



NIR and agriculture: we are just starting to understand the perspectives

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The success of NIRS to assess the quality of agriculture and agro-food products, is mainly coming from its easy implementation procedure; its capacity to simultaneously determine several parameters and the fact it allows implementing rapid/instantaneous analytical solutions. For the agriculture and agro-food sectors, it provides analytical answers in short and real-time; but also several and simultaneous analytical answers from a unique analysis. The rapid determination of valuable constituents and criteria is essential for the analysis of raw materials, intermediate and end products.

In the near future, the business challenges facing people involved in agriculture and agro-food productions are mainly the monitoring requirements, the economic pressures, the stringent environmental regulations and the continuous changing consumer demands.

Today, the industry is providing low cost and smart NIRS sensors as well as versatile platform as Unmanned Aerial Vehicles (UAV) that opens new perspectives for the agriculture and agro-food sectors. The miniaturization of NIRS and NIR imaging sensors allows the implementation of them at locations and with a frequency not possible before. It permits to increase by one to two orders of magnitude the volume of sample taking into account to get analytical information from a product or a production. For the first time, analysts have an adequate tool to address adequately sampling issues. Analyst can take advantage of the heterogeneity nature of agro-food products to tackle analytical challenges such as untargeted detection of contaminants or mislabeling of products.

The perspectives are tremendous and we are just at the beginning of the story. There is a future awaiting us.
