

Reducing the Risk of Heirloom Crop Damage at Tidewater Grain Co.



Tidewater Grain Company is a totally sustainable family and farmer-owned specialty small grain producer based in Oriental, NC. They are proud to be the first rice farmers in North Carolina to raise Carolina Gold Rice in more than a century, with a concentration on heirloom grains!



Applications:
Agriculture

Market:
Field Water Management

Challenge

Reducing crop hazards from too much or too little water while upholding a safe and environmentally responsible field operation are the primary goals of Tidewater Grains. Similar to many rice growers, Tidewater Grain used manual labor, several times a week to inspect the (15) fields for proper water levels.

They also run the danger of having their fields overtaken by ocean saltwater during severe weather which can cause crop damage in as little as 24 hours.

“Checking the 15 fields water levels several times a week was necessary but also an inefficient way of managing our crops.” said Tommy, Owner

The time required to physically travel to each field is considerable, and field levels can fluctuate significantly between inspections.

The level monitors' accuracy and dependability, as well as their simplicity of installation and use, ideally from a mobile device, were the main concerns. The initial and ongoing expenses of an automated field water (ditch water) level monitoring system were additional concerns.

Solution

In 2023, Tidewater Grain Company installed the TankScan TSR1000 level monitoring system to monitor the sea level near the field on the coastline in North Carolina. The remote monitoring system uses battery power, a Verizon SIM card and a mobile phone-friendly cloud software application. The startup and setup costs were minimal. The TankScan customer care team set up the website and Tidewater Grain installed the monitor above the sea level. After installing the battery, the monitor took readings, the accuracy was confirmed, field levels were set, and alert levels setup for email and text notifications.

The sea level is monitored from a cell phone or from a PC. The system is cost effective due to its use of existing infrastructures through internet connectivity, internet browser, email, text message and cloud compute. The user is provided with accurate readings and little to no training is required.



Results

Tidewater Grain has recognized numerous benefits from the sea level monitoring including:

- Automated alert notifications eliminate the risk of crop damage
- Labor and overhead expenses related to labor-intensive manual inspections of fifteen fields are decreased with remote level monitoring
- Greater adaptability to changing environmental conditions with real-time visibility
- By minimizing unnecessary trips to the fields, employee safety is no longer an issue during inclement weather

“TankScan is great for tracking sea levels, in fact during the hurricanes in the fall of 2023, the NOAA sea level monitoring system went down. TankScan continued flawlessly, and the local news outlet used the TankScan data for their reporting.”, said Tommy.