

Setting standards. Testing quality.
Providing orientation.



DLG
German Agricultural Society

Test Center Technology
and Farm Inputs

DLG Test Center Technology and Farm Inputs: Information before investment

Investment decisions on new agricultural machinery or farm inputs should always be based on hard data and facts. For more than 130 years, DLG has therefore been testing agricultural machinery, equipment and farm inputs. The DLG Test Center Technology and Farm Inputs with its tests in the fields of vehicle technology, indoor and field operations, farm inputs as well as machinery and forestry, municipal and garden equipment, is one of the world's most important testing organizations.



The Test Center in Gross-Umstadt (Germany) provides professionals with information that is an important decision-making tool for investments and practical use. Its more than 4,000 test reports and test results provide farmers with clear guidance – regarding agricultural machinery and equipment as well for consumables like compound feeds, silage additives, fertilizer lime, cleaning and disinfecting agents or udder hygiene products.

The methods and test profiles are practice-oriented, independent of the manufacturers and developed by neutral Test Commissions. They are based on state-of-the-art measuring techniques and test equipment and take international standards and norms into account. In addition, tests are also carried out according to international standards and regulations. The Test Center has extensive accreditations and designations for this purpose.



DLG – Open network and professional voice

DLG supports progress in the agricultural, agribusiness and food sector worldwide through knowledge, quality and technology transfer, and contributes to sustainably safeguarding vital global resources. As an open, international network, DLG works with experts from all over the world to develop future-oriented solutions for the challenges faced by the sector. It organizes leading international fairs and events in the fields of crop cultivation, animal husbandry, agricultural and forestry technology, energy supply and food technology. Its quality tests for foods as well as for agricultural machinery, equipment and farm inputs are international leaders in their fields. Through its professional work and its network of experts, DLG repeatedly provides fresh impulses for practitioners.

Information: www.DLG.org

DLG PowerMix 2.0 for tractors – The premium class for determining energy efficiency

Based on typical work loads of a tractor in practice, the DLG Test Commission consisting of users, scientists, consultants and DLG engineers has defined 14 load cycles. With these the fuel and AdBlue consumption, the performance and ultimately the energy efficiency of the entire vehicle can be determined on the DLG chassis dynamometer. The load cycles reflect typical field and transport work in both the partial and the full-load range. Pure pulling work, e.g. with a plough or cultivator, is carried out realistically and matched to the respective machine output, as well as mixed work that loads the PTO shaft and the hydraulic system in addition to the drive. Heavy and light transport work is also simulated in order to test efficiency on the road, enabling an overall assessment of the energy efficiency of tractors in practical use under reproducible conditions.

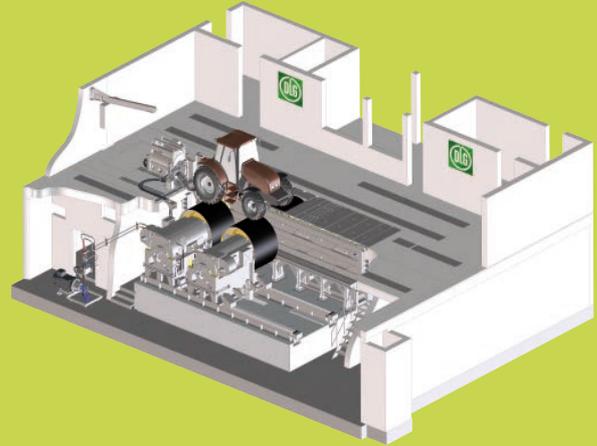
With support from



by decision of the German Bundestag



Video at www.dlg.org/de/landwirtschaft/tests



Safety for manufacturers and farmers

The experts at the DLG Test Center Technology and Farm Inputs test several thousand agricultural machinery and equipment products as well as farm inputs every year. The rewards for passing the demanding, practice-relevant tests are marks such as DLG APPROVED as well as the DLG quality mark:

- The DLG Test Commissions – consisting of leading professionals, scientists, experts from associations, consultants and administrators – together with the DLG test engineers translate practice-oriented questions from indoor and outdoor operations into reproducible technical tests. Whether on test benches or in defined scenarios in practical use on the farm, the products and innovations are examined using the latest measuring technology and the evaluation of experienced practitioners.
- The test method and test design are developed in close consultation with the independent, voluntary Test Commissions. These experts specify the assessment criteria that form the basis for awarding the DLG quality marks.
- The DLG Test Center offers an ideal framework for research and development-related tests. Manufacturers have prototypes and pre-production models tested by experienced DLG test engineers on test benches or in practice. This enables optimisations of the products to be carried out even before the market launch.

Testing fields for technology and farm inputs

The DLG Test Center offers standardized tests as well as individual tests in the following fields of competence:

Vehicle technology

In the vehicle technology sector, tractors, heavy equipment, heavy-duty vehicles and components are inspected and tested from various perspectives according to both international and the DLG's own standards. User protection has top priority here. As a technical service designated by the German Federal Motor Vehicle and Transport Authority (KBA) and as a national test centre appointed by the Organisation for Economic Co-Operation and Development (OECD), the DLG Test Center conducts extensive safety-relevant tests on vehicle and vehicle components. This ranges from tests of roll-over protection systems and cabs of tractors, heavy equipment and trucks, to evaluations for recording direct and indirect fields of vision, to the measurement of noise and vibration loads. The range of tests is supplemented with material and constant-load tests of components and systems, as well as the evaluation of functionalities of automated steering systems and the ISOBUS interface between the tractor and the implement.

Performance and consumption data of tractors and commercial vehicles are determined at the DLG Test Center under standardised and reproducible conditions. The outputs on the PTO shaft test bench and on the tractive power measuring vehicle are recorded according to OECD Tractor Code 2. The premium class shows the determination of the energy efficiency of tractors as part of a DLG PowerMix test which simulates use in agricultural practice. The DLG PowerMix chassis dynamometer is one of the world's largest chassis dynamometers for output, emissions and consumption measurement of commercial vehicles.

The engineers of the DLG are represented in a large number of national and international committees for the support and specialist consulting of the German Federal Ministry of Nutrition and Agriculture (BMEL) in fulfilling Germany's position within OECD Tractor Code.





Indoor operations

The “Indoor operations” test area covers all technical testing and certification services around the farmyard. This includes tests in the field of animal housing systems, such as building and ventilation technology, keeping and feeding facilities, as well as milking technology. Tests of measures to reduce emissions in and from animal houses are also part of this specialist field. A further test area is devoted to decentralized energy supply, grain drying and grain moisture measurement.

Focus on animal welfare

An important principle for tests in the area of animal husbandry technology is to make the animal welfare requirements demanded by the Animal Welfare Act measurable. Indicators from the fields of ethology and animal health as well as physiological and performance, condition and hygiene parameters are used for this purpose. The relevant indicators are established by the Test Commissions in consultation with the DLG committee on Animal Welfare. Another feature of the tests is use on farms in order to make the effect on animals in practical use measurable and assessable.



Field operations

The spectrum of DLG tests in the area of field operations ranges from seedbed preparation to harvesting. DLG engineers test almost all machines along the cultivation chain in arable farming and grassland operations – soil-working machinery, seed drills, mineral and universal fertilizer spreaders, slurry spreaders, combine harvesters, forage harvesters, mowers, hay and silage technology as well as bale presses. Among the key areas defined by the DLG Test Commissions are criteria such as work quality, working rates, handling, fuel and tractive force requirements, as well as maintenance and safety, which can be adapted in modular fashion to the respective test. The tests are supplemented by an intensive practical on-farm test and evaluation by experienced practitioners.

Farm inputs

DLG tests farm inputs based on the high DLG standards and awards the DLG quality mark and the DLG seal of approval to products that pass the tests. Among the tested products are fertilizer lime, compound feeds (feed concentrate and mineral feed), udder hygiene products, cleaning and disinfecting agents, silage additives, animal housing disinfectants, as well as hoof care and hygiene products. The DLG farm input tests include product and partially also process certification. All DLG rated farm inputs are subject to continuous monitoring. Consistent product quality is ensured through regularly repeated tests and/or audits of the manufacturing plant at least once a year.



Forestry, municipal and garden equipment

With more than 600 tests per year, the test engineers in the “Forestry, municipal and horticultural technology” test area offer the manufacturers of small power equipment a full service range: consultancy, safety testing in accordance with the Machinery Directive, type approval testing, tests for obtaining GS and other certification marks. In close cooperation with the KWF (German Center for Forestry Work and Forestry Technology), the DLG test engineers assess the practicability of small power equipment and award the DLG APPROVED label.

Leaders in the testing of agricultural equipment and input products

DLG has been testing agricultural machinery and farm inputs for over 130 years. The DLG Test Center Technology and Farm Inputs is one of the leading testing organisations for the international agricultural sector.

- **Vehicle technology**
Tractors, components and accessories, electronics
- **Field operations**
Arable and grassland equipment ranging from primary cultivation and drilling to fertiliser application and harvesting
- **Livestock farming and on-farm operations**
Shed construction, livestock housing and equipment
- **Farm inputs**
Feedstuffs, limes, hygiene products to silage films
- **Forestry, municipal and garden equipment**
Power tools and mounted equipment

Information: www.DLG.org · Contact: Tech@DLG.org

DLG membership: Giving knowledge a voice.

DLG was founded by the engineer, painter and author Max Eyth in the year 1885. It has over 29,000 members and is a leading organization in the agricultural and food sector. It is politically independent, an internationally networked organization and is open to all individuals, companies and institutions interested in agriculture and food production.

As an open network and professional voice of agriculture, agribusiness and the food sector, we want to increase expertise, ensure a broad transfer of technology and know-how, and set and secure quality standards. This is why we promote dialogue between scientists and researchers, practical farmers and the society across professional and national frontiers.

Become part of our network. We provide orientation, offer perspectives and lend a voice to your important topics – with the aim of working together with you to shape the future of agriculture, agribusiness and the food sector.

www.DLG.org/membership



DLG e.V.

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