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DLG Expert Knowledge: single-seed sowing — Agritechnica 2025 trends included

New free DLG publication on single-seed sowing; Insights confirm Agritechnica 2025 machinery trends; Independent, practice-oriented guidance for farmers

The DLG (German Agricultural Society) has this quarter released a new free publication titled “Single-seed sowing of cereals” within its ongoing Expert Knowledge Series, a long-established collection of short digestible technical briefs that provide farmers and agricultural professionals with independent, practice-oriented insights on current farming topics. The latest title examines the agronomic and technological potential of single-seed sowing in cereals, adding to a broad portfolio of publications issued by the non-profit organization as part of its remit to advance knowledge and innovation in the agricultural sector.

The new publication, developed by the DLG Technical Committee “Soil Cultivation and Sowing Technology”, which consists of practitioners, academics and representatives from industry and organisations, provides a clear and practice-oriented overview of the current state of single seed sowing in cereals.

“Our working group brings together practical field knowledge, academic research, industry solutions and advisory expertise. This combination allows us to present a realistic, technically sound assessment of single seed sowing of cereals. With this publication, we aim to summarize what is currently known about the opportunities and limitations of precision placement in cereals and offer farmers a reliable basis for their own decisions,” commented Prof. Dr. Till Meinel, Vice President of DLG, member of the Technical Committee.

Free to access for the world’s farmers, the document outlines both the potential and the constraints of the single seed sowing technique. Unlike conventional drill sowing, which distributes grains rather randomly within the row, single seed systems place each seed at a defined spacing and depth. Findings from advisory bodies, manufacturers and research

institutions show that, under favourable conditions, this can lead to more uniform stands, modest yield increases, better aeration, and occasionally reduced disease pressure.

Farmers working with precision systems have also reported more resilient crops, particularly during dry spring periods. Technical and economic challenges remain as well, including the need for reliable singulation at practical field speeds and the higher investment and maintenance demands of precision machinery.

As with all DLG knowledge publications, the work reflects the organisation's interdisciplinary and non-profit approach. Each title is produced by one of some 40 dedicated working groups that bring together farmers, researchers, industry representatives and advisory experts, ensuring that the content remains evidence-based and directly relevant to day-to-day agricultural practice.

The DLG publication concludes that single seed sowing offers real agronomic potential, but that economic and technical factors still limit broader adoption. As with all titles in the DLG Expert Knowledge Series, the objective is to provide farmers with independent, evidence-based information that supports practical and informed decision-making.

Released shortly after Agritechnica—a leading showcase for innovations in agricultural machinery, including next-generation seeding systems—the publication's findings align with and further substantiate the industry trends presented at the trade fair.

The brochure was produced by Detlev Dölger (Hanse Agro GmbH), Prof. Dr. Till Meinel (Cologne University of Applied Sciences), Wilfried Mißbeck (farmer), Prof. Dr. Yves Reckleben (Kiel University of Applied Sciences) and Georg Horst Schuchmann (DLG Competence Center Agriculture). It was developed under the DLG Technical Committee "Soil Cultivation and Sowing Technology", one of around 40 interdisciplinary technical committees supporting the organization's knowledge work.

Farming innovations in sowing technology at Agritechnica

During Agritechnica, Prof. Dr. Till Meinel on behalf of the DLG's working group presented how sowing technology is advancing: the increasing integration of multiple inputs during a single pass, with machines capable of placing seed, fertilizer and, in some cases, crop protection agents either through a shared coulter rail or through separate placement systems.

Digitalization is pushing boundaries, as seen in Amazone's EasyTram software, presented at Agritechnica, which enables automated and highly precise tramline creation based on cloud-generated application maps. This system reduces operator workload and ensures repeatable tramline accuracy, even on slopes.

Further innovations include the (ultra-)shallow cultivation and sowing system from 4 DISC GmbH, which uses hydraulically driven, horizontally mounted discs to create a precise seed placement environment.

Lemken presented a new automated blower control system that monitors actual airflow rather than relying on blower speed alone, helping operators avoid blockages or leaks while reducing energy consumption.

Manufacturers such as Amazone and Väderstad showcased electrically adjustable components on their precision seeders to optimise singulation quality. The trend towards automation was underscored by the XAVER carrier vehicle from Fendt, which can now be equipped with single-seed sowing technology and reflects the industry's gradual movement toward autonomous field processes.

The DLG publications cover agricultural topics from sowing to storage, including plant protection, digitalization, agricultural technology to animal husbandry, and are published in German and English. Since 2007, the DLG regularly releases knowledge updates with recent titles like "Mechanical weed control: practical concepts for root crops" and "Crop protection sprayer technology". More than 150 titles has been published to date.

The new publication on single-seed sowing is available for download at [DLG Expert Knowledge 501: Single-seed sowing of cereals](#)

Media contact:

Malene Conlong

Tel: +49 6924788237

Email: M.conlong@dlg.org

About DLG

With more than 30,000 members, DLG is a politically independent and non-profit organisation. DLG draws on an international network of some 3,000 food and agricultural experts. DLG operates with subsidiaries in 10 countries and also organizes over 30 regional agricultural and livestock exhibitions worldwide. DLG's leading international exhibitions, EuroTier for livestock farming and Agritechnica for agricultural machinery, which are held every two years in Hanover, Germany, provide international impetus for the local trade fairs. Headquartered in Frankfurt, Germany, DLG conducts practical trials and tests to keep its members informed of the latest developments. DLG's sites include DLG's International Crop Production Centre, a 600-hectare test site in Bernburg-Strenzfeld, Germany and the DLG Test Centre, Europe's largest agricultural machinery test centre for Technology and Farm Inputs, located in Gross-Umstadt, Germany. DLG bridges the gap between theory and practice, as evidenced by more than 40 working groups of farmers, academics, agricultural equipment companies and organisations that continually compare advances in knowledge in specific areas such as irrigation and precision farming.

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