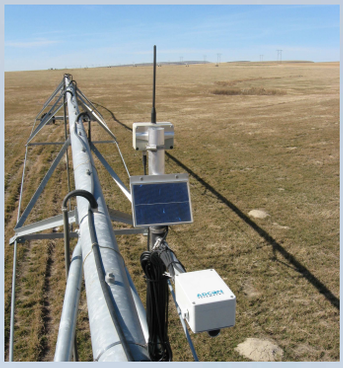
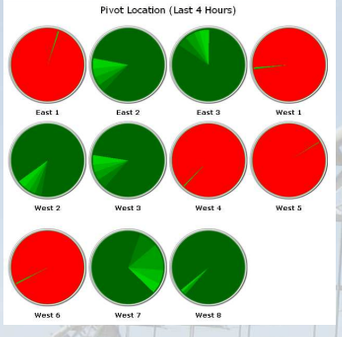
# Irrigation Monitoring



## Irrigation Monitoring

Water is a precious commodity. Your crop demands it. Avoiding moisture stress and irrigation mishaps are critical to reaching optimum yields, improving irrigation uniformity, and increasing irrigation efficiency. It simply isn't feasible to be in the field every hour of every day to monitor the status of an irrigation event. There are ways we can provide feedback through remote wireless technology. This data can be viewed via any Internet-capable device.




## Pivot Location and History

Center pivots are a great tool for applying irrigation water uniformly. Monitoring the location and movement of a pivot is important when juggling farm operations. The ability to view the location of all your pivots on one electronic device gives you a quick snapshot of the irrigation status on your farm. This snapshot is useful for scheduling multiple pivots, operations within a pivot, watching for stuck pivots, or simply for peace of mind.

Direction

| Location | Current Compass Direction | Date |
|---|---|---|
| East 1 | N ↑ | 6/29/2012 9:15:00 AM |
| East 2 | W ← | 6/29/2012 9:00:00 AM |
| East 3 | N ↑ | 6/29/2012 9:15:00 AM |
| West 1 | W ← | 6/29/2012 9:15:00 AM |
| West 2 | SW ↙ | 6/29/2012 9:15:00 AM |
| West 3 | W ← | 6/29/2012 9:00:00 AM |
| West 4 | SW ↙ | 6/29/2012 9:15:00 AM |
| West 5 | NE ↗ | 6/29/2012 9:15:00 AM |
| West 6 | SW ↙ | 6/29/2012 9:15:00 AM |
| West 7 | SE ↘ | 6/29/2012 9:15:00 AM |
| West 8 | SW ↙ | 6/29/2012 9:15:00 AM |

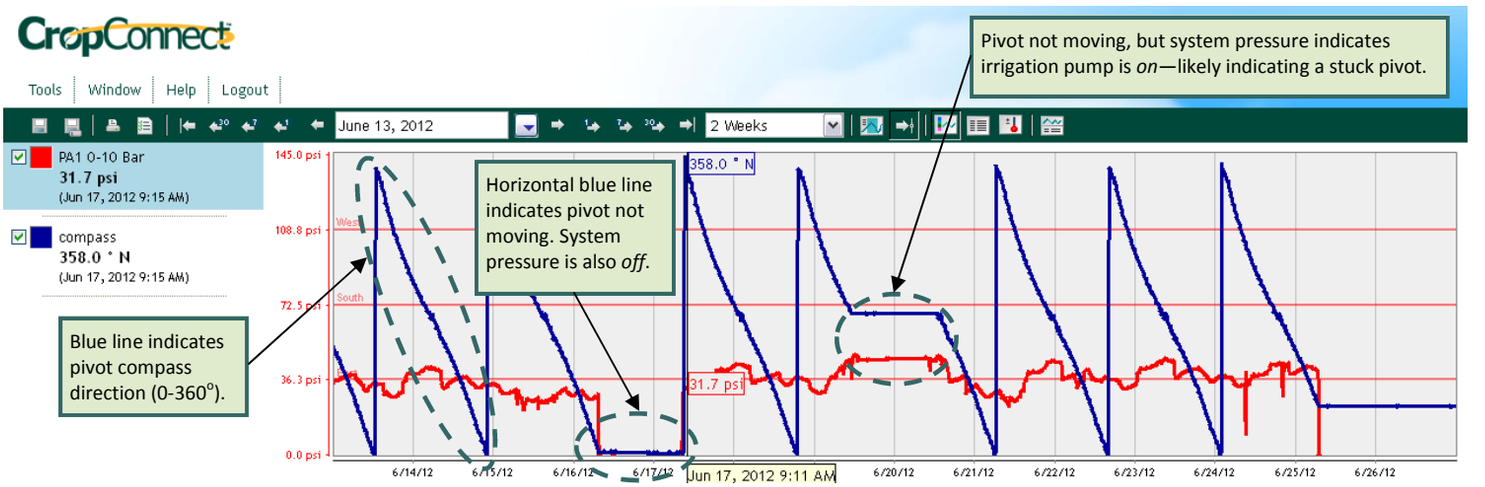
While knowing the current location of your pivot is important, tracking the history of a pivot can give you an entirely different picture of your irrigations and the performance of your equipment. When working perfectly, the pivot should travel at a uniform speed and apply a uniform amount of water to your crop. Check the uniformity of center pivot movement by viewing the linearity of the line graph over time. This tool may help you discover problems in your system before they become costly. This also gives you a history of run times and rate of travel over the entire season.

## Pressure and Flow Rate

Knowing whether the irrigation system is *on* or *off* is as simple as installing a *pressure switch*. When the irrigation system reaches 5 PSI, the pressure switch is triggered, and records *on*. Every irrigation event and length of run time will be recorded.

Similarly, *a pressure sensor* can record run times, but also gives you the added value of recording actual system pressure throughout the irrigation. Variation in irrigation system pressure can be an indicator of pump problems, nozzle/emitter plugging, line breaks, or insufficient capacity.

Gallons per minute and cumulative gallons applied are important for fertilizer/pesticide injection rate calculations, balancing evapo-transpiration equations, calculating total acre-ft applied, and calculating depth of wetting.




**Please contact your local Nutrien Ag Solutions field representative for more information.**

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