METOS®

FARMER / AGRONOMIST eLEARNING PROGRAM





Course 1 Metos Stations and Sensors

In this course:

You will obtain a foundational knowledge of Metos stations and their applicability in different field conditions and needs. Common station sensors are covered in detail, in addition to soil moisture, related sensors and environmental monitoring hardware.

Estimated Learning Time: 70 min

Topics covered:

Pessl Suite of Stations

• Selection of a Device

Common Station Sensors

- Global Solar Radiation Sensor (Pyranometer)
- Hygroclip Temperature and RH Sensor
- Leaf Wetness Sensor
- Pessl Instruments Temperature and RH Sensor
- Precipitation Sensor (Rain Bucket)
- Wind Speed and Direction Sensors

Soil Moisture Theory

- Introduction to Soil Moisture Theory
- Field Capacity, Refill, Wilting Point
- Evapotranspiration

Soil Moisture Sensors

- Overview and Tensiometric Sensors
- Volumetric Sensors
- Soil Moisture Sensor Hardware

By the end of this course you will be able to:

- · Understand the main features and differences between Metos most popular in-field stations and sensors
- Develop a basic understanding of soil moisture including soil types, field capacity, and key terms
- Understand the various soil and environmental sensors curated and available through METOS

FieldClimate Software

In this course:

You will gain a solid understanding of the FieldClimate software platform and how use the data captured by the METOS sensors and hardware. Topics covered include adding users, stations, and devices; the general layout and display settings; soil moisture displays; and, forecast, disease, and work planning tools.

Estimated Learning Time: 86 min

Topics covered:

Adding Users

Registration and Login

Adding Stations & Devices

Adding a Station or Device

General Layout, Configuration, Display

- General Interface
- Dashboard
- Station Settings
- Sensor Data

Soil Moisture Layout and Tools

- Soil Moisture Page Introduction
- Soil Moisture Data Part 1
- Soil Moisture Data Part 2
- Soil Moisture Tools Part 1
- Soil Moisture Tools Part 2

Forecast, Disease, and Work Planning Tools

- Forecasting Tools
- Disease Modeling Tools
- Work Planning Tools

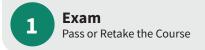
By the end of this course you will be able to:

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- Register a FieldClimate account, add users and connect hardware
- Navigate the FieldClimate software effectively
- Access and interpret basic soil moisture data

Exam

• Access forecasting, disease modeling, and work planning tools







Course 3

Integrated Pest Detection using iScout

In this course:

You will learn how to add iSCOUT to your Field Climate account and see images from your iScout device.

Estimated Learning Time: 11 min

Topics covered:

- Accessing Picture in FieldClimate
- Value Proposition and Summary

By the end of this course you will be able to:

- Set-up your iSCOUT to FieldClimate and begin assessing pictures from your field
- Understand what iSCOUT can do

Course 4

Monitoring using CropVIEW

In this course:

You will learn how to connect CropVIEW to your Field Climate account.

Estimated Learning Time: 14 min

Topics covered:

- Using CropView
- Value Proposition and Summary

By the end of this course you will be able to:

- Set-up your CropVIEW and assess pictures in FieldClimate
- Understand what CropVIEW can do





Course 5 **Spray Applications**

In this course:

You will learn the various weather factors, sensors and solutions that are required for successful spray applications.

Estimated Learning Time: 68 min

Topics covered:

- Agenda and Factors
- Weather Factors
- Weather Factors and Delta T
- Delta T Alerts and Summary
- Value Proposition
- Work Planning
- Forecasted Protection Model
- Demo of Spray Applications
- Benefits and Summary

By the end of this course you will be able to:

- Know which sensors are required for spray applications
- · Know which weather factors and forecasts are important
- · Understand how Delta T is calculated and which values are important
- Understand how the plant protection model works
- · Have an understanding of the benefits and ROI for spray applications

Course 6 60 Disease **Disease Applications**

In this course:

You will learn the various weather factors, models and solutions that are required for disease management.

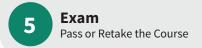
Estimated Learning Time: 46 min

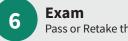
Topics covered:

- Agenda and Disease Modeling Background
- Disease Modeling and Constraints, and Localized Weather Factors
- Value Proposition for Wheat Disease Models
- Fusarium Model Example
- Work Planning Tools Plant Protection, Growing Degree Days, CropView
- Disease Applications and CropView
- · Demonstration of Disease Modeling
- ROI, Benefits and Summary

By the end of this course you will be able to:

- Understand the disease triangle
- · Know which sensors are required for disease management
- · Know which weather factors and forecasts are important
- Understand how a disease model is created and used
- · Understand the importance of localized meteorological factors
- · Understand how other tools are combined with disease modeling
- · Understand how the disease model works in FieldClimate
- Have an understanding of the benefits and ROI for disease management





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Course 7 **Forecast Applications**

In this course:

You will learn about site specific weather forecasts-monitoring and how these are combined in work planning tools for your fields.

Estimated Learning Time: 51 min

Topics covered:

- Holistic Solutions for Smart Ag and Precision Forecasting
- Meteorological Monitoring and Site Specific Forecasts
- Forecasting in FieldClimate
- · Value Proposition and Actionable Forecast Tools Interpreting the Data
- Precision Forecasts and Field Specific Work Planning Tools
- Live Demo in FieldClimate
- Return of Investments, Benefits and Summary

By the end of this course you will be able to:

- Understand what precision forecasting is
- · Know what meteorological monitoring is and what is required
- Understand site specific forecasts for field operations
- Understand FieldClimate's site specific forecasts
- · Know the value proposition and actionable forecast tools interpreting the data
- · Know how precision forecasts and field specific work planning tools are combined
- Explore the return on investment, benefits and summary

Course 8 Soil Moisture and Plant Nutrition

In this course:

You will understand the relationship between soil moisture and nitrogen for crop development and yield.

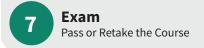
Estimated Learning Time: 78 min

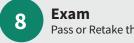
Topics covered:

- Agenda and Introduction
- Where and How, Plant Available Water (PAW)
- Modeled Soil Moisture
- Measuring Soil Moisture
- Soil Moisture and Yield Potential
- Live Demo in FieldClimate
- ROI, Cost Benefits and Summary

By the end of this course you will be able to:

- · Understand why soil moisture is fundamental for crop development and yield
- Where and how water is held in the soil and what is PAW
- Understand the terms field capacity, wilting point and available water for different soils
- · Understand how soil moisture is determined both modeled and measured methodologies
- Understand the impact of soil moisture and nitrogen on yield potential
- Explore various methods on yield prediction based on soil moisture
- Explore the return on investment, benefits and summary
- · Examine live actionable tools for soil moisture and nutrient management





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Course 9

MobiLab: Nutrient Management

In this course:

You will explore how to test for soil nutrients from your fields right in your office and you will also learn about sample collection, field apps, desktop software and hardware for nutrient testing, using Electrophoresis.

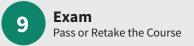
Estimated Learning Time: 80 min

Topics covered:

- Introduction, What Chemical can be Measured and Components of MobiLab
- Setting up the System
- Sample Preparation (Soils)
- Sample Measurement
- Cleaning and Other Things You Should Know
- Live Demo Putting it all Together, How it Works
- ROI, Summary and Benefits
- Manuals, Trouble Shooting Guide, MobiLab App Manual

By the end of this course you will be able to:

- Know what chemicals can be measured
- Know the components of MobiLab LoaC
- Understand how to set up the system
- Know how to sample preparation (Soils)
- Know how to make a sample measurement
- Know how to clean the MobiLab
- Know what other things you should know
- Understand the live demo on putting it all together
- Understand the ROI, summary and benefits



Course 10 MicroMetos: LoRA and NB-IoT

In this course:

You will dive deeper into the μ Micro station, including a guided overview of the communication types, hardware, sensor options, assembly and installation.

Estimated Learning Time: 40 min

Topics covered:

- Introduction to µMetos Solutions
- µMetos Solution Types and Specifications
- Components and Starting Up the µMetos
- Setup and Installing of the µMetos
- Using Your μMetos Device in FieldClimate and General Maintenance
- µMetos Quick Start Up Guide

By the end of this course you will be able to:

- Understand the µMETOS Soil and Clima Solutions
- Understand the LPWAN Data Logger for Remote and Urban Areas (with LoRaWAN® or NBIoT connectivity)
- Understand the µMETOS Solution Types
- Understand the µMETOS Soil Specifications
- Understand the µMETOS CLIMA Specifications
- Understand the components of µMETOS Soil and CLIMA
- Know how to start the µMETOS Soil and CLIMA
- Know how to set up the µMETO Soil and CLIMA
- Know how to use your µMETOS
- Know how to maintain your μMETOS



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Course 11 Metos FarmView

In this course:

You will explore FarmView, a tailor-made geospatial tool that helps you to understand fields through space and time. It combines existing iMETOS® hardware and software with satellite data to deliver a complex but easy to use monitoring system for your fields – actionable tools.

Estimated Learning Time: 60 min

Topics covered:

- Introduction to FarmView
- Layout and Setup of FarmView
- Setup of the Irrimet Tool
- Using the Irrimet Decision Support Tool
- Setup and Using the Sum Soil Moisture Decision Support Tool
- Example of the Water Balance and Sum Soil Moisture Decision Support Tools
- New Features Coming to FarmView
- FarmView Benefits, ROI and Summary
- Live Demo and Quick Setup of FarmView

By the end of this course you will be able to:

- Understand what FarmView is
- Explore FarmView layout and setup
- Understand how to define Cropzones
- Know how to setup the Irrimet module
- Know how to use the Irrimet decision support tool
- Know how to setup soil moisture sum for sensors
- Know how to use the soil moisture sum decision support tool
- Explore examples of water balance and soil moisture sum modules
- Explore the new features coming to FarmView
- Understand the ROI, summary and benefits

