

OPTIMIZING DIGITAL DATA SHARING IN AGRICULTURE

CASE STUDY BRIEF: NOVEMBER 2020

BACKGROUND

In our digital age, data is increasingly recognized as a powerful tool across all sectors, including agriculture. Historically, data on rural farmers was extremely limited and unreliable; the advent of new digital technologies has allowed more reliable data sources to emerge, from satellites to telecom to the Internet of Things. Private companies—including fintech and agricultural technology innovators—are increasingly utilizing these new data sources to learn more about farmers and to structure new services to meet their needs.

In order to make efficient use of this emerging data, many actors are exploring data-sharing partnerships that combine the power of multiple datasets to create greater impact for smallholder farmers. In a new Learning Brief looking at AgriFin engagements with 14 partners across four different countries, we found that 25% of engagements featured a strong data-sharing component. These engagements spanned various use cases, including credit scoring, targeted training, and open access to information.

Drawing on this broad experience, our research looks at what we've learned about data sharing to enhance service delivery for smallholder farmers. We have distilled these lessons into common barriers faced by data-sharing arrangements in order to provide practical guidance and tools for overcoming these barriers to the broader ecosystem of actors involved in optimizing data sharing for agriculture.

THE PROMISE & ROLE OF DATA SHARING IN AGRICULTURE

In recent years, the volume and variety of digital agricultural data has grown at an exponential rate. Smallholder farmers' remote location and lack of linkages to global markets have traditionally hindered robust data collection. But the penetration of mobile phones and other digital technologies into rural areas has made data collection and sharing significantly easier. This, in turn, is creating new opportunities for a variety of actors to transform service provision in smallholder agricultural markets.

For example, private companies are increasingly seeing farmers as potential customers—and, in order to serve these customers, companies are turning to data that expands their understanding of this market segment. Recognizing that there are still some data limitations, more and more of these companies are entering into data-sharing partnerships. Using the power of combined datasets, these companies can develop new, tailored products for smallholder farmers, integrate farmer risk scoring, and optimize customer interactions. Some companies are even utilizing combined datasets to create entirely new business models where data itself is the commodity, sold directly to customers or to businesses that want to know more about their customers.

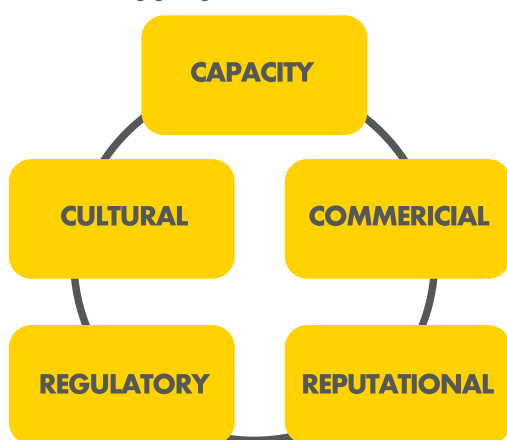
Despite these growing opportunities, our research shows that the sophisticated use of data in agriculture is still at an early stage. Many investments into new data-enabled platforms, models, services, and systems are still working out how to operate profitably at scale. In addition, data sharing engagements tend to lack sophistication on several levels: 1) the types of data being shared (limited primarily to demographic data); 2) the format of data sharing (primarily static reports); 3) the level of analysis applied to the data (primarily simple analysis at the farmer level; and 4) the types of data-sharing agreements (primarily bilateral).



BARRIERS TO EFFECTIVE DATA SHARING

Underpinning many of these engagements are complex negotiations about how data sharing can unlock service delivery for a variety of different players. Different actors—whether private companies, value chain players, financial service providers, or nonprofits—come to the table with different interests and incentives for sharing data. As might be expected in such a complex ecosystem, analysis of early data-sharing partnerships shows a range barriers.

Looking at the AgriFin portfolio, we can see that the primary barriers to establishing a data-sharing agreement can be classified as cultural, capacity, commercial, reputational and regulatory. Even for organizations that recognize the potential of data in agriculture, these barriers can prevent them from effectively assessing the business case for investment within different regulatory environments. Once a data-sharing agreement is created, the barriers tend to shift. For example, many organizations don't have a dedicated team working on the engagement, which can lead to delays in sharing data. Data-sharing agreements also suffer when the partners don't have on-the-ground staff members who understand how to work with disaggregated farmers.



Certain barriers are more apparent with certain types of partners. For instance, government and nonprofit actors often face skill and capacity barriers, while financial service providers often contend more with cultural and regulatory barriers. While each use case is unique, we have distilled a common taxonomy of reference barriers and a mapping of where they're most likely to show up in different partnerships (*see full length learning brief for more detail*).

Pictured Above: Common barriers to Data Sharing with Partners

EMPOWERING EFFECTIVE DATA SHARING

Research and learning about how to effectively use data in different agricultural use cases and partnership models is quickly accelerating.

For example, donor-funded programs like AgriFin are working with providers to test new service delivery models, using data as a key enabler. In the broader ecosystem, a number of open data initiatives—such as GODAN and GEOGLAM—are establishing much-needed standards, open datasets, and enabling resources for different actors.

INTRODUCING OUR NEW LEARNING BRIEF

Our Learning Brief takes stock of what has been learned so far about effective data sharing within AgriFin's portfolio. In addition to the lessons on barriers noted above, the Learning Brief contains the following tools:

-  **Reference taxonomies** that distill how the AgriFin program considers key dimensions of data within data-sharing partnerships
-  **A data readiness tool** that provides a holistic way of assessing organizational readiness to start working with data internally or in data-sharing partnerships
-  **A data-sharing agreement process** that distills the common steps, barriers, and learnings from the AgriFin progra

Our hope is that these tools can be used broadly by the agricultural community in understanding why data is important and how you can use it to improve the lives of smallholder farmers. As the AgriFin program continues to evolve its work over the coming years, there will be an increasing focus on how to work with data to further evolve smallholder service delivery, including the development of additional tools and frameworks.

MERCY CORPS AGRIFIN

Mercy Corps' AgriFin programming (MCAF) represents USD 35 million in innovation funding from the Mastercard Foundation, Bill and Melinda Gates Foundation and the Swiss Development Corporation to support development, testing and scale of digitally-enabled services for smallholder farmers. With this support, AgriFin now reaches more than 8 million smallholders.

ISF

ISF is an advisory group committed to transforming rural economies by delivering partnerships and investment structures that promote financial inclusion for rural enterprises and smallholder farmers. Combining industry-leading research with hands-on technical expertise, ISF develops practical, profitable, and sustainable financial solutions.

To learn more, please get in touch with us!



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CONTACT

Leesa Shrader
Program Director | AgriFin
lshrader@mercycorps.org

 www.mercycorpsagrifin.org

 [@mercy-corps-agrifin](https://www.linkedin.com/company/mercy-corps-agrifin)

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