reconditioning the edible portion of a crop that will provide a reasonable assurance of human food safety. Therefore, the FDA recommends that these crops be disposed of in a manner that ensures they are kept separate from crops that have not been flood damaged to avoid adulterating "clean" crops.*

In an effort to assist farmers in recovering from flood-related impacts, NCDA&CS is collaborating with the College of Agriculture and Life Sciences (CALS) at North Carolina State University to provide assistance to farmers to determine safe uses for flood-impacted crops and commodities. **While these products cannot be used for human food, FDA has established a process by which a request can be submitted to divert these products to animal feed provided that they pass a testing protocol.** Before crops or commodities contacted by flood waters can be used for animal feed, the farm must develop a diversion request detailing the process to assure the safety of diverted crops or commodities. We encourage you to not initiate any diversion actions until your request has been approved. Please contact your local Cooperative Extension Agent for further information and guidance. To assist those submitting diversion requests requiring sample testing, NCDA&CS will provide all testing at no cost to the farm.