

2014 年 12 月 1 日

●小規模農家のビッグデータ活用支援する安価な代替手段

【New York Times, 2014/12/01】

ニューヨーク・タイムズ紙は1日の記事で、センサとビッグデータを用いるインディアナの大農家を紹介。

この農家のオーナーはセンサを搭載したコンバインやコンピュータによる分析、作付機械などはいずれも多額の費用が必要となるため、小規模農家が同様のテクノロジーを導入するのは難しいだろうと語っている。

しかし、農作業のスケジューリングや収穫分析を行うためのスマートフォン型ソフトを提供するファームログスのジェシー・ボルマーCEOは、リソースの共有で小規模農家も同じようなテクノロジーを利用できると反論する。

同社のソフトは土壌の質や気象情報、現場の機械から収集したデータなどを使用した分析を提供するもので、ボルマー氏はこれにより地元農家に助言する農学者も「データ・サイエンティストになれる」という。

同氏によると畑で野菜を栽培する米国28万の農家の15%以上が同社の無料ソフトを利用している。

同社以外でも農作業現場からデータを収集できる機能を持つコンバインをリースするファームリンクといった会社が登場。小規模な農家でもビッグデータを活用できる環境は整い始めている。

(参考) 本件報道記事

A Low-Cost Alternative to Pricy Big Data on the Farm

By QUENTIN HARDY

DECEMBER 1, 2014 4:50 PM December 1, 2014 4:50 pm 2 Comments

<http://bits.blogs.nytimes.com/2014/12/01/a-low-cost-alternative-to-pricy-big-data-on-the-farm/>

Will big data kill the small farm or save it?

An article in Monday's New York Times profiles a farmer in Indiana, who is loaded with the latest information technology-rich agricultural gear. His sensors and large-scale data analysis, he told me, increases his return on investment by 50 percent, compared with conventional farming.

This farmer also owns or leases 18,000 acres, which is a lot, and thinks smaller farmers with just a couple thousand acres will have a hard time keeping up with technological change. That is because things like sensor-equipped

combines, computer analysis and planting equipment that works at a variable rate to maximize productivity all cost a lot of money.

Help for the little guy may be at hand, however, because of the same influences that are reshaping big business: The so-called consumerization of IT is moving once-expensive software onto smartphones that can connect to cheaper cloud systems. The ever-shrinking cost of semiconductors is making once exotic tech a commonplace on much farm equipment. And, in the prairie tradition of agricultural cooperatives, smaller farmers may pool resources to get a better result.

“I’d argue against the idea of a widening gap” between large and small farms, said Jesse Vollmar, co-founder and chief executive of FarmLogs, which makes smartphone-type software for the scheduling of farm tasks and analysis of yields. “There is a gap in management practices, but that is our reason to exist.” FarmLogs uses data for farm analysis, like soil quality and rainfall, which is publicly available, along with specific information derived from field machinery. By automating the analysis, he said, “local agronomists can be data scientists too.” The agronomists are already a fixture in most farm communities, offering advice on crops and conditions.

Mr. Vollmar says his product is used by more than 15 percent of the country’s 280,000 row crop farms, most of them smaller operations. It is free, though next spring he plans to introduce premium products around automated collection and analysis that will cost “in the \$5 an acre range.”

Machine-based data for specific fields, such as information about planting seeds to a specific depth, or counting corn seconds after it leaves the stalk, is increasingly important. This machinery costs more, but again there are emerging alternatives.

FarmLink, a Virginia-based company, began life with an operation, now called MachineryLink that leases combines. Its 200 machines travel to four parts of the country, starting in Texas and moving to the Mississippi Delta and then the Pacific Northwest, before ending the season in the Midwest, maximizing how long a machine is used each season.

It does not lease planters, although some company might do that in the future, particularly as sensor-heavy variable rate planters become standard-issue equipment.

FarmLink’s business is around analyzing the data that the machines deliver. Data from the combines is mixed with other data points, mostly 150 square foot “microfields” of soil and water characteristics, to profile maximum yield

potential. People who attest they are farmers of a specific parcel can subscribe to the results and benchmark their yields against the optimum.

“On machines, our core business is people with 1,500 to 3,000 acres,” said Scott Robinson, president of FarmLink. “For the data, we have people with just 500 acres.” The company is also working with farm management companies that cater to medium-size farms.

Between the leasing and data business, FarmLink is projecting revenue of about \$50 million over the next 12 months.” You can make a case that data science could actually level the playing field between big and small farmers,” Mr. Robinson said. “Being smart on operational decision making is going to be critical.”

Source: New York Times, 2014/12/01

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