



# Climate Smart Pilots Irrigated Cropping

## Cotton | Trangie NSW

Digital sensors deployed on the irrigated cropping trials at Trangie Agricultural Research Centre helped the farm manager improve their decision making and adapt management practices.



**Higher  
temperatures**

More days over 35°C  
Increased heat stress



**Increased  
drought  
frequency &  
intensity**

Increased variability in soil moisture



**Increased  
rainfall  
variability**

Lower rainfall  
Changing weather patterns

### Automatic weather station and rain gauge:

Real time  
weather and  
rainfall data  
collected across  
the farm



- Local weather data used to estimate crop water requirements
- The decision to irrigate is based on local real-time data



**“ It was amazing to see all the real time data. It gave me a better understanding on how water is being used in the cotton and how water productivity can be improved. Canopy sensor data is fantastic as it clearly tells me when and how much the crop is stressed.”**

**-Glenn Orman,  
farm manager**



### Water flow, depth and pressure sensors

- Estimate irrigation water delivery, application and losses
- Monitor irrigation system performance
- Better understanding of water balance
- Improve water use



### Crop sensors and soil moisture sensors

- Monitor soil moisture availability and water use by crop
- Monitor crop stress due to water deficit and extreme weather
- Timely response to crop needs
- Better irrigation decisions



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