

Big Brother is Feeding You

The corporate digital takeover of farming

As farmers face increasing economic pressure and rising climate impacts, Big Agri and Big Tech corporations are working jointly to sell them a new techno-fix: the digitalisation of farming through platformisation and artificial intelligence.

Digital farming is set to reinforce corporate monopolies and market control, solidifying multinationals' power at the expense of small-scale farmers and the environment.

What is digital farming?

Agribusiness and tech corporations are spending billions to create new digital technologies and platforms to collect data on every aspect of farmers' work: from buying seeds, pesticides and fertilisers, to managing field performances and services. Despite their promises to farmers to increase farm efficiency, these corporations seek to increase their power through oligopolistic platformisation.1

With new digital tools, corporations want to collect every possible kind of farming data:

- Weather prediction from public sources,
- Soils and quality of land,
- Machine-produced data (tractors, devices, seed drill, fertiliser spreader, harvesters...)

Farmer's data is then commodified by corporations to sell them so-called "digital solution packages" to strengthen their market dominance.

On these platforms, public and machine-produced data are combined with personal data from farmers and farm workers, sometimes in real time. So-called datafication is replacing farmers' expertise, knowledge and decision-making power by "optimising" algorithms. These algorithms prioritise Big Agri corporations' products and services, limiting choices for farmers and consolidating corporate power.2



To sell these new digital tools, corporations sell **farmers unrealistic and misleading arguments**, promising to "optimise" farming, help them make decisions, enhance resilience to extreme weather events, and framing digitalisation as an "ecological" solution to produce food with fewer chemicals, improving soil health and conserving water.

Digitalisation takes decision-making power away from farmers, and digital models are based on data from huge industrial farms, pushing farmers to more dependency on global fertilisers or pesticide corporations, hindering the transition towards agroecology. Additionally, digitalisation and artificial intelligence harm the environment due to their energy and resource-use footprint.⁴

Multiplying platforms

Every major agricultural corporation has now created its digital farming platform:

Fertilisers & pesticides

B A BAYER E R

Climate FieldView claims to provide a summary overview of farm operations and valuable insights for farmers as well as advisors and retailers. Fertilisers



YaraPlus, in cooperation with John Deere, "promotes crop nutrition decisions." Agriculture machinery



Operations Center CLAAS connect, 365 FarmNet, Bear Flag Robotics (autonomous farming technologies, self driving tractors...) Pesticides

D-BASF

xarvio, in cooperation with various machinery producers like Fendt and CLAAS, covers seed and pesticides spraying. Seeds and pesticides



Cropwise includes Al tools to "optimise yields and profitability".

Many Big Agri corporations also collaborate on digital partnerships. BASF has invested \$2.5 billion with Bayer/Monsanto on research and development on breeding, biotech, pesticides, agricultural microbials, agricultural biologicals, and precision agriculture, and works with John Deere to develop a joint project on "precision farming and farm management solutions."

Collaborating with Big Tech: the platformisation of farming

Big Tech wants a piece of the digital farming pie. Amazon, Microsoft and Google offer platforms, essential cloud computing and data analytics services (including AI) to agribusiness, commodifying agricultural data. Researchers are calling it the "formation of a Big Ag-Big Tech Complex".⁵

97%

The market share of clouds and infrastructure for digital farming held by Amazon Web Services, Microsoft Azure, Oracle, Google Cloud, IBM, Alibaba, Tencent Cloud and Huawei Cloud in 2023.⁶

^{3.} Sauvagerd et al, 2024

^{4.} https://www.umweltbundesamt.de/sites/default/files/medien/479/publikationen/fb_digitalisation_and_natural_resources.pdf

^{5.} Sauvagerd et al, 2024

^{6.} Haranas M (2024) AWS, Microsoft, Google Lead Gartner's Cloud Services Magic Quadrant. https://www.crn.com/news/cloud/2024/aws-microsoft-google-lead-gartner-s-cloud-services-magic-quadrant

Bayer and Microsoft cooperated closely for two main platforms that use Microsoft's Azure Data management:

- **Leaf Agriculture** is promoted as "improved" decision making to "enhance accessibility" of farm machinery data.
- **FieldView** targets actors from across the agri-food value chain like retailers, financial institutions, and consumer packaged goods (CPG) companies. All data is compiled in one place, from pesticide spraying, to harvests, to satellite inputs. Bayer claims data from 100 million hectares is on this platform.

Beyond the farming sector, supermarket giant **Lidl** is launching its own cloud computing and cybersecurity services services for businesses located in Europe.⁷

The use of artificial intelligence

Al technologies in particular are an emerging market in the farming sector for Big Tech. Corporations are closely collaborating with Big Agri, while also launching their own technologies.

Microsoft has launched two platforms in particular:

- **Azure Data** uses sensors, drones and satellites to analyse and integrate datasets to "optimise crop management, monitor soil health, and manage resources more effectively."
- FarmVibes.Al: sensors, drones, and satellites provide data and models on soil health, crop
 conditions, and "optimal resource use to enhance productivity and sustainability in farming."

Alphabet/Google developed "**Mineral**" as an agri-tech company with a focus on robots, which was sold to John Deere in 2024. Microsoft has also invested up to \$12 billion in digital farming including Al technologies in the Asia-Pacific region in recent years.

Inadequate regulations

EU laws like the AI Act or the Digital Market Act do not regulate the farming sector. The Data Act does include the farming sector, defining the producers of digital devices as owners of the data. Before the Data Act was agreed, farmers' organisations defended farmers' right to have a say on the management and access of their data.¹⁰

Regulatory gaps remain for data use and sharing, as definitions are not tailored to complex farming situations, where land-owners, land users and third parties are involved in generating data and share an interest in accessing it.

The Data Act does not tackle legal arrangements by corporations to **acquire farmers' data**, offering discounts or incentives to farmers to do so — thereby increasing their corporate power.¹¹ This can further dispossess farmers from access to crucial data needed to manage their farms.

^{7.} https://www.irishtimes.com/business/2024/08/23/how-lidl-accidentally-took-on-the-big-guns-of-cloud-computing

^{8.} https://techcrunch.com/2024/08/22/former-alphabet-x-spinout-mineral-sells-technology-to-john-deere/

^{9.} https://agentialai.com/microsofts-ai-innovations-in-agri-tech-a-new-dawn-for-thailands-agriculture/

^{10.} https://djustconnect.be/en/european-code-conduct-data-sharing-agriculture

^{11.} Ryan, M. et al. The future of agricultural data-sharing policy in Europe: stakeholder insights on the EU Code of Conduct. Humanit Soc Sci Commun 11, 1197 (2024). https://doi.org/10.1057/s41599-024-03710-1

Conclusion: A dangerous trend

Farming should feed people – not algorithms. Digital farming is dominated by a few global corporations. Farmers and lawmakers are not aware of the impacts and lack information on what purpose these new platforms serve.

Digital farming is another example of the **rising encroachment of Big Tech into our lives**: its aim is to maximise profits for corporations, not deliver real solutions for farmers.

- Big Agri/Big Tech monopolies will increase costs for farmers, reduce their autonomy and limit their choice, which will likely increase inequalities between smallholder farmers and industrial producers.
- Monopolies will reduce diversity of seeds and complicate the development of locally-adapted solutions for small and medium farms developed with the farming communities themselves.
- Farmers' data ownership, privacy and security are not regulated, and risk **depossessing farmers** of their ability to manage their own farms.
- Forcing farmers to join digital platforms and widely share their data with corporations is set to deepen **corporate control** over what we eat, tightening the grip of multinationals over farmers and driving a profit-driven, polluting, agricultural model.

Low-tech solutions controlled by farming communities, serving their needs and interests, are better tools to support the transition towards agroecology.¹²

Demands

Take immediate steps to curtail Big Agri/Big Tech domination and the formation of dangerous monopolies:

- **Digital farming needs sector-specific rules** to avoid increasing corporate control and a stronger push towards industrial farming.
- Farmers, as the originators of agricultural data, must have **full control over how their data** is collected, stored, and utilised.
- **Peasant knowledge** should be promoted and participatory approaches are needed to involve local farmers and communities in the creation and sharing of agricultural knowledge.¹³
- **Block mergers and anti-competitive partnerships** between Big Tech and Big Agri to prevent dominant corporations from solidifying control over digital farming.
- **Break up concentrations of power** in the agricultural and digital sector by applying structural separation and vertical integration restrictions.



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