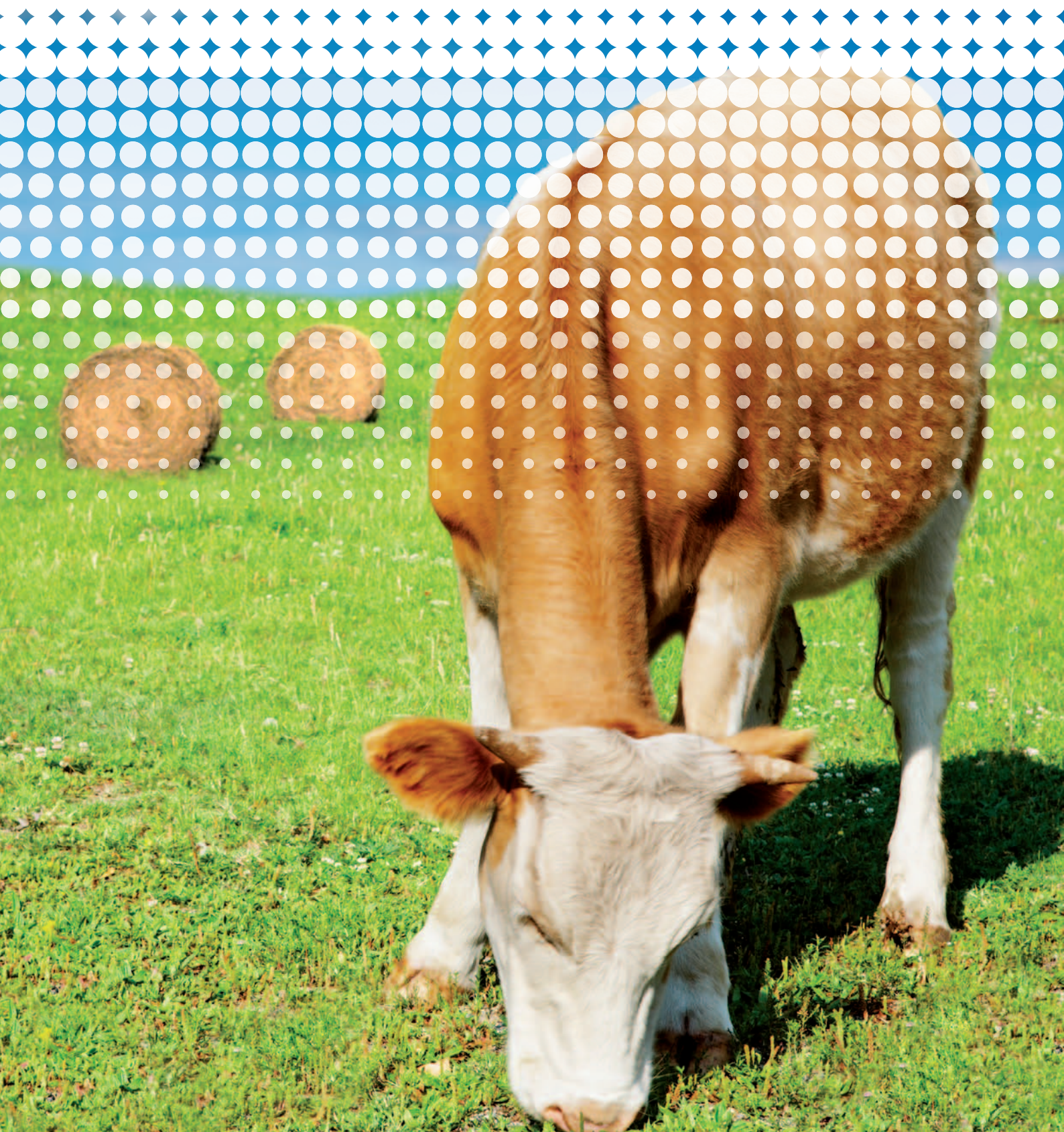




# AgriNIR™

PORTABLE ANALYZER FOR FORAGES



# AgriNIR™

the  
*bread-and-butter*  
instrument  
for any farmer

## THE PRODUCT

AgriNIR™ is a portable NIR analyzer for forages and grains that quantifies the percentage of moisture (dry matter), crude protein, starch, ADF, NDF and ash of the plant material being analyzed in seconds.

## FEATURES AND ADVANTAGES

### **Comfort**

Analysis performed on-site and in real time

### **Immediate results**

A complete analysis approximately in 60 seconds

### **Costs**

Low analytical costs (generally just depreciation)

### **Efficiency**

Virtually no sample preparation;

... a grab it and analyze it procedure;  
opportunity to increase measured replicates.

*More replicates mean more precision.*

### **Convenient**

The instrument is contained in a compact case.

All that is required for analysis in one place.

As soon as power is supplied and lamp is stabilized, sample analysis can begin.

### **Ready for Use**

The instrument is pre-loaded with NIR calibration curves for 7 NIR Families (Crop Families) and with a total of 44 curves

### **Maintenance**

Using a USB connection and the Internet there is the opportunity for constant and immediate diagnosis of the instrument and the predicted results



## VALIDATION

- AgriNIR™ has been validated and approved by University of Padua (Italy), Department of Animal Science in 2007.
- AgriNIR™ has been validated and approved by University of Cracow (Poland), Department of Animal Nutrition in 2008.
- All reference chemical Analysis in USA are conducted by commercial forage laboratories rated A or B by annual NFTA testing (National Forage Testing Association, USA).

**A laboratory in a trolley:**

- all of the components except the external power supply (AC or DC) are enclosed in high-impact transport case, that is equipped with wheels and an extendable handle

*Easy*  
to move  
& to operate

**AgriNIR™ system****The system components:**

- sample holding cup
- NIR light source and detector
- rugged, high capacity computing device
- user Interface with keyboard, display, printer and USB port 110v AC and 12v DC
- AC power cable
- lighter adapter for field use

**Optional:**

- GSM/GPRS communication mobile

**SIZE****Material:** ABS**Dimensions:** 50 x 30 x 46 cm (approximately 20 x 12 x 18 inches)**Weight:** 19 Kg (approximately 42 pounds)

ABS provides a rugged and sturdy enclosure for measuring components

**ACCURACY****Humidity or Moisture:** 2%**Starch:** 3%**Crude Protein:** 3%**ADF:** 3%**NDF:** 3%**Ash:** 3%**Crude Fat:** 3%**USER INTERFACE****Keys:** Soft**Display:** LCD 1/4 VGA

Easy to read on-screen instructions make for easy operation

**OPERATING ENVIRONMENT****Working temperature**

0°C / +40°C (104°F)

**Power supply**

110 - 220v AC

(external power supply included)

9 - 32v DC

(lighter plug or vehicle battery clips included)

## NIR FAMILIES (CROP FAMILIES)

In this table, the 44 NIR calibration curves (Y) are shown in their relationship to each of the 7 NIR Families (Crop Families).

NIR chemical parameters that can be analyzed in every NIR Family	NIR CHEMICAL PARAMETERS						
	Humidity or Moisture	Starch	Crude Protein	ADF	NDF	Ash	Crude Fat
<b>NIR FAMILIES (Crop Families)</b>							
Corn Silage	YES	YES	YES	YES	YES	YES	YES
Hay	YES	NO	YES	YES	YES	YES	YES
High Moisture Corn	YES	YES	YES	YES	YES	YES	YES
Alfalfa Hay	YES	NO	YES	YES	YES	YES	YES
Grass Silage	YES	NO	YES	YES	YES	YES	YES
TMR	YES	YES	YES	YES	YES	YES	YES
Soybean Flour	YES	NO	YES	NO	YES	YES	YES

44 calibration curves included by default in the instrument so that you can immediately start to analyze your material on site and begin seeing the advantages offered by using AgriNIR™. New NIR Families (Crop Families) or Chemical Parameters calibration curves can be developed by specific customer request (C0/C1/C2 Maintenance Programs).

## OTHER FAMILIES ON REQUEST

NIR CHEMICAL PARAMETERS							
NIR FAMILIES (Crop Families)	Humidity or Moisture	Starch	Crude Protein	ADF	NDF	Ash	Crude Fat
Corn Grain	YES	YES	YES	NO	YES	YES	YES
Wheat Grain	YES	YES	YES	NO	YES	YES	YES

NIR CHEMICAL PARAMETERS							
NIR FAMILIES (Crop Families)	Humidity or Moisture	Starch	Crude Protein	ADF	NDF	Ash	Crude Fat
Green Maize	YES	NO	NO	NO	NO	NO	NO
Green Grass	YES	NO	NO	NO	NO	NO	NO

## HOW TO USE IT

- Put the material in the sampling cup
- Insert the sampling cup into the AgriNIR™
- Start the analysis, and read the result on the display; the analysis results can be printed on ticket or transferred to PC



# DG NIR MANAGER

SOFTWARE SUITE

# a Software Suite for NIR experts

NIR experts looking for new development

## THE PRODUCT

Software suite for the creation and the updating of the calibration curves: new NIR families (Crop Families) or new Chemical Parameters of the existing NIR Families (Crop Families).

Useful tool for NIR experts able to independently update the calibration curves.

A key point for accurate readings.

## MAIN FEATURES

### NIR Information Manager

Definition of new NIR Families (Crop Families) and related chemical parameters analyzed

### Spectra Collection Manager

Acquisition of spectra scanned by AgriNIR™ and their management in an SQL DB

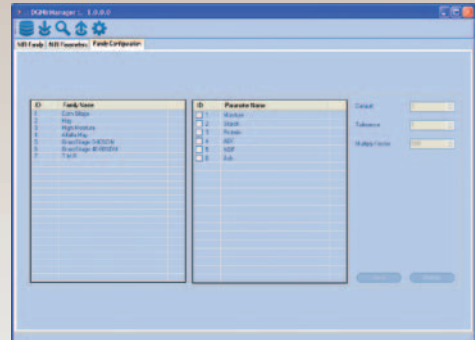
### Spectra and Curves Manager

Mathematical treatment of spectra thanks to libraries of algorithms available and capability to export and import data to/from standard software for MULTIVARIATE STATISTICAL ANALYSIS

### AgriNIR™ Data Manager

Creation of files ready for updating AgriNIR™ device; all data are protected

### NIR INFORMATION MANAGER



### SPECTRA COLLECTION MANAGER



### SPECTRA AND CURVES MANAGER



### AGRINIR™ DATA MANAGER



## DG NIR MANAGER

Updating of the calibration curves can be done with a USB key or by GSM/GPRS.

*Different Solutions for Different Customers.  
Customization is key to our philosophy.*

## MAINTENANCE OF NIR CALIBRATION CURVES

TASKS	Model Maintenance Classes		
	K0*	K1	K2
Get samples from field, representative of your working area (10 for each family to be upgraded).	user	user	user
Scan samples using AgriNIR™ and save SPECTRA on USB key, tagging each sample SPECTRA and physical sample with a unique ID.	user	user	user
SEND to dg/a.p.** physical samples with unique ID and USB key with all SPECTRA, previously stored.	user	----	user
Perform reference chemical analysis on each physical samples using your reference LAB.	user	user	dg/a.p.**
Send to dg/a.p.** results of reference chemical analysis and USB key with all SPECTRA, previously stored.	user	user	----
Data evaluation and mathematical treatments (based on dg/a.p.** NIR Manager sw package).	user	dg/a.p.**	dg/a.p.**
Development of the new calibration curves.	user	dg/a.p.**	dg/a.p.**
Updating of the AgriNIR™ calibration curves (through USB key or directly via GSM/GPRS).	user	dg/a.p.**	dg/a.p.**

\* Class K0 should be reserved to those users who are or employ an NIR expert  
 \*\* dinamica generale®/authorized partner

## CREATION OF NIR CALIBRATION CURVES

TASKS	Model Development Classes		
	C0*	C1	C2
Get samples from field, representative of your working area (100 for each new family to be developed).	user	user	user
Scan samples using AgriNIR™ and save SPECTRA on USB key (starting from GRASS SILAGE NIR FAMILY), tagging each sample SPECTRA and physical sample with a unique ID.	user	user	user
SEND to dg/a.p.** physical samples with unique ID and USB key with all SPECTRA, previously stored.	user	----	user
Perform reference chemical analysis on each physical samples using your reference LAB.	user	user	dg/a.p.**
Send to dg/a.p.** results of reference chemical analysis and USB key with all SPECTRA, previously stored.	user	user	----
Data evaluation and mathematical treatments (based on dg/a.p.** NIR Manager sw package).	user	dg/a.p.**	dg/a.p.**
Development of the new calibration curves.	user	dg/a.p.**	dg/a.p.**
Updating of the AgriNIR™ calibration curves (through USB key or directly via GSM/GPRS).	user	dg/a.p.**	dg/a.p.**

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## NOTE

Keys to success are in the hands of the user

- **Key1:** User must obtain at least 10 unique and representative samples for each NIR Family (Crop Family) of interest
  - **Key2:** User must provide a unique code for each sample and associate that code with each spectrum
- K1 Maintenance Class is included with instrument purchase.



4000 m<sup>2</sup> (13000 feet<sup>2</sup>) covered, divided on 2 buildings on a total area of 12500 m<sup>2</sup> (41000 feet<sup>2</sup>)

## WHO IS dinamica generale®?

dinamica generale® has developed and produced weighing system for agriculture for 20 years and today the best world-wide feed mixer producers install dinamica generale weighing system. 10 years ago the company started to invest and develop the NIR technology and today it is considered as one of the leader in NIR analysis applied on fresh forages with predictions directly in field. Design patents are registered world-wide and the products have been presented in congresses and symposiums all over the world.

From the very beginning in the product portfolio was included a feeding management software that during these years has evolved reaching its 5th editions and thousands installations all over the world.

Today, thanks to a structured R&D department (more than 15 engineers), the DTM™ is no more a simple feeding management software but "THE FARM MANAGEMENT" SOFTWARE and has become the best ally for all those farmers who want to lead their farms to the future.

## CONTACTS

### GENERAL INFORMATION

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### SALES DEPARTMENT

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### R&D DEPARTMENT

technical@dinamicagenerale.com

### CUSTOMER SERVICE

assistenza@dinamicagenerale.com

support@dinamicagenerale.com

## TDI ASSISTANCE

Technical assistance 24 hours a day, 7 days a week, 365 days a year.



## QUALITY & CERTIFICATIONS



dinamica generale® confirms the aptitude to work with the high qualitative standard requested at international levels by offering to its clients the best product and support as defined by the company's mission.

As a demonstration of this, we have successfully passed the recertification inspection for the quality management system as well as for the environment: UNI EN ISO 9001:2008 e UNI EN ISO 14001:2004.

Starting from 2009, in addition to our other certifications, we can add the prestigious UNI EN ISO 13485:2003 that demonstrates all the company's attention to the clients in the medical sector.

*"We reserve the right to modify designs, or implement product improvements, without any obligations with respect to goods purchased."*

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