2020 Annual Report

Impact

CLAAS Group Overview

Financial indicators (IFRS)

in € million	2020	2019	Change in %
Financial performance			
Net sales	4,042.3	3,898.0	3.7
Research and development costs[1]	237.4	243.6	-2.5
EBITDA	333.4	280.3	18.9
EBIT	185.6	164.0	13.2
Income before taxes	158.1	135.7	16.5
Net income	107.1	96.3	11.2
Free cash flow	308.1	- 138.2	322.9
Financial position			
Equity	1,464.1	1,417.3	3.3
Comprehensive capital expenditure[2]	187.2	183.3	2.1
Total assets	3,722.5	3,531.9	5.4
Employees			
Number of employees as of the balance sheet date[3]	11,395	11,448	-0.5
Personnel expenses	742.2	730.3	1.6

[1] Before capitalized and amortized development costs.
[2] Including development costs recognized as an asset, excluding goodwill.
[3] Including apprentices.

“To seize the tremendous innovation potential in agriculture, we are focusing on dialogue, benefiting the customer, and keeping an eye on the sustainable interaction between technology and the environment.”

Thomas Böck

The 2020 Annual Report is now also available online at annualreport.claas.com along with an interactive KPI calculator.

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Executive Bodies

Foreword by the Executive Board

Thomas Böck
CEO of the CLAAS Group

Dear Business Partners,

The 2020 coronavirus pandemic showed us exactly how sensitive and complex our food supply system is. Fortunately, farms all over the world often managed a solid harvest despite considerable restrictions. CLAAS and its agricultural equipment experienced favorable development despite the unprecedented situation.

Sales of agricultural equipment in most parts of Europe remained stable and on par with the prior-year level, while sales in Russia rose considerably. The constant development in North and Latin America contrasted with a significant increase in Asia.

Contrary to the slight overall decline in the global agricultural equipment market, CLAAS continued to grow year on year and achieved a new sales record of 4.0 billion euros.

While our sales in Germany, France, and the Rest of Western Europe sometimes declined, there was a significant rise in Eastern Europe and in Russia in particular. The strongest sales growth of around 20% was achieved outside Europe, with North America proving to be the key driver. The broad international positioning of CLAAS has once again paid off.

This type of overall positive development was not something we expected at first. As a family-owned company, CLAAS has again proved itself to be highly resilient during the coronavirus pandemic. With short decision-making processes and effective cooperation across departmental boundaries, we quickly adapted to the new challenges in the difficult initial phase. During a production stop of several weeks at almost all locations, we made extensive preparations to start back up again as soon as possible with the best possible safeguards in place to protect our employees against infection. Spare parts business proved

to be particularly robust in this period. We were able to continue to supply our customers to the greatest possible extent thanks to the great commitment of our employees and our close-meshed logistics network.

We continued with the consistent implementation of our corporate strategy despite the restrictions related to the coronavirus. Several large investment projects were completed within the planned time frame or started on time. In Le Mans, we completed the modernization of our tractor plant, which is now equipped with the latest manufacturing technologies and geared toward a wider range of models. In Harsewinkel, the first phase of the comprehensive project to modernize combine harvester assembly was completed. In the second phase, we will merge the two assembly lines in 2021 and also set the course in production for our new generation of combine harvesters. In addition to the high volume of capital expenditure, spending on research and development again remained at a very high level.

Working under pandemic conditions has accelerated the digital transformation at CLAAS in other areas. We were helped in this regard by a powerful IT system that was immediately adaptable to the new challenges. Dialogue with customers also shifted to virtual formats in most cases. We therefore brought forward the launch of the new product configurator, which boasts numerous new functions and is extremely intuitive. We also held customer events via YouTube and virtual training sessions on our machines.

We used hybrid events to effectively communicate the numerous product innovations. We were helped in this respect by the positive progress made at Agritechnica. At the world's largest agricultural machinery exhibition in November 2019, CLAAS was awarded "Machine of the Year 2020" for the LEXION 8000/7000, the JAGUAR 900, and DataConnect, a manufacturer-independent cloud-to-cloud solution. The AXION TERRA TRAC, the first half-track tractor with full suspension, also received a very positive response from experts.

Crop yields were good in many regions, and prices of agricultural commodities were stable. Despite numerous uncertainties throughout the global economy, the positive outcomes in 2020 mean that we are entering the new fiscal year with confidence and expect sales and earnings at the prior year's level.

We are continuing to drive forward holistic and integrated solutions to seize the tremendous innovation potential in agriculture. We are focusing on dialogue, benefiting the customer, and keeping an eye on sustainable interaction between technology and the environment.

Our business decisions are always consistently geared to the long-term success of CLAAS. A fiscal year is a very well-defined and manageable period of time. At the same time, we are no less pleased about the successes we achieved together in the past fiscal year. We succeeded in working together with our more than 11,000 employees to make many ideas a reality thanks to an intensive dialogue of partnership between us, our suppliers, our sales partners, and our financial partners. On behalf of the entire Group Executive Board, I would like to thank everyone involved from the bottom of my heart.

Cooperation with the employee representatives, the Supervisory Board, and the Shareholders' Committee was once again focused on targets and the future.

And finally, our tremendous gratitude goes out to our customers, who believed in us and placed their trust in us once more.

Yours sincerely,

Thomas Böck
CEO of the CLAAS Group

Report of the Supervisory Board of CLAAS Kommanditgesellschaft auf Aktien mbH

Cathrina Claas-Mühlhäuser and Helmut Claas

Dear Business Partners,

The Supervisory Board of CLAAS KGaA mbH monitored and analyzed the Group's business situation and risk position at its regular meetings during fiscal year 2020. The Supervisory Board's assessments were based on reports by the Executive Board on the Group's strategic orientation, its financial position and financial performance, deviations from the plans made throughout the course of business, and operating decisions. The reports were received in two sessions and used in the decisions made by the Supervisory Board.

The Supervisory Board's deliberations focused on the sales and earnings outlook, the development of business in comparison to budgets, the acceptance of the auditor's report, the auditing of the annual financial statements of CLAAS KGaA mbH and the CLAAS Group, as well as the plans for the year 2021 and for the medium term.

Furthermore, the Supervisory Board discussed the investments in sales and production locations, the market launch of the new LEXION combine harvesters and AXION 900 TERRA TRAC tractor, further digitalization projects, the CLAAS Group strategy, as well as the impact of the coronavirus pandemic.

The Supervisory Board also studied a report regarding risk management at the CLAAS Group.

The shareholder representatives on the Supervisory Board are: Cathrina Claas-Mühlhäuser (Chairwoman), Helmut Claas, Dr. Patrick Claas, Reinhold Claas, Christian Boehringer, and Gerd Peskes. The employee representatives on the Supervisory Board are: Heinrich Strotjohann, Michael Köhler (until January 2020), Tanja Goritschan (deputy chairwoman), Sabine Sasserath (from January 2020), Carmelo Zanghi, Rainer Straube, and Dr. Alexander Pfohl.

The financial statements of CLAAS KGaA mbH and the consolidated financial statements of the CLAAS Group as of September 30, 2020, as well as the management reports for CLAAS KGaA mbH and the CLAAS Group, were audited by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Hanover, Germany, the auditors elected at the annual general meeting on January 16, 2020, and appointed by the Supervisory Board. The statements and reports received an unqualified audit opinion on November 24, 2020.

The financial statements of CLAAS KGaA mbH, the consolidated financial statements and management reports, as well as the proposal for the appropriation of profit were presented to the Supervisory Board upon their completion. These documents, as well as the auditor's reports, were available to the members of the Supervisory Board and were discussed in detail at the Supervisory Board meeting on December 10, 2020, in the presence of the auditor.

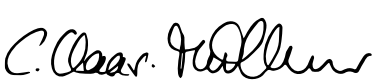
The Supervisory Board then passed the following resolution:

Having examined the financial statements of CLAAS KGaA mbH, the consolidated financial statements and management reports, as well as the proposal for the appropriation of profit, the Supervisory Board confirmed the results of the audit. No objections were raised. The Supervisory Board therefore approves the consolidated financial statements. It recommends to the shareholders that the annual financial statements of CLAAS KGaA mbH for fiscal year 2019/2020 be adopted and agrees with the proposal for the appropriation of profits made by the Executive Board of the personally liable partner.

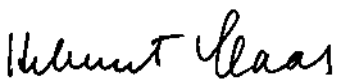
The Supervisory Board would like to thank the Executive Board and all employees for their high level of personal commitment during the successful fiscal year 2020; a year in which, despite the unique challenges presented by the coronavirus pandemic, we were able to achieve a satisfactory business result.

The challenge of the new fiscal year is to realize ambitious projects in the core markets, but also in the growth fields outside of Europe, in the environment shaped by the ongoing coronavirus pandemic.

Harsewinkel, Germany, December 10, 2020



The Supervisory Board
Cathrina Claas-Mühlhäuser
(Chairwoman)



Dipl.-Ing. Dr. h.c.
Helmut Claas
(Member of the Supervisory Board)

Executive Board of the CLAAS Group

Thomas Böck
CEO, responsible for Forage, Technology and Systems and the Tractor Division

Hans Lampert
Finance and Controlling

Executive Board of the CLAAS Group

Jan-Hendrik Mohr
Grain Harvest

Christian Radons
Sales and Service

Structure of CLAAS KGaA mbH

Personally Liable Partner

Helmut Claas GmbH

KGaA Shareholders

Family Helmut Claas

Family Günther Claas

Family Reinhold Claas

Shareholders' Committee

Helmut Claas,
Honorary Chairman

Cathrina Claas-Mühlhäuser,
Chairwoman

Christian Ernst Boehringer,
Deputy Chairman

Structure of CLAAS KGaA mbH

Supervisory Board

Cathrina Claas-Mühlhäuser,
Chairwoman

Tanja Goritschan,
Deputy Chairwoman*

Christian Ernst Boehringer

Helmut Claas

Dr. Patrick Claas

Reinhold Claas

Michael Köhler*
(until January 2020)

Gerd Peskes

Dr. Alexander Pfohl*

Sabine Sasserath*
(from January 2020)

Rainer Straube*

Heinrich Strotjohann*

Carmelo Zanghi*

* Employee representatives.

Group Executive Board**

Thomas Böck

Dr. Jens Foerst
(until September 2020)

Hans Lampert

Bernd Ludewig
(until May 2020)

Jan-Hendrik Mohr

Christian Radons
(from June 2020)

** Executive Board of Helmut Claas GmbH.

Authorized Company Representatives

Stefan Belda

Dr. Emmanuel Siregar

02

Group Management Report

Group Management Report

Our Strategy

The agricultural equipment sector continues to be strongly influenced by long-term trends: ongoing population growth is resulting in ever-increasing demand for food. Rising need for raw materials in both nutrition and energy generation is also resulting in a major increase in biomass production. At the same time, the availability of freshwater resources and agricultural land is falling. Droughts and natural disasters are becoming increasingly frequent, and cultivation methods are changing. This all means that supplying agricultural commodities is becoming ever more challenging. Highly efficient agricultural products and services can help boost productivity to generate greater yields from less land.

The global economic system as we know it is undergoing transformation. This is also affecting agriculture. Globalization and digitalization have become key issues in the industry, alongside agricultural developments. The spread of protectionism and disruptive policy are posing challenges to CLAAS, which over time has built strong international networks and relies on global value chains. Digitalization continues to offer a major opportunity to master the requirements of the future by developing new solutions. All of these driving forces, whether new or old, will influence CLAAS as a company in the future. Even in a volatile environment, the goal remains to achieve profitable growth. CLAAS has focused its strategy on the following four strategic focal points so that it can take on a leading global role as a manufacturer of agricultural equipment moving forward.

Global growth in core business

CLAAS aims to expand its global market position across all relevant machine segments. New, innovative tractor, combine harvester, forage harvester, and forage harvesting machinery are making a key contribution to this. Besides the core market in Europe, the growth strategy is also focused on North America, Eastern Europe, and Asia. CLAAS operates with the quality standard of a premium manufacturer and develops individual and regional offerings. Thanks to the expansion of the global dealer network and the use of new digital opportunities, CLAAS will be able to respond in an even quicker and more targeted manner to customer requirements. Apart from ensuring a comprehensive supply of spare parts to customers at short notice, used machines trading, equipment maintenance contracts, and financing business represent our core business.

Driving forward technologies of the future and new areas of business

Trends such as digitalization, automation, alternative drivetrains, and agricultural services will have a long-term influence on the agricultural industry and therefore also on CLAAS business. Connected combine harvesters, tractors and digitalized services are becoming an increasingly important selling point. Connectivity in CLAAS machines also offers the basis for customer-centric services, such as remote services or automatic documentation. CLAAS is the technology leader in the industry thanks to its CEMOS AUTOMATIC system for combine harvesters and tractors. It continues to work towards automating processes in machines and to research into alternative drivetrain solutions. In addition, CLAAS is also developing new, digital business models. To do so, CLAAS is entering into external partnerships with fledgling companies in order to develop valuable customer solutions and complement its own internal solutions where appropriate.

Increasing operating excellence

As an independent family business, CLAAS aims to compete with significantly larger players on the global stage. The Company therefore intends to set the benchmark in terms of profitability, and not just in product development and innovation. Significant investments are being made in topics that will determine the future. In order to ensure that these investments are profitable, operating excellence is being increased across all divisions and functions. As an example, CLAAS will continue to modularize its products to reduce complexity in development and production and boost efficiency. The systematic leveraging of company-wide synergies; the optimization of value creation within the global production network; the

reduction of selling, general, and administrative costs; and the digital transformation of the CLAAS organization are also contributing to improvements in operating excellence.

Strengthening the global team

The long-term success of the CLAAS Group is reliant on the levels of qualification and motivation of its employees. Increasing globalization and digitalization are exposing specialists and management teams to new challenges. CLAAS is focusing on establishing an international management team to take on these challenges proactively. In addition, CLAAS is investing significantly in employee training to secure and develop the relevant expertise.

Due to the growth of international subsidiaries and activities, CLAAS is in a phase of constant evolution. That is why CLAAS will continue its organizational development and regularly review and optimize structures and processes.

The international presence of CLAAS is growing, and so is the number and diversity of employees. A strong corporate culture is the key to ensure that the connective elements remain at the forefront across national and cultural borders. Diversity is an excellent opportunity for an international company to position itself successfully on the global stage.

Industry Trends

Economic frameworks

According to estimates by the International Monetary Fund (IMF), the global economy responded to the coronavirus pandemic with a negative growth rate of 4.4% in calendar year 2020, on the back of external supply and demand shocks and precautionary saving among consumers (prior year: 2.8%; as of October 2020). Regional developments varied significantly depending on economic situations before the crisis and responses to the pandemic by individual countries. In the euro zone, the IMF expects the growth rate to drop to -8.3% (prior year: 1.3%). Alongside the pandemic, a significant decline in available income due to the – at times – sharp fall in the price of oil had a further adverse effect on the economy, particularly for oil-exporting countries. The rate of growth in Russia, for example, is anticipated to fall from 1.3% in the prior year to -4.1%. In terms of the U.S. economy, full-year growth in 2020 is expected to stand at -4.3%, down from 2.2% in the prior year, as a result of the pandemic. Only China is on course to record a positive growth rate in 2020, at 1.9% (prior year: 6.1%).

In 2019, the global agricultural equipment industry (including municipal, forestry, and garden equipment) achieved a market volume of €111 billion, according to estimates from the German Mechanical Engineering Industry Association (VDMA), continuing the prior-year growth trend (prior year: €109 billion). By contrast, the VDMA expects a slight decline in the industry's sales in real terms in 2020.

In crop year 2019/20, which, in contrast to the CLAAS fiscal year, ended on June 30, global grain production (including rice) increased year on year to 2,671 million metric tons according to the U.S. Department of Agriculture (USDA). On the back of a slight dip in the prior year, wheat production climbed by 4.6% to a new record-breaking level of 764 million metric tons. Corn production, on the other hand, remained roughly stable at 1,116 million metric tons.

The increase in wheat production resulted in inventories rising again following the stagnation in crop year 2018/19. Against this backdrop, prices hovered above the five-year average for the most part of the year.

Dairy production volume climbed by 1.3% in 2019 to 852 million metric tons. Milk prices developed positively at the start of the past fiscal year and were significantly higher than the five-year average.

Regional industry developments

The outlook for the current fiscal year 2020 was relatively cautious from day one, due in part to the dry weather conditions recorded in some regions over the past few years. This forecast was confirmed in European core markets up to the end of the early sales campaign in March. The spread of COVID-19 in Europe initially created additional uncertainty. However, taken as a whole, the agricultural equipment industry was actually not as affected by the pandemic as the rest of the mechanical engineering industry, due to the more-optimistic crop yield outlook for the remainder of the crop year as well as other factors. Sales of agricultural equipment in Europe remained on par with the – admittedly relatively weak – prior-year level.

In Eastern Europe, the agricultural equipment market saw varied performance from region to region. The solid grain harvest in Russia in 2019 stimulated growth in agricultural equipment sales in the current year, whereas the agricultural equipment market in Ukraine experienced a decline in growth due to the planned liberalization of the market for agricultural land and the resulting focusing on real estate investments rather than equipment purchases.

The North American agricultural equipment market saw a slight decline after a lower grain harvest in 2019. Additional uncertainty caused by the trade conflict with China had a negative impact on farmers' planning security and dampened demand for agricultural equipment.

Latin America has developed into a key trading partner for China when it comes to agricultural products. This trend has also given impetus to the agricultural equipment market, which remained at a high level.

Agricultural equipment markets in Asia developed very positively overall. Following a temporary dip in demand due to COVID-19, China was able to increase its sales of agricultural equipment beyond the prior-year level. Sales of agricultural equipment in India were up in the wake of favorable weather conditions and subsidy programs. The agricultural mechanization trend observed over the past few years continued in India.

Impact of and Response to the Coronavirus Crisis

CLAAS already registered key warning signs of the pandemic from China in February. This was followed by initial surveying of suppliers and sub-suppliers regarding the current and future supply situation. As a result, CLAAS received the first risk report on the impact of the coronavirus pandemic in China on material purchasing and production in other markets even before the first case of COVID-19 was diagnosed in Germany. The risk report laid the foundations for efficient procurement activities in the coronavirus crisis, which played a key role in bringing production back online quickly and ensuring consistent supply capacities.

Crisis management teams were set up at locations outside of China by the end of February. From mid-March on, the teams met on a daily basis, and in some cases several times a day, to provide up-to-date assessments of the situation and define and communicate hygiene measures and protection concepts in close collaboration with all divisions. As the number of infections rose, all CLAAS employees had sufficient access to face masks and disinfectant. A higher degree of separation between teams and shifts in production was also ensured, and points of contact with indirect divisions and functions, visitors, and employees of logistics companies were drastically reduced and controlled. As a further measure, CLAAS arranged for more indirect employees to work from home starting in March. Thanks to the rapid and targeted response from IT, work was able to continue practically without a hitch, even in the case of challenging research and development projects. The situation gradually began to normalize from the second half of the year on, while compliance with the necessary protective measures was ensured.

Sales, service, and the CLAAS Academy also went online, as customer visits and in-person training were not possible for many weeks and business travel throughout the CLAAS Group was severely restricted. Apps and online video conferencing helped CLAAS keep in touch with its customers.

Series production at almost all CLAAS production sites was forced to shut down for anything from a few days to multiple weeks, primarily due to production stoppages at suppliers and sub-suppliers, but also on account of government-imposed

lockdowns. The sole exceptions were the locations in Bad Saulgau, Germany, and Omaha, USA. By contrast, shipments of machines and components continued at all production sites and were given top priority ahead of the upcoming crop harvest and in view of largely stable demand. Series production was restored within a relatively short period of time thanks to proactive supplier management and, in some cases, based on special approvals for essential businesses.

Close collaboration with transportation companies and a number of special approvals ensured that key suppliers from Italy were able to continue delivering parts to CLAAS production sites during the long period of lockdown there. This was thanks to a strict program of daily supplier monitoring. At the same time, production programs were constantly updated and adjusted in line with the latest developments.

Spare parts business at CLAAS proved to be particularly robust in this period. Supplies to customers were maintained at the highest possible level due to intelligent shift management and clear prioritization of spare parts positions. A pilot project was also set up to enlist the help of students in the repackaging of parts at short notice. Last year's completion of the expanded central spare parts warehouse in Hamm, which was able to process up to 17,000 positions every day, also benefited CLAAS in the crisis.

The measures outlined above, coupled with the stable market conditions, ensured that CLAAS successfully minimized the adverse effects of the coronavirus crisis on its financial performance.

Financial Performance

Net sales by region ↗ 1

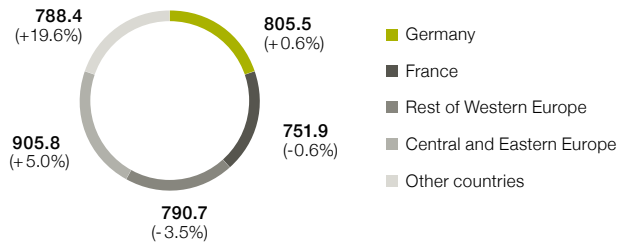
The CLAAS Group generated net sales of €4,042.3 million in the past fiscal year, up 3.7% on the prior year. This meant that CLAAS was able to increase its sales in spite of the coronavirus pandemic. Sales developments in markets relevant to CLAAS varied and partially offset each other. Overall, the change in important exchange rates, such as U.S. dollars or Russian rubles, had no significant impact on sales. The share of sales generated outside Germany amounted to 80.1% (prior year: 79.5%).

Net sales in Germany totaled €805.5 million (prior year: €800.6 million). The slight rise in sales was predominantly due to service and parts business and sales of used machinery. In addition, sales of forage harvesting machines and telehandlers also rose year on year.

At €751.9 million, net sales generated in France were down on the prior-year figure of €756.5 million. This decline was primarily the result of the market-related decline in sales of new machines, and particularly forage harvesters, telehandlers, and wheel loaders. Business involving customer service, spare parts, and accessories developed positively. CLAAS was able to maintain its position on the combine harvester and baler market.

1 _ Net Sales by Region

in € million / in % compared to prior year



Sales generated in the Rest of Western Europe declined to €790.7 million (prior year: €819.1 million). The decline in sales was particularly marked in the United Kingdom on account of widespread flooding in the country and uncertainty caused by Brexit. Sales also declined in Italy due to the massive spread of coronavirus in the north of the country, which is extremely important to the agriculture industry. By contrast, demand for CLAAS products developed very positively compared to the prior year, particularly in Scandinavian countries and in Spain.

At €905.8 million, net sales in Central and Eastern Europe were up 5.0% from the prior-year figure of €862.8 million. Demand for professional agricultural equipment, particularly for CLAAS

products, remains high. The rise in sales was predominantly due to increased sales of combine harvesters, forage harvesters, and tractors. Russia, Poland, and Romania contributed the highest sales volume within this region. The positive year-on-year sales trend was also due to the increase in sales volumes from tenders in the Central Asia region.

At €788.4 million, net sales generated outside of Europe were up 20% year on year (prior year: €659.0 million). Significant increases were generated in North America through sales of forage harvesters, combine harvesters, and tractors. This development allowed CLAAS to expand its position on the large combine harvester market, in particular as a result of the launch of the new LEXION series. CLAAS was able to increase its sales in Argentina in spite of the difficult political and economic conditions there. In addition, sales of agricultural equipment increased in China on the back of a year-on-year rise in customers' willingness to invest. The U.S., Canada, and China contributed the highest sales volumes in this region.

Income ↗ 2

Gross profit on sales improved by €59.8 million year on year, which resulted in a rise in the gross profit margin from 19.5% to 20.3%. Sales margins remained stable overall, while savings in purchasing generated positive effects on cost of sales. In addition, increased spare parts sales volumes led to a relative improvement in the gross profit margin.

Selling, general, and administrative expenses remained on par with the prior year and therefore developed at a disproportionately lower rate compared to sales. The increase in expenses for IT and digitalization projects was counteracted by a fall in costs for communication, marketing, and travel.

Research and development costs rose to a new record high at CLAAS. They included the development and renewal of harvesting machinery and tractors, investments in electronics architecture for machine control and connectivity, and expenses for the digitalization of agricultural processes. Please refer to the section on "Research and Development" for more information.

Other operating income, net, saw a decline of €46.6 million year on year. Other operating income rose significantly in 2019 to €127.3 million due to a variety of one-off effects. At €94.0 million, it remains on par with the average observed in prior years. The rise in other operating expenses was partly due to the conservative assessment of asset valuation against the background of the uncertainty caused by the coronavirus pandemic.

Income from investments, net, mainly includes the respective share of income from the financing and leasing business of the CLAAS Financial Services companies.

2 _ Income Statement (Summary)

in € million	2020	2019	Change
Net sales	4,042.3	3,898.0	144.3
Cost of sales	-3,222.6	-3,138.1	-84.5
Gross profit on sales	**819.7**	**759.9**	**59.8**
Selling, general and administrative expenses	-441.9	-440.1	-1.8
Research and development expenses	-226.2	-222.4	-3.8
Other operating income, net	4.7	51.3	-46.6
Operating income	**156.3**	**148.7**	**7.6**
Income from investments, net	18.7	13.3	5.4
Financial result	-16.9	-26.3	9.4
Income before taxes	**158.1**	**135.7**	**22.4**
Net income	**107.1**	**96.3**	**10.8**

The improvement in the financial result is mainly due to the development of foreign exchange gains and losses. This trend was mainly due to the favorable development of key currency pairs over parts of the year, particularly in the case of the U.S. dollar, from which the Company benefited thanks to the flexible hedging strategy.

In spite of the coronavirus crisis, income before taxes exceeded our expectations by climbing €22.4 million year on year. This positive trend was primarily due to the significant improvement in gross profit. The return on sales amounted to 3.9% (prior year: 3.5%).

Cash Position

Liquid assets ↗ 3

As of the reporting date, the CLAAS Group's liquidity amounted to €907.7 million (prior year: €669.7 million). Liquid assets are mainly held as fixed-term deposits, money market securities, and investment funds. The increase in liquidity was primarily due to the decline in working capital.

3_Net Liquidity

in € million	Sept. 30, 2020	Sept. 30, 2019	Change
Cash and cash equivalents	524.1	491.3	32.8
Securities	383.6	178.4	205.2
Liquid assets	**907.7**	**669.7**	**238.0**
Financial liabilities*	759.3	650.5	108.8
Net liquidity	**148.4**	**19.2**	**129.2**

* Excluding derivative financial instruments.

Financial liabilities and credit facilities

The U.S. private placement, the "Schuldscheindarlehen" (German private placement) issued in 2015, and another "Schuldscheindarlehen" issued in euros in a total of four tranches in the current financial year were the largest individual financial liabilities items. The rise in financial liabilities was predominantly due to the first-time application of the new IFRS 16 lease standard and the lease liabilities recognized in this context.

On the balance sheet date, the CLAAS Group had access to credit facilities from banks as well as a flexible syndicated loan totaling €680.8 million for general financing purposes, €639.8 million of which was unutilized.

Further information on the financial liabilities and the financial risk management are presented in the Notes 25 and 35 to the consolidated financial statements.

Off-balance-sheet measures

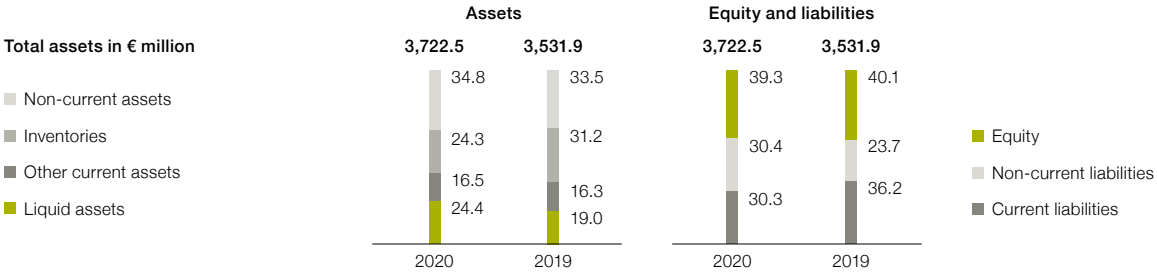
CLAAS uses the asset-backed securitization program (ABS program) to sell trade receivables to a structured entity on a revolving basis. Due to the seasonal nature of sales realization in the agricultural equipment industry, substantial financing is needed during the course of the year. By contrast, at the end of the fiscal year, the relatively lower level of capital tied up in working capital generally leads to a high liquidity level. The ABS program helps to effectively reduce seasonal liquidity fluctuations. The volume of receivables transferred amounted to €175.1 million as of September 30, 2020 (prior year: €232.8 million).

Asset and capital structure ↗ 4

Non-current assets were covered by long-term financing, consisting of equity and non-current liabilities, at a ratio of 200.5% as of the balance sheet date (prior year: 190.6%). Non-current assets plus 50.0% of inventories were funded by long-term financing at a ratio of 148.5% (prior year: 130.0%). These figures testify to the CLAAS Group's sound capital structure.

4_Balance Sheet Structure

in %



Cash Flows ↗ 5

5_Statement of Cash Flows (Summary)

in € million	2020	2019	Change
Cash and cash equivalents at beginning of year	**491.3**	**609.7**	**-118.4**
Cash flows from operating activities	478.4	45.9	432.5
Cash flows from investing activities	-376.6	-164.1	-212.5
Cash flows from financing activities	-49.3	-10.1	-39.2
Effect of foreign exchange rate changes on cash and cash equivalents	-19.7	9.9	-29.6
Change in cash and cash equivalents	**32.8**	**-118.4**	**151.2**
Cash and cash equivalents at end of year	**524.1**	**491.3**	**32.8**

The significant rise in cash inflows from operating activities was mainly due to the lower level of funds tied up in working capital resulting from the decrease in inventories. In addition, cash inflow due to a year-on-year increase in current provisions also had a positive effect.

Cash outflow from investing activities predominantly comprised outflow from capital expenditure. Investment in short-term securities was also increased compared to the prior year and led to an outflow of cash and cash equivalents totaling €206.3 million.

Cash outflow from financing activities mainly resulted from dividend payments and the repayment of lease liabilities, which was accounted for the first time due to the initial application of IFRS 16.

The development of the free cash flow is as follows: ↗ **6**

6_Free Cash Flow

in € million	2020	2019	Change
Cash flows from operating activities	**478.4**	**45.9**	**432.5**
Net capital expenditure in intangible assets, property, plant and equipment, borrowings, and investments	-170.3	-184.1	13.8
Free cash flow	**308.1**	**-138.2**	**446.3**

Capital expenditure ↗ 7

Capital expenditure came to €187.2 million in the reporting year. The additions mainly relate to investments in the construction, expansion, and modernization of production and sales sites, in new technologies, and in innovative products. The ratio of capital expenditure to sales stood at 4.6% (prior year: 4.7%).

Investments in the construction, expansion, and modernization of production and sales sites were mainly made in Germany, Russia, the United Kingdom, and France.

In Harsewinkel, Germany, work began on the realization of the SynPro 2020 modernization project. This investment ensures the future competitiveness of the Harsewinkel production site. The project centers on merging the two separate combine harvester assembly lines into one joint production line, with the switch to a modular construction concept for combine harvesters playing a key role. In fiscal year 2020, an automated guided vehicle system was implemented and new test bays were installed. New foundations laid in preparation for the changes to combine harvester assembly, which include the raising of the production hall ceilings in summer 2021.

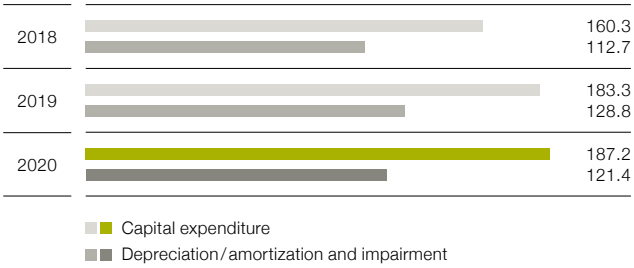
In Le Mans, France, CLAAS wrapped up the comprehensive modernization of its tractor production on schedule. This project involved renewing technical equipment, but also took into consideration employees' opinions and views on design and procedures with the help of virtual reality. Entire processes, such as internal logistics or filling up machines with operating liquids, were completely redesigned. Tractors are now transported from the first assembly station to the last by automated guided vehicles.

CLAAS is also continuing to invest in the production site in Krasnodar, Russia. This project involves expanding metal processing operations and extending the conveyor system in the paint shop. Besides the expansion of the surface treatment center, an additional logistics hall will also be constructed with new storage areas.

The redesign of the headquarters of CLAAS U.K. Ltd. in Saxham, United Kingdom, was completed this year. The work involved building a new Technoparc, which serves as an exhibition center for customers.

7_Capital Expenditure, Depreciation/Amortization, and Impairment

in € million



Construction of a new sales center in Ymeray, France, was also completed on schedule. The new site will pool sales activities in France. In this new technology center, CLAAS has constructed an efficient and productive working environment that provides the perfect backdrop for meetings with customers, sales partners, and other interested parties.

In addition, CLAAS is investing in the expansion and digitalization of business processes at all levels of the sales organization. New systems and applications are set to enhance communication among CLAAS, dealers, and customers.

Investments in the testing and production of new products made within the scope of the extensive development program account for a substantial share of capital expenditure.

At the end of the fiscal year, CLAAS had financial obligations totaling €25.5 million relating to future capital expenditure.

Financial Position ↗ 8

8_Balance Sheet (Summary)

in € million	Sept. 30, 2020	Sept. 30, 2019	Change
Assets			
Intangible assets	289.2	267.4	21.8
Property, plant and equipment	561.6	541.8	19.8
Right of use assets	88.1	–	88.1
Investments accounted for using the equity method	156.8	142.0	14.8
Inventories	905.8	1,103.5	-197.7
Trade receivables	373.8	355.5	18.3
Liquid assets	907.7	669.7	238.0
Other assets	439.5	452.0	-12.5
Total assets	**3,722.5**	**3,531.9**	**190.6**
Equity and liabilities			
Equity	1,464.1	1,417.3	46.8
Financial liabilities	759.3	650.5	108.8
Provisions	979.9	960.9	19.0
Trade payables	233.1	235.5	-2.4
Other liabilities	286.1	267.7	18.4
Total equity and liabilities	**3,722.5**	**3,531.9**	**190.6**

Total Group assets rose by €190.6 million year on year to €3,722.5 million compared to September 30, 2019. The first-time capitalization of right-of-use assets from leases of €88.1 million was one main reason for the increase. Please refer to Note 2 to the consolidated financial statements for further details on the first-time application and the effects of IFRS 16. The decline in inventories led to a corresponding rise in liquid assets.

Intangible assets increased significantly year on year to €289.2 million from the high level recorded in the prior year. This was caused primarily by the rise in development costs recognized as an asset by €13.3 million to €232.5 million.

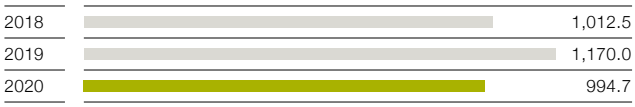
The rise in investments accounted for using the equity method was primarily due to the earnings contributions of CLAAS Financial Services companies.

The significant fall in inventories was partly due to series production closures in March and April 2020 in response to the coronavirus pandemic and played a key role in the decline in working capital. Trade receivables and payables developed in opposing directions, which on balance slightly reduced the working capital decrease. Engines bunkered due to new legal standards on exhaust emissions were reduced according to plan. The share of working capital to total assets dropped significantly to 26.7%.

Working capital developed as follows: ↗ **9**

9_Working Capital

in € million



Other assets declined by €12.5 million to €439.5 million. They mainly comprise deferred taxes, tax receivables, and assets relating to the ABS transaction.

The change in the equity of the CLAAS Group involves a variety of factors, some of which with opposing effects. Net income of €107.1 million, which corresponded to return on

equity of 7.3%, had a positive effect. However, equity was decreased in fiscal year 2020 due to the dividend payment and the effects of currency translation recognized directly in equity. Given that equity did not rise as sharply as total assets, which were impacted predominantly by IFRS 16, the equity ratio declined marginally to 39.3% (prior year: 40.1%).

The increase in financial liabilities was largely driven by the first-time recognition of lease liabilities.

The rise in provisions was due to a variety of partially opposing effects. Tax provisions declined, but there was a rise in other provisions.

In addition to the silent partnership, other liabilities mainly include deferred income, other taxes, and liabilities to investments.

Research and Development

In the reporting year, research and development costs fell slightly by 2.5% to €237.4 million ↗ **10**. Activities were focused on new models and the further development of harvesting machinery and tractors. Investments in electronics architecture for machine control and connectivity, as well as in the digitalization of agricultural processes, also continue to account for a significant share of the CLAAS Group's total research and development costs.

10_Research and Development

		2020	2019
Research and development costs (total)	in € million	237.4	243.6
Research and development cost ratio	in %	5.9	6.2
Development costs recognized as an asset	in € million	52.6	53.3
R&D capitalization ratio	in %	22.2	21.9
Amortization/impairment of development costs recognized as an asset	in € million	41.5	32.1
Share of workforce involved in research and development at the CLAAS Group	in %	12.4	12.5
Active patents	Number	4,307	4,200

Innovative products and developments

CLAAS started production of its first crawler track tractors with full suspension in the form of the AXION 960 TERRA TRAC and the AXION 930 TERRA TRAC. Its key innovation is the inclusion of the suspended TERRA TRAC crawler track system, which is based on the technology currently in use with combine harvesters. The vehicle continues to generate high traction in any conditions, meaning that machines pulled by or attached to the tractor can provide a high level of performance even at low speeds. AXION 900 TERRA TRAC combines the additional traction and soil protection of a tracked tractor with the more comfortable drive characteristics of a conventional tractor.

The new XERION TRAC TS is now available with four crawler track units and in compliance with the Stage V emissions standard. The new track system increases the machine's footprint by 25% compared to the maximum possible wheeled version, providing secure traction and reducing the impact on the soil. The cab has the same armrest featured in the AXION and ARION models, complete with CMOTION multifunction control lever and CEBIS touchscreen. The 12″ touchscreen monitor is easy to navigate, displays all key machine parameters in one place, and allows drivers to switch between steering, transmission, and hydraulic settings at ease.

CLAAS has also expanded the SCORPION series with the addition of the 960 model with 6.5 metric ton lifting capacity and a lifting height of 9.0 meters. The new SCORPION 960 boasts optimum load handling and productivity thanks to quick loading cycles. Another major improvement is the high-performance drive, which guarantees particularly comfortable and precise maneuvering. Last but not least, the entire SCORPION series now also complies with the Stage V emission standard.

There are also two new members of the new generation of CLAAS corn headers, the ORBIS 600 and ORBIS 450 models. The new ORBIS 600, with a working width of 6.0 meters, is equipped with large-diameter discs, which make it ideal for medium to tall corn crops. The ORBIS 450, with a 4.5 meter working width, rounds out the lower end of the new generation of front attachments. Thanks to their crop flow concept, ORBIS corn headers stand for high efficiency and operational reliability whatever the harvest conditions.

Awards

At the Machine of the Year awards that took place on the opening day of AGRITECHNICA 2019, CLAAS was presented with the Machine of the Year 2020 award for its LEXION 8000/7000, the JAGUAR 900, and DataConnect, a joint initiative together with 365FarmNet, John Deere, and CNH Industrial. DataConnect also won a further two gold medals. At the international agricultural fair Polagra Premiery in Poland, DataConnect won an award in the Agricultural Machines, Equipment, Applications and Products category. Not only that, the innovation received the gold medal in the Solutions for Agricultural Management category at FIMA, the international exhibition for agricultural machines held in Spain.

The new LEXION generation received the iF GOLD AWARD 2020. The combine harvester impressed the jury in the Product category, particularly with its ergonomics and design. The jury was especially keen on the fully glazed cab, which provides an all-round view and the greater productivity enabled by the larger grain tank. The iF DESIGN AWARD is a world-famous design prize given to carefully selected industry products every year.

Purchasing

Fiscal year 2020 saw the low capacity utilization in the industry continue. This, coupled with the coronavirus crisis, caused steel prices to fall.

CLAAS was able to capitalize on the favorable development of the price of primary input factor steel, further declines in supplier capacity utilization, and a production program considered stable compared to the automotive industry to reduce costs.

Purchasing and logistics began safeguarding availability of supplies as early as the start of February following a COVID-19 risk report. Existing matrix organizations provided a solid basis for the rapid set-up of crisis management teams. This allowed restrictions to supply capacities to be largely minimized.

Due to COVID-19, the situation varied significantly depending on the logistic sector. Sufficient inbound and outbound capacities were available in road transport. However, capacity in the air freight segment was limited considerably by the cancellation of many passenger flights. This resulted in temporary mark-ups on rates. In terms of sea freight, many ships were moved to roadsteads, leading to volatile market prices but no additional cost impact in total.

The division responsible for purchasing non-production material focused on major investments, IT projects, and optimizing purchasing processes. A variety of investments in buildings and systems, such as at the headquarters in Harsewinkel, Germany, were successfully completed. As part of the advancements in digitalization, CLAAS also initiated a number of extensive projects in collaboration with IT. New digital applications further enhanced the analytical capabilities of the CLAAS purchasing organization, unlocking additional potential and synergies as a result. CLAAS acted on opportunities arising in operative purchasing and adapted its terms and conditions with the aim of lowering costs. Price opportunities are expected to emerge in the near future; however, some suppliers are also set to experience financial difficulties too.

Employees

HR indicators ↗ 11

At €742.2 million, personnel expenses were up by around 1.6% year on year (prior year: €730.3 million). As of September 30, 2020, the CLAAS Group employed a total of 11,395 people (prior year: 11,448) worldwide, approximately 50.9% of which outside of Germany ↗ 12.

Training

As of September 30, 2020, the CLAAS Group employed 714 apprentices (prior year: 735), 430 (prior year: 414) of which in Germany. CLAAS trains young people in Germany in various technical and business professions, and as part of the German "dual study" system. The same applies to other countries in which CLAAS operates, such as France, Hungary, the United Kingdom, and India.

Personnel development

At CLAAS, strategic corporate objectives are directly connected with targeted investments in its employees. During the course of their careers, employees are offered qualification and further education opportunities. Vocational qualifications include a range of measures, such as workplace learning, seminars, workshops, or attending conferences.

Junior staff development

CLAAS cooperates closely with schools and institutions of higher education, and exercises a wide range of vocational training and orientation initiatives. Fairs, training days, and internships enable young people to establish early contact with the potential employer. School graduates may also apply to complete technical or commercial vocational training at any of our sites in Germany or enter into a bachelor's program at the Duale Hochschule Baden-Württemberg. Maintaining contact with apprentices, students participating in the "dual study" system, and interns even after their time at the Company is very important to CLAAS. The CLAAS Next Generation alumni program is used in a targeted manner to ensure the loyalty of talented young people in the long term. After finishing their studies, direct entry positions or the international trainee program offer a great opportunity for graduates to start their careers at CLAAS. The award-winning trainee program focuses on engineering, finance/controlling, sales, and software and electronics.

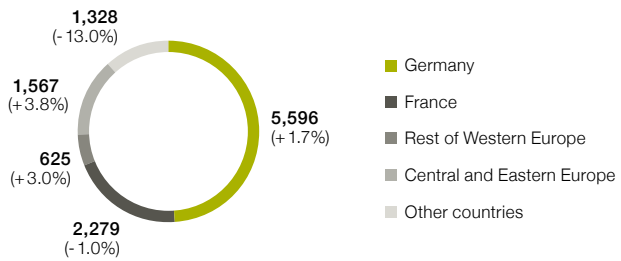
11 _ HR Indicators

		2020	2019
Employees as of the balance sheet date[1]	Number	11,395	11,448
Male employees	in %	86.7	86.5
Female employees	in %	13.3	13.5
Average age	in years	40.2	39.7
Length of service	in years	11.8	12.0
Fluctuation	in %	8.3	7.3
Personnel expenses	in € million	742.2	730.3
Vocational and further training costs	in € million	18.7	20.0

[1] Including apprentices.

12 _ Employees by Region

Employees/in % compared to prior year



Employer rankings and employer branding

CLAAS has successfully positioned itself as an attractive company among its target groups so as to continue securing talent in the future. CLAAS is regarded as being a popular employer among both German and international students, a fact that is confirmed every year by the top positions that CLAAS secures in the employer rankings. The market research company Universum, for example, named the CLAAS Group the Biggest Winner in its employer ranking for engineering students. CLAAS is also actively and systematically encouraging young women to enter technical professions.

Performance-based pay

As a responsible employer, we offer our employees competitive, performance-based pay that is aligned to the long-term requirements of CLAAS. Systematic job evaluation ensures

that our remuneration structures are both sound and commensurate. All domestic employees may become silent partners of CLAAS through CMG CLAAS Mitarbeiterbeteiligungs-Gesellschaft mbH. We aim to create a balance between business interests of the CLAAS Group and employees' professional, personal, and family needs. This includes offering employees the option to have flexible working hours, learn more about the need for a work-life balance, and to take advantage of home office regulations.

Women in leadership positions

CLAAS aims to promote the training and education of young women through offers such as a Female Day and a mentoring program for students of science, technology, engineering, and mathematics (STEM). These measures have already resulted in candidates applying to join our training and trainee programs.

In relation to Germany's law on the equal participation of women and men in executive positions, a new target was resolved in July 2017, which applies through June 30, 2022. The aim is to maintain or, if possible, increase the percentage of women in executive positions over this period. The target for the Supervisory Board stands at 8.3%. The target for the first management level stands at 7.7%, with the target for the second management level at 4.0%. In setting these targets, CLAAS took into account industry-specific circumstances and the current percentage of women on staff.

The above statement pursuant to Sec. 289f (4) of the German Commercial Code (HGB) is an integral part of the management report. The audit by the auditor is to be limited pursuant to Sec. 317 (2) Sentence 6 HGB to whether these disclosures have been made.

Risks and Opportunities

Internal control and risk management system

As a globally active corporate group, CLAAS is subject to various types of risk. Taking preventive measures to counter possible risks, as well as identifying, measuring, and adequately responding to these risks at an early stage, are key components of the CLAAS risk management system. At CLAAS, taking entrepreneurial action also means deliberately entering into calculable risk to allow the Company to take advantage of the related opportunities.

Within the CLAAS Group, a uniform, Group-wide risk management system is an integral part of corporate management and the controlling organization. This serves to take advantage of opportunities, identify any significant risk that could endanger the ability of the Company to continue as a going concern, and ensure appropriate risk handling. The risk management system and implemented risk controlling utilize a wide variety of information for ongoing identification, evaluation, and control of risks. The existing system, which is continually being developed further, complies with all statutory early warning requirements.

The Group's reporting system represents an essential element in the continuous monitoring of economic risks. In addition to the external data supplied for external reporting, detailed internal reports and evaluations are provided to decision makers on a monthly basis. Budgets are monitored for deviations, earnings projections for feasibility, and any new risks are identified, evaluated, and documented on an ongoing basis. Assessment takes place over a period of at least two years; however, some risks are identified and monitored that extend over a longer time frame. The management report usually covers a period of twelve months. Risks are assessed on the basis of the probability of occurrence of an estimated maximum risk exposure before the implementation of countermeasures.

Within existing organizational structures, the risk management system is accounted for and supported by the operating and administrative areas of responsibility. In addition to the regular information provided, an obligation to prepare ad hoc risk reports ensures prompt Group Executive Board action at all times. The Internal Auditing department of CLAAS is

responsible for monitoring the adequacy of the risk management system and conformity with regulations.

The aim of the internal control and risk management system for the financial reporting process and the Group financial reporting process is to ensure the effectiveness of the accounting system and its adherence to generally accepted accounting principles and guarantee compliance with statutory norms, financial reporting standards, and intragroup accounting policies, which are binding for all companies included in the consolidated financial statements. The key information on this is available to the entire Group via the CLAAS intranet. CLAAS ensures that all information is up to date by conducting continuous analyses of any changes to determine their relevance and their impact on the financial statements. The Group Accounting department is primarily responsible for this task. CLAAS prepares its financial statements using a Group-wide reporting system that is also used for preparation of the budget, medium-term planning, and estimates during the fiscal year. The reporting system incorporates principles, processes, and controls to ensure that the financial statements comply with all requirements and are submitted on time. The following examples are representative of these principles, processes, and control mechanisms:

- Group-wide specifications for accounting, measurement, and account coding of key items that are updated and communicated to the responsible departments within the scope of training courses on an ongoing basis;
- Organizational measures in combination with access authorizations for accounting systems, separation of tasks, and rights of disposal;
- Dual control of financial reporting processes and in connection with the preparation of the financial statements;
- Internal audit procedures;
- Activities of external service providers.

The Internal Auditing department conducts regular risk-oriented reviews as well as reviews on a case-by-case basis of key business processes at companies in Germany and abroad. It determines whether legal requirements and internal instructions are being adhered to, and also whether the internal control system is effective and functional. As part of the reviews, the Internal Auditing department agrees on suitable measures with the respective company management team, which are then implemented by the company. The Internal Auditing department also monitors the implementation. All audit results are reported as well. Internal audit activities, such as annual risk-oriented audit planning, documentation of audit activities and results, reporting, and follow-up measures, are set forth in rules for the Internal Auditing department and an audit manual. The tasks and activities are based on the rules of the Institute of Internal Auditors and of Deutsches Institut für Interne Revision, and they are supported by audit software. The most recent audit of the internal audit system in accordance with IDW PS 983 demonstrated full compliance with the quality assessment requirements.

More details on the main risks and opportunities are provided below.

Market risk

The risk landscape of CLAAS is affected by variations in harvest yields, decisions on agricultural policies, farmers' incomes, as well as intense competition in the industry. In view of demand trends for agricultural equipment, markets in Asia, especially China and India, as well as in Central and Eastern Europe, above all Russia, are of particular importance for the CLAAS Group. These markets have huge potential; however, CLAAS sales activities are hampered in some countries in these regions on account of the prevailing market conditions there. These include customs barriers, minimum requirements relating to the share of local manufacturing, payment and convertibility restrictions, or political and economic insecurity. At the same time, there are opportunities that go above and beyond current planning that can emerge from quicker growth in markets with a comparatively low level of mechanization. Risks and opportunities are managed centrally by monitoring and evaluating market-related indicators in conjunction with the specific country risks.

Markets and their early warning indicators are carefully observed on an ongoing basis in order to identify any fluctuations in demand or changing buying behavior in sales regions at an early stage. This ensures that product strategies are kept up to date and are adapted in response to changing customer requirements and reactions from competitors.

Research and development risk
Along with controlled risk-taking, acting entrepreneurially at CLAAS involves dealing in depth with all risks along the value-added chain. With innovation cycles becoming increasingly shorter, research and development play a pivotal role. The aim is to ensure that innovative and technically mature products are created and brought to market for the benefit of customers. Risks from possible mistakes in development, increased start-up costs for new products, or delays to product launches are counteracted through the systematic expansion and ongoing monitoring of research and development activities. CLAAS counteracts the risk that products may not be developed within the planned time frame, at targeted levels of quality, or at the specified costs by continuously and systematically monitoring the progress of all projects using a clearly defined process.

Purchasing risk
Risks resulting from supply bottlenecks have receded lately thanks to lower capacity utilization at suppliers. In addition, risks relating to the development of commodity prices – such as steel – have been reduced. By contrast, suppliers' liquidity-related risks have risen. Against this backdrop, CLAAS decided to significantly expand its long-established system of supplier financial monitoring from February 2020.

During the coronavirus crisis, availability risks forced us to shut down series production at numerous sites for a period of multiple weeks. By implementing extremely strict supplier monitoring, we were able to largely minimize the adverse effects of the crisis. Future availability risks resulting from regional or cross-regional lockdown measures to fight the pandemic are monitored closely. Purchasing, logistics, and production have worked closely together to collate key findings since the start of the pandemic and pinpoint measures and activities to boost supply security. Adverse effects cannot be ruled out, in spite of the suitable countermeasures taken by CLAAS.

Production risk
In CLAAS production, all equipment is serviced regularly, and any potential sources of risk are eliminated by renewing the equipment early in order to reduce the risk of production downtime. In addition, advantageous insurance contracts protect CLAAS from the effects of production outages. Flexible working time models ensure that the required human resources can be adjusted to meet the degree of capacity utilization. To reduce quality risk, a central quality management department guarantees adherence to and fulfillment of predefined standards. The "Impact of and Respnse to the Coronavirus Crisis" section contains a full description of how CLAAS acted on the spread of the pandemic. Series production was temporarily shut down at numerous locations for the protection of employees and as a result of bottlenecks in supply. Based on these experiences, CLAAS considers itself to be well equipped to respond flexibly to further lockdown measures.

Personnel risk
CLAAS has a constant need for highly qualified specialists and management executives. At the moment, CLAAS does not see itself exposed to risks arising from a shortage of certain types of employees on the labor market and resulting delays in finding successors for critical positions. With its personnel strategy, CLAAS focuses above all on in-house junior staff advancement as well as systematic training and personnel development. Aside from dual study programs, the international trainee program ensures that highly qualified employees can be trained within the Company. In addition, CLAAS also offers measures to promote and maintain employee health. For a comprehensive description of personnel activities, please see the "Employees" section.

IT risk
Business processes at CLAAS are supported by powerful, state-of-the-art IT systems. The Group's uniform global IT strategy allows systems as well as security strategies and concepts to be effectively and continuously adapted to reflect current requirements and developments. Cybersecurity threats are actively and continuously monitored. Based on its insights from the monitoring activities, the Group prepares related organizational and technological measures for enhancing IT security, which are then permanently carried out.

In order to avoid disruption, CLAAS places particular importance on standardized hardware and software environments, the integrity and safety of data, and on user management. Reliable data backup systems are complemented by systematic and varied employee training.

Legal risk
CLAAS is exposed to risks relating to international and national tax, competition, patent, trade, and liability law. Decisions at the CLAAS Group are made after intensive legal review and consultation so as to avoid these risks. Selected risks are transferred to insurance companies by means of global master policies and national framework agreements on a uniform basis across the Group.

Financial risk
Due to its business activity, the CLAAS Group is exposed to risks and opportunities from exchange rate and interest rate volatility. On the procurement side, the CLAAS Group is exposed to commodity and supply security risk. Credit risks that could result from payment default or delayed payments are minimized through effective receivables management, close cooperation with banks, and credit insurance. Liquidity risk can result from a significant decline in operating business performance, restriction of the free movement of capital, or as a result of the risk categories mentioned above. These risks are identified for the entire CLAAS Group and measured, monitored, and managed centrally by Group Treasury. The hedging instruments primarily used are foreign exchange outrights and options, as well as interest rate swaps. The risk management software in use enables independent valuations, performance measurement, and forward-looking scenario simulations of the utilized financial instruments. CLAAS is fully compliant with the risk management requirements that the European Market Infrastructure Regulation (EMIR) of the European Parliament and the European Council imposes on non-financial counterparties below the clearing threshold.

CLAAS measures liquidity development on an ongoing basis in the form of daily, weekly, and monthly reports with an increasing level of detail. Potential liquidity risks are countered by maintaining sufficient financing commitments and cash and cash equivalents, as well as through the ABS program and the international cash management strategy.

Risk management in relation to financial instruments, as well as the quantifying of concluded hedging instruments, is explained in Notes 34 and 35 to the consolidated financial statements.

Strategic refinancing risks are managed at CLAAS by a relatively long duration target for drawn borrowings.

Risks related to payment security have become increasingly important in recent years. CLAAS is responding to this constantly growing challenge through Group-wide information and training for employees in affected areas, the monitoring of payment transactions as part of the scope of the cash management process, clear responsibility structures and process definitions, and the systematic implementation of dual control at all process levels, especially payment execution, among other measures. Great importance is also placed on preventing money laundering. Binding Group-wide guidelines are supplemented by corresponding employee training and the provision of information and documentation.

In the area of dealer and sales financing, the CLAAS policy of following a traditional captive financing model only to a limited extent has paid off. The risk mix has remained sustainable thanks to the close integration of CLAAS Financial Services companies into the risk management and lending processes of a major European commercial bank, and the practice of concentrating primarily on business with retail customers.

Overall risk assessment
Following the continuous analysis of the information provided by risk management and risk controlling in fiscal year 2020, all quantified risks were deemed to be not material. For information on the existing financial risks, please see the notes to the financial statements. There is currently no way to tell how the coronavirus pandemic will progress and how long it will last. Renewed interruptions to supply chains and production processes may impact sales and financial performance. However, the handling of the pandemic at CLAAS in the first half of 2020 showed that the Company was able to largely avert any adverse effects. As a result, there are currently no identifiable risks for 2021 that could endanger the existence of the CLAAS Group or any of its major subsidiaries as going concerns, either individually or in conjunction with other risks, even if the pandemic were to continue.

Outlook

Economic frameworks

According to IMF estimates, global economic output measured by gross domestic product is likely to recover from the effects of the coronavirus pandemic in 2021 and see its rate of growth rise to 5.2%. Many key regions around the world will not yet see a return to 2019 pre-crisis levels by 2021. The euro zone economy is expected to grow by 5.2% in 2021, while growth of 3.1% is anticipated in the U.S. According to currently available information, both of these major economies will not recover to pre-crisis levels until 2022 at the earliest. China is expected to see growth of 8.2% (2020: 1.9%). At this point, it is worth noting that economic performance is strongly dependent on the growth rate recorded in the second quarter, as well as the extent and persistence of the negative shock (as of October 2020).

The U.S. Department of Agriculture (USDA) expects to see global grain production (including rice) rise to 2,733 million metric tons in the current crop year 2020/21. At 773 million metric tons, the USDA estimates that the wheat harvest will slightly exceed the prior year's record-breaking harvest (764 million metric tons), with inventories rising as a result of a merely slight increase in demand. At 1,158 million metric tons, the new corn harvest is expected to exceed last year's result (1,116 million metric tons). Inventories are to remain roughly on par with the prior year.

The dairy market continues to experience stable development. The Food and Agriculture Organization of the United Nations expects to see a slight increase in the global diary market of 0.8% in 2020. Asia and North America are the primary source of growth in this market. By contrast, the European Union and the United Kingdom are set to report a slight decrease in dairy volume of -0.5% due to logistics issues and a lack of skilled workers.

Regional industry developments

Wet weather in fall 2019, followed by dry conditions in spring 2020, will lead to lower yields in this year's harvest of winter grain in some of Europe's key cultivation areas. The rainy conditions that came from April onwards were greatly beneficial to corn growth. The European Union's recently resolved common agricultural policy is also giving our customers more planning security and legal certainty. Regional economic development programs (such as special write-downs in Germany) may also continue to boost demand for agricultural equipment. The outlook for European dairy farms has returned to normal following the severe sales crisis in recent months triggered by the COVID-19 pandemic. All in all, this should lead to a slight rise in demand for agricultural equipment in 2021.

Supported by the solid grain harvests in 2020, the agricultural equipment market in Eastern Europe is likely to develop positively in 2021. However, overall development should remain reliant on the underlying political and economic conditions as well. Tenders for agricultural modernization efforts will also continue to impact the market.

Income from agricultural produce for North American farmers will fall in 2020. Government support measures will more than compensate for this decline, resulting in overall income rising. Demand for professional agricultural equipment is expected to remain stable in 2021.

The most likely scenario when it comes to the development of grain production in Latin America in 2020 is a slight increase in production volumes. As a result, the agricultural equipment market in this region is set to stabilize at a high level in 2021. There are opportunities for growth in the Latin American agricultural industry, particularly in relation to soy exports, due to the trade conflict between the U.S. and China. However, political and economic uncertainty could lead to the situation deteriorating.

Asia's agricultural equipment market is on track for positive development in 2021. According to the latest estimates, rice, corn, and grain production is set to rise in crop year 2020/21. Besides the harvest prospects, important driving forces behind the development of the Asian market in individual countries are subsidization policies and the low degree of mechanization of Asian agriculture. Globally speaking, demand for agricultural equipment is at a low level, but will develop stronger momentum in the foreseeable future.

Global trade conflicts and political instability are general risk factors. Further risks arise from the volatility of procurement prices for energy, steel, and other commodities, and the development of currencies significant to CLAAS, such as the U.S. dollar, the British pound, and the Russian ruble. The continuous revision of agricultural policy in the core markets of the European Union, the U.S., Russia, and China, will also shape the overall conditions. In addition, climate change plays an increasingly important role. The global increase of weather extremes such as droughts and heavy rains are impacting farm yields and must be taken into account. Presently, African swine fever, which is especially widespread in Asia and has now also reached Europe, poses an additional risk. The direct impact of COVID-19 on the agricultural industry has been moderate so far compared to other industries. This should remain the case in 2021, provided the situation does not deteriorate significantly any further.

General statement on the development of business and outlook

The development of business in 2020 was characterized by challenging economic conditions, particularly the widespread uncertainty caused by COVID-19, but also the varied and fluctuating development of the market in key agricultural equipment regions. There was strong variation in market assessments throughout the year, especially in Central and Western Europe. As the fiscal year draws to a close, market volumes are either stagnating or falling slightly overall. CLAAS was able to maintain its machine sales at a stable level in this challenging market environment. Sales figures were increased in Eastern Europe and North America. The launch of the new LEXION combine harvester generation played a key role in expanding our market position here. In spite of the volatile market and the extreme uncertainty caused by the COVID-19 pandemic, income still exceeded our expectations.

For fiscal year 2021, we expect key sales regions to experience stable to positive market environments overall. Some of our core markets will normalize from their current low level. In spite of the uncertainties described below, we still expect sales to match the prior-year figure in fiscal year 2021.

In view of the coronavirus pandemic, smoldering international trade conflicts, and increasing political tensions with the risk of new bilateral sanctions in trade, finance, and other aspects of the economy, adverse effects on sales and income at the CLAAS Group cannot be ruled out. Further risks may arise from weakening industry development and changing political frameworks for farmers in our core markets.

We will continue to systematically pursue our strategy and strengthen the position of our products in the growth markets in Eastern Europe, North America, and Asia. The capital expenditures in the current year will remain at the high levels seen in 2020. If market conditions change, the volume could be flexibly adapted. The development of innovative products and intelligent technologies will continue apace in the current fiscal year. However, it will take some time for the expenses associated with such development work to be recouped by the corresponding revenues. We will keep up our efforts to enhance efficiency and sustainable cost reductions in the current year. We anticipate income before taxes to match the prior-year figure in the current fiscal year 2021.

03

Consolidated Financial Statements

Consolidated Income Statement

of the CLAAS Group for the fiscal year from October 1, 2019 to September 30, 2020

in € '000	Note	2020	2019
Net sales	(7)	4,042,338	3,897,961
Cost of sales		-3,222,614	-3,138,119
Gross profit on sales		**819,724**	**759,842**
Selling expenses		-254,295	-255,557
General and administrative expenses		-187,637	-184,528
Research and development expenses	(8)	-226,216	-222,367
Other operating income	(10)	93,996	127,322
Other operating expenses	(10)	-89,226	-76,029
Operating income		**156,346**	**148,683**
Income from investments accounted for using the equity method, net	(11)	18,613	13,214
Income from other investments, net	(11)	92	79
Financial result	(12)	-16,934	-26,250
thereof: interest and similar expenses		(-27,442)	(-28,279)
Income before taxes		**158,117**	**135,726**
Income taxes	(13)	-50,987	-39,454
Net income		**107,130**	**96,272**
thereof: attributable to shareholders of CLAAS KGaA mbH		106,579	95,913
thereof: attributable to minority interests		551	359

Consolidated Statement of Comprehensive Income

of the CLAAS Group for the fiscal year from October 1, 2019 to September 30, 2020

in € '000	Note	2020	2019
Net income		**107,130**	**96,272**
Items to be reclassified subsequently to profit or loss			
Net unrealized gains/losses from currency translation		-50,446	10,815
Net unrealized gains/losses from derivative financial instruments	(34)	21,682	5,686
Items never to be reclassified to profit or loss			
Remeasurements of defined benefit pension plans	(29)	8,497	-47,477
Other comprehensive income, after taxes		**-20,267**	**-30,976**
Comprehensive income		**86,863**	**65,296**
thereof: attributable to shareholders of CLAAS KGaA mbH		86,312	64,937
thereof: attributable to minority interests		551	359

Consolidated Balance Sheet

of the CLAAS Group as of September 30, 2020

in € '000	Note	Sept. 30, 2020	Sept. 30, 2019
Assets			
Intangible assets	(14)	289,223	267,405
Property, plant and equipment	(15)	561,588	541,801
Right of use assets	(16)	88,134	-
Investments accounted for using the equity method	(17)	156,770	142,039
Other investments		5,246	4,095
Deferred tax assets	(13)	122,228	152,839
Other financial assets	(20)	47,105	37,487
Other non-financial assets	(21)	23,562	37,378
Non-current assets		**1,293,856**	**1,183,044**
Inventories	(18)	905,754	1,103,494
Trade receivables	(19)	373,769	355,526
Other financial assets	(20)	160,605	133,532
Other non-financial assets	(21)	80,842	86,677
Securities	(22)	383,551	178,387
Cash and cash equivalents	(23)	524,105	491,267
Current assets		**2,428,626**	**2,348,883**
Total assets		**3,722,482**	**3,531,927**
Equity and liabilities			
Subscribed capital		78,000	78,000
Capital reserve		38,347	38,347
Other reserves		1,342,743	1,296,532
Equity before minority interests		**1,459,090**	**1,412,879**
Minority interests		4,997	4,447
Equity	(24)	**1,464,087**	**1,417,326**
Financial liabilities	(25)	679,635	368,333
Silent partnership	(26)	55,021	51,642
Deferred tax liabilities	(13)	2,514	2,446
Other financial liabilities	(27)	556	4,235
Pension provisions	(29)	344,169	361,663
Other provisions	(30)	48,348	49,341
Non-current liabilities		**1,130,243**	**837,660**
Financial liabilities	(25)	79,655	282,186
Trade payables		233,115	235,480
Other financial liabilities	(27)	22,074	38,929
Other non-financial liabilities	(28)	205,931	170,416
Income tax provisions	(30)	21,854	27,385
Other provisions	(30)	565,523	522,545
Current liabilities		**1,128,152**	**1,276,941**
Total equity and liabilities		**3,722,482**	**3,531,927**

Consolidated Statement of Cash Flows

of the CLAAS Group for the fiscal year from October 1, 2019 to September 30, 2020

in € '000	Note	2020	2019
Net income		**107,130**	**96,272**
Amortization/impairment of intangible assets and depreciation/impairment of property, plant and equipment/right of use assets	(14), (15), (16)	147,838	128,787
Income from investments accounted for using the equity method, net, if non-cash		-18,613	-12,170
Change in non-current provisions		2,900	736
Change in deferred taxes		12,959	6,495
Other non-cash expenses (+)/income (-)		2,588	-10,093
Cash earnings		**254,802**	**210,027**
Change in current provisions		52,382	-19,113
Income from the disposal of non-current assets and securities		-3,673	-1,819
Change in working capital		136,242	-136,176
thereof: inventories		(167,451)	(-127,714)
thereof: trade receivables		(-30,713)	(29,935)
thereof: trade payables		(131)	(-39,457)
Other change in assets/equity and liabilities, if not investing or financing activities		38,708	-6,986
Cash flows from operating activities	(36)	**478,461**	**45,933**
Payments for investments in			
Intangible assets and property, plant and equipment (net of development costs recognized as an asset)	(14), (15)	-131,434	-125,406
Shares of fully consolidated companies and investments		-1,861	-10,734
Borrowings		-17,676	-20,796
Receipts from disposals/divestments			
Intangible assets and property, plant and equipment		6,988	7,907
Shares of fully consolidated companies and investments		-	1,774
Borrowings		29,374	20,977
Additions to development costs recognized as an asset	(14)	-55,728	-57,878
Change in securities		-206,255	19,997
Cash flows from investing activities		**-376,592**	**-164,159**
Proceeds from the increase in loans and the issuance of bonds		408,990	454,859
Repayment of bonds and loans		-395,460	-428,350
Settlement of lease liabilities		-26,238	-
Proceeds from silent partnership		3,379	3,371
Change in liabilities to shareholders		114	235
Payment to minority shareholders		-106	-243
Dividend payments	(24)	-40,020	-40,020
Cash flows from financing activities		**-49,341**	**-10,148**
Effect of foreign exchange rate changes on cash and cash equivalents		-19,690	9,914
Net change in cash and cash equivalents		**32,838**	**-118,460**
Cash and cash equivalents at beginning of year	(23)	491,267	609,727
Cash and cash equivalents at end of year	(23)	**524,105**	**491,267**

Consolidated Statement of Changes in Equity

of the CLAAS Group as of September 30, 2020

			Other reserves						
			Retained earnings		Accumulated other comprehensive income				
in € '000	Subscribed capital	Capital reserves	Accumulated profit	Remeasurements of defined benefit pensions plans	Foreign currency translation	Derivative financial instruments	Equity before minority interests	Minority interests	Equity
Balance as of Oct. 1, 2018	**78,000**	**38,347**	**1,425,394**	**-55,414**	**-81,882**	**-16,465**	**1,387,980**	**4,336**	**1,392,316**
Net income	-	-	95,913	-	-	-	95,913	359	96,272
Other comprehensive income	-	-	-	-47,477	10,815	5,686	-30,976	-	-30,976
Comprehensive income	**-**	**-**	**95,913**	**-47,477**	**10,815**	**5,686**	**64,937**	**359**	**65,296**
Dividend payments	-	-	-40,020	-	-	-	-40,020	-243	-40,263
Consolidation adjustments	-	-	-18	-	-	-	-18	-5	-23
Balance as of Sept. 30, 2019	**78,000**	**38,347**	**1,481,269**	**-102,891**	**-71,067**	**-10,779**	**1,412,879**	**4,447**	**1,417,326**
Net income	-	-	106,579	-	-	-	106,579	551	107,130
Other comprehensive income	-	-	-	8,497	-50,446	21,682	-20,267	-	-20,267
Comprehensive income	**-**	**-**	**106,579**	**8,497**	**-50,446**	**21,682**	**86,312**	**551**	**86,863**
Dividend payments	-	-	-40,020	-	-	-	-40,020	-106	-40,126
Consolidation adjustments	-	-	-81	-	-	-	-81	105	24
Balance as of Sept. 30, 2020	**78,000**	**38,347**	**1,547,747**	**-94,394**	**-121,513**	**10,903**	**1,459,090**	**4,997**	**1,464,087**

Notes to the Consolidated Financial Statements

Notes to Consolidation and Accounting

1. Basis of Presentation

CLAAS KGaA mbH, with registered office in Harsewinkel, Germany, is the parent company of the CLAAS Group (in the following, "CLAAS" or the "CLAAS Group"). The Company is registered in the commercial register of Gütersloh, Germany, District Court under the number HRB 3027. CLAAS, a family-owned company, is a global producer and vendor of agricultural equipment and software solutions for farming applications.

These consolidated financial statements of the CLAAS Group were prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) and the additional requirements of German commercial law pursuant to Section 315e of the German Commercial Code (HGB). Prior-year figures were determined in accordance with the same principles.

The consolidated financial statements consist of the consolidated income statement, the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated statement of cash flows, the consolidated statement of changes in equity, as well as the notes to the consolidated financial statements. To improve the clarity of presentation, individual items within the consolidated balance sheet and the consolidated income statement have been combined. These items are presented separately and explained in the notes to the consolidated financial statements. The consolidated income statement was prepared using the cost of sales method of accounting.

Please refer to Notes 2 and 6 for details on the accounting and valuation policies.

The consolidated financial statements have been presented in euros (€). Unless stated otherwise, amounts are stated in thousands of euros (€ '000).

These consolidated financial statements relate to the fiscal year from October 1, 2019, to September 30, 2020.

The consolidated financial statements were prepared on November 24, 2020, by the Executive Board of CLAAS KGaA mbH. Approval of the consolidated financial statements by the Supervisory Board is planned for December 10, 2020, at the scheduled Supervisory Board meeting.

2. New Financial Reporting Standards

IFRS 16 – Leases

The new IFRS 16 standard was applied at CLAAS for the first time starting October 1, 2019. IFRS 16 replaces the previous standard for leases, IAS 17. Leases are to be recognized in the lessee's balance sheet, initially resulting in a right-of-use asset and a corresponding lease liability in the amount of the present value of the lease payments. Right-of-use assets are presented at CLAAS in the balance sheet in a separate item. Liabilities from lease agreements are reported under current and non-current financial liabilities.

At the time of initial recognition, right-of-use assets from lease agreements do not include the initial direct costs. Leases classified as short-term or low-value are not capitalized and are recognized solely as profit or loss. IAS 38 continues to be used for intangible assets.

Right-of-use assets are generally amortized over the term of the lease on a straight-line basis. Lease liabilities are discounted by applying weighted incremental borrowing rates, which stood between 0.17% and 1.47% as of October 1, 2019, depending on the term of the lease.

IFRS 16 was applied for the first time at CLAAS retrospectively in modified form, without adjusting prior-year figures. There was no effect on retained earnings. Liabilities from leases stood at €126.7 million as of October 1, 2019. The financial obligations from operating leases as of September 30, 2019, were €134.3 million. The difference of €7.6 million in total resulted from application accommodations for leases not requiring capitalization (€5.5 million), changes in assessment of leases (€1.0 million), and the effect from discounting (€1.1 million).

The main impact on the consolidated financial statements as of September 30, 2020, resulting from the application of IFRS 16 consists of the €117 million rise in total assets, which mainly reflects leases for properties and vehicles, as well as the subleasing of CLAAS machinery.

More information is available in Notes 16 (Right of use Assets) and 25 (Financial Liabilities).

Other Information
Other mandatory financial reporting standards that have been recently published by the IASB are less significant for CLAAS.

3. Scope of Consolidation

The companies included in the scope of consolidation are all significant companies, including the structured entities that are directly or indirectly controlled by CLAAS KGaA mbH. Control exists if CLAAS KGaA mbH has power over the investee on the basis of voting rights or other rights, it has rights to variable returns from its involvement with the investee, and has the ability to affect those returns through its power over the investee.

Structured entities are entities that have been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity. Within the CLAAS Group, this applies to the investment fund CHW Fonds as well as the financing company Mercator Purchasing S.A., both registered in Luxembourg. These companies are included in the consolidated financial statements as structured entities. CLAAS uses the financing company to settle the revolving sale of receivables.

Associates are entities over which CLAAS has significant influence but does not have control or joint control of the entities' financial and operating policies. Associates are accounted for using the equity method.

Where CLAAS shares control of an entity together with a partner, it must be specified whether the entity is a joint operation or a joint venture. In a joint venture, the parties that have joint control have rights to the net assets of the arrangement. As a rule, joint ventures are accounted for using the equity method. A joint operation exists when the parties that have joint control have direct rights to the assets and obligations for the liabilities. In this case, the prorated assets and liabilities, as well as the prorated income and expenses, are to be recognized as a rule. The joint operations included in the consolidated financial statements as of the reporting date have no material impact on the consolidated financial statements and are accounted for using the equity method.

Investments in subsidiaries, in joint ventures, or in associates considered to be immaterial from the point of view of the Group are accounted in accordance with IFRS 9.

A breakdown of the scope of consolidation is presented in the following table:

	Sept. 30, 2020	Sept. 30, 2019
Consolidated subsidiaries	**63**	**64**
thereof: domestic companies	(20)	(20)
thereof: foreign companies	(43)	(44)
Investments accounted for using the equity method	**14**	**13**
thereof: domestic companies	(6)	(6)
thereof: foreign companies	(8)	(7)

Please see Note 41 for a complete list of the shareholdings of the CLAAS Group.

Newly Established Companies, Investments in Companies, and Divestments
There were no material newly established companies, investments in companies, and divestments in fiscal year 2020.

4. Consolidation Principles

The financial statements have been prepared using the uniform accounting policies relevant for the CLAAS Group. As a rule, the financial statements are prepared as of the balance sheet date of the consolidated financial statements. Where country-specific laws demand otherwise, subsidiaries whose fiscal years do not end on September 30 prepare interim financial statements as of this date.

Business combinations are accounted for using the acquisition method when the Group obtains control. If the purchase price exceeds the revalued prorated net assets of the acquired subsidiary, the difference is capitalized as goodwill and subject to an annual impairment test. Any differences arising on the liabilities side are reported as other operating income.

First-time consolidation and deconsolidation are generally undertaken on the date of transfer of control.

All receivables and payables, income and expenses, as well as intercompany gains and losses between the consolidated entities are eliminated within the scope of the consolidation.

Investments in associates and joint ventures are accounted for using the equity method. The interests are initially recognized at cost. Possibly acquired goodwill is not reported separately, but is instead included in the value of the investment. After initial measure, the consolidated financial statements include the share of the income until such time as the significant influence or joint control ends.

5. Foreign Currency Translation

Transactions in foreign currency are recognized at the relevant exchange rates on the transaction date. In subsequent periods, financial assets and liabilities denominated in foreign currencies are translated at the exchange rates on the balance sheet date. The exchange rate gains and losses incurred until the balance sheet date from the measurement of financial assets and liabilities are recognized as profit or loss in the income statement.

The assets and liabilities of foreign companies with functional currencies that do not match the Group currency are translated into euros at the daily closing price on the balance sheet date. Equity items are translated using historic rates. The expenses and income of foreign companies are translated into euros at the corresponding average exchange rate for the fiscal year. Differences resulting from currency translations are recognized directly in equity as other comprehensive income.

The following exchange rates were used for the currencies significant to the CLAAS Group:

		Average rate / €		Closing rate / €	
		2020	**2019**	**Sept. 30, 2020**	**Sept. 30, 2019**
British pound	GBP	0.88	0.88	0.91	0.89
Chinese renminbi	CNY	7.89	7.73	8.00	7.77
Indian rupee	INR	82.82	79.01	86.39	76.98
Polish zloty	PLN	4.40	4.30	4.53	4.37
Russian ruble	RUB	79.12	73.79	91.15	70.75
Hungarian forint	HUF	345.53	323.91	363.23	334.84
U.S. dollar	USD	1.13	1.12	1.17	1.09

6. Accounting Policies

Intangible Assets
Intangible assets with finite useful lives are capitalized at cost and, dependent on their expected useful lives, amortized over a period of generally three to ten years on a straight-line basis. Useful lives are assessed each year.

The amortization of concessions, industrial and similar rights and assets, and licenses in such rights is reported under cost of sales. Amortization and impairments of capitalized development costs are recognized as research and development expenses.

Goodwill is accounted for at cost less any accumulated impairment losses and is tested for impairment annually, as well as when there are indications of a possible impairment. Impairment losses are recognized as other operating expenses.

Property, Plant and Equipment
Property, plant and equipment is measured at cost less accumulated depreciation and accumulated impairment losses. Borrowing costs are capitalized if conditions are met and are depreciated over the expected useful lives of the property, plant and equipment once these have been completed. Property, plant and equipment – with the exception of land and similar rights – is generally depreciated over its useful life on a straight-line basis. The useful lives of buildings are between 20 and 50 years, while other property, plant and equipment have useful lives of between three and 25 years. Depreciation and impairment losses are generally recognized as expenses for the period.

Right of use Assets
Right-of-use assets reflect the asset that a lessee receives from the right to use a leased asset. The right-of-use asset is capitalized in the amount of the present value of the lease payments and is generally amortized over the term of the lease on a straight-line basis. The amortization of the right-of-use asset is presented in the cost of sales.

Leases classified as short-term or low-value are not capitalized and are still recognized solely as profit or loss.

Borrowing Costs
Any borrowing costs directly attributable to the acquisition, construction, or production of a qualifying asset are capitalized as a part of the cost of that asset. CLAAS defines qualifying assets as development or construction projects or other assets that will require at least twelve months to complete to a point at which they will be ready for their intended use or sale. If borrowings can be directly allocated to one project, the actual borrowing costs are capitalized. If there is no direct relation, the average borrowing cost rate of the CLAAS Group is applied. The borrowing cost rate for the reporting period is 2.5% p.a. (prior year: 3.0% p.a.).

Impairment
Goodwill as well as assets that are not available for use are not amortized, but are instead tested for impairment annually as of the balance sheet date. Assets subject to amortization are tested for impairment if there are indications that the carrying amount of the asset is lower than its recoverable amount. The recoverable amount of an asset is the higher of its value in use and the fair value less costs to sell. The recoverable amount is determined for each individual asset unless assets have been combined into a cash generating unit. The value in use is based on the present value of the expected future cash flows. If the value in use is less than the carrying amount, an impairment loss is immediately recognized as profit or loss. Any subsequent increases in value are accounted for by attributing the value to the cash generating unit or asset, except in the case of goodwill impairment. When conducting the impairment test, the value in use is determined on the basis of the management's medium-term forecast data covering a period of five years. The planning assumptions were adjusted in line with actual circumstances. Assumptions are taken into appropriate account in consideration of macroeconomic trends and historical developments. Cash flow projections are estimated by extrapolation based on the growth rate of the relevant market segment. The growth rate remains unchanged year on year at between 0.1% and 1.0% p.a. The value in use is determined on the basis of discounting rates ranging from 3.6% p.a. to 12.3% p.a. (prior year: 6.0% p.a. to 13.7% p.a.) and corresponding to the risk-adjusted minimum yield on the capital market.

Investments Accounted for Using the Equity Method and Other Investments

Investments in associates and joint ventures accounted for using the equity method are initially recognized at cost and then in subsequent periods in the amount of the adjusted pro-rated share in equity. The carrying amounts of the investments are increased or reduced each year to reflect the share of earnings, dividends distributed, and other changes in equity. Goodwill is included in the carrying amount of the companies accounted for using the equity method. Impairment occurs when the recoverable amount of the investment accounted for using the equity method is lower than its carrying amount.

At the time of addition and in subsequent periods, other investments are generally carried at fair value, provided that these amounts can be determined reliably. No fair value could be determined for the other investments as of the reporting date. As a result, these were measured at cost less accumulated impairment losses. An impairment loss will be recognized as profit or loss on other investments if there are indicators for impairment.

Impairment losses or reversals of impairment losses on investments accounted for using the equity method and other investments are recognized as profit or loss in income from investments, net.

Deferred Taxes

Deferred taxes are recognized on temporary differences between the IFRS and tax balance sheets of the individual companies, including differences arising from consolidation processes and related to yet unused tax losses and tax credits.

Deferred taxes are measured in accordance with the tax rates and tax regulations that are in force as of the balance sheet date or have been passed in principle and whose validity is expected as of the date of settlement. Deferred tax assets will only be recognized if it is probable that the entity will have taxable income against which the temporary differences can be utilized. A tax rate of 29.0% (prior year: 29.0%) was used to calculate deferred taxes in Germany. This tax rate consists of the domestic corporate income tax, the solidarity surcharge on corporate income tax, as well as trade tax. Country-specific tax rates are used to calculate the deferred taxes of the foreign companies.

Deferred tax liabilities for temporary differences related to investments in subsidiaries and investments accounted for using the equity method are not recognized.

Deferred tax assets and liabilities are offset if they pertain to the same tax subject, are from or to the same tax authority, and relate to the same period.

Inventories

Inventories are recognized at the lower of cost and net realizable value. The net realizable value is derived from the expected disposal income less costs still to be incurred. The cost of raw materials, consumables, and supplies, as well as merchandise, is calculated using the average cost method. The cost of internally generated work in progress and finished goods includes direct materials and labor as well as production-related overheads and production-related administrative expenses based on normal capacity utilization. Borrowing costs are not included in the cost.

Financial Instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. Financial instruments are recognized as soon as CLAAS becomes a party to the contractual provisions for the financial instrument. As a rule, the day on which the financial instrument is concluded is key to how it is reported. Financial instruments recognized as financial assets or financial liabilities are generally not netted, and are only netted when a legal right to offset exists at that time and there is an intention to settle on a net basis. CLAAS classifies non-derivative financial assets and liabilities using the three measurement categories provided for in IFRS 9: financial assets or financial liabilities at fair value through profit or loss, at fair value through other comprehensive income, and at amortized cost.

The categories generally do not include derivative financial instruments designated as hedging instruments. However, derivatives with hedging relationships are classified “at fair value through profit or loss” in order to improve presentation.

In accordance with IFRS 9, the classification of financial assets depends on the business model used to manage them and the contractual cash flow characteristics of the financial instruments. The classification of financial liabilities is dependent on the purpose for which the financial instruments were contracted.

Financial instruments are recognized at amortized cost or at fair value. The amortized cost is calculated using the effective interest method. The fair value of a financial instrument in accordance with IFRS is the amount for which the instrument could be exchanged between knowledgeable, willing parties in an arm's length transaction other than a forced transaction, involuntary liquidation, or distress sale. The fair value generally corresponds to the market value or the stock market price. If the market for a financial instrument is not active, fair value is established using a valuation technique (for example, a discounted cash flow analysis, which applies a discount rate equal to the current market rate of return).

The fair value of derivative financial instruments is calculated by discounting the estimated future cash flows at the current market rate of return or by using other common valuation techniques such as option pricing models.

Financial instruments for which the fair value cannot be reliably measured are carried at amortized cost.

The carrying amounts of financial assets not recognized at fair value through profit or loss are tested as of each balance sheet date for impairment. In accordance with IFRS 9, a risk provision is calculated based on the expected credit loss model. Accordingly, the amount of the allowance recognized as a risk provision for expected credit losses depends on the extent to which the credit risk has increased since initial recognition. The estimate is made on the basis of ratings and risk indicators that are continuously updated. In case of an impairment, the resulting impairment loss is recognized through profit or loss.

As in the prior year, no impairment was recognized for financial assets, excluding trade receivables.

Receivables and Other Financial Assets
Receivables and other financial assets are recognized at fair value, which, in the case of current receivables and other financial assets, corresponds to the nominal value.

CLAAS applied the simplified expected credit loss model approach pursuant to IFRS 9 for expected credit losses arising from trade receivables. Risk provisions for expected credit losses are recorded over the remaining term, irrespective of the credit quality. In addition to taking existing collateral into account, past information and forecasts of future economic conditions are included in the calculation of the expected loss.

CLAAS sells selected trade receivables to a structured company of the CLAAS Group or other financial institutions on a revolving or non-recurring basis. The structured company is an asset-backed securitization (ABS) company that refinances itself in the capital market. Receivables are derecognized when the risks and rewards associated with the receivables are transferred to a third party and the cash inflow from the sale is ensured. These receivables will continue to be carried on the balance sheet, provided that the risks and rewards associated with the receivables – particularly credit risks and default risks – remain in the CLAAS Group.

Securities
Securities primarily include investment funds as well as money market papers and Schuldscheindarlehen (German Private Placement) with remaining maturities of less than one year in most cases. At CLAAS, securities are classified as "measured at fair value through profit or loss."

Recognition and subsequent measurement are carried out at fair value or market price.

Cash and Cash Equivalents
Cash and cash equivalents comprise checks, cash in hand, and bank balances. Cash and cash equivalents as reported in the statement of cash flows correspond to the same item in the balance sheet.

Derivative Financial Instruments and Hedge Accounting
The accounting and measurement of derivative financial instruments with hedging relationships continues to follow the rules of IAS 39 in compliance with the transition requirements of IFRS 9.

CLAAS uses derivative financial instruments to hedge financial risks from the operating business and the resulting refinancing requirements. These risks are generally interest rate, currency, and commodity risks. The hedging instruments primarily used are foreign exchange outrights and options.

At the time of acquisition and in subsequent periods, derivative financial instruments are recognized at fair value. Changes in present value are recognized as profit or loss in other financial result for the period, unless the derivative financial instruments are part of a hedging relationship. Depending on the type of hedging relationship, changes in present value are either recognized as profit or loss in the income statement or directly in equity as other comprehensive income.

The criteria of IAS 39 must be fulfilled for hedges to be accounted as part of a hedging relationship (hedge accounting). If this is the case, CLAAS documents the hedging relationship either as a fair value hedge or a cash flow hedge from this time. Only cash flow hedges existed in the past fiscal year.

The fair values of the derivative financial instruments used for hedging purposes are presented in Note 34.

Cash flow hedges are used to hedge the risks of fluctuations in cash flows. Gains and losses from changes in the fair value of the effective portion of the hedge are initially taken into account in other comprehensive income as equity. These are reclassified into the income statement if the hedged transaction is recognized as profit or loss. The ineffective portion of such changes in value is recognized directly as profit or loss in other financial result for the period.

If the hedge accounting criteria are no longer met, the derivative financial instruments that were part of the hedging relationship are then “measured at fair value as profit or loss.”

Liabilities
Liabilities are initially recognized at their fair value less transaction costs and subsequently measured at amortized cost. Liabilities denominated in foreign currencies are translated at the closing rate. For CLAAS, contract liabilities represent payments received on account, which are reported under other non-financial liabilities. These are obligations to transfer goods or services to the customer for which customer payments have already been received prior to contractual performance.

Pension Provisions
Pension provisions are recorded for defined benefit obligations from vested rights and current benefits on behalf of eligible active and former employees and their surviving dependents. Obligations relate primarily to retirement pensions, which are paid in part as basic and in part as supplementary benefits. Pension obligations are normally based on the employees’ length of service and remuneration levels.

Provisions for defined benefit plans are based on the actuarial present value of the respective obligation. This is measured using the projected unit credit method. This method takes into account not only pensions and accrued vested rights known as of the balance sheet date, but also anticipated future salary and pension increases. The valuation assumptions vary according to the economic conditions of the country in which the pension plans are administered. In Germany, the life expectancy used to calculate the obligation is based on the 2018 G K. Heubeck mortality tables. Comparable bases are used in the other countries. Pension provisions are derived from the balance of the actuarial present value of the defined benefit obligations and the fair value of the plan assets available to cover the pension obligation. The service cost is included in the functional costs in the consolidated income statement. Net interest is included in the financial result.

Actuarial gains and losses on the remeasurement of the net pension liability or net assets are fully recognized in the fiscal year in which they occur. They are recognized directly in equity in other reserves. In subsequent periods, they will not be recognized as profit or loss.

The interest rates used for discounting purposes are determined annually as of the balance sheet date on the basis of high-quality, fixed-rate corporate bonds matching the pension payments.

Other Provisions
Other provisions are recognized for the present legal or constructive obligations of the CLAAS Group that have arisen from a past event and are expected to result in an outflow of

future economic benefits, and whose amount can be measured reliably.

Provisions for obligations arising from sales largely include warranty obligations. Provisions for warranties are recognized at the time of sale of the products in question or the rendering of the corresponding services. Assumptions must be made as to the type and scope of future warranty and policy cases as well as possible special inspections in order to determine the amount of the provisions. These estimates are largely based on historic expectations. Provisions are regularly adjusted in line with new information.

Provisions are measured at the best estimate of the amount required to settle the present obligation at the balance sheet date. Significant, non-current other provisions are discounted. Increases in provisions resulting from a pure addition of accrued interest are recognized as profit or loss in interest expenses for the period.

Recognition of Net Sales
The ordinary business operations of the CLAAS Group involve the sale of agricultural equipment products and services. All income relating to the ordinary business operations, less sales deductions such as cash discounts and price reductions, are presented as net sales. Net sales are recognized when the services have been rendered or the goods or products have been delivered, i.e., when the customer has obtained control of the goods or services.

Cost of Sales
Cost of sales comprises the cost of goods sold, the cost of the sold merchandise, as well as the expenses for commission, outgoing freight and packaging, insurance, and production-related logistics costs.

Research and Development Costs
Development costs for internally generated future serial products are recognized as an asset, provided manufacture of the products will generate probable future economic benefits for CLAAS and the other criteria for the recognition of internally generated intangible assets are fulfilled.

The cost comprises all costs directly attributable to the development process plus the relevant development-related overheads. Borrowing costs are capitalized as a part of the cost if conditions are met. Amortization is undertaken on a straight- line basis as of the start of production over the expected useful life of the product, usually between six and ten years.

Research costs, amortization and impairments of capitalized development costs, and development costs that cannot be capitalized are expensed as incurred in the income statement under research and development costs.

Government Grants
Government grants are only recognized when there is reasonable assurance that the entity will comply with the conditions attached to it, and that the grant will be received. Government grants not related to assets in general are recognized in profit or loss as other operating income over the periods necessary to match them with the related costs that they are intended to compensate. Grants related to assets are deducted in arriving at the carrying amount of the asset, and the grant is recognized as income over the life of a depreciable asset by way of a reduced depreciation charge.

Estimates and Management Judgements
In preparing the consolidated financial statements, it is to some extent necessary to make assumptions and estimates that affect the amount and presentation of assets and liabilities, income and expenses, as well as any contingent liabilities in the reporting period. These estimates and assumptions primarily relate to assessing the recoverability of assets; defining a uniform Group standard for the economic lives of property, plant and equipment; and recognizing and measuring provisions based on the current state of knowledge. In particular, assumptions regarding expected business development are based on circumstances at the time of preparation of the consolidated financial statements as well as the probable development of global markets and industries. The actual amounts may differ from the original estimates if external developments over which management has no control should cause these parameters to change.

At the time the consolidated financial statements were prepared, it was not assumed that the underlying assumptions and estimates would be subject to material changes.

Notes to the Consolidated Income Statement

7. Net Sales

Net sales pertained almost exclusively to the delivery of goods. Sales by region can be broken down as follows:

in € '000	2020	2019
Germany	805,529	800,580
France	751,916	756,511
Rest of Western Europe	790,676	819,106
Central and Eastern Europe	905,807	862,799
Other countries	788,410	658,965
Net sales	**4,042,338**	**3,897,961**

The following table shows the expected net sales for the next five fiscal years resulting from performance obligations already contracted as of the balance sheet date:

in € '000	Sept. 30, 2020	Sept. 30, 2019
Due within 1 year	16,186	13,573
Due within 1 to 2 years	17,142	14,876
Due within 2 to 3 years	10,456	8,320
Due within 3 to 4 years	4,725	3,782
Due within 4 to 5 years	1,759	1,471
Total of future expected net sales from existing performance obligations	**50,268**	**42,022**

8. Research and Development Expenses

in € '000	2020	2019
Research and development costs (total)	-237,377	-243,608
Development costs recognized as an asset	52,622	53,291
Amortization/impairment of capitalized development costs recognized as an asset	-41,461	-32,050
Research and development expenses recognized in the income statement	**-226,216**	**-222,367**
R&D capitalization ratio (in %)	22.2	21.9

9. Personnel Expenses and Employees

The personnel expenses reported under functional costs are composed as follows:

in € '000	2020	2019
Direct and indirect remuneration	-605,955	-595,043
Social security contributions and employee benefit expenses	-123,606	-124,570
Pension expenses	-12,672	-10,657
Personnel expenses	**-742,233**	**-730,270**

The average number of employees during the fiscal year was as follows:

	2020	2019
Direct employees	4,268	4,372
Indirect employees	6,368	6,348
Apprentices	684	662
Average number of employees	**11,320**	**11,382**

Direct employees are directly involved in the production process, whereas indirect employees support production, organizational, and administrative processes.

10. Other Operating Income and Expenses

Other Operating Income

in € '000	2020	2019
Reversal of provisions	39,055	50,197
Write-ups of property, plant and equipment	-	23,590
Measurement of receivables	5,325	8,514
Grants and subsidies	3,924	4,735
Disposal of intangible assets and property, plant and equipment	3,716	1,963
Insurance compensation	1,596	1,812
Pass-through costs	1,399	980
Rental and leases	382	667
Miscellaneous income	38,599	34,864
Other operating income	**93,996**	**127,322**

Other Operating Expenses

in € '000	2020	2019
Measurement of receivables	-11,344	-9,806
Personnel expenses	-9,439	-7,514
Fees, charges, and insurance premiums	-2,961	-3,325
Impairment of property, plant and equipment	-2,106	-22,967
Disposal of intangible assets and property, plant and equipment	-1,806	-1,199
Miscellaneous expenses	-61,570	-31,218
Other operating expenses	**-89,226**	**-76,029**

11. Income from Investments, Net

in € '000	2020	2019
Income from investments accounted for using the equity method, net	18,613	13,214
thereof: impairment losses on investments accounted for using the equity method	-	(-6,360)
Income from other investments, net	92	79
Income from investments, net	**18,705**	**13,293**

12. Financial Result

in € '000	2020	2019
Interest expense	-27,858	-28,530
thereof: profits transferred under a partial profit transfer agreement (CMG)	(-4,145)	(-3,137)
Non-current provisions	-2,004	-4,758
Interest expenses for leases	-829	-
Capitalization of borrowing costs	3,249	5,009
Interest and similar expenses	**-27,442**	**-28,279**
Interest income	8,237	7,908
Income from other securities and loans, net	-916	5,021
Interest expense and income from securities, net	**-20,121**	**-15,350**
Other financial result	3,187	-10,900
Financial result	**-16,934**	**-26,250**

Payments based on the performance of the CLAAS Group with respect to the silent partnership of CMG CLAAS Mitarbeiterbeteiligungs-Gesellschaft mbH (CMG) are included in "profits transferred under a partial profit transfer agreement (CMG)."

Interest expenses and income are the result of financial assets and liabilities measured at amortized cost.

The other financial result can be broken down as follows:

in € '000	2020	2019
Foreign exchange gains and losses, net	7,539	-5,592
Miscellaneous financial income and expenses, net	-4,352	-5,308
Other financial result	**3,187**	**-10,900**

13. Income Taxes

in € '000	2020	2019
Current income taxes	-38,028	-32,959
Deferred income taxes	-12,959	-6,495
Income taxes	**-50,987**	**-39,454**

The underlying income tax rates for foreign companies were between 9.0% and 33.3% (prior year: 9.0% and 33.9%).

Income taxes in the reporting period were €5.1 million higher than the theoretical tax expense that would have resulted from the application of the domestic Group tax rate of 29.0% on income before taxes.

The following table shows the reconciliation from theoretical to actual tax expense:

	2020		2019	
	in € '000	in %	in € '000	in %
Income before taxes	158,117		135,726	
Theoretical tax expense	**-45,854**	**29.0**	**-39,361**	**29.0**
Differences in foreign tax rates	8,222	-5.2	6,783	-5.0
Tax effects from prior years	1,364	-0.9	-1,160	0.9
Non-taxable income and non-deductible expenses	-12,838	8.1	-6,103	4.5
Accounting for investments accounted for using the equity method	5,398	-3.4	3,832	-2.8
Impact of tax losses	-8,374	5.3	-2,973	2.2
Other consolidation effects	62	0.0	-5	0.0
Miscellaneous	1,033	-0.7	-467	0.3
Effective tax expense	**-50,987**	**32.2**	**-39,454**	**29.1**

Deferred tax assets and liabilities are split across the following balance sheet items:

in € '000	Sept. 30, 2020		Sept. 30, 2019	
	Deferred tax assets	Deferred tax liabilities	Deferred tax assets	Deferred tax liabilities
Intangible assets	5,751	64,448	4,311	60,158
Property, plant and equipment	4,298	15,939	5,788	16,330
Inventories	46,655	2,821	51,665	809
Receivables and miscellaneous assets	13,963	13,568	18,985	9,796
Provisions	121,533	3,130	124,811	2,787
Liabilities	4,621	319	5,923	449
Loss carryforwards	75,582	-	77,764	-
Gross amount	**272,403**	**100,225**	**289,247**	**90,329**
Valuation allowances on tax loss carryforwards and similar items	-52,464	-	-48,525	-
Netting out	-97,711	-97,711	-87,883	-87,883
Carrying amount	**122,228**	**2,514**	**152,839**	**2,446**

The tax loss carryforwards, the majority of which are realizable without restriction, amounted to €293.6 million (prior year: €315.5 million). This includes an amount of €212.3 million (prior year: €185.5 million) on which a valuation allowance on deferred tax assets of €52.5 million (prior year: €48.5 million) has been recognized.

The utilization of tax loss carryforwards, on which deferred tax assets had not yet been recognized, resulted in a positive effect of €0.3 million (prior year: €2.0 million).

The following amounts are included in equity due to deferred taxes being offset:

in € '000	Sept. 30, 2020	Sept. 30, 2019
Derivative financial instruments	-4,445	4,411
Currency effects	-1,524	-945
Deferred taxes offset in accumulated other comprehensive income	**-5,969**	**3,466**
Remeasurements of defined benefit pensions plans	37,812	42,252
Deferred taxes in other reserves	**31,843**	**45,718**

Notes to the Consolidated Balance Sheet

14. Intangible Assets

in € '000	Concessions, industrial and similar rights and assets, and licenses in such rights	Goodwill	Payments made on account	Development costs recognized as an asset	Total
Cost					
Balance as of Oct. 1, 2018	**71,150**	**70,493**	**3,947**	**289,299**	**434,889**
Currency translation	229	143	-	-998	-626
Additions	5,230	-	12,212	57,878	75,320
Disposals	-1,867	-	-	-59,437	-61,304
Reclassifications	3,451	-	-2,487	-	964
Balance as of Sept. 30, 2019	**78,193**	**70,636**	**13,672**	**286,742**	**449,243**
Currency translation	-333	-166	-	-1,131	-1,630
Additions	4,295	-	12,441	55,728	72,464
Disposals	-1,668	-	-	-30,317	-31,985
Reclassifications	4,877	-	-4,745	-	132
Balance as of Sept. 30, 2020	**85,364**	**70,470**	**21,368**	**311,022**	**488,224**
Accumulated amortization and impairment losses					
Balance as of Oct. 1, 2018	**48,681**	**55,758**	**-**	**95,012**	**199,451**
Currency translation	36	-	-	-37	-1
Additions (amortization)	7,985	-	-	32,050	40,035
Additions (impairment)	3,648	-	-	-	3,648
Disposals	-1,858	-	-	-59,437	-61,295
Balance as of Sept. 30, 2019	**58,492**	**55,758**	**-**	**67,588**	**181,838**
Currency translation	-252	-	-	-193	-445
Additions (amortization)	8,034	-	-	41,461	49,495
Disposals	-1,570	-	-	-30,317	-31,887
Balance as of Sept. 30, 2020	**64,704**	**55,758**	**-**	**78,539**	**199,001**
Carrying amounts					
Balance as of Sept. 30, 2019	**19,701**	**14,878**	**13,672**	**219,154**	**267,405**
Balance as of Sept. 30,2020	**20,660**	**14,712**	**21,368**	**232,483**	**289,223**

Development costs in the amount of €55.7 million (prior year: €57.9 million) were capitalized. This includes capitalized borrowing costs of €3.1 million (prior year: €4.6 million). The necessary impairment tests on the capitalized development costs did not lead to any impairment losses (prior year: €0.0 million).

15. Property, Plant and Equipment

in € '000	Land, land rights and buildings	Technical equipment and machinery	Other equipment, operating and office equipment	Payments on account and assets under construction	Total
Cost					
Balance as of Oct. 1, 2018	**452,355**	**516,578**	**251,375**	**51,324**	**1,271,632**
Currency translation	5,219	5,011	7,044	472	17,746
Additions	17,347	22,819	14,375	53,423	107,964
Disposals	-1,561	-16,981	-10,389	-34	-28,965
Reclassifications	9,572	18,257	5,906	-34,699	-964
Balance as of Sept. 30, 2019	**482,932**	**545,684**	**268,311**	**70,486**	**1,367,413**
Currency translation	-14,962	-14,553	-4,306	-2,733	-36,554
Additions	23,189	16,603	20,175	54,731	114,698
Disposals	-7,961	-12,391	-12,590	-13	-32,955
Reclassifications	11,164	12,450	22,879	-46,625	-132
Balance as of Sept. 30, 2020	**494,362**	**547,793**	**294,469**	**75,846**	**1,412,470**
Accumulated depreciation and impairment losses					
Balance as of Oct. 1, 2018	**198,041**	**394,598**	**177,489**	**-**	**770,128**
Currency translation	3,079	4,178	3,825	-5	11,077
Additions (depreciation)	10,264	36,013	19,490	-	65,767
Additions (impairment)	12,391	1,807	4,173	966	19,337
Disposals	-230	-12,925	-8,675	-	-21,830
Write-ups	-9,358	-9,465	-44	-	-18,867
Balance as of Sept. 30, 2019	**214,187**	**414,206**	**196,258**	**961**	**825,612**
Currency translation	-6,631	-12,416	-3,140	-43	-22,230
Additions (depreciation)	11,597	37,321	20,402	-	69,320
Additions (impairment)	223	341	892	1,158	2,614
Disposals	-2,225	-11,907	-10,302	-	-24,434
Balance as of Sept. 30, 2020	**217,151**	**427,545**	**204,110**	**2,076**	**850,882**
Carrying amounts					
Balance as of Sept. 30, 2019	**268,745**	**131,478**	**72,053**	**69,525**	**541,801**
Balance as of Sept. 30, 2020	**277,211**	**120,248**	**90,359**	**73,770**	**561,588**

Additions to the cost of assets under construction included €0.1 million (prior year: €0.4 million) in capitalized borrowing costs. As in the prior year, the CLAAS Group did not pledge any property, plant and equipment as collateral for liabilities.

16. Right of use Assets

in € '000	Land, land rights and buildings	Vehicles	Forklift truck	Other right of use assets	Total
Cost					
Balance as of Oct. 1, 2019	**66,311**	**15,238**	**6,000**	**11,944**	**99,493**
Currency translation	-80	-18	-	-	-98
Additions	6,794	4,861	2,001	1,411	15,067
Disposals	-83	-1,382	-400	-96	-1,961
Balance as of Sept. 30, 2020	**72,942**	**18,699**	**7,601**	**13,259**	**112,501**
Accumulated depreciation					
Balance as of Oct. 1, 2019	**-**	**-**	**-**	**-**	**-**
Currency translation	-191	-73	-	-6	-270
Additions (depreciation)	11,479	7,541	2,001	5,388	26,409
Disposals	-83	-1,195	-400	-94	-1,772
Balance as of Sept. 30, 2020	**11,205**	**6,273**	**1,601**	**5,288**	**24,367**
Carrying amounts					
Balance as of Oct. 1, 2019	**66,311**	**15,238**	**6,000**	**11,944**	**99,493**
Balance as of Sept. 30, 2020	**61,737**	**12,426**	**6,000**	**7,971**	**88,134**

For the most part, the other right-of-use assets relate to IT hardware. The expense from leases classified as low-value or short-term that was recognized in the income statement in the fiscal year stands at €12.0 million.

17. Investments Accounted for Using the Equity Method

The following table shows the summarized financial data on associates and joint ventures accounted for using the equity method that are immaterial for the CLAAS Group, both individually and in total:

	Associates		Joint ventures	
in € '000	2020	2019	2020	2019
At equity result	4,672	3,855	13,941	9,359
Carrying amount of investments accounted for using the equity method	35,176	33,134	121,594	108,905

Investments accounted for using the equity method mainly relate to investments in CLAAS Financial Services companies, which provide financing solutions for investments in CLAAS machines.

18. Inventories

in € '000	Sept. 30, 2020	Sept. 30, 2019
Raw materials, consumables, and supplies	180,204	249,505
Work in progress	84,436	68,294
Finished goods and merchandise	641,114	785,695
Inventories	**905,754**	**1,103,494**

The decrease in write-downs of inventories amounting to €7.1 million (prior year: increase of €8.4 million) was recognized in the income statement in the reporting year and recorded under expenses in the cost of sales. As in the prior year, inventories were not pledged as security for liabilities.

19. Trade Receivables

in € '000	Sept. 30, 2020	Sept. 30, 2019
Gross carrying amount	**414,591**	**393,724**
Impairment	-40,822	-38,198
Net carrying amount	**373,769**	**355,526**

The impairment of trade receivables developed as follows:

in € '000	2020	2019
Impairment at Oct. 1	**38,198**	**42,548**
Utilization	-1,587	-5,155
Reversal of/addition to impairment loss, net	5,808	-690
Currency translation	-1,597	1,495
Impairment at Sept. 30	**40,822**	**38,198**

The following table shows the distribution of trade receivables by the impairment and maturity criteria:

in € '000	Sept. 30, 2020	Sept. 30, 2019
Neither past due nor impaired	318,395	280,540
Not impaired but past due as per the following time frames:		
up to 30 days	30,244	47,713
31 to 60 days	11,777	9,548
61 to 90 days	5,671	9,510
more than 90 days	5,457	3,020
Trade receivables adjusted individually for impairment	2,225	5,195
Trade receivables	**373,769**	**355,526**

The amount of interest income received on impaired financial assets was insignificant. Please see Note 35 for disclosures on existing credit risks arising from trade receivables.

Asset-backed Securitization

Trade receivables are sold on a revolving basis within the scope of an asset-backed securitization program (ABS program). At the end of the fiscal year, the nominal volume of the receivables sold and derecognized as a result came to €175.1 million (prior year: €232.8 million).

In some cases, the CLAAS Group retains the share of the sold receivables as part of these sales; this is balanced out under certain circumstances by future credits or netting. The resulting assets amounted to €66.6 million as of the balance sheet date (prior year: €68.3 million).

As part of these sales, the CLAAS Group recognized assets of €12.4 million (prior year: €13.0 million) as of the reporting date for the partially retained provisions for risk of default. The financial liabilities associated with the sales amounted to €11.5 million (prior year: €28.1 million).

20. Other Financial Assets

in € '000	Current	Non-current	Sept. 30, 2020	Current	Non-current	Sept. 30, 2019
Borrowings	-	7,675	7,675	-	3,996	3,996
Receivables from investments	5,559	4,565	10,124	21,085	5,015	26,100
Derivative financial instruments	21,051	19,872	40,923	2,606	26,225	28,831
Creditors with a debit balance	4,356	-	4,356	4,497	-	4,497
Loan receivables	802	-	802	1,322	-	1,322
Miscellaneous	128,837	14,993	143,830	104,022	2,251	106,273
Other financial assets	**160,605**	**47,105**	**207,710**	**133,532**	**37,487**	**171,019**

21. Other Non-financial Assets

in € '000	Current	Non-current	Sept. 30, 2020	Current	Non-current	Sept. 30, 2019
Tax assets	5,667	3,152	8,819	18,154	3,739	21,893
Deferred Income	15,181	-	15,181	15,251	-	15,251
Other taxes	37,109	-	37,109	42,401	-	42,401
Surplus related to funded benefit obligations	-	5,662	5,662	-	12,314	12,314
Payments made on account	19,661	-	19,661	10,514	-	10,514
Miscellaneous	3,224	14,748	17,972	357	21,325	21,682
Other non-financial assets	**80,842**	**23,562**	**104,404**	**86,677**	**37,378**	**124,055**

22. Securities

A total of €97.4 million (prior year: €98.3 million) of current securities €383.6 million (prior year: €178.4 million) was attributable to investment funds. The remaining volume relates to money market papers and the Schuldscheindarlehen (German Private Placement), most often with a residual term less than one year.

Of the current securities held at the beginning of the fiscal year, securities with historical costs of €80.0 million were disposed of during the fiscal year (prior year: €30.0 million).

Securities totaling €10.1 million (prior year: €10.6 million) are pledged as collateral in order to meet the legal requirements of the German Partial Retirement Act (AltTZG).

23. Cash and Cash Equivalents

Cash and cash equivalents in a volume of €12.7 million are restricted, of which €11.5 million (prior year: €28.1 million) is attributable to proceeds from trade receivables transferred under the ABS program that are not freely disposable and are to be transferred to other contracting parties.

24. Equity

Amounts reported as subscribed capital and capital reserves in the consolidated financial statements correspond to the amounts in the separate financial statements of CLAAS KGaA mbH. The subscribed capital of CLAAS KGaA mbH is composed of 3 million no-par-value registered shares with voting rights. The general partner without capital contribution is Helmut Claas GmbH. The shareholders of the limited partnership, CLAAS KGaA mbH, are all direct and indirect members of the Claas family. The capital reserves exclusively contain other contributions from shareholders.

The consolidated statement of changes in equity presents the development of equity as well as detailed information as to changes in retained earnings and accumulated other comprehensive income.

The dividend distributed to shareholders in fiscal year 2020 amounted to €40.0 million.

At CLAAS, the management of capital is governed by provisions of corporate law. The capital under management corresponds to the equity recognized in the balance sheet of the CLAAS Group. The aim of capital management is to achieve an adequate equity-to-assets ratio.

Should it be necessary to comply with contractual provisions, the capital will in addition be managed in accordance with the relevant requirements.

25. Financial Liabilities

in € '000	Current	Non-current	Sept. 30, 2020	Current	Non-current	Sept. 30, 2019
Bond (U.S. Private Placement)	-	255,384	255,384	-	275,229	275,229
Liabilities to banks	36,344	4,656	41,000	77,706	1,113	78,819
Schuldscheindarlehen (German Private Placement)	-	300,000	300,000	200,000	50,000	250,000
Shareholder loans	4,594	41,991	46,585	4,480	41,991	46,471
Lease liabilities	38,717	77,604	116,321	-	-	-
Financial liabilities	**79,655**	**679,635**	**759,290**	**282,186**	**368,333**	**650,519**

The table below shows details of the privately placed bonds and the Schuldscheindarlehen (German Private Placement):

	Nominal volume	Carrying amount Sept. 30, 2020	Coupon in %	Due
Bond (U.S. Private Placement) 2012	USD 300,000,000	€ 255,384,000	3.98 and 4.08	2022
Schuldscheindarlehen (German Private Placement) 2015	€ 50,000,000	€ 50,000,000	1.75	2024
Schuldscheindarlehen (German Private Placement) 2020	€ 215,000,000	€ 215,000,000	0.6 or 0.6±6M-Euribor (min. 0)	2027
Schuldscheindarlehen (German Private Placement) 2020	€ 35,000,000	€ 35,000,000	0.75	2029

Interest on liabilities to banks denominated in various currencies is charged at rates of between 0.75% p.a. and 4.8% p.a. Of these liabilities, €1.1 million are secured (prior year: €1.0 million). The unsecured liabilities to banks are attributable in part to very current liabilities in connection with the ABS program.

The shareholder loans refer primarily to liabilities to shareholders of the limited partnership.

Depending on the term of the lease, the lease liabilities were discounted at incremental borrowing rates of between 0.17% and 1.47%. The following table shows the due dates of the lease liabilities as of the balance sheet date:

in € '000	Sept. 30, 2020
Due within 1 to 5 years	38,717
Due between 5 and 10 years	58,195
Due after more than 10 years	19,409
Lease liabilities	**116,321**

Future lease payments are offset by expected income from minimum lease payments from non-cancelable sub-lease agreements for CLAAS machinery in the amount of €28.6 million.

In addition, the CLAAS Group had access to credit facilities from banks as well as a flexible syndicated loan totaling €680.8 million as of the balance sheet date for general financing purposes, €639.8 million of which was not utilized.

26. Silent Partnership

The silent partnership of the employee participation company CMG is compensated on the basis of performance and is considered subordinated in the event of liability. Pursuant to IFRS, any repayable capital transferred is classified as a financial liability. With regard to the silent partnership, the fair value cannot be reliably determined, for which reason the carrying amount is reported in this case.

In return for its subordinated capital contribution, CMG receives compensation that is based on the performance of the CLAAS Group. CMG also shares in any Group losses. A total of €5.7 million of the silent partnership can be terminated without cause as of September 30, 2021, additional termination-without-cause rights for a further €26.3 million apply between fiscal years 2022 and 2025.

27. Other Financial Liabilities

in € '000	Current	Non-current	Sept. 30, 2020	Current	Non-current	Sept. 30, 2019
Derivative financial instruments	3,874	-	3,874	11,456	-	11,456
Accrued interest	2,671	-	2,671	2,628	-	2,628
Miscellaneous	15,529	556	16,085	24,845	4,235	29,080
Other financial liabilities	**22,074**	**556**	**22,630**	**38,929**	**4,235**	**43,164**

28. Other Non-financial Liabilities

in € '000	Current	Non-current	Sept. 30, 2020	Current	Non-current	Sept. 30, 2019
Contract liabilities	71,376	-	71,376	64,026	-	64,026
Deferred Income	67,508	-	67,508	55,930	-	55,930
Other taxes	59,322	-	59,322	42,628	-	42,628
Social security	7,078	-	7,078	7,791	-	7,791
Miscellaneous	647	-	647	41	-	41
Other non-financial liabilities	**205,931**	**-**	**205,931**	**170,416**	**-**	**170,416**

29. Pension Provisions

Defined Benefit Plans

The pension provisions within the CLAAS Group encompass both obligations from current pensions as well as vested rights from future retirement, disability, and surviving dependents pensions. Pension obligations are normally based on the employees' length of service and remuneration levels.

As a rule, defined benefit plans within the Group vary depending on the economic, tax, and legal conditions in the respective countries. Individual agreements have been reached with the members of the Group Executive Board. The obligations from defined benefit plans for Group employees relate mainly to obligations in Germany, France, and the United Kingdom.

The pension plans have been closed in Germany since 2006, and since 2008 in the United Kingdom.

The defined benefit obligations are composed as follows:

in € '000 / Sept. 30, 2020	Defined benefit obligations (DBO)	Fair value of the plan assets	Net obligation
Germany	305,201	486	304,715
France	35,747	-	35,747
United Kingdom	73,885	79,547	-5,662
Other countries	3,707	-	3,707
Carrying amount	**418,540**	**80,033**	**338,507**
thereof: pension provisions			344,169
thereof: other non-financial assets			5,662

in € '000 / Sept. 30, 2019	Defined benefit obligations (DBO)	Fair value of the plan assets	Net obligation
Germany	322,027	473	321,554
France	36,634	-	36,634
United Kingdom	71,846	84,160	-12,314
Other countries	3,475	-	3,475
Carrying amount	**433,982**	**84,633**	**349,349**
thereof: pension provisions			361,663
thereof: other non-financial assets			12,314

The changes in the present value of the defined benefit obligations are composed as follows:

in € '000	2020	2019
Present value of the defined benefit obligations as of Oct. 1	**433,982**	**361,498**
Current service cost	10,742	8,616
Interest cost	3,404	6,646
Actuarial gains and losses	-17,255	71,442
Past service cost, curtailments and settlements	-186	-4,266
Currency translation	-1,841	331
Pension payments	-10,538	-10,549
Miscellaneous	232	264
Present value of the defined benefit obligations as of Sept. 30	**418,540**	**433,982**

The actuarial gains and losses largely result from the changes in financial assumptions.

The change in the fair value of the plan assets is shown in the table below:

in € '000	2020	2019
Fair value of the plan assets as of Oct. 1	**84,633**	**77,336**
Interest income	1,461	2,151
Income from plan assets excluding amounts already included in interest	-4,286	5,479
Employer contributions	2,116	643
Employee contributions	232	264
Currency translation	-2,196	425
Pension payments from plan assets	-1,927	-1,665
Fair value of the plan assets as of Sept. 30	**80,033**	**84,633**

The following amounts are recognized in comprehensive income for defined benefit plans:

in € '000	2020	2019
Current service cost	-10,742	-8,616
Past service cost	186	4,266
Interest cost	-3,404	-6,646
Interest income	1,461	2,151
Defined benefit plan components recognized in the income statement	**-12,499**	**-8,845**
Income from plan assets excluding amounts already included in interest	-4,286	5,479
Actuarial gains and losses	17,255	-71,442
Defined benefit plan components recognized directly in equity	**12,969**	**-65,963**

Interest cost and interest income are included in the financial result. The service cost and the past service cost are generally reported as functional costs.

Total cost from plan assets amounted to €2.8 million in fiscal year 2020 (prior year: income of €7.7 million).

The following material assumptions (average) were used for the actuarial valuation of the defined benefit plans:

	Sept. 30, 2020		Sept. 30, 2019	
in %	Germany	Other	Germany	Other
Discount rate	0.80	1.26	0.60	1.33
Rate of salary increase	2.50	2.49	2.50	2.49
Rate of pension increase	1.75	-	1.75	-

Plan assets mainly pertain to the funded plan in the United Kingdom and are composed of the following:

	Sept. 30, 2020		Sept. 30, 2019	
	in € '000	in %	in € '000	in %
Equity instruments	24,616	30.7	28,694	33.9
Bonds	53,023	66.3	54,493	64.4
Cash and cash equivalents	1,908	2.4	973	1.1
Miscellaneous	486	0.6	473	0.6
Plan assets	**80,033**	**100.0**	**84,633**	**100.0**

The equity instrument and bond items are held in the form of funds, for which redemption prices are determined on a regular basis. The equity instruments and bonds included in the fund are quoted on active markets. The market value of the plan assets is largely determined by the capital market environment. Unfavorable equity and bond developments, in particular,

could impact the market value. The investment risk is limited by the broad diversification of the bonds in the funds as well as the high quality of the obligors.

Plan assets are largely managed by a trust association in the United Kingdom under a trust agreement. This trust association stipulates, among other things, the principles and strategies for the investment activities.

The focus of the investment strategy is on sufficient diversification in order to distribute investment risk over a variety of markets and asset classes. It is also important that there is sufficient congruity between the risk drivers on both the investment and obligation sides. The allocation of assets is kept within specific investment ranges with respect to the type of investment and geographical market. In the year under review and in the prior year, the main focus of investment was on United Kingdom securities.

Were the other assumptions to remain unchanged, a rise in the discount rate by 25 basis points, as the material actuarial assumption, would reduce the present value of the defined benefit obligations by €20.0 million. A reduction in the discount rate of 25 basis points would correspond to a rise in the present value of the defined benefit obligations by €19.3 million. Actual developments will likely differ.

A rise or fall of 50 basis points in the rate of pension would have a comparable impact on the present value of the defined benefit obligations as a change in the discount rate of 25 basis points, provided that the other assumptions remain unchanged. The impact of a possible change in the rate of salary increase, on the other hand, would be insignificant.

The weighted average maturity of the defined benefit obligations was 19.0 years as of September 30, 2020 (prior year: 19.6 years).

In fiscal year 2021, pension payments in the amount of €10.0 million are anticipated. The employer contributions to plan assets are expected to amount to €2.1 million.

Defined Contribution Plans

Defined contribution plans are also in place in Germany, North America, and China in addition to the defined benefit plans. Furthermore, contributions were also made to national pension insurance institutions in Germany.

The total cost of the defined contribution plans can be broken down as follows:

in € '000	2020	2019
Defined contribution plans	2,994	3,250
National plans	28,599	27,050
Total cost of defined contribution plans	**31,593**	**30,300**

30. Income Tax Provisions and Other Provisions

		Other provisions				
in € '000	Income tax provisions	Personnel obligations	Sales obligations	Miscellaneous obligations	Total other provisions	Total
Balance as of Oct. 1, 2019	**27,385**	**151,541**	**367,781**	**52,564**	**571,886**	**599,271**
Utilization	-13,259	-120,556	-220,550	-11,402	-352,508	-365,767
Reversals	-3,122	-2,985	-28,926	-6,572	-38,483	-41,605
Additions	11,882	137,852	264,110	45,293	447,255	459,137
Interest/change in interest rate	-	51	11	-4	58	58
Currency translation	-1,032	-1,250	-8,200	-4,887	-14,337	-15,369
Balance as of Sept. 30, 2020	**21,854**	**164,653**	**374,226**	**74,992**	**613,871**	**635,725**
thereof: non-current	-	25,167	19,585	3,596	48,348	48,348
thereof: current	21,854	139,486	354,641	71,396	565,523	587,377

Income tax provisions include current tax obligations.

Personnel obligations mainly comprise provisions for part-time retirement programs, outstanding vacation time, anniversaries, and annual bonuses. Obligations arising from sales primarily relate to provisions for warranty claims, sales bonuses and rebates, and other sales-generating measures.

Other Disclosures

31. Contingent Liabilities and Other Financial Obligations

The CLAAS Group had the following obligations as of the balance sheet date:

in € '000	Sept. 30, 2020	Sept. 30, 2019
Obligations to purchase items of property, plant and equipment	25,527	21,500
Bills of exchange, guarantees, etc.	23,748	23,442

32. Litigation and Damage Claims

As a result of their general business operations, CLAAS Group companies are involved in a variety of legal proceedings and official governmental proceedings, or are exposed to third-party claims, or there may be a possibility of such proceedings being instituted or asserted in the future (for instance with respect to patents, product liability, or goods supplied or services rendered). Although the outcome of individual proceedings cannot be predicted with certainty given the unforeseeable nature of events associated with legal disputes, the current assessment is that no significant adverse impact on the results of operations of the CLAAS Group will occur beyond the risks reflected in liabilities and provisions in the financial statements.

33. Additional Disclosures on Financial Instruments

Carrying Amounts of Financial Assets and Liabilities by Categories

in € '000	Sept. 30, 2020	Sept. 30, 2019
Financial assets measured at fair value through profit or loss	431,218	210,607
Financial assets measured at fair value through other comprehensive income	1,907	706
Financial assets measured at amortized cost	1,032,697	988,981
Financial liabilities measured at fair value through profit or loss	3,874	11,456
Financial liabilities measured at amortized cost	949,862	969,349

The carrying amounts of financial assets and liabilities generally equate to their fair values.

The values differ for financial liabilities: The carrying amounts of financial liabilities totaled €759.3 million (prior year: €650.5 million), while the fair value was €774.0 million (prior year: €657.6 million). The entire amount was attributable to Level 2 of the fair value hierarchy.

Fair Value Hierarchy

The market values of financial assets and financial liabilities measured at fair value may be determined based on the following basic data in accordance with the fair value hierarchy, with the individual measurement levels defined as follows in IFRS 13:

- Level 1 Measurement based on quoted prices in active markets for identical financial instruments
- Level 2 Measurement based on inputs other than quoted prices included within Level 1 that are observable either directly or indirectly
- Level 3 Measurement based on models using inputs that are not based on observable market data

The following table shows the carrying amounts of the financial assets and liabilities measured at fair value by measurement level. There were no transfers between the individual categories:

	Sept. 30, 2020			Sept. 30, 2019		
in € '000	**Level 1**	**Level 2**	**Level 3**	**Level 1**	**Level 2**	**Level 3**
Securities	383,551	-	-	178,387	-	-
Derivative financial instruments	-	40,923	-	-	28,831	-
Other investments	-	-	8,651	-	-	4,095
Financial assets at fair value	**383,551**	**40,923**	**8,651**	**178,387**	**28,831**	**4,095**
Derivative financial instruments	-	3,874	-	-	11,456	-
Financial liabilities at fair value	**-**	**3,874**	**-**	**-**	**11,456**	**-**

Net Gains or Losses on Financial Instruments

The net gains or losses on the financial instruments recognized in the consolidated income statement can be categorized as follows:

in € '000	**2020**	**2019**
Financial assets and financial liabilities measured at fair value through profit or loss	4,074	-2,438
Financial assets measured at amortized cost	331	21,630
Financial liabilities measured at amortized cost	-22,510	-40,080
Net gains or losses on financial instruments	**-18,105**	**-20,888**

The net gains or losses on financial assets or financial liabilities measured at fair value through profit or loss arise solely from fair value changes.

For financial assets measured at amortized cost, the net gains or losses include interest income, foreign exchange gains and losses, impairments, write-ups, gains, or losses from the sale of the loan or receivable, and gains or losses from the reversal of previously recognized impairment losses on debt instruments.

The net gains or losses on financial liabilities measured at amortized cost primarily include interest expenses and foreign exchange gains and losses. The prior-year figures have been adjusted for interest income and expenses.

34. Derivative Financial Instruments and Hedge Accounting

Hedge accounting is not used for some derivative financial instruments. The changes in fair value for these derivatives are recognized through profit or loss. Where hedge accounting is applied, derivative financial instruments are used to hedge future cash flows (cash flow hedging). There were no other hedging relationships in the fiscal year. The following table provides an overview of the derivative financial instruments used and their fair values:

	Sept. 30, 2020		Sept. 30, 2019	
in € '000	Assets	Liabilities	Assets	Liabilities
Forward exchange transactions	32,974	2,650	27,180	8,356
thereof: cash flow hedges	(31,872)	(707)	(27,155)	(4,679)
Foreign currency options	7,845	1,224	1,624	2,986
thereof: cash flow hedges	(4,886)	(-)	(912)	(-)
Miscellaneous	104	-	27	114
thereof: cash flow hedges	(-)	(-)	(-)	(-)
Derivative financial instruments	**40,923**	**3,874**	**28,831**	**11,456**
thereof: non-current	19,872	-	26,225	-
thereof: current	21,051	3,874	2,606	11,456

The cash flows from interest rate and currency risks from non-current financial liabilities hedged by cash flow hedges are due in 2022 and recognized in profit or loss. The underlying transactions for cash flow hedges for currency risks from the operating business are largely expected to be realized in the coming 12 to 18 months. This means that these hedges will primarily impact profit or loss in the coming fiscal year.

The changes in the value of cash flow hedges reclassified from equity to foreign exchange gains and losses, net, in the fiscal year amounted to €-2.7 million (prior year: €0.4 million).

The ineffective portion from cash flow hedges, which was recognized as profit or loss in foreign exchange gains and losses, net, amounted to €0.3 million (prior year: €-0.7 million).

35. Financial Risk Management

Principles of Risk Management

As a result of its business activities, the CLAAS Group is exposed to market price risk, particularly exchange rate and interest rate risk. On the procurement side, the CLAAS Group is exposed to commodity and supply security risks. Moreover, credit risk arises from trade receivables, as well as from receivables relating to finance transactions such as cash and cash equivalents or the purchase of securities. Liquidity risk can result from a significant decline in operating business performance or from the risk categories mentioned above.

All market price risks are identified for the entire CLAAS Group and measured, monitored, and managed centrally by Group Treasury. Systematic, central currency and interest rate management is undertaken in order to limit, control and steer exchange rate and interest rate risk. In addition to operating measures to limit risks, all of the usual financial instruments, including derivatives, are used to manage risk. All transactions are concluded exclusively on the basis of existing underlying transactions or specifically planned transactions and are renewed on a rolling basis as required. All business partners are banks of very good credit quality.

Credit risk is identified, monitored, and managed for the entire CLAAS Group by the relevant decentralized units, supplemented by Group credit management. The local units focus their activities on operational monitoring and management of the respective risks in consideration of the locally adapted parameters specified by Group credit management. Group credit management establishes general guidelines, which form the basis for monitoring and managing the locally supervised transactions.

Since the management and the supervisory bodies of CLAAS attach great importance to systematic risk management, a comprehensive monitoring system that meets all legal requirements has been implemented. In this context, the efficiency of the hedging instruments used and the reliability of the internal control systems are regularly checked by means of internal and external reviews.

CLAAS pursues strict risk management. Derivative financial instruments are used exclusively for risk management purposes, i.e., to limit and govern risk related to business operations. The execution, control, and recording of transactions are strictly segregated in terms of physical function, on the one hand, and organizational function, on the other. Levels of discretion in trading in terms of both amount and characteristics are defined in internal guidelines. In the finance area, risk positions are continuously evaluated and analyzed by means of suitable systems. The analysis includes simulations and scenario calculations. The competent executive bodies are informed regularly of risk exposure. Certain finance management transactions must be approved by the Group Executive Board and/or the Shareholders' Committee.

Credit Risk

CLAAS is exposed to credit risk resulting from its business operations and finance activities. This risk entails the danger of unexpected economic loss in the event that a counterparty does not fulfill its payment obligations. Credit risk comprises both the direct risk of default as well as the risk of a downgrade in credit rating in combination with the threat of a concentration of individual risks. The maximum risk arising from a financial asset corresponds to the carrying amount of the asset. Effective monitoring and management of credit risk is a basic component of the risk management system at CLAAS. Group credit management has defined principles for managing credit risk across the Group. CLAAS internally reviews and rates the credit quality of all customers with credit needs exceeding certain limits. In addition to financial reports submitted by the customer, the data for review and classification of credit quality is based on information from external credit rating agencies, previous default experience on the part of CLAAS, and experience resulting from the long-standing business partnership with the customer.

The maximum risk of default on trade receivables is derived from the carrying amounts recognized in the balance sheet. The risk of default is covered by write-downs. No single client was responsible for a material share of the total trade receivables of the CLAAS Group.

There were no indications, either during the course of the fiscal year or as of the balance sheet date, that the obligors of trade receivables that are neither impaired nor past due would not meet their payment obligations.

The collateral held for the purpose of minimizing potential credit risk consists primarily of credit insurance, guarantees from customers or banks, and, in some cases, retentions of title. There were no major losses recorded in either fiscal year 2020 or the prior year.

The CLAAS Group is exposed to credit risks in connection with investments in cash and cash equivalents and securities based on the risk of the obligor or issuer not meeting its payment obligations. In order to minimize this risk, issuers and obligors are carefully selected. These must have at least a BBB rating pursuant to the Standard & Poor's categories. Investments are widely diversified to further limit the risk of default. Default risk is continuously monitored using a market- and rating-based limit system. The competent executive bodies of the CLAAS Group approve the investment strategy and the limit system.

Derivative financial instruments are used exclusively for risk management purposes. The derivatives are either measured individually at fair value or included in hedge accounting. The maximum credit risk arising from derivative financial instruments corresponds to the positive market values of the instrument. The impact of counterparty risks on the market value is quantified using the credit value adjustment. Nearly all counterparties are internationally operating banks. The credit quality of the counterparties is continuously reviewed on the basis of rating agency credit ratings and the market prices for credit default insurance. Moreover, the risk of default is limited by a strategy of broad diversification.

Risks can also arise from issued financial guarantees. As of September 30, 2020, the maximum risk in the event of utilization amounted to €1.1 million (prior year: €3.4 million). The fair value was calculated as of the date of addition using the "expected value" method, taking into account credit risk reductions (liquidation proceeds) and risks that could arise on the basis of a default probability of 5% to 10% (prior year: 5% to 10%).

Liquidity Risk

The CLAAS Group employs a number of measures to effectively counter liquidity risk. In doing so, liquidity management places top priority on the absolute necessity of ensuring solvency at all times. Liquidity management also aims for a comfortable and cost-efficient liquidity position that will allow the Group to react adequately to opportunities in a dynamic market environment. To meet these goals, value is placed on maintaining sufficient financing commitments (see Note 25) and cash and cash equivalents as well as on the ABS program (see Note 19) and international cash management. Liquidity trends are monitored intensively on an ongoing basis in the form of daily, weekly, and monthly analyses and reports with an increasing level of detail; future liquidity requirements are projected on a regular basis as part of the financial planning process. This process consists of a rolling three-month forecast, an annual forecast, and a five-year forecast. In addition, the situation with regard to financing conditions for CLAAS on the financial markets is monitored on an ongoing basis to enable any refinancing risk to be countered promptly and proactively.

The following table gives an overview of undiscounted contractually agreed payment obligations from liabilities due in the coming fiscal years:

in € '000 / Sept. 30, 2020	2021	2022	2023	2024	2025	From 2026	Total
Financial liabilities	103,741	225,032	116,933	67,203	13,446	318,245	844,600
Silent partnership	5,707	5,240	5,693	9,544	5,837	23,000	55,021
Trade payables	233,115	-	-	-	-	-	233,115
Derivative financial instruments	3,880	-	-	-	-	-	3,880
Miscellaneous	15,529	556	-	-	-	-	16,085
Payments due	**361,972**	**230,828**	**122,626**	**76,747**	**19,283**	**341,245**	**1,152,701**

in € '000 / Sept. 30, 2019	2020	2021	2022	2023	2024	From 2025	Total
Financial liabilities	299,101	14,450	188,761	106,371	53,394	45,536	707,613
Silent partnership	5,535	2,880	5,299	5,769	9,670	22,489	51,642
Trade payables	235,480	-	-	-	-	-	235,480
Derivative financial instruments	11,472	-	-	-	-	-	11,472
Miscellaneous	24,845	4,235	-	-	-	-	29,080
Payments due	**576,433**	**21,565**	**194,060**	**112,140**	**63,064**	**68,025**	**1,035,287**

Currency Risks

The international focus of the CLAAS Group means that its operating business and financial transactions are exposed to risks of exchange rate volatilities, mainly arising from fluctuations in the value of the U.S. dollar, British pound, Polish zloty, Hungarian forint, Russian ruble, and Chinese renminbi against the euro. In the operating business, currency risk mainly arises when net sales are realized in a currency different from that of the associated costs (transaction risk). To effectively counter the effect of exchange rate fluctuations, CLAAS pursues central currency management under the purview of the Group Treasury department.

To calculate the total risk exposure, the estimated operating inflows and outflows are recorded centrally for each currency on a fiscal-year basis. A basic hedging strategy is developed for the resulting net exposures in consideration of risk-bearing capacity, the market assessment, and the competitive situation in the target market in question. The hedging strategy is intended to protect the CLAAS Group from negative market developments while enabling the Group to participate in positive developments. The hedge horizon is typically between one and two years. The hedging strategy is approved by the competent executive body of the CLAAS Group and implemented by the Group Treasury department through the conclusion of financial derivative contracts. The hedging strategy implemented is monitored continuously by the Group Treasury department and adapted as needed. Group management and the competent executive body receive regular reports informing them of the current status of the currency risk position.

Financing-related and investment-related currency risks are – insofar as possible and appropriate – integrated into the forecasts of operating exposure. Alternatively, these risks may be hedged individually on a case-by-case basis.

The following scenario analysis indicates the value of financial instruments denominated in foreign currencies in the event of a 10% increase or 10% decrease in the value of the hedging portfolio in comparison with the actual exchange rates on the balance sheet date. The figures are presented separately depending on whether the items are recognized in equity (via hedge accounting) or at fair value through profit or loss. The future underlying items that the derivative portfolio is intended to hedge are not included in the presentation pursuant to IFRS 7. Any conclusions made on the basis of the information presented here therefore relate exclusively to derivative financial instruments. The values stated are not meaningful for determining the overall future effect of exchange rate fluctuations on the cash flows or earnings of the CLAAS Group. In addition to the analysis made here of the market value risk inherent in currency derivatives, internal risk management and the information provided regularly to the competent executive bodies are based above all on meaningful scenario analyses of the total risk position, which take account of both the underlying items and the hedge portfolio. Foreign currency loans are generally hedged using forward transactions.

	Sept. 30, 2020		Sept. 30, 2019	
in € '000	Equity	Profit or loss	Equity	Profit or loss
Actual fair value	**36,057**	**890**	**23,393**	**-5,937**
Fair value in the event of an exchange rate increase of 10%	**43,875**	**25,466**	**23,511**	**22,704**
U.S. dollar	19,432	19,567	6,766	18,069
British pound	11,081	4,593	9,874	3,716
Polish zloty	5,806	1,349	5,507	1,189
Russian ruble	8,097	-1,480	1,526	262
Chinese renminbi	1,409	1,482	908	623
Hungarian forint	-1,950	-2,772	-1,070	-2,786
Miscellaneous	-	2,727	-	1,631
Fair value in the event of an exchange rate decrease of 10%	**32,987**	**-29,521**	**28,000**	**-45,398**
U.S. dollar	40,162	-18,419	40,941	-32,122
British pound	-6,274	-5,667	-7,191	-7,244
Polish zloty	-2,511	-2,060	-2,710	-2,071
Russian ruble	1,894	1,918	-3,184	-1,203
Chinese renminbi	-955	-2,432	-928	-1,194
Hungarian forint	671	657	1,072	889
Miscellaneous	-	-3,518	-	-2,453

Furthermore, the conversion of the net assets of foreign subsidiaries located outside the euro zone and their income and expenses (translation risk) also entail currency risks. Based on efficiency and materiality considerations these risks are generally not hedged.

Interest Rate Risk

CLAAS is generally exposed to interest rate risk on assets and liabilities. Such risk may arise on financial instruments such as bonds or liabilities to banks or due to the effects of interest rate changes on operating and strategic liquidity. Transactions relating to initial funding and capital investment, as well as the subsequent management of the positions in line with targets such as maturity date and the length of time for which interest rates are fixed, are undertaken centrally for the entire CLAAS Group by the Group Treasury department in coordination with the competent executive bodies. Interest rate derivatives are used to manage risk. These positions are recognized at their fair values and continuously monitored on a fair value basis. The resulting risk is measured by means of value at risk analyses, among other things.

Value at risk is measured using Monte Carlo simulation, assuming a confidence level of 99.0% and a holding period of ten days. The resulting figure represents the loss in fair value of the portfolio of all interest-sensitive instruments, with a probability of only 1.0% that the figure obtained will be exceeded after ten days. Currency derivatives are not included, as any interest-related changes they may be exposed to are insignificant. As of the balance sheet date, the value at risk of all interest-sensitive financial instruments amounted to €2.4 million (prior year: €1.5 million).

Commodity Price Risk

CLAAS is subject to the risk of changes in commodity prices arising from the procurement of input materials. To a minor extent, derivative financial instruments are used to hedge the risk of changes in the price of industrial metals and natural rubber. The resulting risk is thus insignificant.

36. Disclosures on the Consolidated Statement of Cash Flows

The consolidated statement of cash flows comprises cash flows from operating as well as investing and financing activities. Effects of changes in the scope of consolidation on cash and cash equivalents are shown separately in cash flows from investing activities. The impact of exchange rate fluctuations on cash and cash equivalents is eliminated from individual cash flows and stated separately.

The following cash flows are reported under cash flows from operating activities:

in € '000	2020	2019
Interest paid	26,152	28,776
Interest received	7,594	7,011
Dividends received	2,668	12,599
Income taxes paid	39,732	59,942

Liabilities from financial liabilities developed as follows:

in € '000	2020	2019
Financial liabilities as of Sept. 30	**650,519**	**605,521**
Initial application of IFRS 16	126,652	-
Financial liabilities as of Oct. 1	**777,171**	**605,521**
Cash inflows/outflows	- 12,594	26,744
Currency translation	- 1,178	1,156
Measurement of bonds in foreign currencies	- 19,845	17,098
Non-cash changes leasing	15,736	-
Financial liabilities as of Sept. 30	**759,290**	**650,519**

37. Related Party Disclosures

Related parties are associates and joint ventures accounted for using the equity method as well as persons who can exercise significant influence on the CLAAS Group. The latter includes the members of the Group Executive Board, the Supervisory Board, and the Shareholders' Committee, as well as the members of the Claas families.

The following table shows the extent of the business relationships of the CLAAS Group with related parties:

	Associates		Joint ventures	
in € '000	**2020**	**2019**	**2020**	**2019**
Income	29,849	25,695	132,827	163,562
Expenses	4,103	3,616	215,976	276,823
Receivables	8,960	6,301	31,320	29,195
Liabilities	90	109	15,225	21,063

The receivables and liabilities mainly relate to trade receivables and trade payables.

The members of the Claas family granted loans totaling €46.6 million in the reporting year (prior year: €46.5 million); of this amount, €4.6 million (prior year: €4,5 million) is due within one year.

The CLAAS Group did not conclude any other material transactions with related parties.

All transactions with related parties were conducted on an arm's length basis.

The remuneration paid to members of the Supervisory Board and the Shareholders' Committee totaled €1.5 million in fiscal year 2020 (prior year: €1.4 million).

The following remuneration was paid to members of the Group Executive Board:

in € '000	**2020**	**2019**
Current remuneration	4,436	4,910
Provisions for retirement benefits	68	54
Total Group Executive Board remuneration	**4,504**	**4,964**

Retirement benefits were paid to former members of the Executive Board of CLAAS KGaA mbH/the Group Executive Board in the amount of €0.8 million (prior year: €0.8 million). Obligations for current pensions and vested rights of former members of the Executive Board of CLAAS KGaA mbH/the Group Executive Board totaled €15.5 million as of the balance sheet date (prior year: €16.4 million).

38. Auditor's Fees

The following fees were recognized as an expense for the services provided by the auditor of the consolidated financial statements, Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft:

in € '000	2020	2019
Audit services	632	693
Other assurance services	42	32
Tax consulting services	154	341
Other services	5	-
Auditor's fees	**833**	**1,066**

Audit services include fees for auditing the financial statements of CLAAS KGaA mbH and the consolidated financial statements as well as the financial statements of the domestic subsidiaries.

39. Application of Section 264 (3) and Section 264b of the German Commercial Code

The following domestic subsidiaries made partial use of the exemption option pursuant to Section 264 (3) and Section 264b of the German Commercial Code:

- 365FarmNet Group KGaA mbH & Co KG, Harsewinkel
- CLAAS Anlagemanagement GmbH, Harsewinkel
- CLAAS E-Systems GmbH, Dissen am Teutoburger Wald
- CLAAS Global Sales GmbH, Harsewinkel
- CLAAS Industrietechnik GmbH, Paderborn
- CLAAS Material Handling GmbH, Harsewinkel
- CLAAS Saulgau GmbH, Bad Saulgau
- CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel
- CLAAS Service and Parts GmbH, Harsewinkel
- CLAAS Vertriebsgesellschaft mbH, Harsewinkel

40. Events after the Balance Sheet Date

There were no events or developments after the end of the fiscal year that could have led to material changes in the presentation or the measurement of individual assets or liabilities as of September 30, 2020, or that are subject to disclosure requirements.

41. List of Shareholdings

	Company and registered office	Shareholding in %	Held through no.
I.	**Affiliated companies included in the scope of consolidation**		
No.	**Domestic companies**		
1	CLAAS Kommanditgesellschaft auf Aktien mbH, Harsewinkel		
2	BLT Brandenburger Landtechnik GmbH, Liebenthal	50.6	16
3	CLAAS Anlagemanagement GmbH, Harsewinkel	100.0	1
4	CLAAS Bordesholm GmbH, Bordesholm	82.4	16
5	CLAAS Braunschweig GmbH, Schwülper	100.0	16
6	CLAAS Central Asia Investment GmbH, Harsewinkel	100.0	1
7	CLAAS E-Systems GmbH, Dissen am Teutoburger Wald	100.0	1
8	CLAAS Global Sales GmbH, Harsewinkel	100.0	1
9	CLAAS Industrietechnik GmbH, Paderborn	100.0	1
10	CLAAS Material Handling GmbH, Harsewinkel	100.0	1
11	CLAAS Osteuropa Investitions GmbH, Harsewinkel	100.0	1
12	CLAAS Saulgau GmbH, Bad Saulgau	100.0	1
13	CLAAS Selbstfahrende Erntemaschinen GmbH, Harsewinkel	100.0	1
14	CLAAS Service and Parts GmbH, Harsewinkel	100.0	1
15	CLAAS Thüringen GmbH, Schwabhausen	90.0	16
16	CLAAS Vertriebsgesellschaft mbH, Harsewinkel	100.0	1
17	CLAAS Weser Ems GmbH, Molbergen	100.0	16
18	365FarmNet GmbH, Berlin	100.0	19
19	365FarmNet Group KGaA mbH & Co KG, Harsewinkel	100.0	1/20
20	365FarmNet Verwaltungs GmbH, Gütersloh	100.0	1
	Foreign companies		
21	Canada West Harvest Centre Inc., Kelowna/Canada	100.0	29
22	CHW Fonds, Luxembourg/Luxembourg		
23	CLAAS Agricoltura S.R.L., Milan/Italy	100.0	41
24	CLAAS Agricultural Machinery (Shandong) Co. Ltd., Gaomi/China	100.0	36
25	CLAAS Agricultural Machinery Private Limited, New Delhi/India	100.0	8/14
26	CLAAS Agricultural Machinery Trading (Beijing) Co. Ltd., Beijing/China	100.0	30
27	CLAAS América Latina Representação Ltda., Porto Alegre/Brazil	100.0	1/8
28	CLAAS Argentina S.A., Sunchales/Argentina	100.0	1
29	CLAAS Canada Holdings Inc., Kelowna/Canada	100.0	1
30	CLAAS East Asia Holding Ltd., Hong Kong/China	100.0	1
31	CLAAS Eastern Ltd., Saxham/United Kingdom	100.0	54
32	CLAAS Financial Services Inc., Wilmington/Delaware/USA	100.0	45
33	CLAAS France Holding S.A.S., Fresnes/Paris/France	100.0	1
34	CLAAS France S.A.S., Fresnes/Paris/France	100.0	33
35	CLAAS Global Sales Americas Inc., Wilmington/Delaware/USA	100.0	8
36	CLAAS Greater China Holding Ltd., Hong Kong/China	100.0	1
37	CLAAS Holdings Ltd., Saxham/United Kingdom	100.0	1
38	CLAAS Hungária Kft., Törökszentmiklós/Hungary	100.0	1
39	CLAAS Ibérica S.A., Madrid/Spain	100.0	1
40	CLAAS India Private Ltd., Faridabad/India	100.0	1
41	CLAAS Italia S.p.A., Vercelli/Italy	100.0	1
42	CLAAS Manns Ltd., Saxham/United Kingdom	100.0	54
43	CLAAS Middle East – FZE, Dubai/United Arab Emirates	100.0	8
44	CLAAS North America Holdings Inc., Omaha/Nebraska/USA	100.0	1
45	CLAAS of America Inc., Omaha/Nebraska/USA	100.0	44
46	CLAAS Omaha Inc., Omaha/Nebraska/USA	100.0	44
47	CLAAS Polska sp. z o.o., Poznań/Poland	100.0	1

	Company and registered office	Shareholding in %	Held through no.
	Foreign companies		
48	CLAAS Regional Center Central Europe GmbH, Spillern/Austria	100.0	1
49	CLAAS Regional Center South East Asia Ltd., Bangkok/Thailand	100.0	1
50	CLAAS Regional Center South East Europe S.R.L., Afumaţi/Romania	100.0	1
51	CLAAS Réseau Agricole S.A.S., Fresnes/Paris/France	100.0	53
52	CLAAS Southern Ltd., Saxham/United Kingdom	100.0	54
53	CLAAS Tractor S.A.S., Vélizy/France	100.0	33
54	CLAAS U.K. Ltd., Saxham/United Kingdom	100.0	37
55	CLAAS Western Ltd., Saxham/United Kingdom	100.0	54
56	Mercator Purchasing S.A., Luxembourg/Luxembourg		
57	Nebraska Harvest Center Inc., Wilmington/Delaware/USA	100.0	44
58	OOO CLAAS Vostok, Moscow/Russia	100.0	1
59	OOO CLAAS, Krasnodar/Russia	99.0	11
60	S@T-INFO S.A.S., Chalon-sur-Saône/France	100.0	33
61	TOV CLAAS Ukraina, Kiev/Ukraine	100.0	1
62	Usines CLAAS France S.A.S., Metz-Woippy/France	100.0	33
63	365 FarmNet France S.A.S., Fresnes/Paris/France	100.0	33
	II. Associates accounted for using the equity method		
64	CLAAS Financial Services LLC., San Francisco/California/USA	49.0	45/32
65	G.J.'s Harvest Centre Inc., Ontario/Canada	34.5	29
66	Mecklenburger Landtechnik GmbH, Prüzen/Germany	25.1	16
67	Schmahl Landtechnik Upahl GmbH & Co., Upahl/Germany	45.0	16
68	Schmahl Landtechnik Upahl Verwaltungs GmbH, Upahl/Germany	45.0	16
69	SM3 CLAAS S.A.S., Fleury/France	42.0	51
70	Société Nouvelle Dachy S.A.S., Amiens/France	20.0	51
71	Worch Landtechnik GmbH, Schora/Germany	39.0	16
	III. Joint ventures and joint operations accounted for using the equity method		
72	CLAAS Financial Services Ltd., Basingstoke/United Kingdom	49.0	54
73	CLAAS Financial Services S.A.S., Puteaux/Paris/France	49.0	1
74	Fricke Landtechnik GmbH, Demmin/Germany	25.1	16
75	G.I.M.A. S.A.S., Beauvais/France	50.0	53
76	TechnikCenter Grimma GmbH, Mutzschen/Germany	30.0	16
77	Uz CLAAS Agro MChJ, Tashkent/Uzbekistan	49.0	6

	IV. Other significant shareholdings		Subscribed capital	Shareholding in %	Held through no.
78	AGRAVIS Technik Hessen-Pfalz GmbH, Fritzlar/Germany	EUR	700,000	10.0	16
79	BayWa AG Centre Ltd., Crossfield/Alberta/Canada	CAD	555,557	10.0	29
80	CLAAS Main-Donau GmbH & Co. KG, Gollhofen/Germany	EUR	1,200,000	10.0	16
81	CLAAS Nordostbayern GmbH & Co. KG, Altenstadt an der Waldnaab/Germany	EUR	750,000	10.0	16
82	CLAAS Südostbayern GmbH, Töging am Inn/Germany	EUR	700,000	10.0	16
83	CLAAS Württemberg GmbH, Langenau/Germany	EUR	800,000	10.0	16
84	CS Parts Logistics GmbH, Bremen/Germany	EUR	1,550,000	50.0	14
85	DESICO S.A., Florentino Ameghino/Buenos Aires/Argentina	ARS	13,333	10.0	28
86	Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, Kaiserslautern/Germany	EUR	1,248,000	4.2	1
87	E-FARM GmbH, Hamburg/Germany	EUR	34,628	11.8	3
88	Landtechnik Steigra GmbH, Steigra/Germany	EUR	615,000	15.1	16
89	LTZ Chemnitz GmbH, Hartmannsdorf/Germany	EUR	750,000	10.0	16
90	MD-Betriebs-GmbH, Munich/Germany	EUR	25,000	10.0	16
91	NOB-Betriebs-GmbH, Altenstadt an der Waldnaab/Germany	EUR	25,000	10.0	16
92	Pellenc Languedoc Roussillon S.A.S., Lézignan-Corbières/France	EUR	1,000,000	35.0	51
93	Tingley Implements Inc., Lloydminster/Canada	CAD	1,092,000	10.0	45

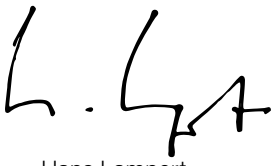
Management Statement on the Preparation of the Consolidated Financial Statements

These consolidated financial statements for the fiscal year ended September 30, 2020, and the Group management report were prepared by the Executive Board of CLAAS KGaA mbH on November 24, 2020. The accuracy and completeness of the information contained in the financial statements and the Group management report are the responsibility of the Company's management. The consolidated financial statements were prepared in accordance with International Financial Reporting Standards (IFRS), as applicable in the European Union (EU). Prior-year figures were determined in accordance with the same principles The consolidated financial statements are supplemented by the Group management report and additional disclosures in accordance with Section 315e of the German Commercial Code (HGB).

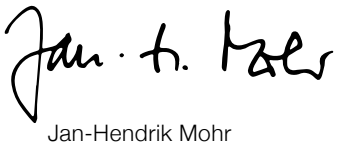
Systems of internal control, uniform Group accounting policies, and continuous employee training ensure that the consolidated financial statements and the Group management report are prepared in compliance with generally accepted accounting principles and comply with statutory requirements. Compliance with the guidelines set forth in the risk management manual, which are applicable to the Group as a whole, as well as the reliability and effectiveness of the control systems are examined by our internal auditing unit on an ongoing basis. After careful examination of the current risk position, we have discovered no specific risks that could threaten the continued existence of the CLAAS Group.

Harsewinkel, November 24, 2020
Executive Board of the CLAAS Group.

Thomas Böck



Hans Lampert



Jan-Hendrik Mohr

Christian Radons

Independent Auditor's Report

To CLAAS Kommanditgesellschaft auf Aktien mbH

Opinions
We have audited the consolidated financial statements of CLAAS Kommanditgesellschaft auf Aktien mbH, Harsewinkel, and its subsidiaries (the Group), which comprise the consolidated income statement, the consolidated statement of other comprehensive income, the consolidated balance sheet as at 30 September 2020, consolidated statement of changes in equity and consolidated statement of cash flows for the fiscal year from 1 October 2019 to 30 September 2020, and notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of CLAAS Kommanditgesellschaft auf Aktien mbH for the fiscal year from 1 October 2019 to 30 September 2020. In accordance with the German legal requirements we have not audited the group statement on corporate governance in section 'Employees' subsection 'Women in leadership positions' of the group management report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB and and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 30 September 2020 and of its financial performance for the fiscal year from 1 October 2019 to 30 September 2020,

- and the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the Group management report does not cover the content of the aforementioned Group statement on corporate governance.

Pursuant to Sec. 322 (3) Sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the opinions
We conducted our audit of the consolidated financial statements and of the group management report in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

Other information
The executive directors are responsible for the other information. The other information comprises the group statement on

corporate governance in accordance with Sec. 289f (4) HGB (information on proportion of women) in section 'Employees' subsection 'Women in leadership positions' of the group management report.

Our opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or
- our knowledge obtained in the audit, or otherwise appears to be materially misstated.

Responsibilities of the executive directors and the supervisory board for the consolidated financial statements and the group management report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Sec. 317 HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also

- identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Sec. 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Hanover, November 24, 2020

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

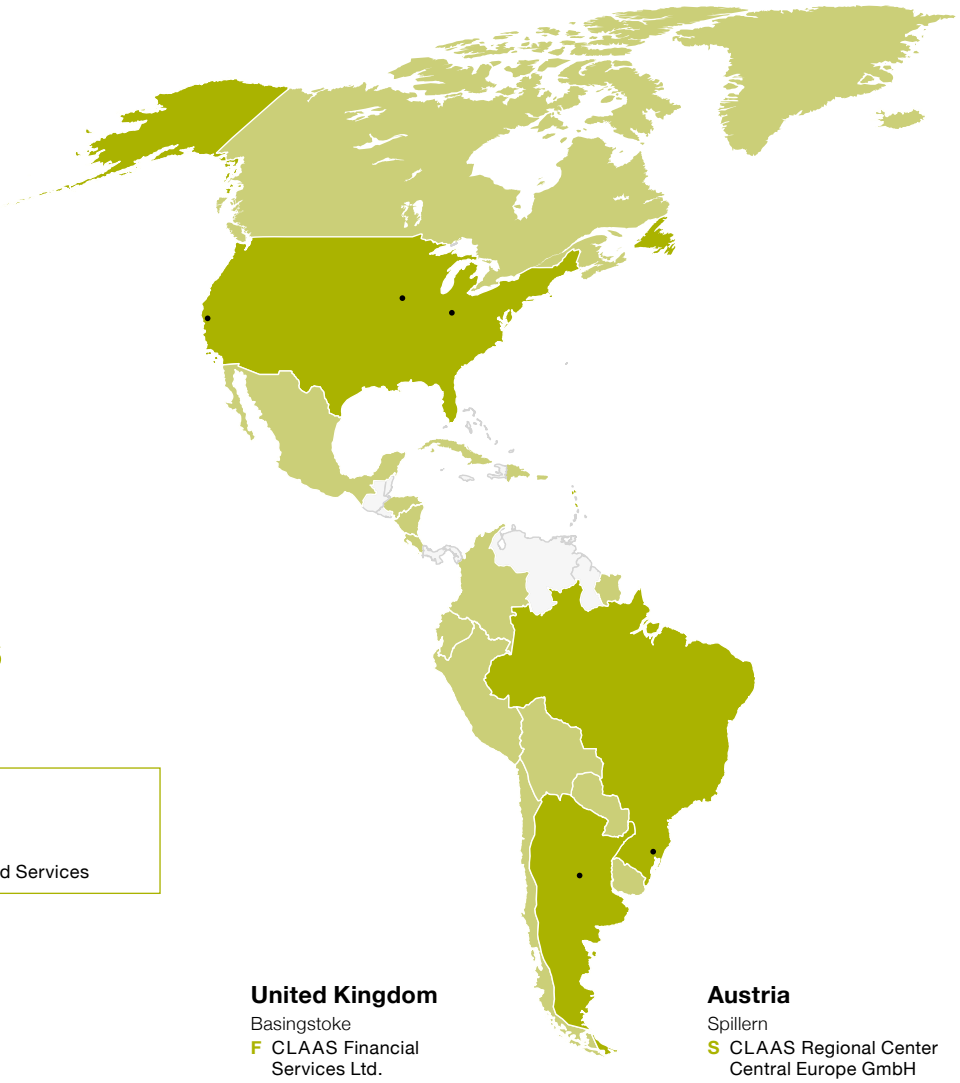
(Dr. Janze)
German Public
Auditor

(Heinrichson)
German Public
Auditor

Locations

19
Countries

34
Locations



P Product Company
S Sales Company
F Financing Company
H Holding – Management and Services

USA
Columbus/Indiana
S CLAAS of America Inc.

Omaha/Nebraska
S CLAAS of America Inc.
P CLAAS Omaha Inc.

San Francisco/California
F CLAAS Financial Services LLC.

Argentina
Sunchales
S CLAAS Argentina S.A.

Brazil
Porto Alegre
S CLAAS América Latina Representação Ltda.

United Kingdom
Basingstoke
F CLAAS Financial Services Ltd.

Saxham
S CLAAS U.K. Ltd.

Spain
Madrid
S CLAAS Ibérica S.A.

Italy
Milan
S CLAAS Agricoltura S.R.L.

Vercelli
S CLAAS Italia S.p.A.

Austria
Spillern
S CLAAS Regional Center Central Europe GmbH

France
Le Mans
P CLAAS Tractor S.A.S.

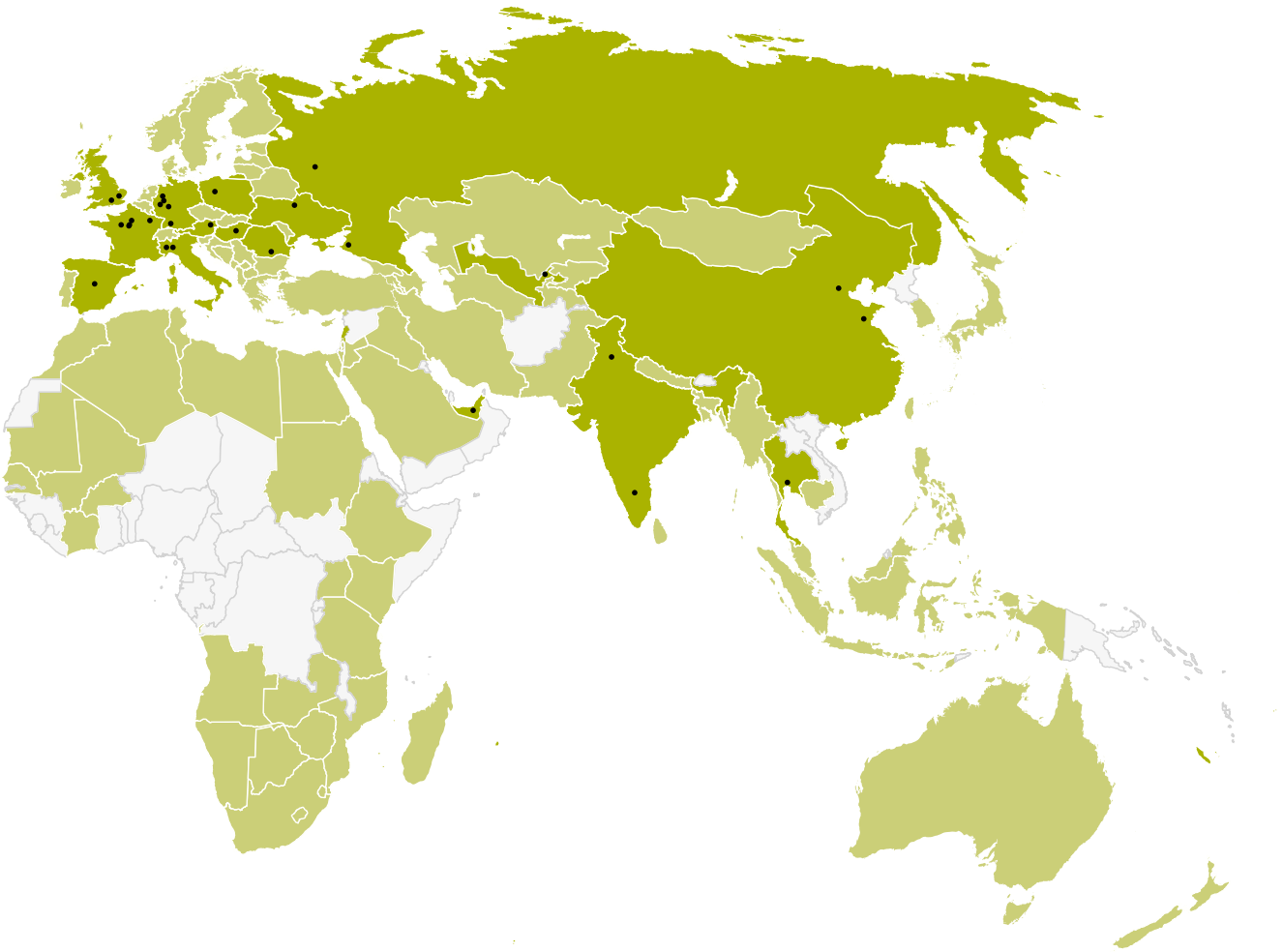
Metz-Woippy
P Usines CLAAS France S.A.S.

Paris
F CLAAS Financial Services S.A.S.

Vélizy
P CLAAS Tractor S.A.S.

Ymeray
S CLAAS France S.A.S.
S CLAAS Réseau Agricole S.A.S.

Locations



Germany

Bad Saulgau
- P CLAAS Saulgau GmbH

Dissen a.T.W.
- P CLAAS E-Systems GmbH

Hamm
- S CLAAS Service and Parts GmbH

Harsewinkel
- H CLAAS KGaA mbH
- S CLAAS Global Sales GmbH
- S CLAAS Material Handling GmbH
- P CLAAS Selbstfahrende Erntemaschinen GmbH
- S CLAAS Service and Parts GmbH
- S CLAAS Vertriebsgesellschaft mbH

Paderborn
- P CLAAS Industrietechnik GmbH

Hungary

Törökszentmiklós
- P CLAAS Hungária Kft.

Romania

Afumați
- S CLAAS Regional Center South East Europe S.R.L.

Uzbekistan

Taschkent
- P Uz CLAAS Agro MChJ

Ukraine

Kiev
- S TOV CLAAS Ukraina

Poland

Poznań
- S CLAAS Polska sp. z o.o.

India

Chandigarh
- P CLAAS India Private Ltd.

Bangalore
- S CLAAS Agricultural Machinery Private Limited

Russia

Krasnodar
- P OOO CLAAS

Moscow
- S OOO CLAAS Vostok

United Arab Emirates

Dubai
- S CLAAS Middle East – FZE

Thailand

Bangkok
- S CLAAS Regional Center South East Asia Ltd.

China

Beijing
- S CLAAS Agricultural Machinery Trading (Beijing) Co. Ltd.

Gaomi
- P CLAAS Agricultural Machinery (Shandong) Co. Ltd.

Definitions

Capital expenditure = Capital expenditure for intangible assets (excluding goodwill) + capital expenditure for property, plant and equipment

EBIT = Net income + income taxes + interest and similar expenses

EBITDA = EBIT +/– amortization/depreciation/impairment/write-ups of intangible assets; property, plant and equipment; right of use assets; investments; and borrowings

$$\text{Equity and non-current liabilities to non-current assets (in \%)} = \frac{\text{Equity + non-current liabilities}}{\text{Non-current assets}} \times 100$$

$$\text{Equity-to-assets ratio (in \%)} = \frac{\text{Equity}}{\text{Total assets}} \times 100$$

Free cash flow = Cash flows from operating activities – net capital expenditure in intangible assets; property, plant and equipment; borrowings and shares of fully consolidated companies and investments

Liquid assets = Cash and cash equivalents + current securities

$$\text{Return on equity (in \%)} = \frac{\text{Net income}}{\text{Equity}} \times 100$$

$$\text{Return on sales (in \%)} = \frac{\text{Income before taxes}}{\text{Net sales}} \times 100$$

Working capital = Inventories +/- trade receivables/payables – payments received on account + payments made on account

Ten-year Overview

in € million	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Financial performance										
Net sales	4,042.3	3,898.0	3,889.2	3,761.0	3,631.6	3,838.5	3,823.0	3,824.6	3,435.6	3,304.2
Research and development costs[1]	237.4	243.6	233.4	217.6	221.4	203.0	212.3	197.0	181.2	144.3
EBITDA	333.4	280.3	372.7	335.7	251.9	310.5	327.9	420.5	426.1	377.5
EBIT	185.6	164.0	256.8	215.2	129.0	196.8	194.4	334.7	347.6	292.3
Income before taxes	158.1	135.7	225.7	184.5	93.5	157.7	155.1	295.3	315.6	255.3
Net income	107.1	96.3	152.0	115.4	37.6	105.7	113.1	212.3	232.7	181.8
Return on sales (in %)	3.9	3.5	5.8	4.9	2.6	4.1	4.1	7.7	9.2	7.7
Return on equity (in %)	7.3	6.8	10.9	8.9	3.2	8.6	9.6	17.3	21.3	20.9
Foreign sales (in %)	80.1	79.5	78.5	79.1	78.6	77.2	77.2	78.1	77.3	73.5
Cash flow / investments / amortization, depreciation, impairment										
Cash flow from operating activities	478.4	45.9	85.0	345.0	246.0	156.5	50.4	247.6	115.1	244.5
Free cash flow	308.1	-138.2	-83.9	209.6	118.5	38.8	-136.9	82.1	-84.2	156.5
Capital expenditure[2]	187.2	183.3	160.3	130.7	122.2	128.3	173.2	172.4	163.1	93.7
Depreciation / amortization / impairment[3]	121.4	128.8	112.7	116.2	102.8	111.3	133.3	83.3	78.4	85.1
Asset / capital structure										
Non-current assets	1,293.9	1,183.0	1,066.8	995.6	1,002.0	993.0	942.5	820.4	707.3	586.4
thereof: development costs recognized as an asset	232.5	219.2	194.3	183.2	174.9	160.9	141.8	116.1	96.9	89.7
thereof: property, plant and equipment	561.6	541.8	501.5	476.2	480.5	480.7	486.2	460.0	404.3	337.6
Current assets	2,428.6	2,348.9	2,382.9	2,237.1	2,135.2	2,350.2	2,170.6	2,105.5	1,913.1	1,803.4
thereof: inventories	905.8	1,103.5	959.7	683.9	733.0	873.1	934.9	729.7	682.1	559.6
thereof: liquid assets	907.7	669.7	803.4	937.7	842.4	851.3	699.2	863.7	767.2	818.8
Equity	1,464.1	1,417.3	1,395.5	1,293.8	1,160.7	1,231.0	1,183.2	1,226.7	1,094.8	870.1
Equity-to-assets ratio (in %)	39.3	40.1	40.5	40.0	37.0	36.8	38.0	41.9	41.8	36.4
Non-current liabilities	1,130.2	837.7	958.4	938.8	1,060.2	981.1	656.1	700.0	593.5	497.3
Current liabilities	1,128.2	1,276.9	1,095.8	1,000.2	916.3	1,131.1	1,273.8	999.2	932.1	1,022.4
Total assets	3,722.5	3,531.9	3,449.7	3,232.8	3,137.2	3,343.2	3,113.1	2,925.9	2,620.4	2,389.8
Net liquidity	148.4	19.2	197.9	320.3	124.0	46.7	82.7	387.4	333.6	442.9
Working capital	994.7	1,170.0	1,012.5	839.5	892.3	1,007.2	998.1	843.6	822.7	650.9
Equity and non-current liabilities to non-current assets (in %)	200.5	190.6	220.7	224.2	221.6	222.8	195.2	234.9	238.7	233.2
Employees										
Number of employees as of the balance sheet date[4]	11,395	11,448	11,132	10,961	11,300	11,535	11,407	9,697	9,077	9,060
Personnel expenses	742.2	730.3	693.0	673.5	653.3	650.6	627.0	594.0	548.1	540.4

[1] Before capitalized and amortized development costs.
[2] Including development costs recognized as an asset, excluding goodwill.
[3] Of intangible assets (excluding goodwill) and property, plant and equipment.
[4] Including apprentices.

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From field to machine to consumer. The cover of this year's annual report uses the dynamic CLAAS design to underscore this deeply rooted connection, while the magazine cover looks firmly ahead to the next generation. It shows that CLAAS keeps moving and never loses track of what is important.

2020 Annual Report

cutting edge

Magazine accompanying the Annual Report 2020

Network under Strain
How the pandemic has put global supply chains to the test.

Chain Reaction
The agricultural equipment sector is breaking new ground to combat climate change.

Factory of the Future
The new tractor production location in Le Mans, co-designed by employees.

19
countries

34
locations

11,395
employees

4.042
billion euros in sales

CLAAS is a family business founded in 1913 and is one of the world's leading manufacturers of agricultural equipment. The company, with corporate headquarters in Harsewinkel, Germany, is the European market leader in combine harvesters and the global market leader in forage harvesters. CLAAS is also a top performer in agricultural technology worldwide, with its tractors, agricultural balers, and grassland harvesting machinery. The CLAAS product portfolio also includes digital solutions and state-of-the-art farming information technology.

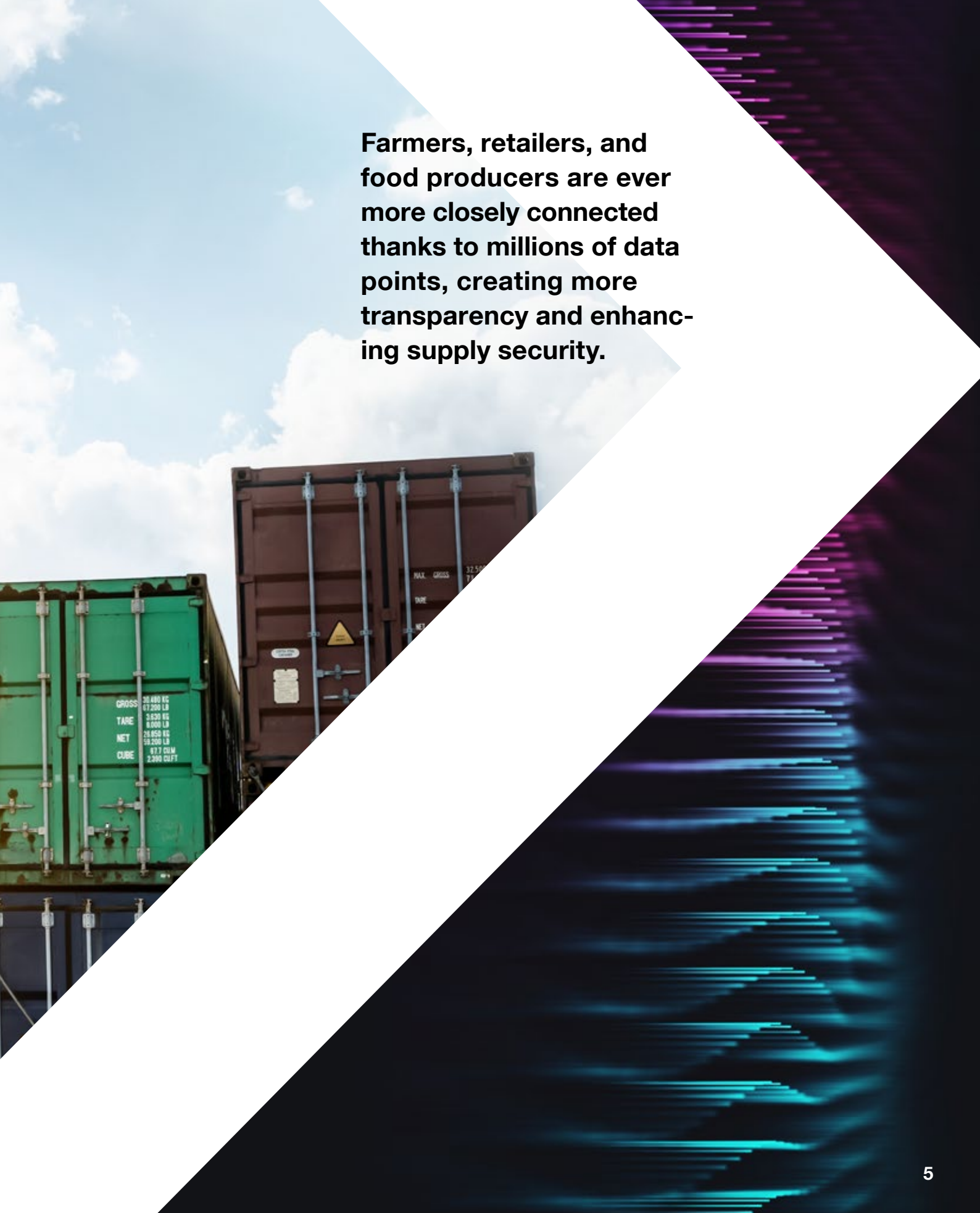
Magazine 2020

Our actions leave a trace – our footprint. In ecological terms, our footprint should remain as small as possible. By contrast, our agricultural equipment activities should be as sustainable as possible – our impact. We are looking far beyond the bounds of mechanical engineering and cooperating with scientists and technology leaders to allow farmers to increase their yields with methods that are increasingly more environmentally friendly.

Studies show that 100 billion U.S. dollars will be invested in agricultural research between now and 2050.

More than 800 million people all over the world contribute to securing our food supply. Now, one farmer can feed 155 people worldwide, thanks in part to modern technology. A century ago, one farmer could only feed four.

The global food industry generated sales of roughly 6,632 billion euros in 2020 – twice as much as the entire automotive industry.



Farmers, retailers, and food producers are ever more closely connected thanks to millions of data points, creating more transparency and enhancing supply security.

The 2020 pandemic showed how sensitive supply chains for commodities, packaging, and even finished products can be. Nevertheless, it was still possible to avert global shortages.

Contents

The magazine and the Annual Report are also available online at annualreport.claas.com


F&E 1 08

“The 2020 coronavirus crisis has provided us with a hard-hitting demonstration of how sensitive and complex our food supply is. The fact that farms all over the world still managed to harvest their crops at such great effort is an outstanding achievement, but also a warning: In many areas we need solutions to provide better support to people in the agricultural industry. In this year’s magazine we have put together some of the topics that are important to us here at CLAAS: dialogue, benefiting the customer, and keeping an eye on sustainable interaction between technology and the environment.”

Thomas Böck

Network under Strain

The coronavirus pandemic showed how complex and global the supply chains for our food are – and how quickly particularly farmers and consumers suffer when one of the links in the chain breaks.

Dirk Böttcher

The spread of the lockdown from Asia to Europe to North America resulted in millions of people being shut away from public life, shaking the global agricultural markets to their very core. Prices for palm oil, milk, potatoes, and corn, as well as for poultry and pork, fell across the board, dramatically in some cases. Demand for corn in ethanol production, for instance, has collapsed, with crude oil available practically being given away due to the economic crisis and the reduction in mobility. In Europe and North America, farmers are ploughing under ripe potatoes by the ton. It's a similar story when it comes to milk: consumption has dropped significantly, particularly in the U.S., since the closure of coffee shops and schools. On April 26, the chairman of the board at U.S. meat processor Tyson Foods shone a spotlight on the precarious situation in the meat industry with a full-page newspaper advertisement consisting of just six words: The food supply chain is breaking.

Ludivine Petetin

is a Senior Lecturer in Law at the University of Cardiff. In her research, the French legal expert focuses on topics such as food democracy, food security, agri-technology, sustainable agriculture, and rural development, as well as the impact of the coronavirus crisis. She regularly collaborates with national governments and international institutions such as the World Health Organization (WHO).

The world's third-largest rice exporter, Vietnam, stopped its rice exports in late March. Kazakhstan, a key wheat exporter, followed suit with its exports, while countries such as the Philippines, Egypt, and Saudi Arabia began stocking up on huge volumes of rice and wheat. The effects were even felt in Germany, where hoarding led to rice sales doubling. For Abdolreza Abbassian, Senior Economist with the Food and Agriculture Organization (FAO), all of the elements were in place for a global food supply crisis. He warned that panic buying from importers and governments could trigger a food crisis. The thing is, there wasn't even a shortage in agricultural products. Fabrizio Zilibotti from Yale University spoke of a global "supply shock." Farmers were producing products in sufficient volumes, but they simply weren't reaching the people who needed them. Consumers were cut off from producers, and supply chains were no longer open.

Successful intervention from international organizations

According to Dr. Ludivine Petetin, Senior Lecturer in Law and a specialist in agriculture law at the University of Cardiff in Wales, success in initially averting a global crisis was all thanks to international trade and health organizations and the Food and Agriculture Organization of the United Nations: "Organizations intervened at an early stage and with great success. Under pressure from the international community, Vietnam lifted its ban on exports after just two weeks. Other countries followed, while governments stopped stocking up so much. This all helped ease the situation."

The French legal expert has been observing international agricultural markets for many years. "No one can yet provide a solid assessment of the impact of the pandemic," she says. But she views the progression of the coronavirus crisis with concern, with millions of people still in lockdown in South-East Asia, Africa, and Latin America. "This means that there won't be enough workers in the fields, which will affect sowing and field cultivation." China is just one example, where more than three million tons of fruit and vegetables have been left to rot on fields and in plantations according to estimates by consulting firm BRIC Agri-Info Group, simply because there is no one to harvest the produce. More than 300,000 of China's travelling beekeepers have not been able to make their usual trips across the country with their hives due to restrictions on travel, leaving many crops such as rapeseed and soybean unpollinated. In Petetin's homeland of France, the government has already called on the population to help out in harvests. In Germany, the lengthy absence of workers from Southern and Eastern Europe posed major issues for asparagus and strawberry growers.

Petetin believes that distributors, slaughterhouses, packaging, and processing operations are the link in the supply chain most at risk from the disruption: “Even our daily staples cross as many as five international borders for processing and packaging before they land on consumers’ plates.” In the United Kingdom, flour was in short supply on supermarket shelves at the beginning of the lockdown. But the problem wasn’t a shortage of flour, it was a shortage of flour packaging. “The United Kingdom imports this packaging, and the border closures brought the supply chain to its knees,” explains Petetin.

Ben Brown

is an Assistant Professor of Professional Practice in Agricultural Risk Management at Ohio State University. He grew up in a farming family and one of his roles is Program Manager of the university’s Farm Management Program that shares knowledge between the department faculty and industry.

It was a similar story across the globe, as Ben Brown from Ohio State University in Columbus explains: “We have to keep the chains open,” urges the expert in risk management.

Proof of what can happen when chains aren’t kept open came in the spring, when U.S. slaughterhouses and other food processing operations were forced to close due to clusters of coronavirus infections. The blockages to the supply chains resulted in a situation that initially appeared bizarre but was simple to explain in economic terms. “Consumers were paying top prices because the bottom had fallen out of the supply, with the processing industry hamstrung,” Browns says. “At the same time, prices for farmers at the other end of the chain were low. Some farmers even had to give away their produce or destroy it because they couldn’t find any buyers. The problem was particularly severe for pork and beef.”

Secure operations

Brown is now much more optimistic when it comes to the supply situation: “Producers have done their homework and are now operating much more securely, so they can avoid closures.” New supply chains are being established, and Brown is also seeing retailers begin to process meat themselves.

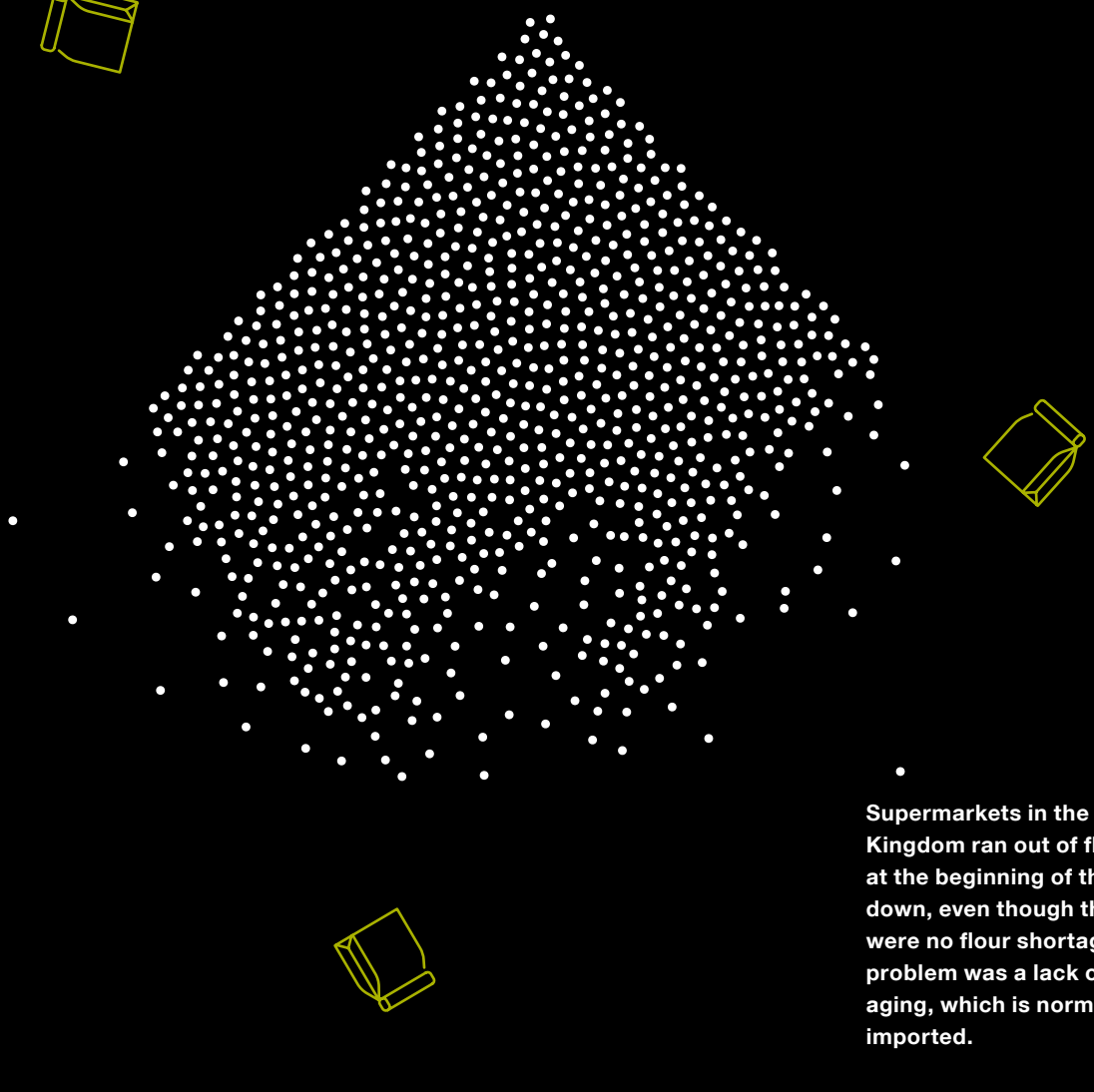
Brown believes that the crisis-hit months were a real eye-opener for farmers when it comes to setting up a functioning risk management system. “This means negotiating long-term contracts with buyers, making better use of financial market instruments such as hedging, and in so doing securing prices today for the harvest of tomorrow,” he says. According to Brown, the U.S. government is also supporting farmers with subsidies for business interruption insurance. There is also a trend towards more diversification in operations, both in terms of products and in terms of buyers.

Brown also expects to see an increase in automation. After all, machines cannot catch a virus, don’t need to self-quarantine, and are not affected by a lockdown. “Technology is becoming increasingly important and this is the perfect time for manufacturers to showcase their innovations,” says Brown. He believes that harvests need to be completed more quickly and with a greater degree of automation, making it safer for people to work. There are plenty of opportunities here for manufacturers of agricultural equipment in his view. According to a survey conducted by the German Mechanical Engineering Industry Association (VDMA), manufacturers in Germany are significantly more positive than their international competitors when it comes to the outlook ahead.

More value creation on farms

In Europe, Ludivine Petetin is observing how farmers are creating more value on their farms by taking on responsibility for initial processing rather than simply delivering unprocessed goods. Consumers are also returning to regional produce. Farmers are responding to the trend, setting up farm shops and diversifying their range of products. Organic farming appears to be one of the main beneficiaries emerging from the crisis, with sales of organic produce up 27 percent in March 2020 compared to the previous month. However, here too there is a reliance on global supply chains: the majority of organic seed used in the EU originates from China.

In the United Kingdom the problem wasn't a shortage of flour, it was a shortage of flour packaging.



Supermarkets in the United Kingdom ran out of flour at the beginning of the lock-down, even though there were no flour shortages. The problem was a lack of pack-aging, which is normally imported.

10 %

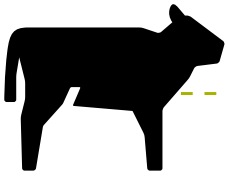
of workers on U.S. farms are seasonal workers from abroad. Depending on the time of year, the number of migrant workers can total up to 2.7 million.

25 %

less beef was produced in the U.S. in April compared to March 2020.

April 26, 2020

The day of the U.S. meat processor Tyson Foods' chairman of the board's full-page advertisement in a daily newspaper declaring: The food supply chain is breaking.



USA

CHINA

362

Chinese seed producers existed in March 2020.

50 %

was the percentage by which poultry supplies fell year on year in China due to transport issues.

30 %

of which were closed due to the coronavirus crisis at this point.

100 %

was the increase in the price of pork in many areas in China in spring 2020 compared to 2019.

300,000

travelling beekeepers were affected by travel restrictions in China, leaving many crops unpollinated.

GERMANY

80 %

of workers in the German meat industry are migrant workers from Eastern Europe, according to estimates.

27 %

was the margin by which sales of organic produce rose in Germany in March 2020 compared to the previous month.

300,000

seasonal workers travel from abroad to Germany to work in agriculture every year.

98 %

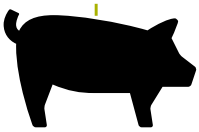
of the soybeans required – mainly for animal feed – in Germany are imported.

20 %

is the margin by which supply exceeded demand for pork in Germany; the majority of this amount is exported to China.

68 kg

of soy was imported to the EU from North and South America per capita in 2018.



88 %

of the food consumed in Germany is produced in Germany.

98 %

was the figure for the same metric in 1990.

60,000,000

people were placed under quarantine in the Chinese province of Hubei alone.

5,000

friteries in Belgium were forced to close their doors due to the coronavirus crisis. National potato producers expect to lose more than 125 million euros in sales.

115,000,000

more people could go hungry due to the coronavirus crisis, bringing the total figure to 250,000,000.

600,000,000

tons of rice are produced globally every year.

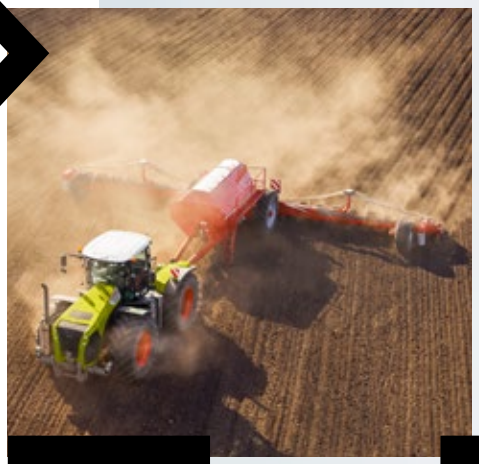
C H » R E A C

Ever since the first steam-powered machine hauled a plough across a field using a cable winch, agricultural equipment has always been about efficiency. Modern agricultural machines are now reaching their economic and environmental limits when it comes to size and power, which is why the industry needs to break new ground to combat climate change and reduce emissions.

Jörg Huthmann

Agricultural equipment and construction machinery manufacturers began working on strategies to reduce harmful emissions at a European level back in 2011, two years before the first climate protection laws were introduced. The German agricultural equipment industry initiated a research project in 2016, in partnership with universities, scientific institutions, and the German Mechanical Engineering Industry Association (VDMA). Its name? EKoTech. The aim of the project was to cut carbon emissions in agricultural equipment; a proactive effort in the fight against climate change and not simply a response to legal requirements. Nevertheless, the benchmark is derived from environmental policy, which requires a 40 percent reduction in emissions from 1990 levels by 2030.

ACTION



40 PERCENT CUT IN CARBON EMISSIONS

Achieving this goal requires a whole series of measures covering the entire agricultural production chain and combining potential for improvement. Tractors with low fuel consumption are brilliant, but what about the plough? It doesn't need a single drop of diesel to run, but its design and frequency of use are often a major factor in the tractor's fuel consumption. EKoTech has shifted this perspective and pinpointed four elements that are proven to enhance the overall performance and carbon footprint of agricultural equipment.

The first steps are to look at the engine, improve the machine as a whole, and analyze the entire process from the perspective of operating efficiency. These three elements have already been investigated, with findings being implemented in the latest generation of products. The fourth element focuses on alternative energy sources and drive concepts, from biodiesel to fuel cells and electric motors. This is what's on the agenda for manufacturers over the next few years.

The EKoTech project looked into the cultivation of wheat, corn, and grass over a period of 40 years from 1990 to 2030. The chosen metric was carbon emissions emissions per quantity of grain or other crops produced. All of the measures reduce fuel costs, making them attractive from a financial perspective for farmers and contractors.

TECHNICAL AND POLITICAL AIMS

In an interview with two members of the EKoTech project team, Dr. Bernd Scherer and Dr. Eberhard Nacke, it soon becomes clear how ambitious the initiative was and how the technical and political aims are linked together.

Dr. Bernd Scherer has been Managing Director of Agricultural Machinery at the VDMA since 1992. He has an intimate knowledge of the industry and helped launch the EKoTech project in 2016. Dr. Eberhard Nacke is responsible for innovation at CLAAS and managed the EKoTech project. He is also responsible for implementing the EKoTech findings at CLAAS, a global player in the agricultural equipment market. Nacke helped develop the scientific basis for the project long before it was launched and raised funding for the initiative.

"By 2030 we will be in a position to reduce the amount of diesel needed to produce one metric ton of wheat by over 30 percent compared to 1990," says Dr. Bernd Scherer, summarizing the findings. "If we maximize potential here, we could even be looking at cutting diesel consumption by 40 percent. The findings from the project are robust and extremely important for our industry, thanks to the funding from the Federal Ministry of Food and Agriculture and support from scientific and academic domains."

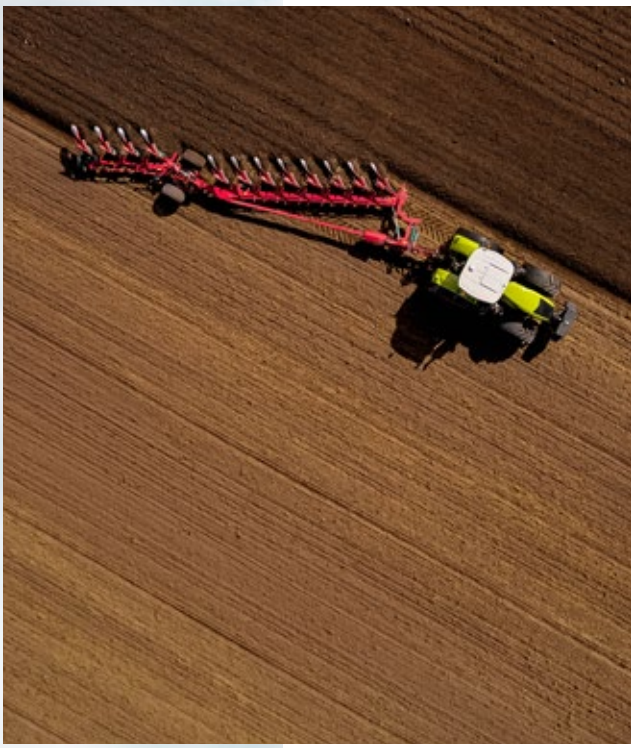
“Nowadays, machinery, engine management, operating procedures, and certainly process capacities are unthinkable without software and connected computing.”

Dr. Bernd Scherer

OPTIMIZE THE SYSTEM, NOT THE INDIVIDUAL COMPONENTS

“We link together real-life farm data from the past 30 years with models to cultivate wheat, corn, and grass,” adds Dr. Eberhard Nacke. “A key success factor in this area is not to concentrate solely on the potential of individual components, rather to view the production system and associated agricultural process chains, many of which can be digitally mapped and tracked, as a whole. It is also just as relevant to ease the burden on the person operating the machinery and prevent inefficient settings that cause unnecessary emissions, both of which are now commonplace thanks to assistance systems. Last but not least, we have also looked into alternative drives and fuels that will be a firm fixture of the efficiency mix of tomorrow.”

“The idea behind EKoTech is to pursue an integrated and targeted approach, but above all transfer existing performance onto the road and into the fields in the form of available technical solutions,” adds Dr. Bernd Scherer, explaining how the findings are being implemented. “There’s also no question that political incentives are needed to simplify agricultural investment and enhance opportunities for amortization. This is an integral part of our regular dialogue with policymakers in Berlin and Brussels.”



16,000 ROLLS FROM ONE LITER OF DIESEL

Dr. Bernd Scherer underlines how vital Agriculture 4.0 – and particularly the topics of digitalization and connectivity – is in achieving the EKoTech objectives: “We benefit from computer-assisted intelligence across the board now. Machinery, engine management, operating procedures, and certainly process capacities are unthinkable without software and connected computing. In this context, digital solutions are generating the gains in efficiency that are really paying dividends, both economically and environmentally, for agri-business. We are already at a stage where one liter of diesel can power all of the agricultural equipment needed to produce flour for 16,000 rolls.”

“A key factor of success here is not to concentrate solely on the potential of individual components, rather to view the production system and associated agricultural process chains, many of which can be digitally mapped and tracked, as a whole.”

Dr. Eberhard Nacke

CLOUD SOLUTIONS AND DATA MANAGEMENT

The members of the EKoTech project team also prize cloud-based solutions and cross-manufacturer and single-manufacturer data management. The VDMA sees specific benefits in both approaches from a user perspective: those involving multiple manufacturers and solutions manufacturers develop on a proprietary basis.

“First and foremost, from a technical standpoint, we require standardized interfaces that function universally across multiple systems,” says Dr. Bernd Scherer. Here, the VDMA is working on corresponding compatibility standards at ISO level to ensure that cross-system data exchange becomes a reality. The ultimate goal is to establish standardized cloud-to-cloud solutions that can connect farmers’ farm management systems with multiple manufacturers’ cloud products.

Dr. Eberhard Nacke shares the VDMA’s view that reducing emissions and protecting the environment are a marathon, not a sprint. Both experts refer to the ambitious EU plans as part of its Green Deal that are set to impact agri-business and require farmers to significantly reduce the use of certain materials by the end of the decade. Demand for plant protection products alone is to be halved EU-wide by 2030. For mineral and organic fertilizers, the aim is to reduce the amount of nitrate entering groundwater by 20 percent.

Technical solutions that meet these criteria go above and beyond the scope of fuel efficiency, but still require the precision and control of smart, connected processes. EKoTech was and remains an important milestone on this journey.

Gathering Clouds

The DataConnect interface enables farmers and contractors to untap the full potential of their data – regardless of the manufacturer of their machinery. This is only possible because the interface partners have been thinking outside of the box.

Robert Habi

"We can't do that!" "How is that supposed to work?!" When Frank Drexler thinks back to how his colleagues reacted to the partnership with John Deere beginning to take shape, he is sympathetic and a little proud too. "The initial responses were completely normal. John Deere and us sharing data – it would have been inconceivable a couple of years ago, there's no doubt about it," the co-manager of the DataConnect project at CLAAS says. The industry also sat up and took notice when the initiators of the project, CLAAS and John Deere, and data management experts 365FarmNet announced at Agri-Technica 2019 that CNH Industrial would also be linking up its cloud solution. This kind of partnership is an industry first, but also an innovation that has been all about the customer since day one.

After all, not many farmers will have purchased their entire machinery fleet from the same manufacturer. The reality is that workflows involve combine harvesters, forage harvesters, and transfer vehicles from a variety of different makes, all of which can only be monitored in a single system with a significant amount of effort. "With DataConnect we can say to our customers: you don't need any additional software, you can simply record the speed or position of this CLAAS, CNH Industrial, or John Deere machine on whatever platform you choose," Drexler says. In principle, many thousands of agricultural machines around the world can use the DataConnect interface, irrespective of their year of construction. The only condition is that they are fitted with a telemetry system.

No new investment necessary

There was one simple reason why all of the companies involved in the platform were in favor of this approach, rather than starting a joint venture and developing additional software: "If a customer has already made two investments – namely in our equipment and equipment made by the other manufacturer – then we consider it our duty to connect the equipment

without offering a new application," Frank Drexler says. In technical terms, this solution was quick, too, as it only required a couple of months of programming work. "We already have the infrastructure in place, as do our partners," explains Drexler. "It's the same story with programming expertise."

"We believe that digital solutions have the most potential to help farmers and contractors work more efficiently and also more sustainably at the same time. That's why it's up to us to make these solutions convenient to use."

Thomas Böck, CEO

One goal: defining standards

One of the more complicated parts of the journey was resolving the strategic questions surrounding the partnership. CEO Thomas Böck remembers well the initial discussions between CLAAS and John Deere: "They were certainly a challenge for us as competitors. But all of us in the agricultural equipment industry were committed to establishing a single digital standard. Ultimately we grasped the initiative together as market leaders and have actually gone a step further than the automotive and commercial vehicle industry."

Under lock and key

One topic that continues to occupy project manager Frank Drexler's thoughts is data sovereignty. In order to counter any misgivings, Drexler addresses the issue openly with his counterpart at John Deere, Georg Larscheid. The question of who benefits more from the platform is often asked.

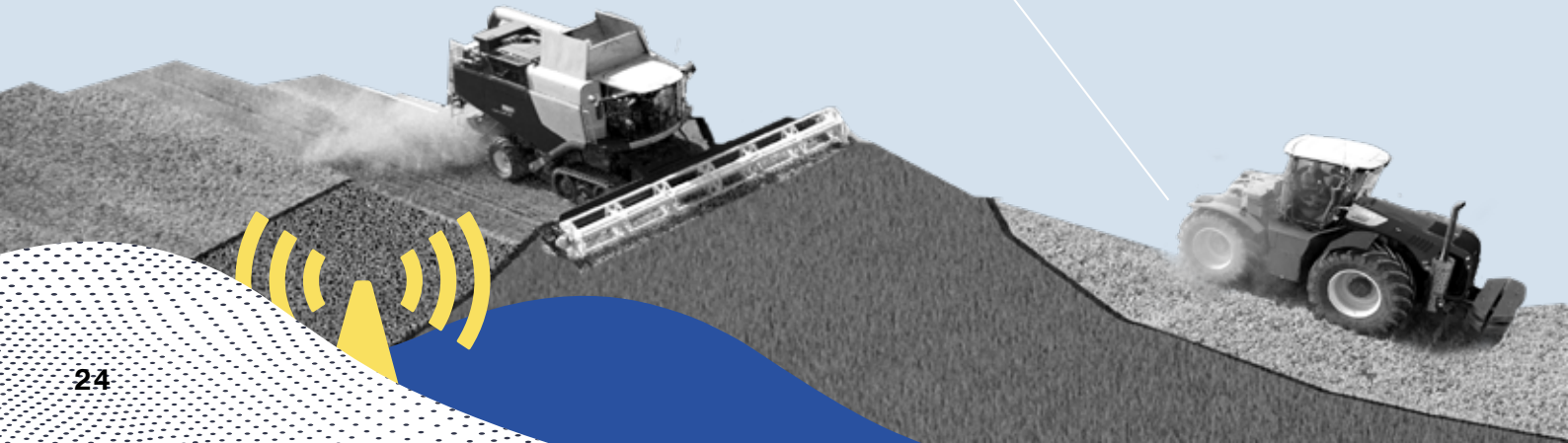
"Our customers have also requested a simpler way to share data within their machinery fleet in the past, to boost the profitability and sustainability of their farms by opening up new possibilities in terms of digitalization."

Georg Larscheid, head of Sales Services & Precision AG at John Deere

"DataConnect is aimed solely at the customer," the head of integrated system solutions at John Deere says. "None of the partners are at an advantage or disadvantage, because we haven't developed a platform for ourselves." In other words, there is no way for CLAAS to gather data belonging to competitors – and vice-versa. Only the customer can do this, by making data available for analysis by third-party providers, for example. What's more, there are no common business models that could result from DataConnect. "There are clear boundaries here in terms of

Gathered machinery data:

- Machine position
- Historical position data
- Diesel fill level
- Current status
- Machine speed



market law," Drexler explains. "In addition, the GDPR also provides an extremely stringent data protection framework in the EU anyway."

The possibilities are endless

Despite the complexity of the platform, the partners are very optimistic looking ahead. "It was a great feeling when we connected the machinery together for the first time and saw that it worked well." A number of months have passed since then, and some farmers have already linked up their machinery with their portal of choice. Starting this fall, a single screen gives farmers answers to any of the following questions: Where is my machinery? What is its status? How quickly is it traveling? It goes without saying that the sensors on a combine harvester or a forage harvester are capable of gathering much more data from the field than just these parameters.

"As soon as DataConnect is expanded to include agronomic data such as fertilizer volume or yields, thousands of farmers and contractors will be able to use their management software to their full potential and optimize their operations in the process."

Patrick Honcoop, Head of Product Management Partnerships at 365FarmNet

Under the platform roadmap, more and more agronomic data such as harvest volumes, field boundaries, and fertilizer volumes is set to be added to the system. This data can then be compared against soil and cultivation data, making it simpler to plan sustainable optimizations. "With so many different systems out there, we know of many customers who still transport their data from A to B using USB sticks or don't use systems at all," says Patrick Honcoop, product manager at co-initiator 365FarmNet, underlining the potential importance of these expansions. "Simple data exchange also fosters acceptance of further farm digitalization and data management."

As soon as DataConnect is available, entirely new questions will arise in terms of maintenance and service: What happens, for instance, if a partner's machine generates a fault in the TELEMATICS portal? What about servicing? How do I integrate the machines into my system of choice? "These processes are being developed in parallel to the project, with dealers and service partners receiving training," says Drexler. DataConnect is seemingly much, much more than a few gathering clouds in the data sky.

Synergies with international projects

A number of projects on the international stage could profit from DataConnect: All DataConnect partners are also members of the Agricultural Industry Electronics Foundation (AEF), which is looking to develop an industry standard for data exchange as part of its Atlas project. Hence why the partners in the DataConnect project plan to share their experiences with the AEF. Gaia X is another European data infrastructure with the aim of enhancing data security and sovereignty within the European Union. The agriculture-specific program is called Agri-Gaia and is geared towards establishing a decentralized infrastructure for the exchange of data and algorithms in agriculture. Through the Gaia X-based standards, Agri-Gaia aims to give farmers the opportunity to move data freely between different cloud platforms and use the data themselves for economic purposes. Findings from DataConnect could provide some orientation here, too.

Making work more effective

The CLAAS CULTI CAM automatically controls cultivation machinery. With the camera, control module, and hydraulic valve guiding the machine centimeter by centimeter, the driver is free to concentrate on other tasks. The system can increase the driving speed twofold, increasing area coverage by up to 25 percent and proving particularly beneficial to inexperienced machinery operators.

Drawing a distinction

The CLAAS CULTI CAM distinguishes row crops in two ways. First of all, the 2D color segmentation recognizes the crops that require protection on the basis of their leaf color. This can be problematic in weedy areas, but thanks to the system's 3D object detection, it can also determine the spatial structure of the crops, including their size.

Raising the level of automation

The objective at CLAAS E-Systems is to automate field maintenance even further and minimize the use of herbicides. This system makes an important contribution to reducing the use of herbicides, which make up the majority of crop protection products – accounting for around a 50 percent share in Germany.

The All-Seeing Eye

Mechanical cultivators are used to combat weed growth in organic farming and wherever herbicides have no effect. The new CULTI CAM system, developed by CLAAS, allows machinery operators to maintain a high level of precision and protect plants when working on fields.

Florian Lehmann

25 %

Doubling the driving speed can improve area coverage by up to 25 percent.

Cooperating for valuable data

CLAAS also sells the CULTI CAM system to cultivator manufacturers, who then make the data they gather available. With the help of this data and data gathered from cameras fitted in other CLAAS agricultural equipment, CULTI CAM can continue to be optimized. After all, the systems are all made up of the same modular components.

Home-grown innovation

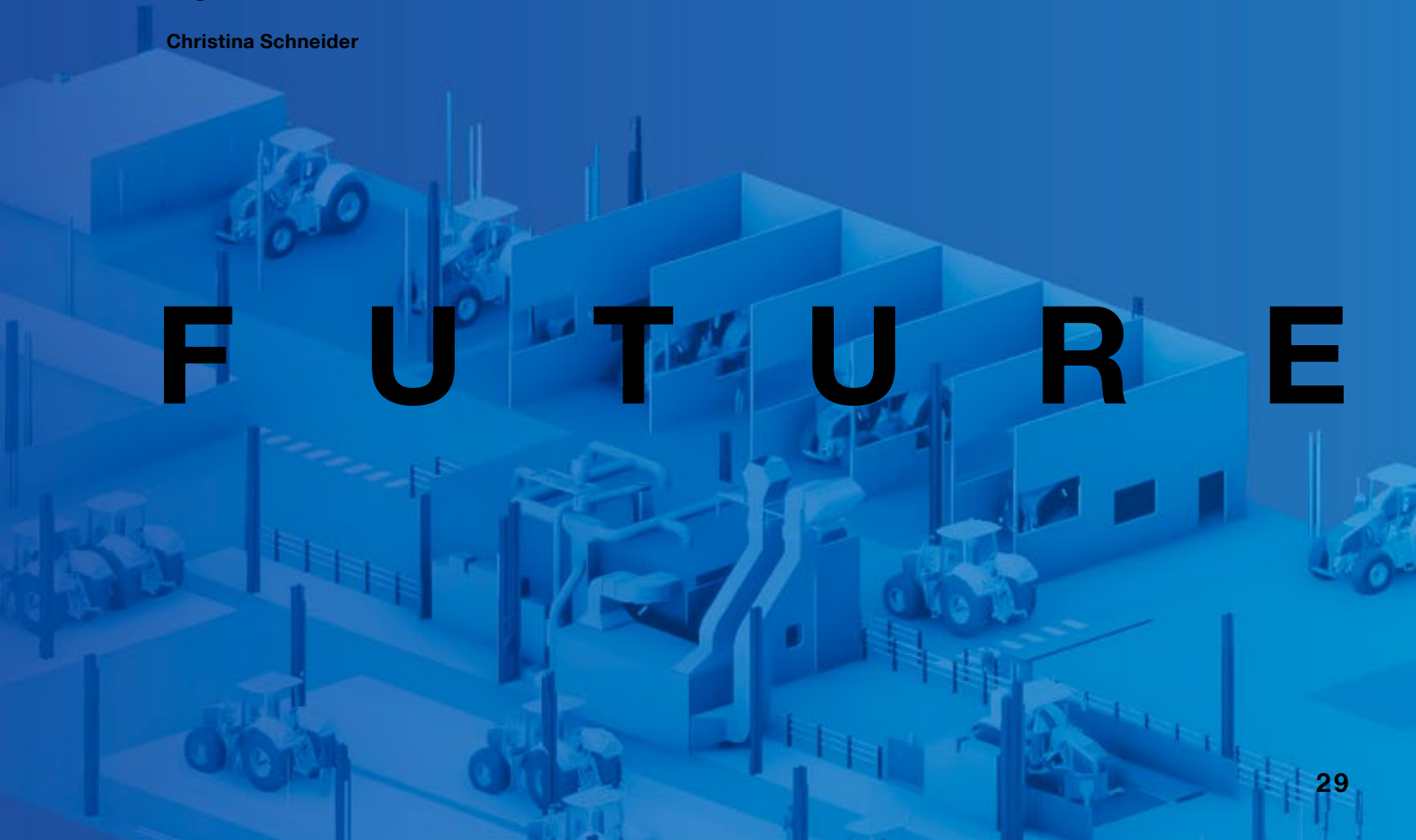
CULTI CAM has a special place among the large machinery that makes up the rest of the CLAAS portfolio. Developed at Group subsidiary CLAAS E-Systems in Dissen, Germany, it offers cultivator manufacturers real added value and demonstrates that smart technology can contribute to more environmentally friendly crop care.

FACT OF THE

O R Y

Le Mans is the main location for the production of CLAAS tractors. Around 10,000 roll off the factory's production line every year. Production figures are to be increased significantly in future. To achieve this, major modernization work has been carried out – without disrupting operations.

Christina Schneider



F U T U R E

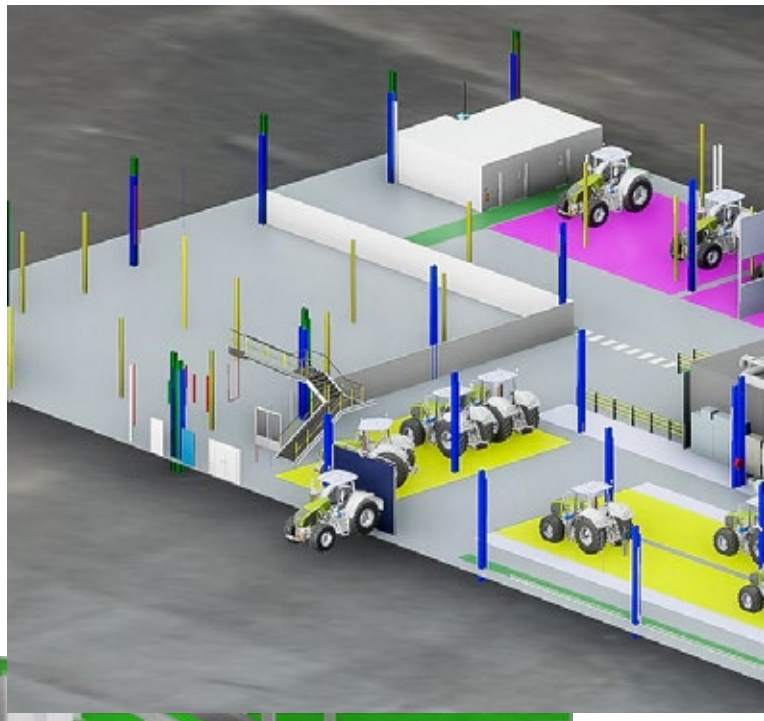
Starting point
"Stopping production to modernize the factory was out of the question," recalls project coordinator Alexandre Baudy. "This was where the end-of-line process, the final quality control, was located three years ago," he says, pointing to the first assembly station. Around 50 tractors are produced every day in Le Mans, with the factory only winding down for the four-week summer break in August and at Christmas. Replacing a whole assembly line in one fell swoop would never have worked, but it was also abundantly clear that the factory was in need of modernization.

There were many reasons behind the 40-million-euro project christened CLAAS Forth: "The factory is already relatively old, there are many new technologies available, and the standard of quality has risen," says Baudy. "What's more, machinery is now more customized and consists of more individual parts. We also want to manufacture significantly more tractors moving forward – in an attractive and safe environment."

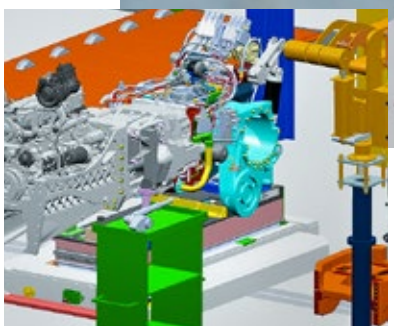
CLAAS plans to sell 13,000 tractors per year in its core Western and Eastern Europe market and tap into new markets moving forward. The three-year modernization project not only involved renewing the technical equipment, entire processes were redesigned too, such as the internal logistics system or facilities to fill up machines with a variety of fluids. There were three key factors in modernizing the factory while maintaining operations:

1. Planning
The use of virtual reality was extremely important. "First of all, we made sure that we mapped the whole factory and all of the buildings in 3D," the project coordinator says. Delmia software then allowed the tractor factory to be simulated virtually, including the production of models that don't even exist yet. 3D animations and VR glasses simulated a variety of different options to design processes more efficiently. This also shed light on the necessary construction-related changes. "This was a huge advantage," says Baudy. "It enabled us – and continues to enable us – to improve production together with our employees before implementation, and make adjustments to machinery for example. Essentially it allowed us to get ahead of the game."

2. Machinery
Automated guided vehicles, or AGVs, were key to the modernization work while maintaining factory operations. "AGVs are now state of the art," explains Emmanuel Bozo, project manager for phase three of CLAAS Forth. They transport tractors from the first assembly station to the final station on the line and are able to move loads of up to 20 metric tons. At the start of the main assembly process they pick up the power trains. The AGVs are powered by induction technology equipped to the factory floor, with a white magnetic strip ensuring that they stay on track. Sensors at the front end of the vehicle detect any obstacles and bring the AGV to a halt if necessary, meaning employees can move freely between the vehicles without any risk to themselves. "Adding more AGVs in the future will allow us to manufacture up to 75 tractors per day," says Bozo. "They also give us a great deal of flexibility." The first AGV went online in May 2018, and the AGV integration was completed in August 2019. At the moment there are 36 vehicles in the Le Mans factory, with more on the horizon.



Planning



Machinery

3. Employees

Involving employees in the process was the third key factor in CLAAS Forth. “Besides a handful of consultants, we put our faith in our own workforce,” says Baudy. “They know the factory best – every movement and every angle – so it was clear that they should help the experts plan the modernization work.” The core project team comprised 50 colleagues: engineers, technicians, workers, and apprentices. Representatives from Controlling, Human Resources, Purchasing, Logistics, and Research and Development were also involved. Even the name of the project, CLAAS Forth, was chosen by employees. The communication model was also tailored entirely to them. For example, a weekly CLAAS Forth forum was

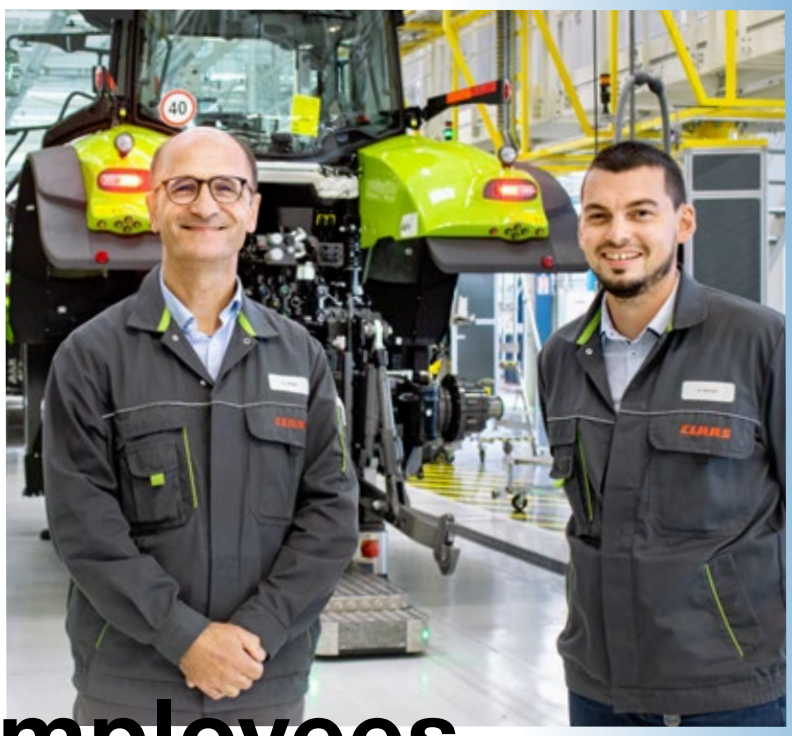
held in Le Mans, which was open to everyone and provided updates on when, how, where, and why things were changing. Employees also received training on the implementation of the new structures.

“The effect of this level of employee integration was twofold: identification and pride,” says Baudy. “We saw how some employees were taking selfies at the production line. They are using equipment that they designed themselves.” Employees are benefiting particularly from the ergonomic improvements. Headsets also allow them to communicate much more easily at certain stations. There is now more space generally as only the parts that are needed and fitted are actually brought to the assembly line. One other element has had an impact on the working environment: some 250 metric tons of new paint. All of the walls and ceilings have been painted white, and the floors in a light gray, significantly improving the brightness.

Implementation

The changes were implemented in three phases, each of which involved a variety of sub-projects. “Planning temporary changes to production to make space for the renovation work was a project in itself,” says Bozo. “Anyone who last visited the factory three years ago would now be completely lost; everything has changed.” Huge logistics warehouses used to be located where the production line now ends.

Colleagues in Le Mans have learned a great deal over the past three years. They are already sharing their knowledge with their colleagues in Harsewinkel, where the SynPro 2020 combine harvester production modernization project is underway. In France, thoughts have already turned to new projects for Le Mans. “The next task on the list is the office concept,” says Baudy. “We are considering introducing a flexible office system. So far only a handful of people in the factory have been able to work from home, and this is a figure we want to increase significantly moving forward.” With all of its changes and new features, the factory in Le Mans remains a highlight for employees and visitors alike. It was recently selected as a showcase for future industry by the French organization Alliance Industrie du Future.



Employees

Emmanuel Bozo

was responsible for phase three of CLAAS Forth as project manager. At the end of the main assembly section, work focused on automating the driving and braking test benches and adjusting internal logistics to match the assembly line.

Alexandre Baudy

maintained a close eye on the entire CLAAS Forth at all times as project coordinator.

The Most Powerful Scissors in the World

In February 2019, chefs in the U.S. state of Minneapolis became the first people able to work with Calyno, a soybean oil with a healthier fatty acid profile developed using the gene editing procedure TALEN. The genetic mutation created in the laboratory soybean cannot be distinguished from natural mutations, which is why the plants can be cultivated without any special requirements and the oil marketed in the U.S. as "GM-free". In Europe, soybeans such as these are considered genetically modified and are banned for the time being. The EU intends to decide how to proceed with gene editing procedures, such as TALEN and the more widely known molecular scissors CRISPR/Cas9, in 2021.

Jörg Huthmann

Its proponents argue that the only way to safeguard the global food supply against population growth and climate change is through new cultivation methods, including genetic engineering, whereas its detractors cite the lack of research into the on-target and off-target effects of gene editing.

What's certain is that genetic mutation is a process that takes place naturally and is vital to maintaining biodiversity. Plant growers attempt to use mutations to permanently retain beneficial qualities in certain plants in subsequent generations. Here, mutations are provoked through chemical processes or ionized radiation, with the latter also known by the less-flattering term "atomic gardening." These conventional methods initially produce random mutations. Selecting new plant properties was and remains a process that takes years, as it is based on this random process. But now, new gene editing procedures have changed all that. The CRISPR/Cas9 molecular scissors remove the element of chance and enable precise mutations to be defined in a genome.

Anything is possible

This may lead to new sources of food being identified, or cures for hereditary diseases found. Any living organism, including human beings, can be genetically edited using the process, which is why it is vital that a responsible approach is taken and clear political frameworks put in place. This is the area that is attracting the most criticism from many NGOs. The work of scientists and researchers is not viewed with skepticism, nor are the current and future possibilities of using the new tools. Criticism mainly centers on the promises of organic-led farming that were not kept when existing methods of genetic engineering were discovered. There is concern that CRISPR and co. will be used to maximize the profits of the industry's major players when it comes to seed and crop protection, and not serve to advance sustainable farming.

State-of-the-art IT plays an essential role in the success of the process, as gene sequencing produces enormous amounts of data. Every single person carries around 25,000 different genes. The first DNA sequencing of a full human genome was completed in 2000 after work lasting years and costing millions. Since then, the costs and the workload have fallen significantly. Wheat – a staple in the global food supply alongside rice, corn, and soy – has a much larger and more complex genome than human beings. Decoding and documenting the genetic information of an agricultural crop in combination with the CRISPR/Cas9 molecular scissors opens up brand new dimensions in the world of plant cultivation.

What is CRISPR/Cas9?

CRISPR/Cas9 is a molecular biological method of adding, removing, or deactivating genes. The acronym CRISPR stands for clustered regularly interspaced short palindromic repeats. The Cas9 suffix refers to a protein that allows the CRISPR method to function. U.S. scientist Jennifer Doudna and Emmanuelle Charpentier, from France, were the first to decode the molecular scissors in 2012, and their efforts were rewarded with the Nobel Prize in Chemistry in 2020. Doudna lectures at the University of California in Berkeley, whereas Charpentier has been the Head of the Max Planck Unit for the Science of Pathogens in Berlin since 2018. Their discovery showed that bacteria have a rudimentary immune system that prevents external (viral) DNA from entering. This defense mechanism proved to be a universal tool.

Karl-Heinz Kogel, Professor of Phytopathology at the Justus-Liebig University Giessen, is one of the world's leading experts in this area. Kogel and his team conduct research on plant protection, plant disease, and crop biotechnology.

Professor Kogel, GMO is an extremely divisive subject. In which direction are you heading with your current research projects?

We are mainly looking into to biological plant protection and making use of helpful microorganisms; gene editing is just one of many tools in this area. Blight-resistant wheat is achievable using conventional cultivation methods in ten years, but with CRISPR it only takes one.

Prof. Dr. Karl-Heinz Kogel, Professor of Phytothology at the Justus-Liebig University Giessen, holds some specimens of his research subject in his hand: wheat plants. Kogel's working group developed the CRISPR/Cas9 technique for barley to edit the genome of grain plants with high levels of efficiency.

Do you only see positives from the use of CRISPR/Cas9 compared to older plant cultivation methods?

CRISPR is more precise, or in other words more selective. And, as I mentioned, it's also significantly quicker than previous methods. It is an extremely useful tool in plant cultivation, but it still lacks political acceptance, or is a controversial subject at least, in Germany and in the EU. This attitude does not reflect the current scientific understanding, so I think the topic should be re-assessed. At least that's happening now.

How do you view the off-target effects of CRISPR/Cas9, which critics often cite as one of the main risks?

I would cite my colleague Detlef Wiegel[1], who noted in a recent interview that billions of off-target mutations occur in one hectare of wheat simply as a result of the sun's UV rays. Politically, a distinction is drawn between mutagenesis due to natural factors and mutagenesis as a result of genetic changes. There is no way of differentiating changes to a plant genome generated through CRISPR/Cas9 from mutations that occur naturally; CRISPR/Cas9 mutations also cannot be retrospectively traced as such. Really the only difference is that the CRISPR/Cas9 method is significantly safer and more environmentally friendly than conventional mutagenesis methods. I don't consider there to be any scientific reasons standing in the way of approving modern cultivation methods.

Do you think it's possible that gene editing will gain a foothold in European politics?

My scientific viewpoint here is clear; it would be a very welcome development if it did. At the moment it appears as if the ban on gene editing is having the biggest impact on the small and medium-sized cultivators who provide so much diversity in the industry. CRISPR is simple and quick and would be an ideal tool for these cultivators to quickly apply agronomic improvements to approved plants in a targeted manner. These are the people being hampered by the current policies.

Are we perhaps having the wrong discussion here, and is there a way out of this dilemma in your opinion?

Here in Germany we are a leading force in plant sciences, together with China and the U.S., and at the moment there is still sufficient funding for our research. The problem is that we frequently bring high-level developments to the table but do not find any partners in Europe to implement the findings in practice, because of the political restrictions. Patents are one way of protecting knowledge, as are partnerships with major companies. Both of these are taking place, but there is a bottleneck when it comes to making use of the latest scientific findings in the field. This is where we need forward-thinking national and EU-wide regulations. Without these, we will lose our world-leading status.

[1] Prof. Dr. Detlef Weigel is a Director and Scientific Member at the Max Planck Institute for Developmental Biology, Tübingen, Germany, among other roles.

WHY?

Prizes such as the iF Design Award from the Industrie Forum Design association show that CLAAS is delivering on its leading ambitions here. Alain Blind and his design team have big plans as part of their efforts to create an even more emotional brand impact. It all started with Y.

Robert Habi

Design competency at CLAAS

Alain Blind set up the industrial design team at CLAAS in 2014. Since then, the team has grown steadily larger and Blind and his ten colleagues have dedicated their time to seamless user experiences, excellent ergonomics, emotional machinery design, and intuitive operation.

Mr. Blind, what's the Y design all about?
Our design translates the brand values – reality, passion, and agility – into recognizable forms and colors. The Y itself is the key element here, and is also a protected trademark. It serves as a three-dimensional aesthetic framework to showcase the power of the machine. Familiar shapes such as the boomerang on the wheel arch and the light-gray seat as a background for the logo are all part of the concept.

What is the intended effect of the design?
Even though the architecture and layout of a combine harvester are fundamentally different from that of a tractor, both machines should still have a uniform appearance. It's about striking a balance between performance and emotion. We don't just build machines here, and that's been the case for some time. Just like the advancement in agricultural equipment through smart electronics and data, it is our job to increase the emotional appeal of the brand and make working with our machinery almost seem like a hobby. To maintain this balance, we use the word "power intelligence," controlled power that interacts with its agricultural environment and the people around it. If you are driving along and come across a tractor on the road, it shouldn't make you scared, it should provide a connection between us and nature in the form of professional performance.

How does CLAAS transfer the design into all of its products in the field?
The topic of design is firmly established at the highest level of the Group and we are also part of Lead Engineering, which is the team responsible for developing a consistent product experience. We are a driving force behind these areas at CLAAS. We have been responsible for the entire design concept since 2015. Before that, we worked with external partners for 35 years. It is vital that all machinery is conceived from the brand core, and this is where in-house design competency is a must.

"We want to move away from the machine-specific micro-design approach we pursued for 35 years and more toward a clearly identifiable, integrated macro-design."

Alain Blind

Making a mark on the front cover of the Annual Report: As a protected trademark and a central element, the Y will establish a consistent design language across all future machines.

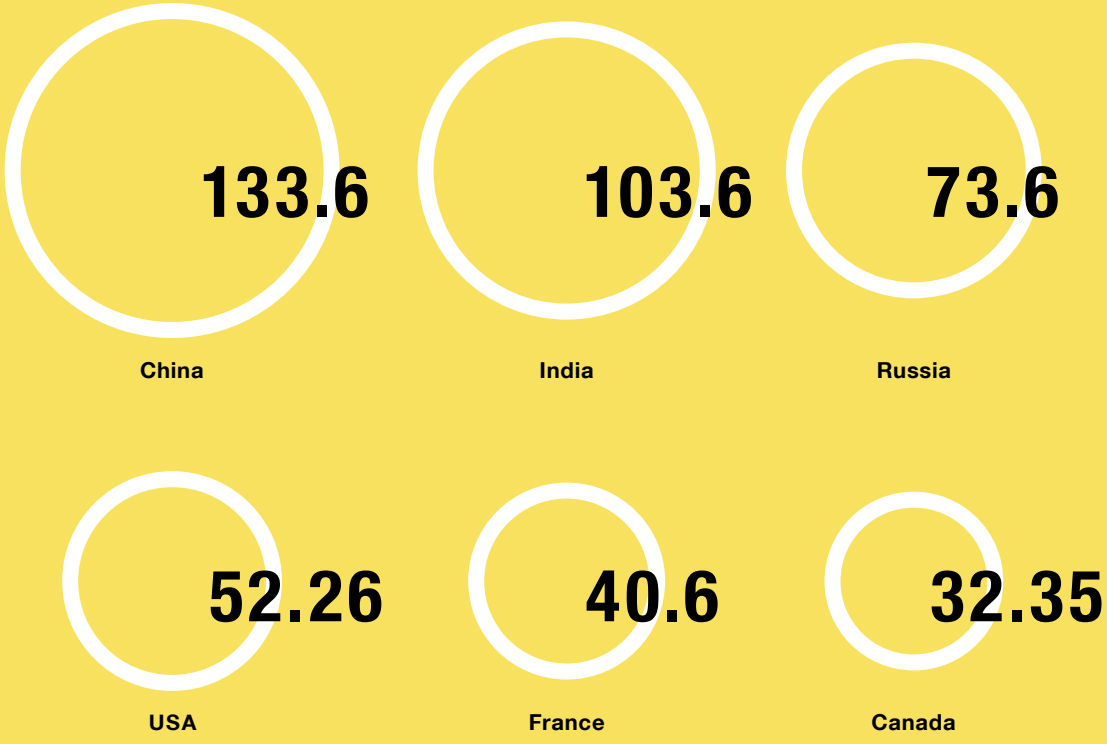
Where do you see potential for optimization?
We want to become more dynamic, which means thinking holistically and emotionalizing the machinery in every regard. I think we achieved this well with the LEXION. There are still some areas, such as the driver's workplace, where the technical systems and engineering are superb but there is still potential to make our design more user-friendly. We want to achieve a higher level of quality and integration to bring users even closer to the technology around them. Technology should always have that wow factor.

What does your roadmap look like moving forward?
The next products to receive the Y design will be tractors, followed by the forage harvesters. We have already gone further than that with additional equipment such as balers. We want to establish the family design across the entire portfolio over the next three to four years. Just like the kidney-shaped grilles on BMWs, the Y should be at the forefront in the visual design of all of our vehicles – it's unique in the industry.

Fields

CLAAS continues to expand its presence in the North American agricultural industry. The U.S. and Canada are among the most exciting agricultural markets in the world.

Dirk Böttcher



Successful neighbors

The U.S. and Canada are two of the largest wheat producers on the planet. (figures stated in millions of metric tons per year)

# of Gold

Canada

is the world's fifth largest exporter of agricultural products. Exports in 2018 totaled 34 billion U.S. dollars.

3.6 million square kilometers

of land is used for agriculture in the U.S. The whole of India only measures 3.2 million square kilometers.

90 days
are available from seed to harvest in the northern part of the province of Saskatchewan, Canada's "grain belt."

By 2030
the Canadian agricultural sector will generate sales of 51 billion U.S. dollars according to the Royal Bank of Canada.

178.5 ha
of land is managed by the average farm in the U.S. More than half of all farms have more than 800 ha.

Not only is North America a front-runner economically with its tech and internet giants, the U.S. and Canada are also true heavyweights in agriculture. The U.S., the world's largest exporter of agricultural products, and Canada, fifth on the same list, ship food worth more than 1.3 trillion U.S. dollars every year. Land available for cultivation in both countries is larger than the area of India, and the market has a corresponding significance for manufacturers of agricultural machinery.

There is plenty of untapped potential, too. Canada, the second largest country on the planet, has some lofty ambitions when it comes to its national agricultural industry. It intends to develop Canadian agriculture into the most modern, sustainable, and prosperous sector in the world, according to Sarah Rostami, Senior Communications Officer of the Investment Agriculture Foundation (IAF) of British Columbia, in an interview with Foodtank, a non-profit think tank for food.

Seed to harvest in 90 days

The Canadian government has backed this ambitious objective by announcing a three-million Canadian dollar investment program, most of which will go toward funding a variety of research projects, including in the province of Saskatchewan, Canada's "grain belt," which is home to almost half of the country's arable land. Here, most operations constitute enormous grain and oilseed farms that can only be managed using state-of-the-art, high-performance technology. This is partly due to the climatic conditions, which only allow a brief window from seed to harvest – in some cases of just over 90 days. Canada also suffers from a major dearth of manpower.

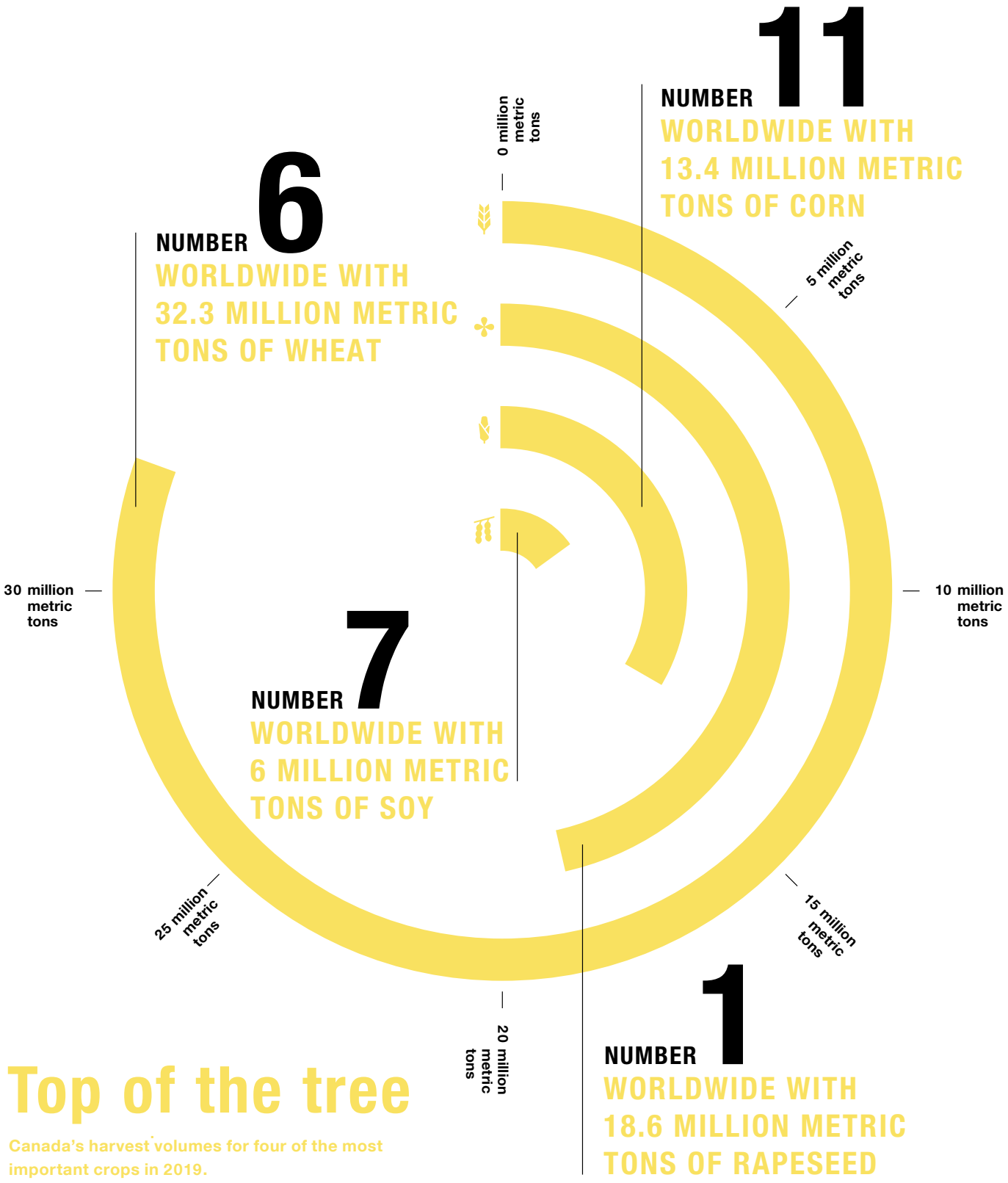
According to Farm Credit Canada (FCC), Canada's largest lender in the agricultural sector, the outlook is positive for the top four export products of wheat, rapeseed, soybean, and pulses. Its report praises the long-term trade agreements Canada has concluded with the most important markets in the world, which has enabled the country to take on a leading position in global trade.

More corn and soy

In the U.S., growth is set to return to the market leader following pandemic-related slumps. According to the latest figures published by the U.S. Department of Agriculture, cultivation of corn and soy is the highest it has been for years. In livestock farming, pig numbers rose to an all-time high of 78 million in the first quarter.

Technology and machinery will play an increasingly important role in this area moving forward. Innovative ideas are already having a lasting effect on the sector. This transformation is also necessary, as the U.S. is also suffering from a shortage of workers in the agricultural industry, weather phenomena are complicating cultivation and harvesting, and the percentage of fertile land is falling.

Since the launch of the LEXION in 2019, all CLAAS products are now resplendent in seed green and almost the entire CLAAS range is available on the market. As a result, the company can help to find the right answers to the biggest challenges and assist both countries in their efforts to reach their ambitious targets.



Top of the tree

Canada's harvest volumes for four of the most important crops in 2019.

Harvest on Call

Reducing costs, lowering entry barriers for customers, or promoting urban plant cultivation: farming as a service and rental concept can take many forms. These examples show that technology and flexible contract models will be able to help farmers and contractors moving forward.

Robert Habi

Spreading the burden

Short-term tractor rentals: no impact on sales, but more of what the customers want

When it's harvest time, man and machine are in action practically 24/7. CLAAS analysis performed in Poland and other countries in 2018 showed that both smaller farms and contractors are increasingly on the lookout for additional machinery for short periods of time. Demand is highest for tractors, not least because of their versatility: transporting hay, working in barns, or transporting grain during the harvest. These findings gave rise to a new element in CLAAS core business: FIRST CLAAS RENTAL for

tractors. Customers can choose from a selection of several dozen machines, from the ARION 400 with its 90 hp up to the 400 hp AXION 950, and rent them from dealers at ten locations in Germany. Besides evening out the workload, there are many other benefits for both customers and CLAAS alike. For example, farmers who are considering a purchase have enough time to test out the potential new member of their fleet with a rental tractor. The rental model has been such a resounding success over the past two years that CLAAS is now offering the same service in Denmark, where the CLAAS importer offers FIRST CLAAS RENTAL as a kind of franchise. In Germany, cultivation equipment such as field cultivators or disc harrows are also available thanks to a partnership with agricultural equipment provider Amazone.

Robots to fight weeds

Greater independence thanks to new harvest helpers

The coronavirus pandemic has provided proof of how reliant some farmers are on field workers. For this and other reasons, the “robots as a service” model is also gaining a foothold in agriculture. Opinions differ as to the global market volume for agricultural robots such as automatic milking systems, drones, and harvest robots, with estimates that the market will be worth anything from 7 to 20 billion U.S. dollars by 2025. Besides established machinery such as robotic milking machines, robotic weeders that can remove weeds without the need for pesticides are likely to be among the most popular innovations. However, machines such as these come in at a relatively costly 30,000 to 100,000 euros and are not as efficient as a real person – yet. That’s why rental models are important, to lower the entry barriers and open the door to innovation. In this area, companies like to price their service in terms of the volume of picked fruit or removed weeds. French manufacturer Naio Technologies and Danish providers Agrointelli and Farmdroid already have models on the market. Naio Technologies is working with over 100 farmers in Europe and Canada, where its robots are used in fields and in vineyards.

Plantation in the supermarket

Urban indoor cultivation

Automated growing boxes to cultivate salad and herbs in supermarkets are just one urban solution for space-saving vegetable cultivation. Solutions such as these have a number of ecological advantages: cultivation in the supermarket directly reduces the need for transport and, according to manufacturers such as Infarm, the glass boxes are pesticide-free, only require a small amount of fertilizer, and use 95 percent less water than conventional cultivation methods. These miniature plantations are connected to a cloud system and control temperature, light, and nutrient density automatically. Harvesting by Infarm employees is also offered as part of the farming as a service. The start-up operates in seven European countries as well as in North America. Energy consumption and the bacterial resistance of the plants is often the source of criticism when it comes to indoor farming concepts such as these, but they remain an interesting option in efforts to boost the food supply without requiring new land for cultivation.

The Machine Whisperer

Breakdown – a word no farmer ever wants to hear, especially not during the harvest. When things get serious, Marten Höper and his colleagues from CLAAS service can step in and put agricultural machinery back into working order. In an interview on the use of modern technology on the remotest fields, the value of experience, and some memorable assignments, the passion this service technician has for his profession quickly becomes clear.

Florian Lehmann

Marten Höper originally wanted to become a farmer, but ended up choosing another profession. Höper has pursued his deeply rooted passion for agricultural machinery at CLAAS since 2014, firstly as a machinery technician, then while studying agricultural engineering on a dual study course, and now as a service technician for CLAAS Service & Parts GmbH.

Mr. Höper, what happens when a CLAAS machine decides to go on strike?
There are three different levels at CLAAS: Local dealers are always the first port of call. If they cannot solve the issue, they contact national support. Here at international customer service, we are the third level of assistance. More often than not we look into the issue remotely. One brand-new innovation currently being tested in this area is the concept of a "ghost technician," where service technicians can assist remotely using an app on their on-site colleagues' smartphones. The smartphone camera gives us access to photos and videos and allows us to provide specific, practical assistance on how to proceed. If the issue remains unresolved, this is when things get exciting: We have to pack our bags and hit the road.

What do you make sure you always have with you before you leave?
The right tools, but also my laptop with the diagnosis software on it and the correct interface cable to read the machine's parameters. What do the temperature or engine speed sensors say? Which parts have had a failure? The digital repair manuals, circuit diagrams, and cable plans are also extremely important. With the newer models, remote service allows me to determine the exact position of the machine, get an initial diagnosis of its status, and find out which spare parts I am likely to need, ensuring I am well prepared before arriving on site.

So, with your bags packed you then travel to customers all over the world?
Exactly. One assignment took me to Romania, for instance, where the transmission on an ATOS tractor overheated so much it broke several other components – washers, bearings, shafts. The problem was that the transmission was still overheating even after the local dealer had apparently repaired it on multiple occasions. You need to have an in-depth knowledge and understanding of the whole system. The expertise available in smaller workshops may be of a high

quality, but there simply won't be experts available for 20 different pieces of agricultural machinery. That's why they send me out there.

When I arrived at the customer's farm, the transmission was in pieces on the sandy floor of an old pigsty. I put it back together immediately and took a close look at the part. I quickly discovered that something was moving that shouldn't have been moving. The clue to solving the puzzle came from the exploded-view drawing, where a one-millimeter-thick washer was missing underneath a gearwheel. Replacing the washer solved the problem.

You also work with pilot series machines that are being tested. This is a completely different type of work, isn't it?
Pilot series machines are really exciting. They are assigned to a select group of customers and remain under close monitoring. After all, despite all of the testing we do, the machines have not been field-tested in all conditions. The findings need to be reported back to development and production as soon as possible. That's why we take care of these machines, as sometimes they will suffer unexpected issues. If something happens you have to be able to improvise to resolve the problem quickly. This is where experience is vital.

What do you mean exactly?
Case in point: we found that one pilot series model, the AXION TERRA TRAC, needed filling up with fuel several times a day despite having two 300-liter tanks. We looked at the situation and noticed that the engine wasn't drawing any fuel out of one of the tanks. There was a vacuum in one of the pipes. We thought about how we could change the pipe routing, and promptly rectified the problem. We always pass on these quick fixes to the technical development team, together with a detailed report. Our colleagues analyze the issue in detail and in this particular case our solution was implemented into the regular series model almost unchanged. That was cool!

Products and Services

CLAAS Group Overview

Financial indicators (IFRS)

in € million	2020	2019	Change in %
Financial performance			
Net sales	4,042.3	3,898.0	3.7
Research and development costs[1]	237.4	243.6	-2.5
EBITDA	333.4	280.3	18.9
EBIT	185.6	164.0	13.2
Income before taxes	158.1	135.7	16.5
Net income	107.1	96.3	11.2
Free cash flow	308.1	-138.2	322.9
Financial position			
Equity	1,464.1	1,417.3	3.3
Comprehensive capital expenditure[2]	187.2	183.3	2.1
Total assets	3,722.5	3,531.9	5.4
Employees			
Number of employees as of the balance sheet date[3]	11,395	11,448	-0.5
Personnel expenses	742.2	730.3	1.6

[1] Before capitalized and amortized development costs.
[2] Including development costs recognized as an asset, excluding goodwill.
[3] Including apprentices.

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Standpoint

Agriculture is one of the key industries of the 21st century. It can safeguard food supplies to feed the world if we manage to link humans, machinery, and nature in a smart way. This is a Herculean task that we enthusiastically tackle every day – because we think in generations.