F2F2F LogiQ

Farm 2 Field 2 Food

Food safety, quality control and complete traceability is of paramount importance to fulfil consumers' requirements.
Dinamica Generale is constantly improving precision farming and precision feeding solutions that generates effective results along the entire value chain.
The intelligence of the system is a cloud database that integrates farm specific data sources, while the big data analytics delivers recipes and prescription maps to improve animal health and soil treatment effectiveness to increase consumers' confidence in what they eat.

dinamica generale®
Electronic Solutions & Sensors

PRECISION AGRICULTURE TECHNOLOGY

SOLUTIONS

IN-FIELD

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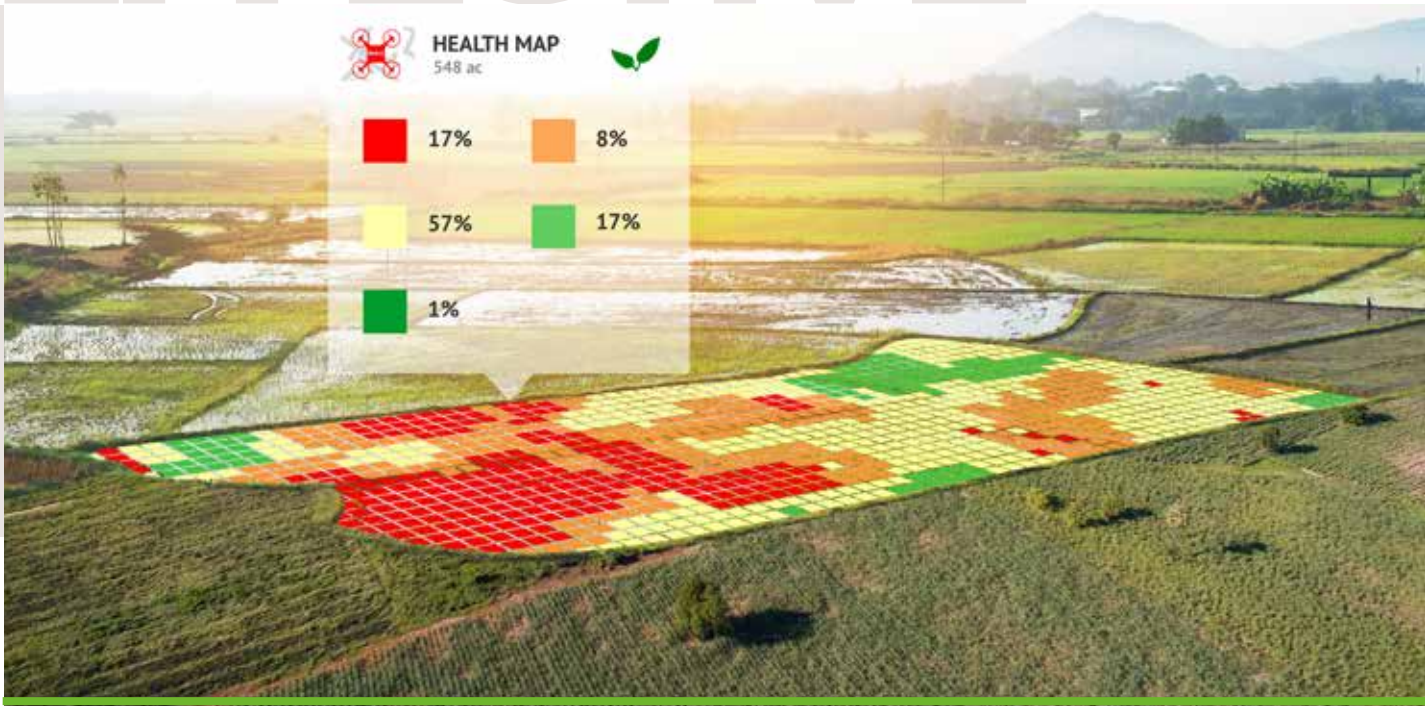
@dinamicagen

dinamica generale

IMPROVING PRODUCTIVITY AND EFFECTIVENESS OF FARMING PRACTICES TO HELP GROWERS GAIN MAXIMUM YIELDS

EFFECTIVE



Comprehensive technologies:

- Weighing and Control (weight indicators – load cells and sensors – accessories)
- In-Field Analysis (NIR, optical & imaging technologies)
- Data Management (Software and data exchange tools)

PRECISION AGRICULTURE HELPS GROWERS FULFILL THEIR POTENTIAL

Precision agriculture technologies and data analytics are transforming agriculture, making a farm's field operations more insight driven and efficient. Dinamica Generale is helping farmers and growers to boost yield at every stage of crop production cycle:

1. Soil preparation with organic manures (slurry and manure): The nutrient content of slurry and manure can be highly variable. NIR analysis provides better understanding of nutrient content and availability; while variable rate control enhances controlling and minimizes the environmental impact of nutrients runoff.

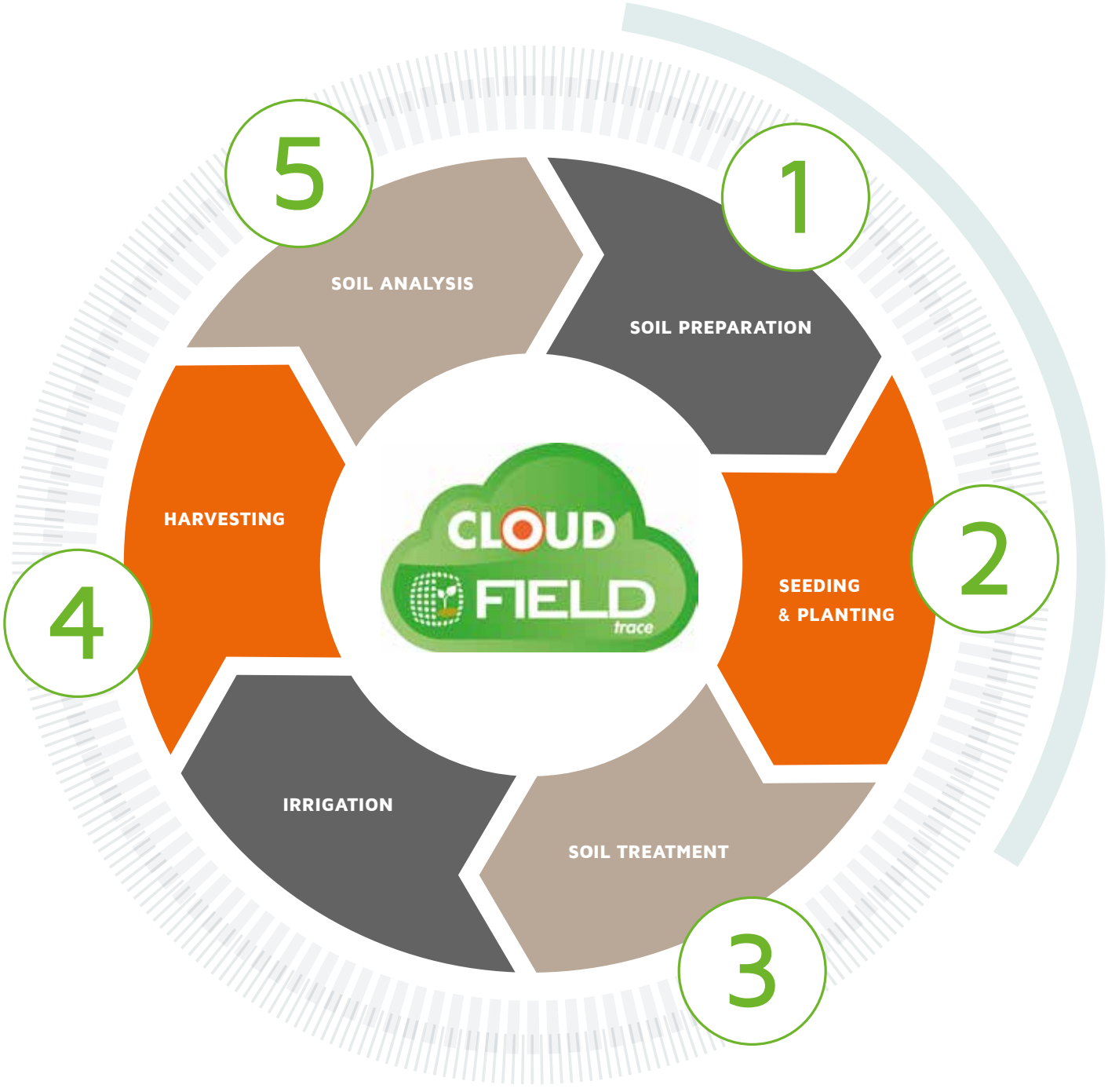
2. Seeding and Planting: For planters, implementing variable-rate helps farmers tailor their seeding rates to address field variability thereby increasing utilization efficiency. Dinamica Generale provides prescription maps for variable-rate seeding.

3. Soil treatment: herbicides and pesticide treatments are necessary because of a high incidence of weeds, insects or plant diseases on crop yield. Prescription maps for variable-rate treatment are reducing application costs with environmentally controlled applications.

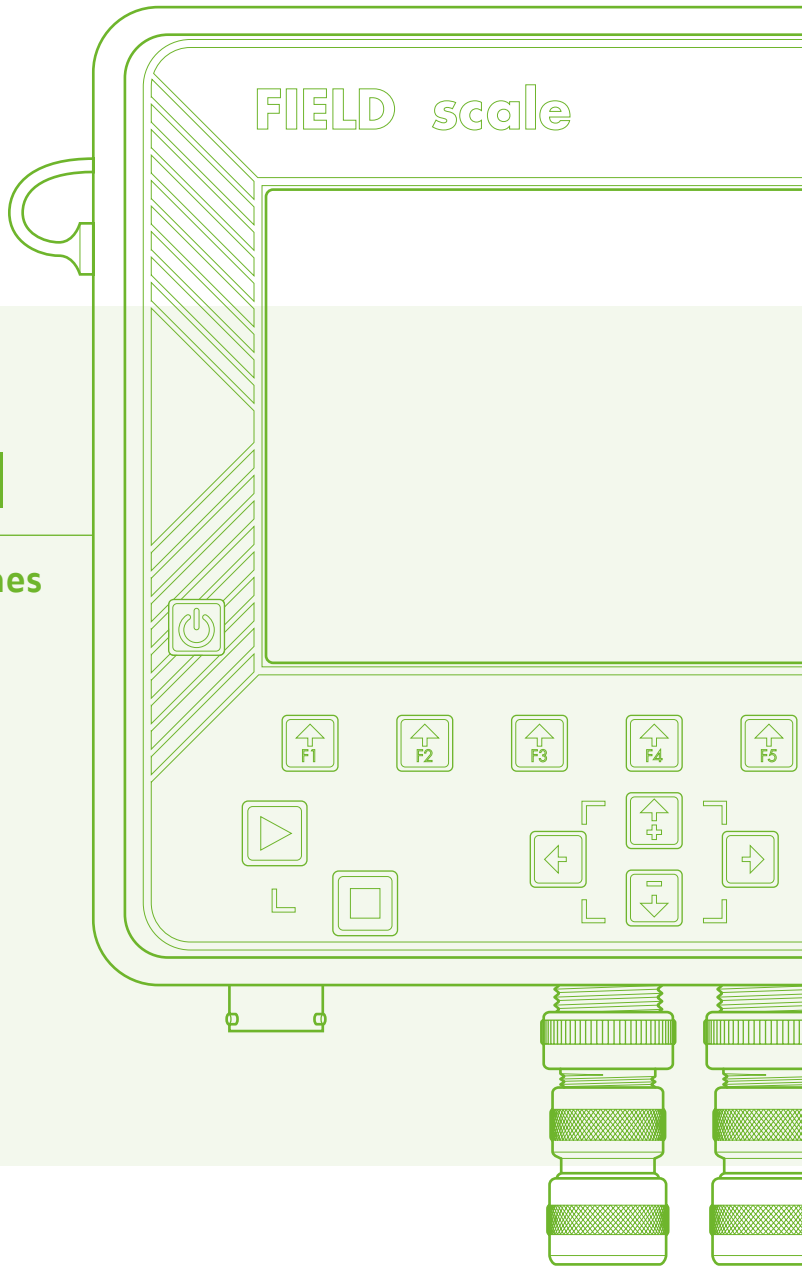
4. Harvesting: real time NIR analysis of dry matter and nutrients during harvesting on both forage harvesters and combines enables growers and farmers to understand the quality of their crops. Data are readable in real time on the display installed in the cabin and transferred wirelessly to the Field Trace Software in Cloud for transforming data into useful field information.

5. Soil Analysis: the integration of multiple sensors capable of acquiring different data simultaneously, characterizing the soil both above and below the ground permits Dinamica Generale to leverage information to make better and timely decisions for optimal treatments.

	TASKS	Dinamica Generale	GEOLINE	MACHINE APPLICATION
FIELD TRACE Cloud Software Integrates all precision farming technology and data. **FIELD TRACE** creates variable rate prescription maps on the basis of data aquired in the field to improve crop quality and yield	soil preparation	Distribution Control (variable rate application) + NIR Analysis		Manure Spreaders - Slurry Tanker
	seeding & planting	Weighing		Seeder - Planter
	soil treatment		Distribution Control (variable rate application)	Sprayer
	irrigation	-		-
	harvesting	Weighing + NIR Analysis		Forage Harvester - Combine - Grain cart - Forage Wagon - Baler
	soil analysis	NIR Analysis		-


5
SOIL ANALYSIS
1
SOIL PREPARATION
2
SEEDING
& PLANTING
3
SOIL TREATMENT
4
IRRIGATION
HARVESTING
CLOUD
FIELD
trace

1. Weighing and Control



TOTALLY INTEGRATED SOLUTIONS

1.1 Weight indicators for machines operating in field

The right indicator for any requirement

The comprehensive range of weight indicators offers integrated functionality and different options based on performance required.

What can you benefit?

- **Scalable, flexible range designed for different applications requirement (grain carts, forage wagons, balers etc...)**
- **Balanced price-performance ratio**
- **Minimization of downtimes thanks to integrated monitoring and diagnostics**
- **Multi-language user interface**
- **IP 68 protection for all weight indicators**

Model	**STAD Connect**
Description	Weight transmitter without user interface that transfers weight signals gathered from load cells to virtual terminals via CANopen communication protocol
Benefits	• Versatile device applied to a variety of applications and VT • Easy fit design makes it suitable to be integrated virtually everywhere • Robust and reliable for years • STADConnect can be added to every system at any time
Features	• Use of virtual terminals (VT) as scale interface • Control of scale functions from the cab • CANopen communication format • Integration with weight repeaters • Connection to all load cell models
Applications	The STAD Connect can be used in applications such as slurry and fertilizer spreaders, balers, seed tenders, forage wagons, grain carts

Model	**DG400/SB-ECU**
Description	Digital weighing indicator that gathers signals from load cells to provide accurate output in ISOBUS and CANJ1939 communication protocol
Benefits	• Easy to use with quick access to all functions • Perfect reading at every moment of the day, under the sun/rain • Safe usage at any weather condition • Balanced price-performance ratio • Flexible and reliable. Functions and configuration of DG400/SB-ECU weight indicator can be easily tailored to users' needs
Features	• Overload control for improved operator security • Working mode: total/partial and net/gross weight • WiNET™ port for plug & play connection of ALL accessories • All models of load cells can be connected • Equipped with ISOBUS and CANJ1939 communication protocol as standard
Applications	The DG400/SB-ECU can be used in applications such as slurry and fertilizer spreaders, balers, seed tenders, forage wagons, grain carts

Model	**FIELD Scale**
Description	Programmable multipurpose weight indicator for forage harvesting process
Benefits	• Built for controlling daily harvesting operation needs, the indicator matches both growers and contractors requirements. • Precise and flexible indicator to improve productivity • High connectivity performance ensures smooth integration with GPS systems and NIR Analyzers
Features	• Menu and user messages can be displayed within a vast number of languages available • The operator can edit name of fields, farms, customers in different languages for each loading and unloading operation • Component management • Loading/unloading management • Dynamic weighing of each harvested component in REAL TIME • Execution report at the end of each loading/unloading phase • 3G technology enables two-way communication between FIELD Scale and FIELD Trace software.
Applications	The FIELD Scale can be used in applications such as forage wagons, grain carts, trailers in general

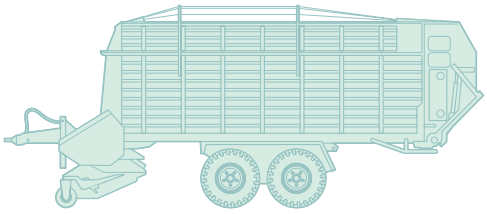
Model	**COMPACTOR Scale**
Description	Programmable weight indicator for bale compacting process
Benefits	• Total operational control from bale weighing and weight recording to adhesive label printing • Versatile multilanguage interface • Easy retrofit into existing baler compactors
Features	• **Single Component Weight Mode**: for bales made up of only one component (e.g. maize, grass, etc...) The system connected to a printer can print labels with weight of the bale, date, time, name of the component and nutrients (e.g. Dry Matter, ADF, NDF, Ash, Crude protein etc...) The values of NIR analysis have to be inserted manually by the operator. • **Multi Component Weight Mode**: for bales made up of forage mixes or TMR. The system connected to a printer can print labels with weight of the bale, date, time, name of the recipe, recipe components and their weight. Once the operator set the percentage of each component, the system will automatically recalculate the weight of each component based on the total weight • Double LCD display improves user interface with clear operator messages • The operator can edit name of Components, Distribution Points and Programs in different languages • Data storage: daily bale counter and total weight achieved • Internal diagnostics for checking all device functions • Working hours counter
Applications	The COMPACTOR Scale can be used in bale compacting applications

1.2 Load cells & sensors

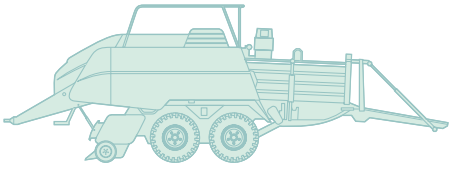
Load cells and sensors that convert a force into an electric signal, are used in a wide variety of force and weight monitoring applications.

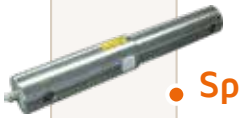
Dinamica Generale offers many load cell types, such as mobile, spindle, pin, flat, compression, strain sensors, pressure transducers, shear beam units. Choose from multiple configurations and sizes, but never compromise on precision and reliability, which are standard in each load cell manufactured by Dinamica Generale.

We have been producing load cells since the nineties to meet customer requirements over time. Even though we have an extensive product offering, if you cannot find just what you are looking for, we will work with you to develop a new product to suit your needs. Choose Dinamica Generale load cells for all your force-sensing needs.

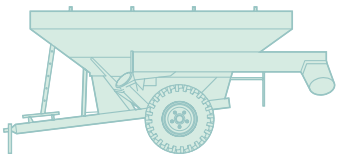


Mobile



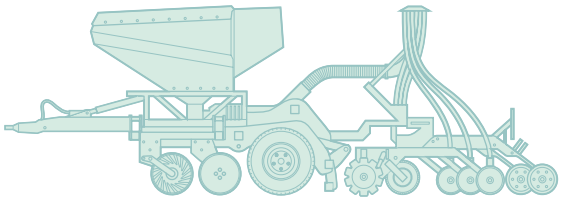


Spindle



Pin

Flat



Compression

Model	**Mobile**
Features	• High-quality alloy steel: dinamica generale special thermal treatment makes it stable for years • PTE cables: maximum protection against moisture, flame and temperature (operating temperature -50° C ~ 70° C) • High resistant coating (480h salt spray testing) • Aluminum protection: strain gauge protected against impact (mobile models) • Sealed strain gauges: sealing agent and industrial grade potting compound protect against harsh use in agricultural field • Temperature compensation as option • Custom mechanical design available on request • IP68 Protection rate
Benefits	• Full traceability of each sensor • Factory standard pre-calibration and testing procedure • Highly Accuracy • Wide range available

Measures		**from**	**to**
diameter	mm (in)	25 (0.98)	95 (3.74)
capacity	Kg (lb)	3.000 (6,614)	15.000 (33,069)

Type

Features

Spindle

Measures		from	to
diameter	mm (in)	63,5 (2.5)	114 (4.5)
capacity	Kg (lb)	5.000 (11,023)	13.000 (28,660)

Pin

Measures		from	to
diameter	mm (in)	35 (1.38)	60 (2.36)
capacity	Kg (lb)	3.000 (6,614)	10.000 (22,046)

Compression

Measures		from	to
length	mm (in)	108 (4.25)	
diameter	mm (in)	73 (2.87)	
capacity	Kg (lb)	13.608 (30,000)	22.680 (50,000)

Flat

Measures		from	to
length	mm (in)	350 (13.78)	450 (17.72)
capacity	Kg (lb)	5.000 (11,023)	10.000 (22,046)

Pressure Transducers

Measures		from	to
length	mm (in)	68 (2.68)	
diameter	mm (in)	25,4 (1)	
capacity	bar	50	1,000

Strain sensor

Measurement range ±500 µm/m

Strain Gauge (custom)

For more details please ask your Dinamica Generale Country Sales Manager

1.3 Accessories

We offer a variety of accessories to meet your needs.
From remote displays to gps and automation devices.

Remote Displays

Indicators' Compatibility	DG400/SB-ECU	Compactor Scale	FIELD Scale

Display:
5 digits
25 mm
(1 inches)

160 mm

Cab Display

Small size display, to be preferably used in the cabin of the machine or WIRELESS connected to each loading machine.

Display:
LED Matrix panel
60 mm
(2.4 inches)

275 mm

Extra Display

LED Display to control weight and components even from long distance (over 30 m - 100 feet). High performance display even in direct sunlight.

Display:
Red "diodes LED"
display 60 mm
(2.4 inches)

275 mm

Weight Repeater

High efficiency LED display to be visible in any lighting conditions. Clear and comfortable viewing of weight information from any position. Lower energy consumption. Shorter set-up time and easy connection to the weight indicator.

Indicators' Compatibility	DG 400/SB-ECU	FIELD Scale	NIR On Board

Model	**Printer**
Description	Records on a ticket the information about weight loaded or analysis saved on the weight indicator. Possibility to print the strings in the languages that are available on the indicator.
Benefits	• Easy tickets' personalization • Flexible and quick connection to Dinamica Generale weight indicators • Reduced maintenance costs
Features	• Product conforms to EEC directives • During manual operations, current weight value (TOTAL and/or PARTIAL) with date and time can be printed by simply pressing the PRINT key

Indicators' Compatibility	FIELD Scale	NIR On Board	GEOSpreader	GEOSystem

Model	**GPS Antenna**
Description	Compact GPS receiver compatible with main Dinamica Generale field operation indicators
Benefits	• Highly compact and shock resistant • Flexible and quick connection • High Performance, Reduced System Power and Cost
Features	• Support GPS, GLONASS, GALILEO and QZSS • Capable of receiving data from SBAS (WAAS, EGNOS, MSAS, GAGAN) • Support 99-channel GNSS • Built-in data logger • Up to 10 Hz update rate • Waterproof

Indicators' Compatibility	DG 400/SB-ECU	FIELD Scale	GEOSpreader

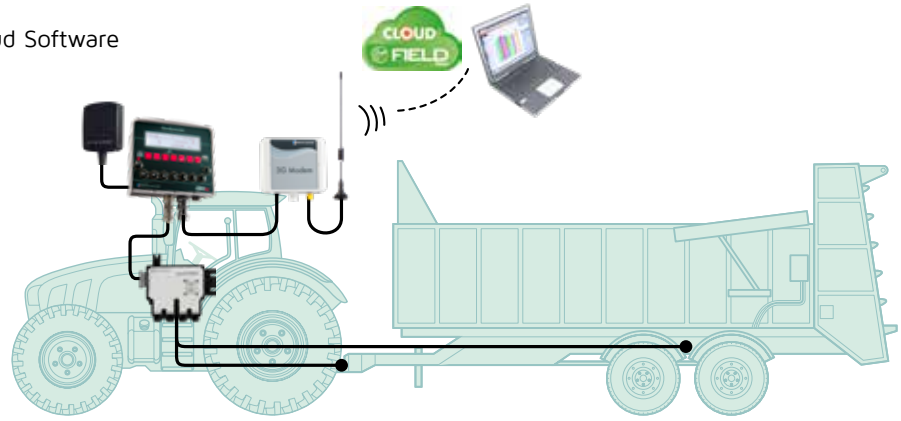
Model	**SensorLOGIC**
Description	Smart device that offsets and transforms different input analog signals into a CAN protocol
Benefits	• Rapid programming and calibration via PC • Easy and quick installation • Versatile connection
Features	• Calibration software developed on PC platform • Supporting up to 4 different input channels • For harsh environment • Waterproof • Integrated support brackets

1.3.1 Typical Configurations

Soil Preparation

System 1

- In-cab Indicator: GeoSpreader
- Sensors: Load Cells/Pressure Transducers/Strain Sensors
- Junction box: Standard (analog output)/SensorLogic (digital output)
- Geolocation: GPS antenna
- Data Management: Field Trace Cloud Software



System 2 - NIR analyzer on slurry tanker

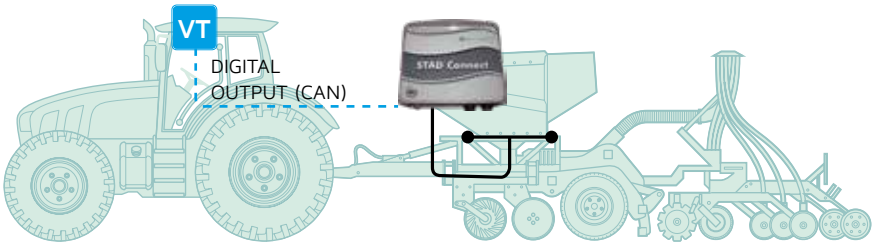
- In-cab Indicator: NIR On Board/VT
- Sensors: Load Cells
- Geolocation: GPS antenna
- NIR Analyzer: EvoNIR
- Data Management:

Field Trace Cloud Software

Seeding & Planting

System 3

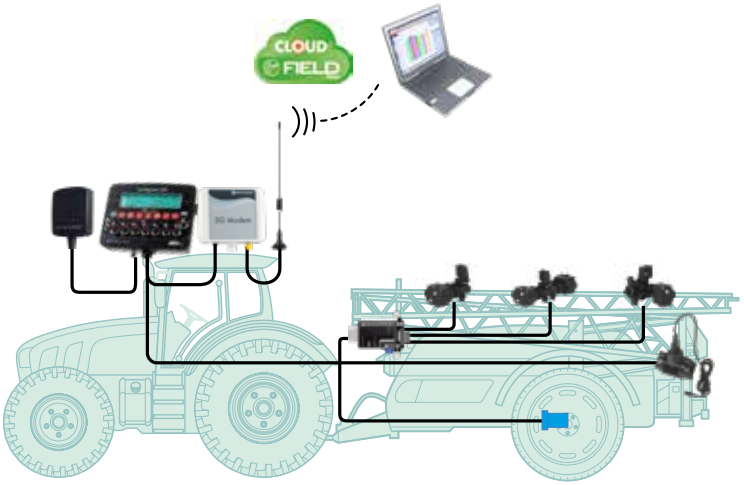
- In-cab Indicator: Stad Connect
- Sensors: Load cells



Soil Treatment

System 4

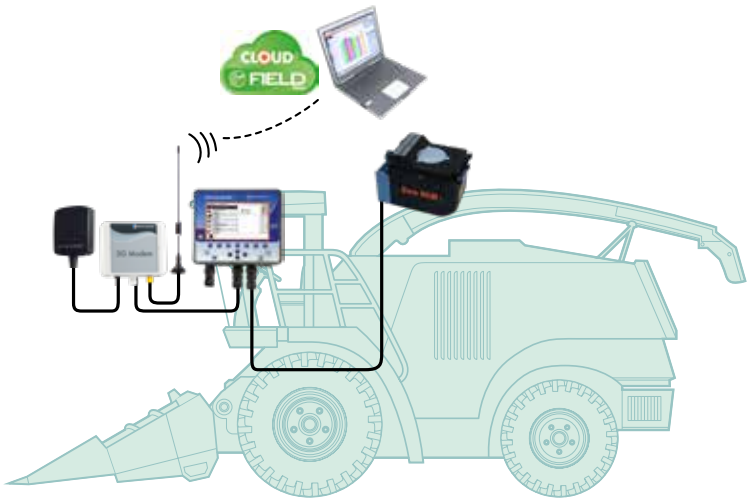
- In-cab Indicator: GeoSystemRange
- Connecting Box: Driver Box
- Geolocation: GPS antenna
- Valves: Variable Rate Valves
- Sensors: Speed Sensor and Flowmeter
- Data Management: Field Trace Cloud Software



Harvesting

System 5 - NIR analyzer on Forage Harvester

- In-cab Indicator: NIR On Board/Virtual Terminal
- Geolocation: GPS antenna
- Data Exchange: 3G Modem
- NIR Analyzer: EvoNIR
- Data Management: Field Trace Cloud Softwaree



System 6 - NIR analyzer on Combine

- In-cab Indicator: NIR On Board/Virtual Terminal
- Geolocation: GPS antenna
- Data Exchange: 3G Modem
- NIR Analyzer: EvoNIR
- Data Management: Field Trace Cloud Software

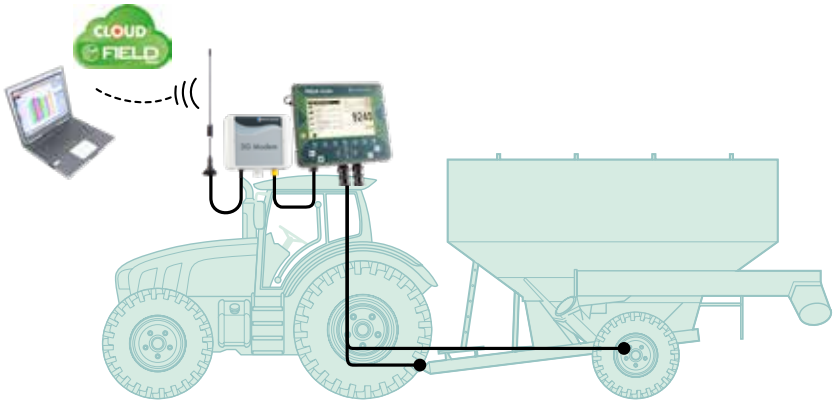
System 7 - NIR analyzer on balers

- In-cab Indicator: NIR On Board/Virtual Terminal
- Geolocation: GPS antenna
- Data Exchange: 3G Modem
- NIR Analyzer: EvoNIR
- Data Management:
Field Trace Cloud Software

NOTE: System for bale traceability available soon

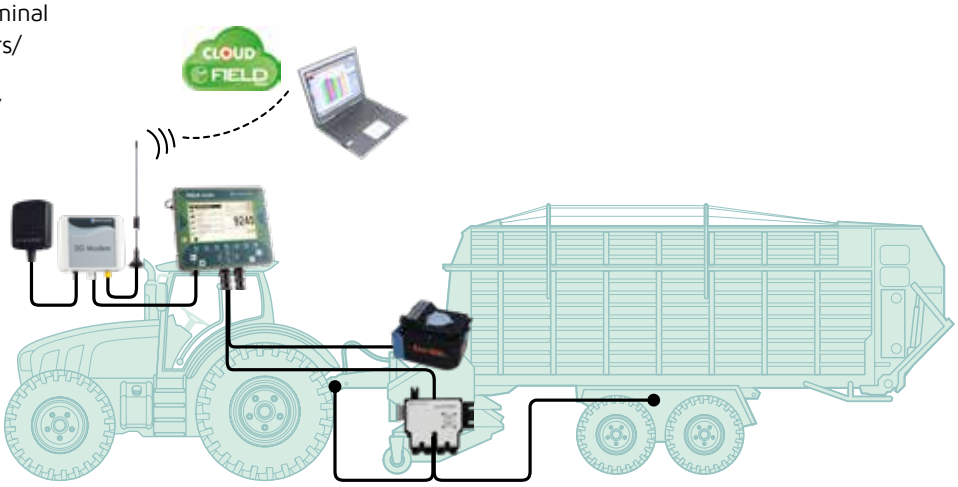
System 8

- In-cab Indicator: Field Scale
- Sensors: Load Cells
- Data Exchange: 3G Modem
- Data Management:
Field Trace Cloud Software



System 9 - NIR analyzer on forage wagons

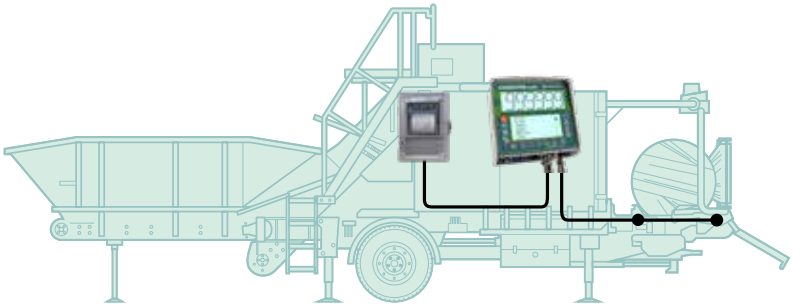
- In-cab Indicator: Field Scale/Virtual Terminal
- Sensors: Load Cells/Pressure Transducers/
Strain Sensors
- Junction box: Standard (analog output)/
SensorLogic (digital output)
- Data Exchange: 3G Modem
- Geolocation: GPS antenna
- NIR Analyzer: EvoNIR
- Data Management:
Field Trace Cloud Software



Compacting

System 10

- Indicator: Compactor Scale
- Sensors: Load Cells
- Printer



1.4 Systems

GeoSpreader

The GeoSpreader System is designed to control the distribution of manure, slurry and solid fertilizers.
The system ensures effective material spreading in accordance with following parameters:

- Planned spread factor
- Homogeneity of material distributed in relation with ground speed of the machine.

The system can be installed on manure spreader machines, trailed or pulled-up fertilizer spreaders and lets you control the speed of any belt or chain system.

Farmers can run the system in manual or auto mode and set forward speed, speed of belt or chain, spread width and target spread rate in t/ha or t/ac.
In manual mode, you can put on more or less material according to eye, while in the auto setting the machine will slow down and speed up to maintain the same application rate.

If you have load cells on your spreader, the system will calibrate itself in real-time.
It will also give you a record of how much has been put on to provide evidence of traceability and there is USB ports for storing and transfer the information.

The system will also work with GPS soil maps.
The GeoSpreader System is available for OEMs and farmers/contractors alike

Benefits	• Keep manure/fertilizer distribution homogeneous in accordance with planned spread factor • Fulfil local manure/slurry spreading regulations • Homogeneous distribution turns into: - higher yields and land productivity - increase profits - quick and high distribution efficiency • Excellent price-performance ratio

GeoSystem

GeoSystem is a controller for crop sprayers featuring precise application of plant-protection products. The GeoSystem spraying computer now allows all nozzles to be individually controlled, and operating the sprayer has become even more comfortable thanks to ISOBUS control.

Above all, substantial amounts of crop protection product can be saved due to precise control of application rates, especially along field edges or where crops grow unevenly.
The GeoSystem acts as the control centre for spraying functions. The computer controls all application parameters such as single-nozzle valve operation, application rates and hydraulic functions. It also controls the electric four-way valve on the suction side, which makes switching between spraying, suction from an external tank, suction from the front tank and clean water as easy as pressing a button - no need for the operator to dismount.

The display layout of operating elements can be flexibly configured to ensure that farmers are always able to access the most important parameters at a glance and take any action as needed, for example by switching off individual nozzles or adjusting the application rate.

The GeoSystem sprayer controller is integrated with FIELD Trace Software in Cloud.

NEW

Wireless Hydraulic Control

SMART Control

Completely Portable Device - in the tractor - in the field - on the farm

Smart Control is the one-stop portable wireless solution for hydraulic functions.

The hydraulic functions are highly customizable managing up to 24 solenoid valves with internal sound alarm and color display for high visibility. Open/Close discharge doors, activation of belt conveyors are just a few functions that Smart Control is capable of controlling.

Furthermore, all functions controlled by the Smart Control can be easily programmed thanks to the Smart i-Con software, a specific cloud tool designed for configuring your device to suit your needs.

Smart i-CON Cloud Tool

Benefits	• Save time and fuel during loading and unloading by controlling the hydraulic functions • Highly customizable solution in terms of functions and graphic design to fit every customer's needs • All hydraulic functionality - at the touch of your fingertips

2. In Field Analysis

2.1 NIR Technology

2.1.1 Portable NIR Analyzers

2.1.2 On-Board NIR Analyzers

2.1 NIR Techology

Getting more value from crops

In recent years, there has been a growing awareness of the increasing value in using NIR technology in field. The desire to properly value crops is driving this trend.

How **NIR** sensors can help with?

Turning real time harvesting quality data into decision making information

NIR Sensors by Dinamica Generale can be easily integrated into field-specific equipment as aftermarket installation to measure and monitor the crop's moisture and nutrients in real time with outstanding accuracy.

The NIR technology is utilized in many types of farm equipment such as combines, forage harvesters, balers, forage wagons, slurry tankers, feed mixers to optimize harvesting process and feed distribution to animals to reach the maximum efficiency and traceability from field to farm to fork.

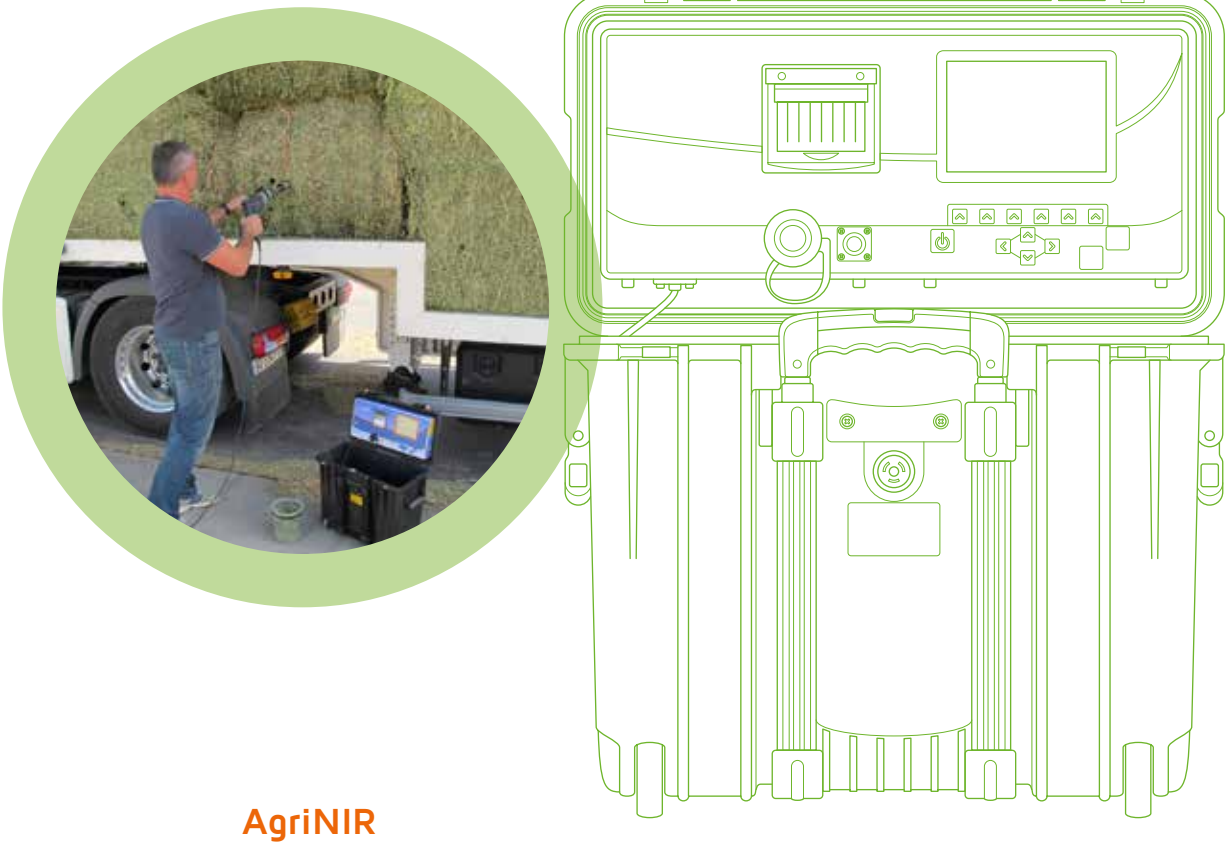
The NIR systems enable to:
- Define the real quality of grains & crop during harvesting
- Increase profitability and cash flow: invoice on quality not quantity
- Calculate the right amount of inoculants to spray on bales
- Provide decision making info for each bale in terms of nutrients to feed animals
- Precise application of plant nutrient balances in forage maize, grass, wheat (NIR on Slurry Tankers)
- Reduce costs on mineral fertilizers and sampling costs (NIR on Slurry Tankers)

The integration between NIR systems and the Field Trace Software in the Cloud permits farmers and growers to quantify good and bad areas of each field, create yield maps and learn from previous management practices to apply field-specific strategies year after year.

Checking forage DM to determine when to harvest

In recent times, there has been a shift in the target DM at harvest for ensiling forages. The trend is to harvest them at a slightly higher dry matter. This reduces the runoff from the silo and generally improves he efficiency and quality of the silage fermentation process. Wet silages (<30% DM) have a higher risk of a prolonged early fermentation phase that can result in high levels of acetic acid in corn silage. In some herds, high levels of acetic acid in silages are associated with poor dry matter intakes and low or variable milk production. In alfalfa silages, the risk of a high butyric acid or clostridial fermentation increase as forage DM drops below 30%. These silages are related to variable intakes and a higher risk of fresh cow metabolic problems. A lot of these potential problems can be avoided by just being careful to not harvest and ensile forages in bunker silos that are < 32-33% DM. Samples from windrows or different fields can be monitored for DM content to determine when they should be chopped. This simple step can go a long way in improving the fermentation quality of the silage and the animal performance obtained when using the silage in animal rations.

2.1.1 Portable NIR Analyzers



AgriNIR

Your own lab on-the-go

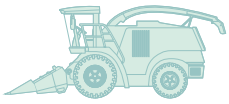
Portable NIR Analyzer for Forages and Grains
Dinamica Generale introduced the AgriNIR back in 2008.
AgriNIR is tried and tested portable NIR analyzer for forages and grains that measures the percentage of moisture (dry matter), crude protein, starch, ADF, NDF, ash in seconds.

- 7 ingredients as standard on each analyzer
- Connects to computer via USB port and wi-fi
- Print out reports right after the analysis thanks to the built-in printer.

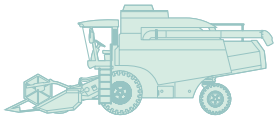
Determining when to harvest forages is extremely important and sometimes difficult. Thanks to AgriNIR the right timing of cutting can be easily determined analyzing dry matter contents.

Benefits	• **Reliable**. The highest possible accuracy on-site. • **Robust**. Sturdy case, full-portability, minimum maintenance • **Versatile**. Determine the right time to harvest. Check quality of feed • purchased. Control feed inventory. • **Profitable**. Value for money • **Quick and easy to use**. NIR analysis in seconds!

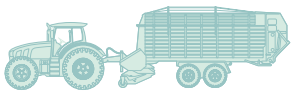
2.1.2 On Board NIR Analyzers



Forage Harvester



Combine



Forage wagons

Baler

NIR On Board for accurate nutrient analysis in real-time

Mounted on the crop spout of forage harvesters combines and balers, NIR On Board measures the following nutrients in real time: Moisture, Starch, Crude Protein, ADF, NDF, Ash, Crude Fat, Crude Fiber, ADL, RFV, NEL, NDFD 30, DOM 24h NDFD 24h, DStarch12h, Brix Q Fiber). Thanks to Dinamica Generale NIR On Board, farmers and contractors will be able to determine crop and slurry nutrient quality on-the-go.

No set-up, continuous update

NIR On Board is calibrated in accordance with factory standard procedures. To get the most out of NIR On Board, the NIR evolution Cloud Software (included in the service contract of your device) enables to align the NIR On Board to your condition of use:

-Verify quality of readings at any time
-Verify characteristics of ingredients
-Update calibrations to keep your instrument reliable over time

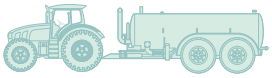
Outstanding accuracy in any crop

The system provides accurate results with different crops. NIR On Board takes the guesswork out of producing high quality silage with outstanding accuracy. This valuable real-time information translates into excellent traceability, a great advantage for dairy farmers when preparing feed with mixers for their livestock or for sale. They will be able to precisely adjust rations in order to match their nutritionists' feeding recommendations. As a result, farmers will provide high quality feed every day with the consistency that is so important for livestock.
Add to this real-time measurement, it also has the advantage to transform the way farmers manage their feedstocks and plan their future choice of crop varieties.
The data provided by the NIR On Board system is also very valuable for the biogas industry, which uses the exact crop composition to fine tune the biogas production process.
Dinamica Generale recommends updating calibrations once a year, with the NIR On Board system this can be easily done through the NIR Evolution Cloud Software.
The data collected by the NIR On Board system are quickly transferred to the farm's PC with USB key or wirelessly.

Better inoculant management

Results provided by the NIR On Board system are the basis for a more precise application of silage inoculants at harvest because rates can be adjusted according to crop and dry matter readings. The result is higher quality silage with greater feed value and less spoilage.
NIR On Board for crops analysis

Application	**Forage Harvester/Combine/Forage Wagon**	**Baler**
Features	Trace all activities out in field • NIR analysis with Granularity • GPS mapping • Real time 3G data exchange with Field Trace Software in the Cloud	
Main Benefits	• Define the real quality of grains & crop during harvesting • Negotiating the price by quality (not only by quality) means increasing business profit	• Calculate the right amount of inoculants to spray on bales • Provide decision making info for each bale in terms of nutrients to feed animals



Slurry Tanker

Precision slurry application with NIR technology

Precise application of slurry according to pre-determined crop nutrient requirements and regulations is now possible using near infrared technology.
The same NIR On Board system applied to forage harvesters for on-the-move analysis can be mounted as a stand-alone kit for slurry tankers for measuring POL N, P205, K20)..

Many farmers spread animal slurry on their crops; what is the main advantage of using The NIR technology on slurry tankers?

• Slurry produces a significant financial benefit compared to artificial fertilizers
• Analyzing a batch of slurry in advance with a Near Infra-Red Sensor makes spreading more accurate
• The use of NIR sensor produces a saving between € 30 and € 60 per hectare for those farmers who already use slurry. The difference with using artificial fertilizer is even greater; the saving is of approximately € 140 per hectare.

Why measuring nutrients in the slurry is so important.

There is a very large variation of dry matter and nutrients in animal slurry. The variation depends on the type of animal, forage, water mixing and stirring. For more precise fertilization application, monitoring slurry prior to spreading at the farm would be advantageous.
Then farmers and contractors could avoid excessive fertilization and losses of nutrients, which is beneficial for both environment and the farm economy. Although there is the possibility to sample slurry basins for laboratory analysis, representative sampling is not an easy task and stirring of the basins may not be sufficient to ensure homogeneity between spreader loads. Analyzing the slurry quality on-line at a point of narrow passage of the slurry (pipe for filling the spreader or a transport pipe on the spreader during spreading) is the task accomplished by the NIR sensor developed by Dinamica Generale.

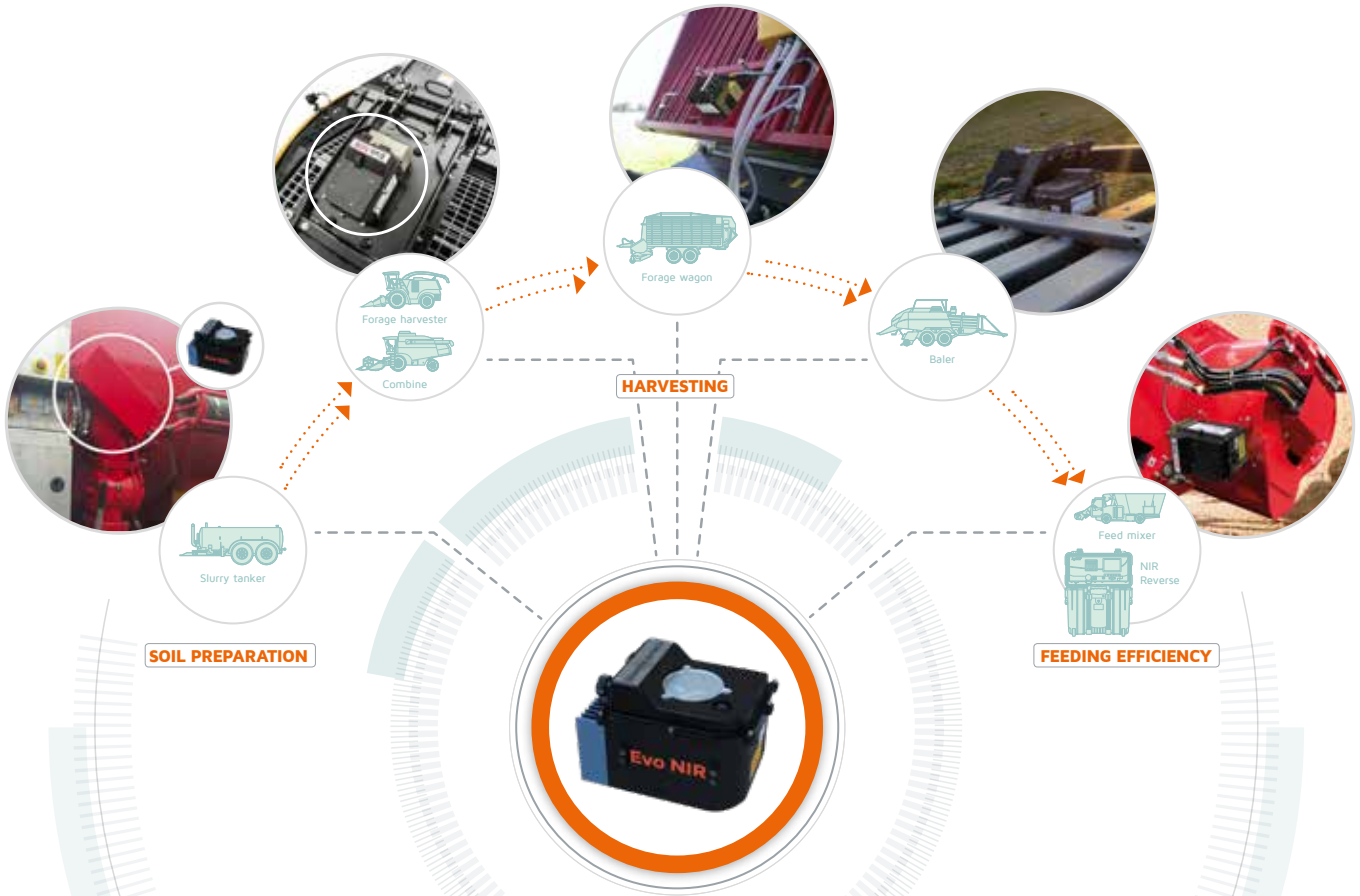
Application	**Slurry Tanker (stand alone kit)**	**Slurry Tanker (machine integrated)**
Features	Trace all activities out in field: • NIR analysis with Granularity • GPS mapping • Real time 3G data exchange with Field Trace Software in the Cloud	• For virtual terminal with built-in ISOBUS task controller • The Evo NIR Analyzer can also be equipped with CANJ1939 protocol
Main Benefits	• More precise application of plant nutrient balances in forage maize, grass, wheat • Immediate information available • Enables automatic rate control based on kg/ton of nutrient • Easier and more precise slurry documentation for local regulations compliance • Cost savings on: • mineral fertilisers • sampling costs • Increasing profitability and cash flow: invoice on quality not quantity	

Evo NIR, the innovative NIR analyzer for multiple applications

The new Evo NIR sensor features the ISOBUS communication protocol for connecting the device to all virtual terminals on the market.
The new NIR sensor installed in different machines analyzes and tracks the quality of crops, slurry, bales, up to the control of animal nutrition. The versatility of the sensor increases the efficiency of use, speeds-up the return on investment and allows collecting data into the Big Data Cloud Software for the generation of prescription maps and specific reports to support decisions.
Whether virtual terminals with built-in ISOBUS task controller are used, the Evo NIR Analyzer with ISOBUS protocol is capable of controlling the system with specific Object Pool.
The Evo NIR Analyzer is also equipped with CANJ1939 protocol.

Versatile like no one
The Evo NIR Analyzer can be installed in different type of machines in the market. From Balers, Combines and Forage Harvesters up to Slurry Tankers and Compactors.

Managing Evo NIR with the NIR Evolution Cloud software makes your work more efficient and sustainable.

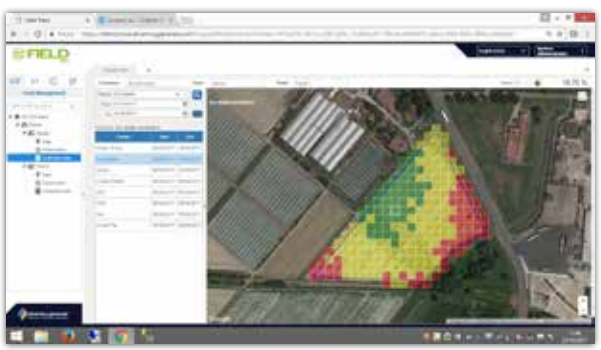


3. Data Management

SIMPLE

3.1 Field Management Software

3.1 Field Management Software



FIELD Trace
Make Precision Decisions

Field Trace is the specialized software for managing in-field operations from soil preparation to harvesting. All data are collected into the Big Data Cloud Software to turn real-time field information into actionable decisions.

Field Task Management
Field Trace lets you plan, monitor and analyze all activities on your farms easily. Fertilization, harvesting, crop protection and all other activities are managed easily. With the Field Trace software in Cloud you can track all field processes remotely, view georeferenced application maps, monitor activities and fleet.
We understand that managing decisions is the key element in precision agriculture applications. You may have data from different systems and sources; Field Trace Software in Cloud supports as many data types as possible.

Application
- Create variable rate application maps and prescriptions.
- Analyze harvest data by field area.
- Track variable rate liquid and/or granular application operations.
- Create reports and charts displaying important performance details on each field.

Benefits
- Optimize field practices and save time by wirelessly transferring prescription maps from software to in-cab indicator
- Make better decisions thanks to seamlessly integration of yield data, georeferencing maps, aerial digital photography, soil maps, weather stations data and NIR Analysis
- Improve crop quality and yield bottom line

3.2 NIR Analysis Management

NIR EVOLUTION is a cloud software provided with the purchase of each and every NIR analyzer manufactured by Dinamica Generale.
The use of NIR EVOLUTION enables:

- initial verification of your NIR device.
- keeping your analyzer always up-to-date (update of calibrations and firmware).
- alignment between NIR analyzer and test lab to always perform accurate analysis.

benefits

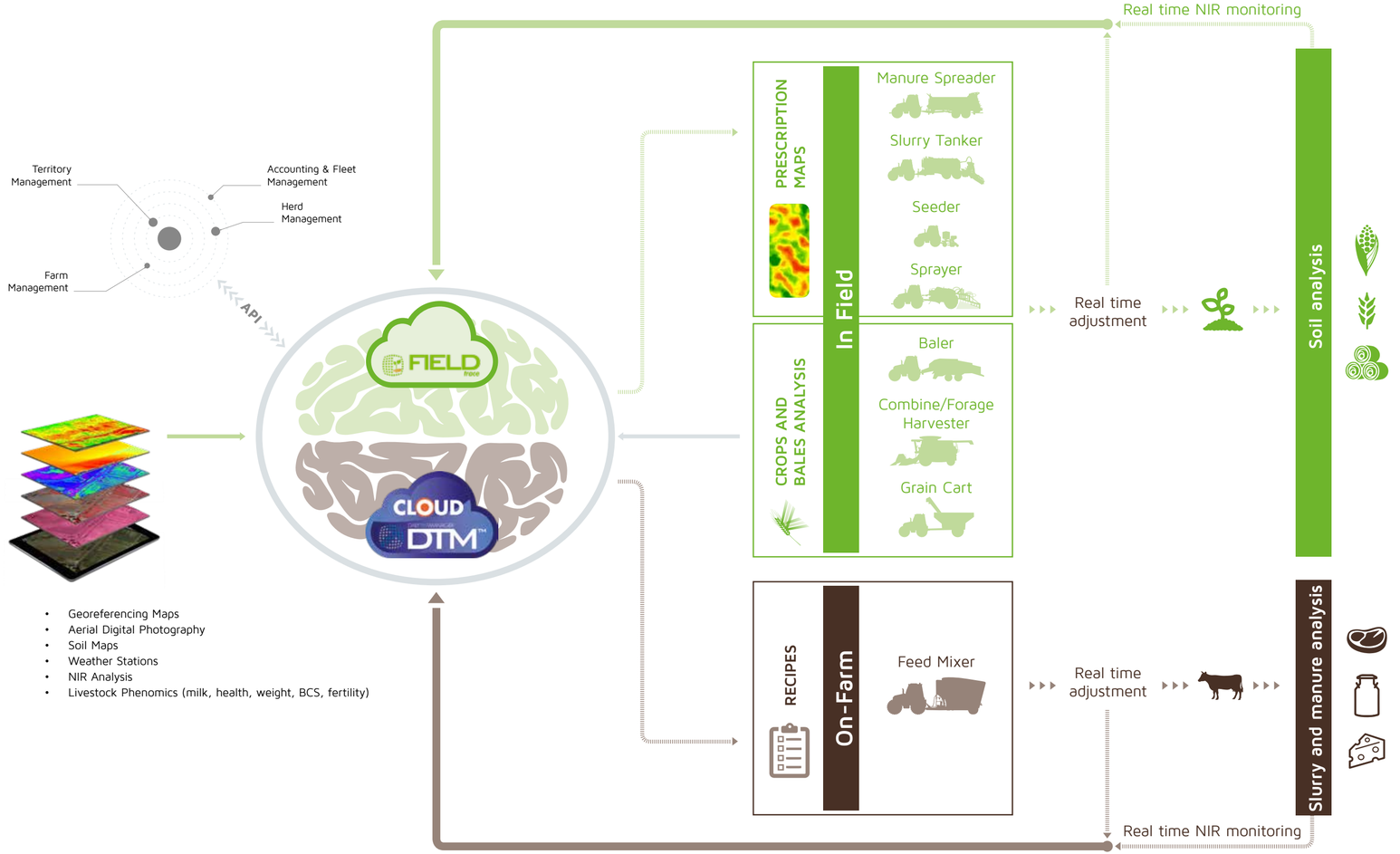
Managing
your NIR device with
the NIR Evolution cloud software
makes your work more efficient and
sustainable.

• Quick and safe access to new calibration update
NIR Evolution ensures that your instruments is using the latest calibration updates. This means better prediction accuracy and greater effectiveness from your time on-farm.

• Reliable predictions
NIR Evolution enables you to improve prediction performance of your NIR device. This constant monitoring and prediction improvement increases the performance of your daily analysis.

• Save time and money
By gaining control over sampling and predictions, feeding analysis becomes more efficient. This means no more time-consuming for lab analysis, no more lost documents.

Index


Real time NIR monitoring
Territory Management
Accounting & Fleet Management
Herd Management
Farm Management
API
FIELD
CLOUD
DTM
PRESCRIPTION MAPS
Manure Spreader
Slurry Tanker
Seeder
Sprayer
In Field
CROPS AND BALES ANALYSIS
Baler
Combine/Forage Harvester
Grain Cart
Real time adjustment
Soil analysis
RECIPES
On-Farm
Feed Mixer
Real time adjustment
Slurry and manure analysis
Real time NIR monitoring
Georeferencing Maps
Aerial Digital Photography
Soil Maps
Weather Stations
NIR Analysis
Livestock Phenomics (milk, health, weight, BCS, fertility)