

Just digitalization and digital sufficiency in organic farming

The students in this Interdisciplinary Project can develop an independent project between two themes:

1. **Critical engagement of corporation-driven digitalization in agriculture.** Digitalization is the current frontier of technological change in agriculture. A multitude of international forums have proclaimed 'smart farming' and 'e-agriculture' as the path to combine industrial farming productivity with more precise resource use. Associations of large-scale farmers and land investors, such as the World Farmers Organization, have framed digitalization as 'the fourth agricultural revolution' (de Jager 2019). Agribusiness corporations have embarked on a series of mergers in order to position themselves in new markets for agricultural data and farm management software (Mooney 2018: 4; Lianos & Katalevsky 2017). At the same time, development actors such as the FAO, the World Bank and the European Development Fund are framing digital technologies as multifaceted tools for small farm intensification and viability (FAO 2018, World Bank 2019, Dalberg Advisors & CTA 2019). While acknowledging the ambivalent nature of complex techno-social changes, and the many potentials of digital technologies in agriculture, critical engagement by scholars and activists is needed so that digitalization's visible and potential risks, limitations, conflicts and inequalities, and the agrarian politics triggered by them, will not go unchallenged.
2. **Alternative forms of digitalization:** One way of challenging corporate digitalization lies in the development of alternative digital platforms, as well as tools designed to support ecological and social niche markets (organic, community-supported agriculture, land trusts, ...). Our faculty is currently embarking on the *DigiPlus* project, which aims to establish a "future farm" on which the possibilities and limits of digitization under the conditions of organic farming are worked out. For this reason, digitization approaches are to be tested for their transferability in organic farming at the Hessian State Domain Frankenhäusen and potentials of digitization for organic farms are to be developed. With the focus on organic farming, the entire value chain in the area of both plant and animal production will be examined and covered in more detail in this joint project. In addition to production-related areas, nature conservation and biodiversity aspects will be examined and the entire production chain will be illuminated. Here, all areas are to be linked to a quality management system with the help of digital tools and the socio-ecological dimension of digitalization is to be illuminated. In addition, it is planned to integrate a further training component. The main branches of the business, animal and plant production, are the focus of the project.

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Warmup reading: Chapter 61 in Akram-Lodhi, A. H., Dietz, K., Engels, B., & McKay, B. M. (Eds.). (2021). *Handbook of Critical Agrarian Studies*. Edward Elgar Publishing.