
Ten firms leading the Agtech revolution

Farming is, without doubt, the most important of all human industries. Here are ten firms improving the lives of farmers and the future of food production.

Agtech innovators often find it difficult to persuade farmers to adopt new technologies. However, technology is changing every industry - and agriculture is learning to adapt. The latest farm innovators have a laser focus and clearer understanding of the farmer's real needs, offering solutions to major issues such as climate change, food security, traceability, sustainability, human health and farm profitability.

Here is a list of ten companies, from across Ireland and the globe, that are and playing a part in the Agtech revolution.

MagGrow

MagGrow, a Dublin based company, is changing how farmers worldwide spray their crops. Its patented technology offers 80% superior spray drift control and 90% better droplet attachment. This helps keep pesticides from drifting out of farmers' fields, serving to grow more with less and making it safer both for growers and kinder on the environment. www.maggrow.com

Microgen Biotech

Microgen Biotech is a spin-out from the Institute of Technology Carlow. Microgen use patented microbial products to treat land stressed by pollutants, helping protect both human and environmental health. This technology is particularly relevant in developing countries, where food security takes precedence, requiring that large tracts of stressed arable land be kept in production. www.microgenbiotech.com

Arc Net

Arc-Net, based in Belfast utilises blockchain technology, DNA sampling and data collection at all points in the supply chain, protecting against food fraud from field to plate, ensuring that food products are 100% authentic and traceable. Blockchain is considered to be a disruptive foundational technology and has been dubbed 'the trust machine' by the *Economist* magazine. www.arc-net.io

Anu Dairy

Anu Dairy from Cork is an Irish dairy biotechnology company. It promotes soil biodiversity and uses 100% organic milk from 100% grass-fed cows to produce the world's first premium, vitamin K2 butter, which can have added benefits in the fight against osteoporosis. www.anudairy.com

Moocall

Moocall, an innovative Dublin-based company, has developed a calving sensor that can predict when a cow will give birth to a calf. It's an IoT wearable device attached to a cow's tail that provides calving alerts to any mobile phone within one hour of calving. This allows time for the farmer to attend the birth, to assist or intervene if necessary. Moocall's latest IoT device is a heat-detecting sensor. www.moocall.com

FarmEye

FarmEye is a startup that developed from research work carried out at NUIG. It is a visual, map-based soil management system that digitally transforms the traditional paper trail of field maps, soil results and nutrient management planning, onto an online platform. For agri-food producers it offers traceability from soil to the supermarket and for farmers it offers big data analytics, to help them save time and money. www.eye.farm/index.html

BHSL

BHSL from Limerick uses patented technology which converts poultry manure into heat and energy for use on the poultry farm. The idea for the technology arose from a ban on spreading chicken manure in the west Limerick region. www.bhsl.com

Blue River Technology

Blue River Technology is a three-year-old company, based in Silicon Valley. Its 'See & Spray' machine, equip farmers to apply herbicide, by spot spraying weeds only. Farmers can save up to 90% of sprayed herbicide, compared to conventional methods of spraying the whole field. 'See & Spray' uses machine learning, as the world's ultimate, expert weed identifier. It combines robotics to bring to market the world's first machine allowing farmers to optimize every plant. Blue River Technology has recently been sold to John Deere for \$305m. www.bluerivertechnology.com

Hargol FoodTech

Hargol FoodTech based in Israel is the only active commercial grasshopper farm in the world. It produces a reliable, sustainable, high-quality source of protein, the demand for which is expected to double by the year 2050. Hargol, Marrow and Moocall are three of the top ten Agtech startups, selected for the prestigious Pearse Lyons Accelerator held in Dublin. www.hargol.com

Harrington Seed Destructor

iHSD - Integrated Harrington Seed Destructor is a revolution in Harvest Weed Seed Control, which is highly

effective against herbicide-resistant weed populations. Integrated at the rear of a combine harvester, iHSD kills weed seeds contained in harvest trash and returns the inert organic matter to the field, all in a single pass without changing harvesting practices. Harvest Weed Seed Control (HWSC) has become a pillar of no-till farming practice in Australian cropping operations and is gaining momentum quickly across the world. Farming practices that rely heavily on broad-spectrum herbicides to control weeds have led to the emergence of genetic herbicide-resistant weed populations. www.ihsd.com

The sky is the limit

There is no reason why Ireland cannot become a major hub for Agtech startups. Recently the Ireland Strategic Investment Fund (ISIF) launched the Ireland Agtech Fund (IAF) in partnership with Finistere-managed Agtech venture funds. It is a major Agtech startup fund set up to help assist Agtech's economic impact in Ireland. The ISIF is to invest a total of €40 million in Finistere-managed Agtech venture funds – €20 million in the Ireland Agtech Fund and €20 million in a global Agtech fund. Californian based Finistere Ventures is to open its first EU office in Ireland, led by Wexford native Kieran Furlong.

[A simple cash flow calculator.](#)