ClearAg:
Focusing on Ag Management Zones
July 26, 2017
Anonymous –

“Our firm has been working toward zone management since 1994 — using all the tools (soil testing, tissue testing, yield and planting data, soil type, etc.) available to decide on an appropriate course of action for a fertilizer prescription, be it soil- or foliar-applied. And while the 4R concept may be simple, implementing the systems needed to practice it can be challenging and costly.”
Soil-Plant-Atmosphere Continuum

Atmospheric Processes

Land & Subsurface Attributes & Processes

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Layer 1
- Silty Loam
- Organic Matter: 7%
- Slope: 13°

Layer 2
- Sandy Loam
- Organic Matter: 2%

Layer 3
- Sandy
- Organic Matter: 0%
Summing it Up

Zone Specific Soil Physics

Zone Specific Crop Stage & Growth Data

Calibrated Meteorology

Soil-Plant-Atmosphere Continuum Quantified

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ClearAg Focus – Advanced Zone Management

- Plant Growth Stage Estimation
- Disease & Pest Occurrence
- Irrigation Scheduling & Drainage Information
- Nutrient Uptake & Transport
- Yield Modeling

ClearAg Focus
Global, Soil-Plant-Atmosphere Continuum Field Level Output Capability

As-Applied Data

Integrated Deep Learning Environment

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IMFocus

ClearAg Focus Applied
Root Zone Water Balance is the important metric:

Root Zone Water Change = RZI + RZCR – E – T - DP
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Irrigation Scheduling Improved

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Irrigation Scheduling Improved

If:
Root Zone Soil Moisture < Critical Level

Then Schedule Irrigation

Scheduler works globally with minimal field inputs required, although additional field details will enhance performance.

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Cosmic Ray Neutron Probe Validation Data

Corn

Franz et al., 2015
Clear Ag IMFocus

Volumetric Water Content (%)

RMSE = 3.82%
MAE = 2.99%
Bias = 0.09%

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Questions?

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For more information, please visit the Iteris-ClearAg Booth #88!
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