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Summary

- Several New Zealand agritech businesses are travelling to Hanover for the Eurotier animal housing tradeshow this month, with German farms planning to invest several billion euros in coming months.
- Digitalisation including automation, is particularly high on the agenda, with farms hoping for efficiency gains, improved sustainability and animal welfare. The German government has been supporting this trend with pilots, data policies and financial incentives.

Report

Germany is hosting the [Eurotier](#) animal housing trade show this month, with several New Zealand businesses exhibiting and visiting. Whilst this event provides a truly global marketplace, this report looks at what Germany itself has to offer as a market for agricultural technology, with a focus on digitalisation.

For the purposes of this report 'Digitalisation' refers to the use of digital technology to improve processes – as distinct from 'digitisation' which refers to the conversion of analogue media into digital media.

Germany's agricultural sector: size, challenges, business confidence and investment plans

Germany is the third largest agricultural producer within the European Union (EU), both in terms of cultivated land and output. Dairy and crops are the largest subsectors, followed by pork and feed (see [here](#) for the EU's factsheet on German agriculture). German farms invested nearly €10 billion in 2020 in buildings and machinery. German agriculture has been going through a period of transformation and uncertainty, driven by major new European and national regulatory initiatives to improve sustainability and animal welfare. The growing impact of climate change, and increasing energy and other input prices as a result of the Russian invasion of Ukraine also play a significant role.

Against this backdrop, farmers' confidence has been declining in recent years, with farmers rating their situation as merely satisfactory and anticipating deterioration. And yet, according to the German Farmers Association's (DBV) latest quarterly survey, about a third of German farms are planning to continue investing over the next six months, amounting to an estimated total of €5.7 billion, slightly more than a year ago. 16% want to invest an estimated €1.5 billion in machinery and devices, 5% some €0.5 billion into farm and stable technologies, and 3% millions of euros into retrofitting electronic devices. Most strikingly, 10% want to invest €2.5 billion (up from 3% a year ago) in renewable energy (photovoltaics etc.; see [here](#) for a recent market intelligence report on agrivoltaics in Germany).

Digitalisation (including sensors, robotics, automation, AI, big data etc.)

The digitalisation of German agriculture has increasingly become the focus of farmers and the government alike, to promote productivity and sustainability. A major survey published ([here](#), German only) last May provides a fascinating snapshot of German farms' direction of travel. More than 90% of respondents see digital technologies as tools for more environment-friendly farming, 80% expect them to save inputs, and more than 60% expect them to improve animal welfare or save costs. A breakdown by technology solutions and implementation status reveals both where German farms are already well equipped, and where they are actively looking to digitalise more in future:

Technology	Already use	Actively looking to invest
GPS-controlled machinery	58%	24%
Agricultural apps for smartphone/tablet	39%	34%
Farm or herd management systems	32%	27%
Automatic/intelligent feeders	24%	16%
Sensor technology for animal husbandry or crop production	22%	42%
Drones	19%	33%
Milking/stable robots	19%	26%
Artificial Intelligence (AI)/ Big Data	14%	59%
Field robots	3%	30%

Overall, 80% of German farms already use at least one of these tools, with the top three priorities being AI/Big Data, sensor technologies and apps. Nearly 80% now see digitalisation as an opportunity (up from 66% in 2016), with that share growing with the size of the farms. 17% wanted to definitely invest over the coming year, and a further 43% possibly; the remaining 40% had no such plans. The greatest hurdles identified are:

- anticipated investment cost;
- concerns about the potential red tape involved in rolling out and using digital technologies;
- expected interconnectivity issues; and
- a lack of sufficient (broadband) internet access – Germany has been running behind other European countries, but the rollout of 5G has recently accelerated.

The Federal Ministry of Food and Agriculture (BMEL) has begun to systematically improve the conditions for digital farming. So-called Digital Experimentation Fields have been set up across the country, with €50 million helping practitioners to test solutions on various types of farm (e.g. dairy, wine etc.). A further €40 million are being invested in machine learning and robotics research projects. Furthermore, some regional governments such as Bavaria are offering grants to individual German farms investing in digital control, plant protection or animal health monitoring technologies. Besides research and funding first steps have been taken to improve access to relevant public agricultural data (see dedicated hub [here](#), in German only; the plan is to connect this also to [Gaia-X](#), Europe's emerging data infrastructure). Beyond open and easy access to public data, German farms are cautious when it comes to sharing their own data. Data security and data privacy concerns also remain relevant for farmers.

Meanwhile, Germany is developing its own, increasingly vibrant agritech [start-up scene](#). One of them – [ag.supply](#) – is of potential interest including to exporters to Germany as it has set up an e-commerce marketplace specifically for farms.

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