



AGRONOMISTS

AGRICULTURAL SECTOR

THE REFERENCE SENSOR FOR MONITORING
THE QUALITY OF CROPS

POLISPEC.COM



polispec

GETTING INSIGHT

Those who contact us have the opportunity to meet a partner able to offer:

 KNOW-HOW

 EXTREME SPECIALISATION

 COMPLETE DESIGN
AND PRODUCTION, "turnkey"

Spectrophotometry and applied electronics

We are a dynamic and creative company founded in 2012, **specialising in spectrophotometry and applied electronics**. We use our theoretical and practical knowledge and methodologies to design and **build electronic systems and measuring instruments**. Our core business is applied spectrophotometry, in its various forms and for each application sector. We work to design and build systems for rapid and non-destructive measurements, **suitable for all contexts where precise, immediate and multiparametric information is required**. This allows us to study and obtain technological solutions for various fields of application, to manage the variables necessary for the integration of systems in different environments and to solve the specific needs of each production process.

We are versatile and multisectoral,
our ideas have no boundaries.

Polispec NIR

Getting insight

We have created **POLISPEC NIR (Portable and On-Line SPECTrophotometer)**, a compact spectrophotometer with an industrial design, designed and built both for portable use and for online installation. Its operation is based on the interaction of a light source with the molecules and with the chemical bonds that characterise the matrix to be analysed, thus performing both quantitative and qualitative measurements.

Polispec NIR is designed to ensure intensive use in all agricultural processes in which immediate and precise measures are required for the management of variables and for self-control systems.



polispec
GETTING INSIGHT

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TECHNOLOGICAL ADVANTAGES



. DESIGN

- Ø COMPACTNESS
- Ø RESISTANCE

Polispec NIR is simple and intuitive, suitable for multiple uses and designed for intensive use on a large variety of matrices.



. QUALITY

- Ø RELIABILITY
- Ø PRECISION

Polispec NIR is a robust and reliable instrument, designed for use in the field and in demanding environmental conditions (temperature, vibrations, atmospheric agents, etc.).



. SOFTWARE

- Ø INNOVATION
- Ø COMPLETENESS

Polispec NIR is equipped with software that allows it to be used in many contexts, both **as a manual system** and as an **integrated tool to agricultural machinery**.



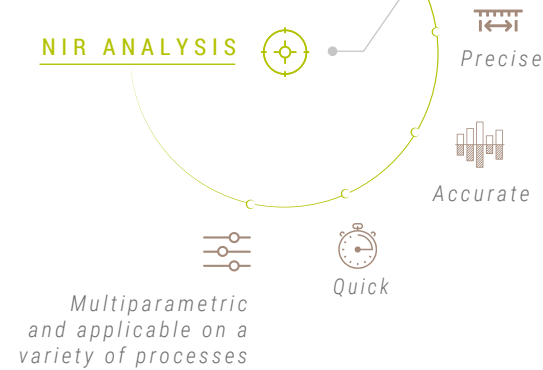
Polispec's NIR (Near Infra Red) analysis is the method that measures products as they are with extreme precision, providing immediate results and without the need for highly qualified personnel to perform the analysis operation.

- . MEASUREMENT VERSATILITY
- . ANALYSIS PRECISION
- . IMMEDIATE DATA

THE NIR TECHNIQUE



NIR ANALYSIS



- . TECHNICAL QUALITY .
- . TIME OPTIMISATION .
- . OPERATIONAL CONVENIENCE .

This technology is suitable for use as both a manual tool and applied in-line. Its application versatility is used to measure a multiplicity of products in an immediate and direct way.

TECHNOLOGICAL ADVANTAGES

Success is the harmonic fusion between power and technology, between strength and intellect. Today in agriculture all this is possible because the entire sector now has the skills and means to make work better, more efficient and more profitable. This is how **Polispec NIR** was conceived, because to know, it is necessary to measure and to act and improve it is necessary to know.



. CHARACTERISTIC

Polispec NIR is an innovative tool dedicated to the agriculture and precision feeding sectors.



. TECHNOLOGY

Polispec NIR is highly performing in terms of sensitivity, operating dynamics and signal cleanliness.

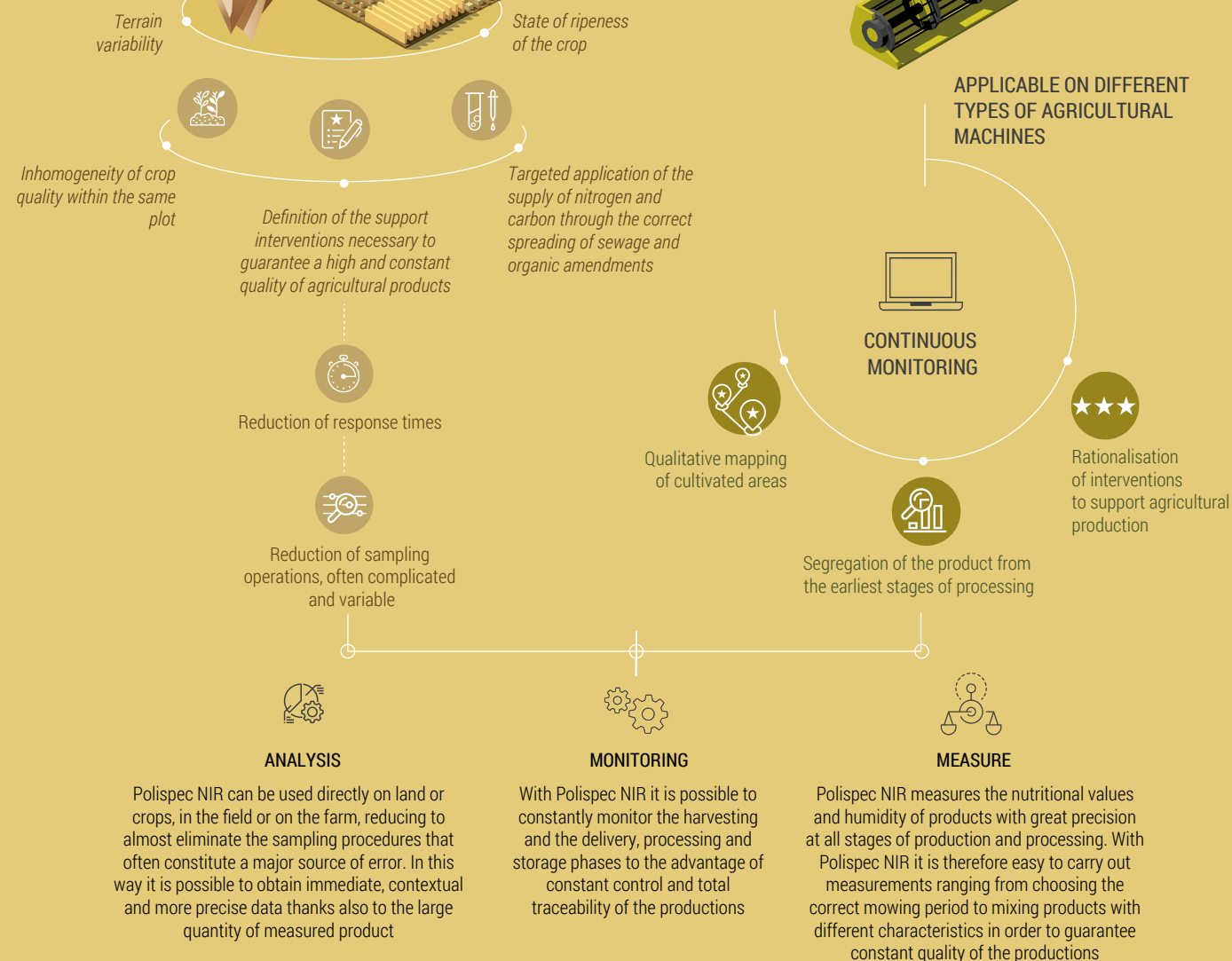
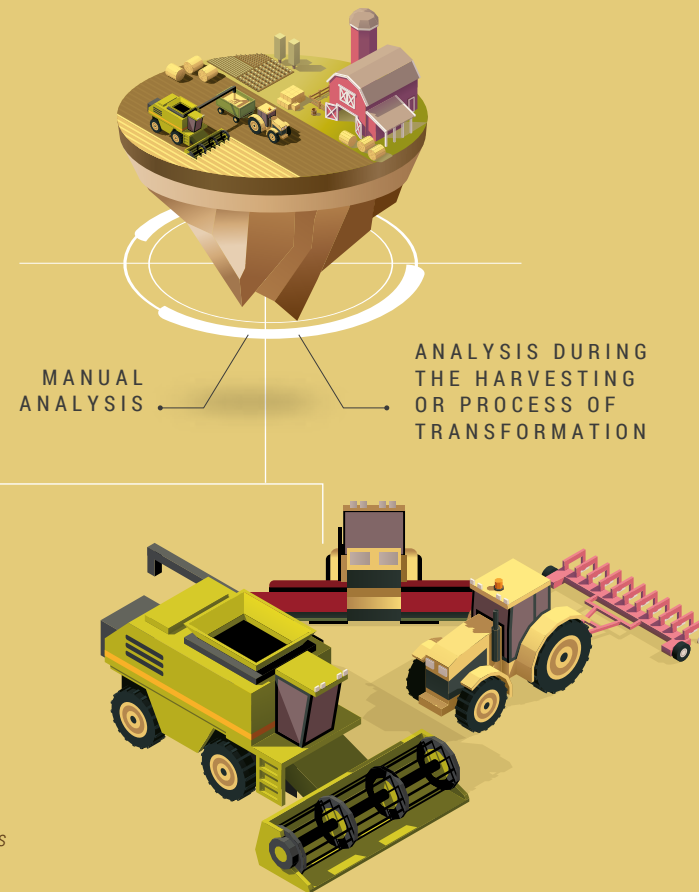


. SOFTWARE

Polispec NIR can be used in a single version for each application area.

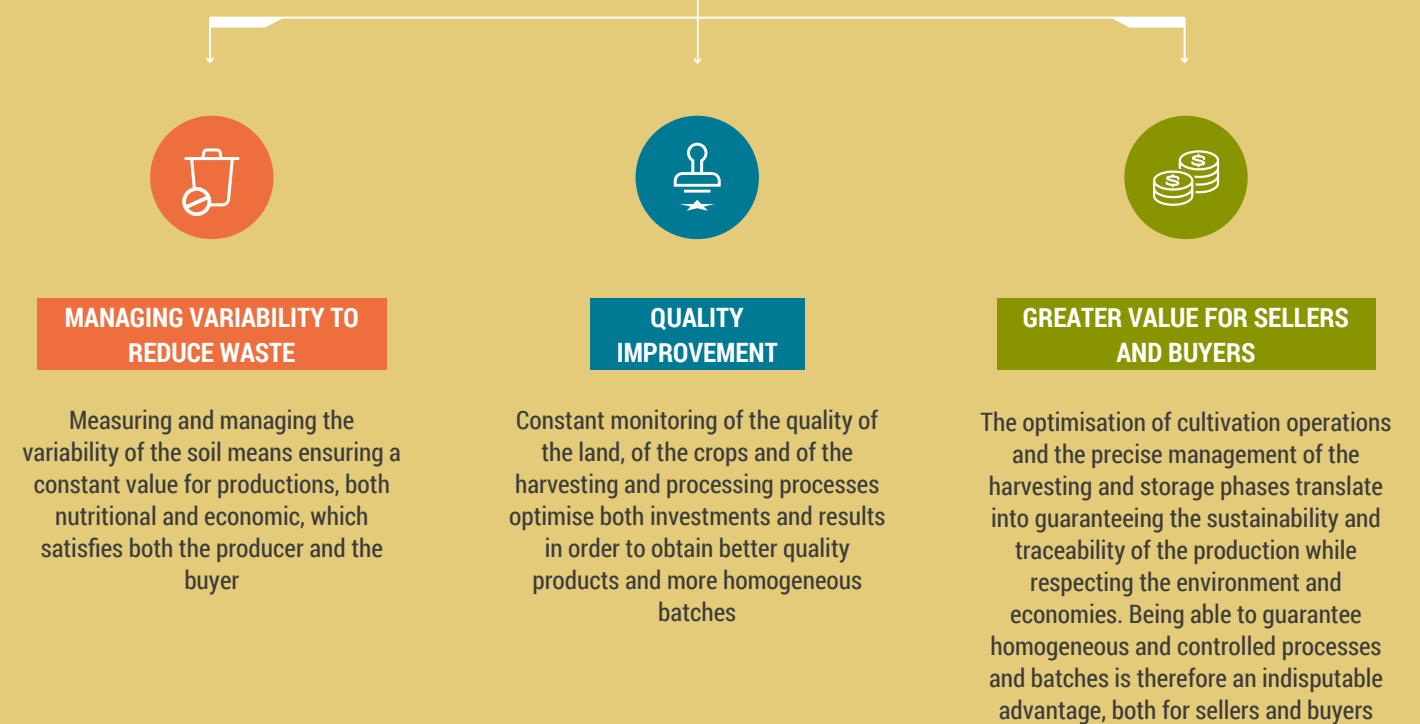
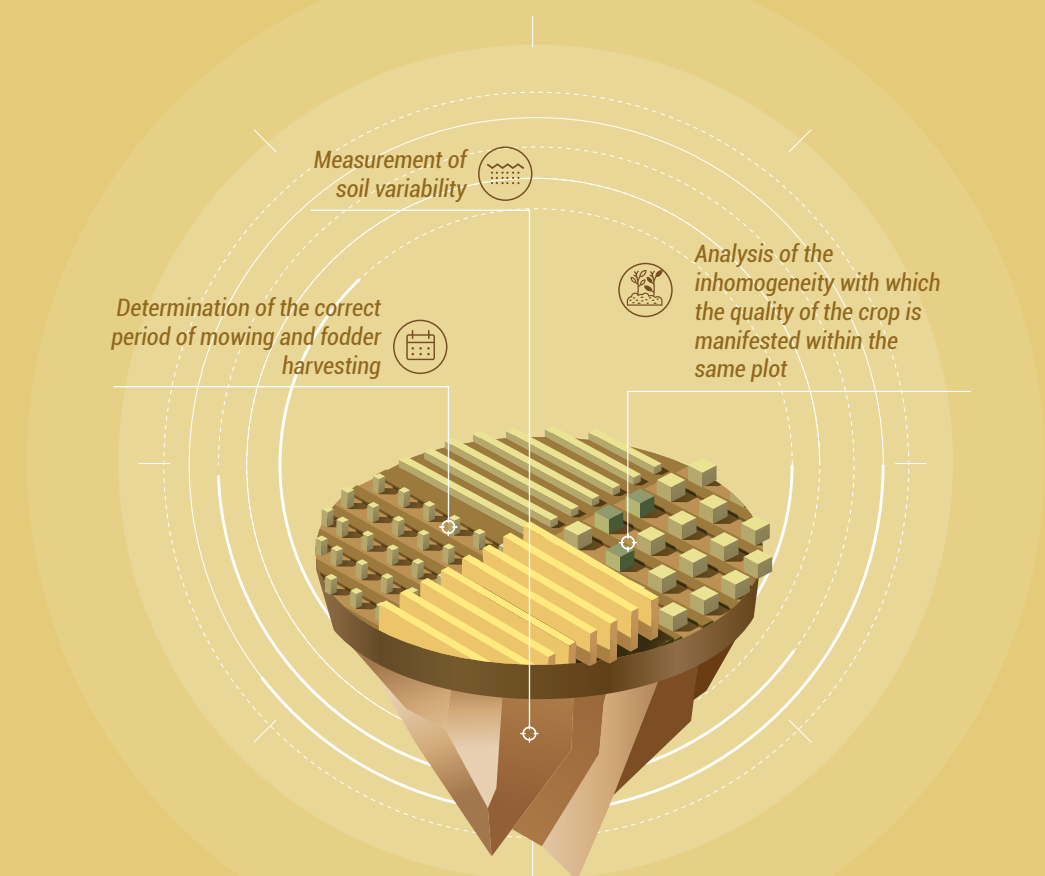
POLISPEC NIR

The modern agricultural sector is and will be characterised by significant changes in the push towards smart and rational agriculture and in this context the role of the agronomic specialist is and will be increasingly important. This figure is called to support the decision-making phases of planning the cultivation and harvesting activities, as well as those of maintaining and enriching the fertility of the soils.



LANDS AND CROPS

Polispec NIR is the perfect tool to measure and better understand the variables related to the agricultural productions and their management.



ANALYSIS OF THE ENTIRE WORKING CYCLE



DIRECT SURVEY OF THE LAND

Both in manual mode and applied to the mechanical working phases of the soil, **Polispec NIR** is a valuable source of information for understanding and managing the inhomogeneity of soils and for determining the fertility and structure characteristics of the soil.

DIRECT CULTURE SURVEY

Through the use of **Polispec NIR** in the period prior to harvesting, it is possible to manage with greater precision the correct periods of threshing, shredding and mowing, as well as to obtain important information regarding the quality of the products themselves and the characteristics of the fodders for ensilage management. In addition to its manual use,

Polispec NIR can be installed on harvesting machines to analyse entire cultivated areas and to obtain detailed production maps useful for determining subsequent agronomic choices.

PRECISE DISTRIBUTION OF FERTILISERS AND SEWAGE

Polispec NIR is also a very useful tool for measuring and managing the nitrogen content in sewage. If properly installed on the spreading barrels or on the refill systems, **Polispec NIR** can be used to regulate the nitrogen distribution in the field. Thanks, therefore, to the monitoring of soil characteristics, crop quality and slurry properties, **Polispec NIR** represents a complete solution to meet the needs of today's agriculture.



Daily on-site
assessment

How many times has it been necessary to check a batch of soybean or dried forages, or directly the agricultural land, to confirm the quality that has been invested in, and how many other times, instead, has it been necessary to correct the inhomogeneity of the crop to uniform the entire agricultural plot? **Polispec NIR** has been conceived and designed exactly for this purpose, **to be used in the evaluation of agricultural land and crops** and to keep management processes and continuous variables monitored day by day.



Chemical analysis in real time

Polispec NIR is the ideal tool for analysing and determining the chemical composition and physical parameters in soils and crops. It is a robust and compact spectrophotometer, capable of measuring the nutritional characteristics of a product in a few milliseconds and continuously.

It is designed to be used as a portable tool but also to be installed on harvesting machines and food processing machines. It represents a versatile and irreplaceable technology that allows complete and immediate analyses directly on the products intended for use without these being altered in any way.



For manual use and use on
agricultural machinery

OUR SOFTWARE

Polispec NIR is extremely versatile because it is equipped with software systems designed by us that allow us to make this device technologically performing and customised on the peculiar characteristics of each agronomist's activity.

poliDATA



Different sampling modes



Immediate results



Archiving system



Custom setting



Guided diagnostics and calibration

Supplied pre-installed on a touch tablet, the poliDATA software can be installed on any touch screen with a Windows® 8 or 10 operating system.

It is our main software for portable use of Polispec instruments and offers an interface designed for use on both tablets and desktops. It is an application designed for control on touch devices and is particularly simple and intuitive to use.

It is available in several languages and its main features are:

- **Analysis:** by choosing a chemometric model, it is possible to analyse a product with different sampling methods (single swipe on the product, multiple swipe, multi-point) designed to reduce the sampling error and to increase the representativeness of the analysis
- **Qualitative indices:** the software has innovative systems for assessing the quality of the analysed product. For example, the index is available to assess the propensity



for ensilage of chopped forage

- **Results:** the analysis results are instantly visible and can be exported in various formats and saved in an archive
- **Analysis reports:** the analysis results can be exported to customised reports with your logo and company information. Additional parameters calculated on the results can be added to the report
- **Sharing of results:** results can be easily shared using a smartphone and sent via email and Whatsapp
- **Analysis archive:** it is used to keep and consult the data generated and saved, to print reports and to compare analyses on the same type of product
- **Instrument diagnostics:** the software contains tools for instrument diagnostics and remote assistance

AGRICULTURAL FIELD

HARVESTING

REARING

STORAGE

SEWAGE

*POLISPEC NIR CAN BE USED WITH
EFFECTIVE RESULTS IN ALL PHASES
RELATED TO FIELD AND FARM.*

polispec
GETTING INSIGHT

THE CIRCLE IS COMPLETELY CLOSED

Directly in the field, during the harvesting of agricultural products, throughout the farming chain or on the materials in storage, **Polispec NIR** is the ideal tool for obtaining valuable data to improve your professional activity.



