New NIR sensor on the LEXION

2025-11-09 08:00 CET

NUTRIMETER GRAIN for nutrient analysis and live yield mapping on the LEXION

For the 2026 season, the NUTRIMETER GRAIN will be the first new transmissive NIR sensor for yield and ingredient determination available on the LEXION. This opens up new possibilities for sustainability-oriented and resource-efficient cultivation and the targeted marketing of high-quality grain, particularly with regard to the precise determination of protein and oil content and yield mapping.

CLAAS has been offering yield mapping for grain harvests with the LEXION for almost 30 years. From 2026, the new NUTRIMETER GRAIN will also enable the recording and mapping of nutrients – for both grain and oilseeds.

High-precision measurement thanks to transmission method

There is growing demand for nutrient analysis using NIR sensor technology in grain harvest. From model year 2026 onwards, the new NUTRIMETER GRAIN from CLAAS will therefore make precise ingredient determination available on the LEXION combine harvester for the first time. The NUTRIMETER GRAIN is the first transmissive NIR measurement system for combine harvesters that enables online measurement of grain ingredients during ongoing harvesting operations. To achieve this, the cuvette transmission method for stationary centres, which has proven itself in laboratory equipment, has been further developed into a continuously operating throughput method. In contrast to the previously common reflection method, which only measures the surface of the centres, the transmissive method measures the ingredients homogeneously through all layers of the centres.

The implementation on the LEXION is achieved via a bypass in the grain elevator, which continuously feeds a small amount of grain through a so-called integrating ball, in which the centre punches are completely illuminated. This enables extremely precise measurement of the protein content in grain and the oil content in oilseeds. The sensor can therefore be used for many types of grain.

Qualitative separation already during harvest logistics and harvest storage

The measured values are displayed in the CEBIS terminal in the cab of the

LEXION and also transferred to the CLAAS connect portal. The data documented there can be used for subsequent storage, marketing and process planning. Since the data is already available during harvest in the field, different quality batches with different protein contents can, for example, be sorted specifically during unloading, transported away from the field separately and stored in sorted batches. The greatly reduced mixing of qualities and the targeted formation of batches of different qualities means that better prices can be achieved during marketing – for example, for bread wheat production – especially since the transmissive measurement method is also used in the grain trade and is therefore recognised and accepted in the marketing chain.

Precise real-time moisture determination also enables even more accurate, site-specific yield recording and yield mapping. Mapping the nutrients also allows for even more sustainable, resource-efficient cultivation of high-quality grain – for example, through precise fertilisation and sowing depending on yield and protein or oil content.

Variety-specific evaluation in CLAAS connect and real-time mapping on CEMIS 1200

Based on the NUTRIMETER GRAIN data, precise live mapping is also possible on the CEMIS 1200, providing an initial overview of the yield potential and quality differences within an area while harvesting is still in progress – important for both farmers and contractors.

The data collected by the NUTRIMETER GRAIN is stored, evaluated and documented in CLAAS connect together with the LEXION machine data. The extended yield reporting for harvesting machinery in CLAAS connect will in future allow variety-dependent yield evaluation with comparison options over several harvest years – not only for CLAAS harvesting machinery, but also across manufacturers.

Cost-effective technology

Despite its higher precision, the purchase price for the NUTRIMETER GRAIN is only about half that of NIR devices previously available for combine harvesters ex works. This means that it is economical even for smaller areas of use. In addition to the cost of the sensor technology, there is a one-off licence fee for use on the specific machine.

The NUTRIMETER GRAIN on the LEXION measures the ingredients and moisture via a bypass on the grain elevator.

The advantages of the NUTRIMETER GRAIN at a glance:

- *Transmissive NIR sensor for harvesting grain and oilseeds.*
- *New measuring method via bypass in the grain elevator of the LEXION.*
- *High-precision, homogeneous measurement of protein and oil content as well as moisture content on the combine harvester.*
- *Measuring method recognised in the grain trade.*
- *Targeted sorting of different quality batches already in the field enables separate storage and marketing.*
- *Economical use thanks to low acquisition costs.*

About CLAAS

Founded in 1913, the family-owned company CLAAS (www.claas.com) is one of the world's leading manufacturers of agricultural machinery. Headquartered in Harsewinkel, Westphalia, the company is the global market leader in forage harvesters. CLAAS also holds the European market leadership in another core segment, combine harvesters. CLAAS also ranks among the world's top agricultural technology companies in the fields of tractors, agricultural balers and grassland harvesting machinery. The product range also includes state-of-the-art agricultural information technology. CLAAS employs 12,000 people worldwide and achieved a turnover of 5 billion euros in the 2024 financial year.

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