



Improving Irrigation Management Through Scientifically-Proven Results

From 2011 to 2014, Hortau partnered with California strawberry growers and an independent group of researchers from the UC California Cooperative Extension and Laval University in Quebec to evaluate real-time irrigation management systems in strawberry fields from Oxnard to Watsonville.

The research was conducted using various forms of precision irrigation practices, and monitored using Hortau irrigation management systems – which help growers detect plant stress in real time using soil tension. In the trials, researchers were able to determine the ideal timing and frequency of irrigations to maximize water use and yield despite severe drought conditions in the state.

Here's a look at some of the highlights from the independent strawberry irrigation trials using Hortau's soil tension measurement stations ...



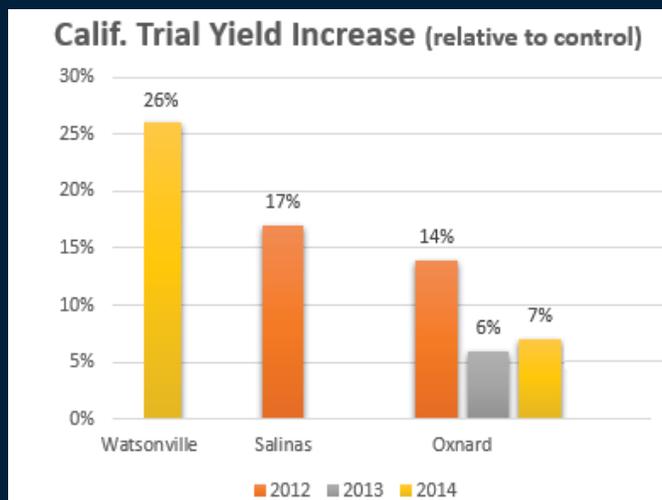
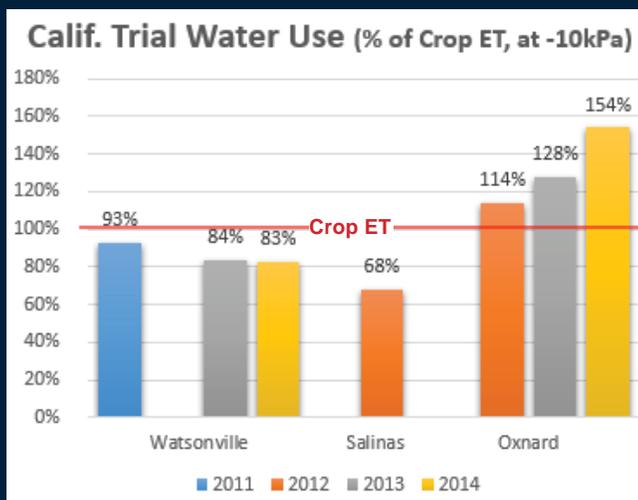
HORTAU
SIMPLIFIED IRRIGATION



Dr. Jean Caron, right, shares research along with Dr. Oleg Daugovich at an Oxnard field day.

Growing Strawberries with Precision

Managing Irrigation with Real-Time Soil Tension Data



WATSONVILLE 2011, 2013, 2014

Using wireless tensiometers to determine the ideal timing and necessary frequency of irrigations, researchers were able to match the control yield despite using 7% less water in 2011 and 60% less in 2013.

In 2014, researchers used the same amount of water as the control but achieved a 26% increase in yield.

SALINAS 2012

In Salinas, researchers saw considerable yield increases relative to the control.

Researchers used 95% less water and achieved a 17% yield increase.

OXNARD 2012, 2013, 2014

In 2012, researchers used 14% more water, which resulted in a 14% yield increase.

The following year, researchers used 35% more water in a drier field and saw a 6% increase in yield relative to the control.

In 2014, researchers used 54% more water and saw a 7% increase in yield. Extra use of water was linked to soil with poor infiltration (beds too compacted) in 2013 and 2014.

In Conclusion

By monitoring soil tension in real time, researchers were able to pinpoint the ideal threshold for stress (10 kPa or cbars).



Here were other key takeaways from the four years of trials across California:

10%
WATER SAVINGS

Hortau on average cut water costs by 10% relative to average grower management.

10%
YIELD INCREASE

Average yield increase of 10% is expected, with a return on investment for the equipment coming within 1-2 months.



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