Web3 technology 'puts farmers in charge of their data'

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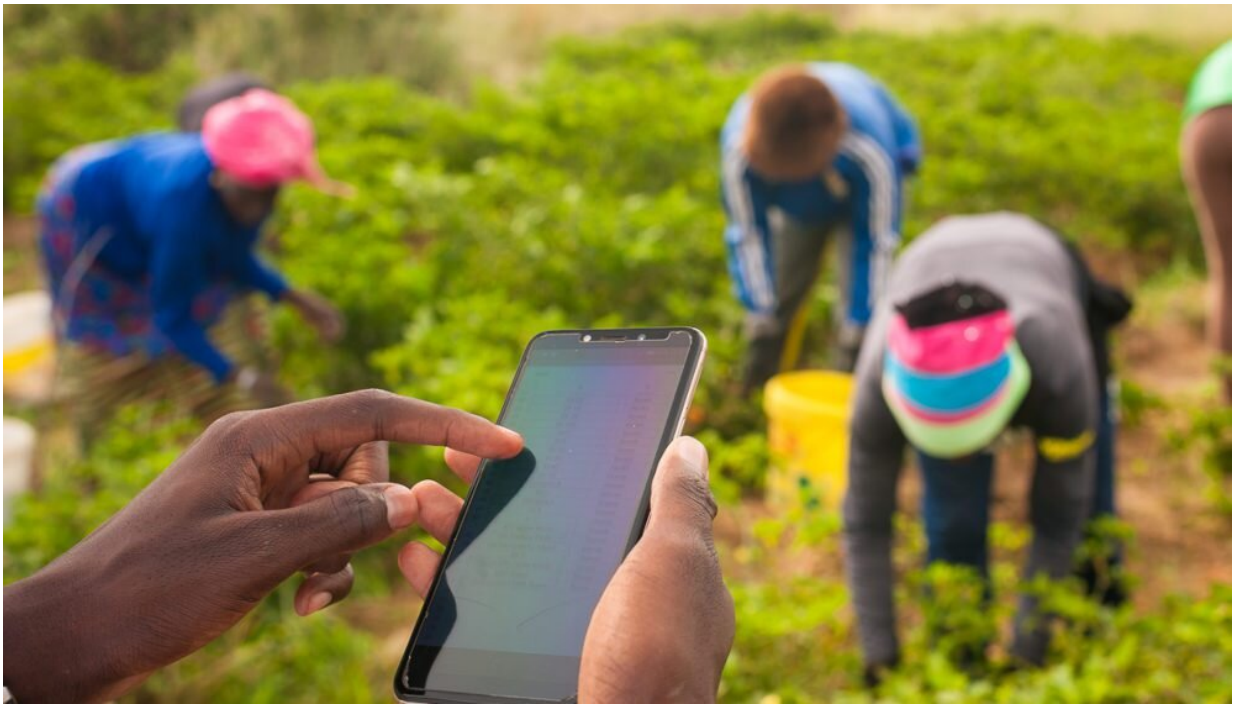

Farmers using a digital application in the field in Saint Louis, Senegal. Technology advocates say easy-to-use video-based technologies in local languages can drive change in agriculture in developing countries. Credit: CTA ACP-EU, (CC BY-SA 2.0)

Innovations such as Web3, the third generation of the internet, and easy-to-use video-based technologies in local languages have the potential to drive change in agriculture in developing countries, say technology

advocates.

Web3, which refers to efforts to create a decentralized version of the internet based on blockchain technology and focused on user ownership, can flip traditional data models and put power back in the hands of farmers, the ICTforAg forum heard.

The interactive virtual event held last week (9–10 March) seeks to explore ways of leveraging information technology to build resilient agricultural and food systems in low- and middle-income countries.

"Typically, farmer data is held in repository systems, controlled by private sector or governments as a way to provide services," said Rikin Gandhi, co-founder and executive director at Digital Green, a non-profit organization that aims to empower smallholder farmers to lift themselves out of poverty through technology and grassroots partnerships.

"However, this can limit the choices and ability of farmers to a diversity of services," he added.

Web3 could offer tools to allow smallholder farmers more control and ownership of their data through data sovereignty—the principle that data is subject to the laws of the country in which it is located—according to Digital Green.

Smallholder farming organizations engage with public and private sectors, civil society, and business, Gandhi explains. In the process, he adds, a lot of data is generated and held in trust by these entities on behalf of the farmers.

"Our strategy is to seek to work with this wider ecosystem, with the aim of empowering these farmer organizations so that they are the ones who can decide how their data is shared and controlled and, in some cases,

perhaps, even monetized," Gandhi said.

Henry Kinyua, East Africa head at Digital Green, says central to this data sharing network is a suite of software tools called FarmStack, which enables peer-to-peer, decentralized data sharing, and allows data providers and farmers to create policies on how data can be shared, for how long, and with whom.

"FarmStack is enabling organizations to identify data needs so they can improve services they offer to farmers, while directly connecting farmers themselves through co-operatives and other partners, creating digital farmer networks for data ownership and governance," Kinyua said on the sidelines of the meeting.

However, Alexander Valeton, managing director of Yielder, an information, communication and training platform for agriculture, says the digitalization of agriculture in developing countries must be bottom-up, and monetizing data should not be the focus.

"The idea that every new digital technology developed in the West can transform agriculture in the developing world is a fallacy," he said.

"These innovations must take into account the needs of smallholder farmers in poor countries, they must be user-friendly and economical and effective," he added.

Valeton believes the aim of improving technology in farming, especially in lower-income countries, should be to alleviate hunger and poverty, in line with the UN Sustainable Development Goals.

"Decentralizing in agriculture is a fantastic idea, but the biggest aim should not be to turn farmers into data vendors," he said.

Simpler technologies are also potential change-drivers in agriculture in low- and middle-income countries, the meeting heard.

Delegates heard about Digital Green's video-based service, which allows advisors and farmers to create and share information among their communities in their own words and local languages.

"The video shows farmers how to implement agricultural practices in their own environment that improve productivity and incomes by promoting climate-smart practices," Kinyua said.

The innovation has reached about 2.3 million farmers—mostly in India, Ethiopia, and Kenya—with video-based advisory services, according to the organization.

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