Irrigation Technology to Address Farmers’ Varying Needs: Water Efficiency & Optimization, Improved Yields, and Reduced Runoff

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Trimble
Water Management Efficiency Drivers

- Food security
- Increase farm production
- Regulation
- Water quality
- Global weather patterns
Addressing with Technology

Land Forming

Drainage Water Management

Precision Irrigation
WM-Form™ Land Forming Solution

- Complete end-to-end land forming solution for leveling, surface drainage, furrow irrigation, and other sub-design features
- Enables optimal surface water distribution and drainage

SURVEY
- WM-Topo™ survey system
- FmX® integrated display
- TMX-2050™ display

ANALYZE & DESIGN
- WM-Form™ software

FORM & VERIFY
- FieldLevel™ II system
- WM-Topo survey system

GROW
Drainage Water Management

- Managing water table depth
  - Optimal root development
- Nutrient hold back in the soil
- Hold water depth in drought conditions
- Utilize with conservation practices such as buffer strips
Data Driven Solutions for Irrigation

- Rainfall
- Topography
- Soil characteristics
- Yield Map
- NDVI
- Crop type and population
- Irrigation Prescription
- Tile location and depth
- Irrigator configuration
- Aerial imagery
Irrigate-IQ™ Solution

- Variable rate irrigation on center pivot irrigators
- Remote monitoring and control
- Irrigation application data capture
Irrigate-IQ™ Solution

LIM

VALVE & NODES

POWER MODULE

GPS NODE

Connected Farm

MONITOR AND CONTROL WITH IRRIGATE APP

MANAGE AND CONTROL WITH CONNECTED FARM IRRIGATE

VIEW ON CONNECTED FARM DASHBOARD
Track and lane maintenance
Environmental compliance for disposal of effluent
Pasture uniformity and yield improvement
Benefits of Irrigate-IQ for Dairy

- Less water consumption and water cost
- Less pumping cost
- Greater crop growth due to warmer soils from controlled soil moisture
- Less nitrate and phosphate leaching from controlled soil moisture and targeted irrigation based on soil type and contour
- Targeted application of nutrients to specific crops
- Controlled management of effluent, fertigation and irrigation with reporting
- User alarms and warnings
- Administration of users and define access
- Regulatory reporting and historical data
• Increase yield by optimizing water application for soil conditions and variability
• Decrease overwatering and minimize groundwater leaching
Precision Irrigation - Potatoes

- Decrease water in low lying areas
- Increase potato uniformity
- Decrease rot in potatoes
- Optimize potato moisture for storage
Precision Irrigation - Cotton

- For water restricted areas, eliminate water application in low producing areas
- Boost water application in high producing areas
- Increase water efficiency and grower profitability
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