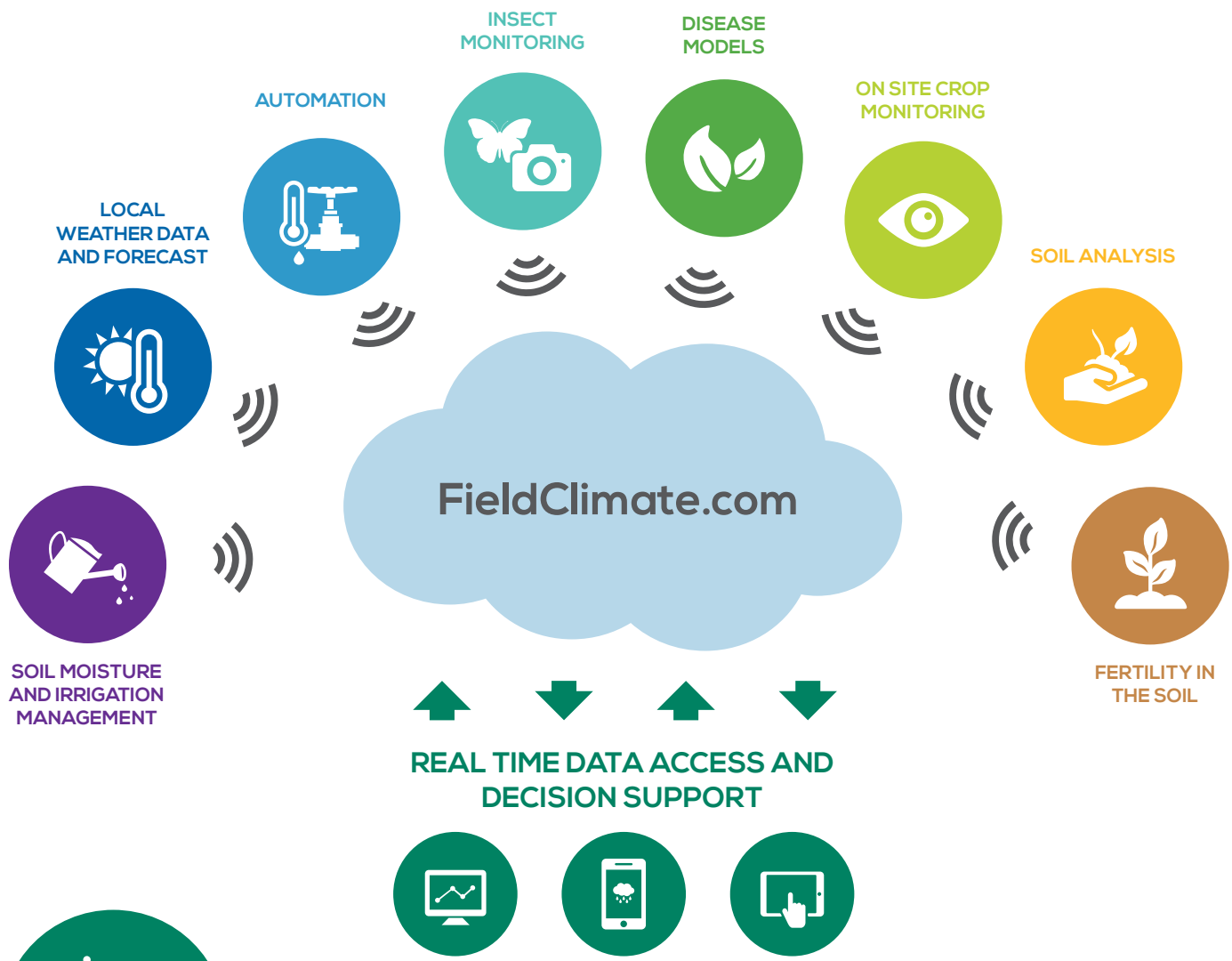
Holistic solutions for smart agriculture



COMPLETE SOLUTION

Why should you choose METOS®?

What makes a METOS® from Pessl Instruments unique?

For more than 30 years, Pessl Instruments has been offering tools for informed decision-making. A complete range of wireless, solar powered monitoring systems under the METOS® brand, and an online platform FieldClimate.com are applicable in all climate zones and can be used in various industries and for various purposes – from agriculture to research, hydrology, meteorology, flood warning and more. Over the years, METOS® has become a global brand with local support, and we are proud to say we managed to reach out to almost every corner of the world. We believe that durable, highly precise technology and support from our trained partners worldwide are the recipe for success. The METOS® brand lasts longer, performs better, is easier to use and offers you the lowest total cost of ownership.

METOS® by Pessl Instruments offers the best solution for your needs:

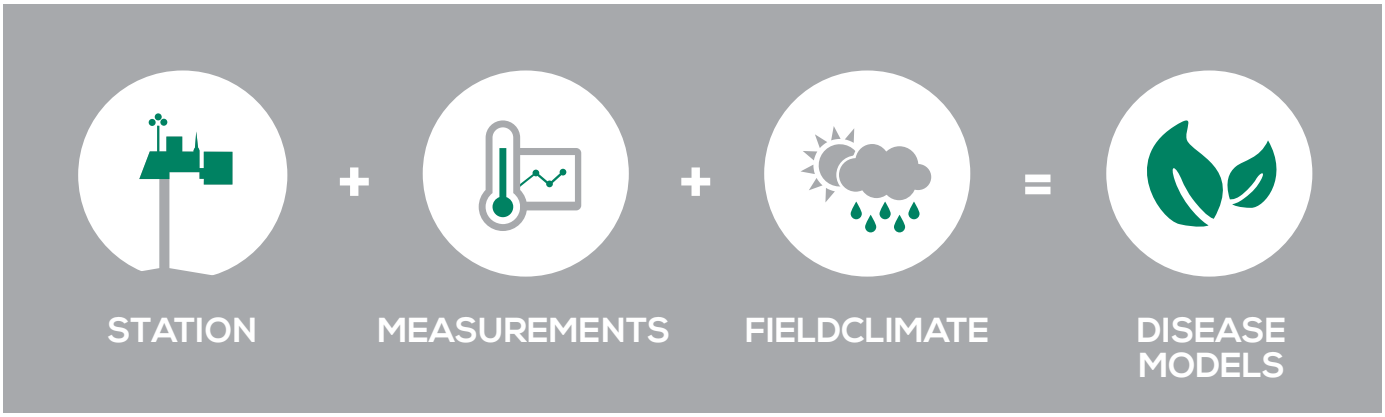
AGRICULTURE	Plant Protection Warning Insect Warning with TrapV® Frost and Heat Warning Irrigation Management and Wireless Automation Greenhouse and Irrigation Automation Plant Physiology Measurement High Resolution Remote Crop Image Monitoring (RECIM Technology) with CropVIEW® Microclimatic forecast with infield rain and temperature – a subscription based service iMeteoPRO® Soil Fertility Monitoring
RESEARCH	Climate Studies Global Warming Application Studies Soil Studies
METEOROLOGY	Measurements of all relevant meteorological parameters for all climate zones
HYDROLOGY	Flood and Draught Monitoring Well and Water Level Monitoring
WIND AND SOLAR INDUSTRY	Site Evaluation Studies Permanent Monitoring
MOBILE MONITORING ON VEHICLES	Spray Drift Information Logistic Information
STORAGE MONITORING	Permanent measurements of temperature and other relevant parameters for storage monitoring
AUTOMATION	Full intelligent automation with iMETOS ICA
SOIL ANALYSES	Mobile soil nutrient laboratory METOS® NPK

Partners:

GEOSYS Growing agriculture · 365FarmNet · Bayer CropScience · Sentek technologies · ONFARM GROW INFORMED · syngenta · ADAMA · BASF The Chemical Company

See full list on our website.

Disease Models



Why does the use of disease models make sense?

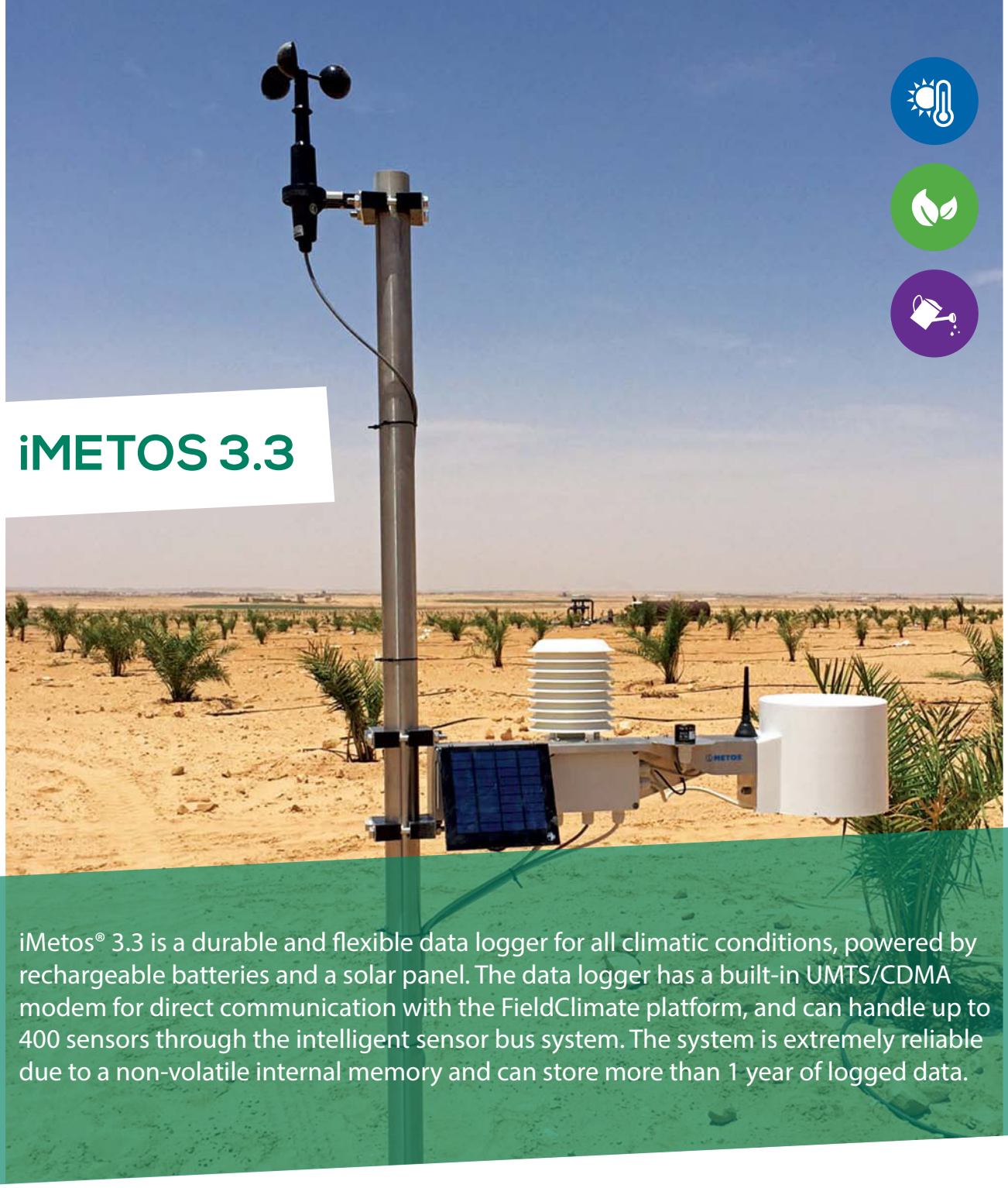
- Crops can be protected on time in the most critical stages of growing.
- Prevention of yield loss.
- You can spray less and only when it is necessary.
- It is easier to decide which actions need to be taken in the field and when.

Article 4 of the Directive 2009/128/EC states:

"Member States must adopt National Action Plans to set up their quantitative objectives, targets, measures and timetables to reduce risks and impacts of pesticide use on human health and the environment and to encourage the development and introduction of integrated pest management and of alternative approaches or techniques in order to reduce dependency on the use of pesticides".

Due to climatic warming, food security, regulatory laws, as well as economical and ecological aspects, "decision support systems for plant diseases" based on climatic conditions are a basic tool in this integrated pest management strategy.

We offer more than 80 disease models for more than 35 crops.



iMETOS 3.3

iMetos® 3.3 is a durable and flexible data logger for all climatic conditions, powered by rechargeable batteries and a solar panel. The data logger has a built-in UMTS/CDMA modem for direct communication with the FieldClimate platform, and can handle up to 400 sensors through the intelligent sensor bus system. The system is extremely reliable due to a non-volatile internal memory and can store more than 1 year of logged data.

Sensors Layout	3 fixed analogue inputs: wind speed, leaf wetness and rain gauge 5 digital inputs: automatic sensor recognition, supporting sensor chains (max. 400 sensors).
Memory	8MB flash memory
Internet Connectivity	GSM - GPRS, EDGE, HDSPA, CDMA, UMTS, Wi-Fi, Satellite
Alert	SMS, user configurable via website
Dimensions without sensors	41 cm L x 13 cm W x 7 cm H
Weight without sensors	2,2 kg
Measuring interval	5 minutes
Logging interval	15 – 120 min (user selectable)
Internet contact	User selectable
Battery	6V, 4.5AH, Operating range: -35°C to 80°C
Solar panel	Dimensions: 13,5 x 13,5 cm, 1,4 Watt solar panel
Part.no. TNS30	iMETOS® 3.3 base unit (no sensors included), Internet based logger, battery 4.5AH, 1,4 Watt solar panel, UMTS based, logger, mounting brackets

TrapV®

TrapV® is a patented combination of hardware and software solutions for remote monitoring of different agricultural and industrial insects. The TrapV®, with its integrated electronics and sticky plate, is light enough to be hung where needed. In the field, the device is self-sufficient, being powered by a solar panel and a battery. Multiple cameras take high-resolution pictures of the sticky plate within the TrapV®. Images are sent via GPRS to the TrapV® platform where they are analyzed with automatic detection of pest. The results are then visible on web or mobile devices. Control is real-time and the collected data can be used for further analysis.

Catchable pests with TrapV®:
Adoxophyes orana (Summer fruit tortrix), Agrotis segetum (Turnip moth), Amyelois transitella (Navel orangeworm), Anarsia lineatella (Peach twig borer), Archips podana (Fruit tree tortrix moth), Autographa gamma (Silver Y moth), Cydia funebrana (Plum fruit moth), Cydia molesta (Peach moth), Cydia pomonella (Codling moth), Epiphyas postvittana (Light brown apple moth), Eupoecilia ambiguella (European grape berry moth), Helicoverpa armigera (Cotton bollworm/Corn earworm), Helicoverpa punctigera (Native budworm), Lobesia botrana (European grapevine moth), Pandemis heparana (Apple brown tortrix), Phthorimaea operculella (Potato tuber moth), Plutella xylostella (Diamondback moth), Spodoptera frugiperda (Fall armyworm), Tuta absoluta (Tomato leafminer)

Memory	4 MB
Internet Connectivity	GSM - GPRS, EDGE, HDSPA, UMTS
GPS receiver	Yes
Dimensions of electronics without trap housing	18 cm L x 13 cm W x 35 cm H
Weight	0,93 kg
Internet contact interval	Max. 4 times per day (usually once a day)
Battery type	Lithium battery
Solar panel dimensions	18 x 13 cm, 7.2 Volt, 333 mA
Camera	4 x 2 megapixel cameras
Solar panel	Dimensions: 13,5 x 13,5 cm, 1,4 Watt solar panel
Part.no.	IM-TR TrapV® - Internet based monitoring device, solar panel, rechargeable battery, GPRS Logger, Interface for 1 temp. input (no sensors incl.), 1 year web service incl., GPS sensor

METOS® NPK

METOS® NPK is a completely new concept which integrates soil nutrient analyses into a single microchip. After the soil samples are extracted from the field, the sample preparation is done right on the field or in the office. The filtered sample solution is injected into a capillary to which a high electric voltage is applied. Many of the dissolved chemical compounds are electrically charged and start to migrate in the electric field. Every molecule type migrates with an individual speed through the liquid medium, depending on its molecule size and charge. The sample ingredients are separating and reach a detector one after another at different migration times. The concentration of each sample compound can be measured individually. This technology also works for on-site measurements in field conditions and can be operated by users without laboratory knowledge. The measured data is related to GPS coordinates and is sent via telecommunication to our web-cloud (www.fiedclimate.com), where it is saved and can be accessed by several users.
The possibility to transfer of the data to machine-readable formats is under development, allowing the automatic site-specific variable rate application with precision farm machinery (e.g. fertilizer spreaders, sprayer etc).

Minimum sample volume	0,250 ml
Measurement range	5 – 1000 ppm; 0,01 – 0,5 g / kg
Resolution	0,5 ppm; 1 mg / kg
Accuracy	For measurements of liquid concentrations (ppm): ±10 %
For measurements of soil concentrations (mg / kg):	±15 %
Chip lifetime	12 hours after braking of the sterile package
Battery capacity	12 hours of measuring time, 3 months in standby
Duration of one measurement	5 minutes

www.metos.at