



PRODUCER-LED INNOVATION CHALLENGE OPPORTUNITY IDENTIFICATION

AUGUST 2024





In order to inform the **Producer Led Innovation Challenge**, AgriNovus sought to understand key inefficiencies that hinder the profitability of Indiana producers. Using both quantitative and qualitative methodologies, Aimpoint Research worked to identify those inefficiencies that are most acutely felt among producers and crystalize specific measures to address them.

Aimpoint conducted a series of in-depth interviews among five Indiana producers with Gross Farm Income (GFI) above \$100K. At the same time, an online survey was conducted among an additional 150 producers who fit the same criteria. While the in-depth interviews conversationally explored producer sentiment towards operational inefficiency, the survey sought to validate that those inefficiencies are indeed felt by the larger population of Indiana producers.

A key pattern from conversations with producers is that the idea of **'inefficiency'** is **difficult to perceive** much less isolate operationally. A common theme is farmers' ways of working **are assumed as necessity** rather than examined for potential improvement. However, three primary themes emerged in both the qualitative interviews as well as the producer survey.

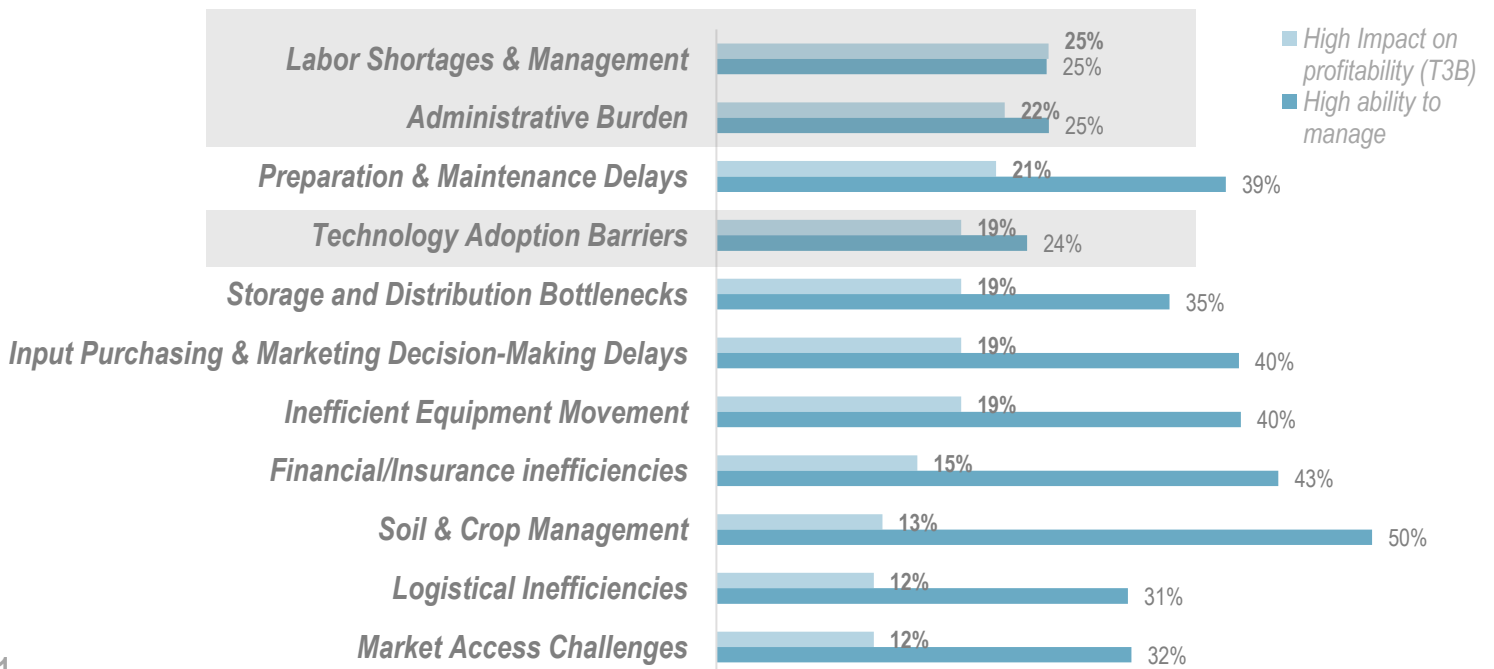
1. **Labor Shortages & Management**

2. **Administrative Burden**

3. **Technology Adoption Barriers**

IMPACT VS. ABILITY

When impact and ability are both considered, the three inefficiencies of **labor management, administrative burden, and technological adoption barriers** stand out in terms of the disparity between producer ability to manage and the impact to profitability. They are impactful factors that are difficult to manage.





LABOR SHORTAGE AND MANAGEMENT

A major issue that emerged from in-depth discussions with Indiana producers was the issue of labor and its relationship to technological innovation. This sentiment is echoed in the producer study with **‘Labor Shortages and Management: Issues managing workers, especially during busy times’** cited as the most impactful inefficiency limiting operational profitability with nearly a third of producers claiming to have ‘low ability’ to manage this obstacle.

The agriculture industry has long relied on an immigrant workforce, but fewer young immigrants are entering the workforce, and this trend is not expected to change. As this labor pool dissipates, wages are driven upward making workers both scarce and expensive. While programs like H-2A are helpful, they are cumbersome to navigate. The eventual adoption of new technologies is a solution, but adoption comes at a sizable opportunity cost, and the requirement for more skilled labor, which is even more of a challenge to find.



“There’s a lot of technical expertise that farmers rely on in order to do some of the more sophisticated types of jobs. As farming becomes more and more digitized and equipment becomes more sophisticated, they want folks that have some technical experience. And that can be a bit challenging.”

ADMINISTRATIVE BURDEN

ANOTHER INEFFICIENCY IMPEDING OPERATIONAL PROFITABILITY IS **‘ADMINISTRATIVE BURDEN’** DEFINED IN THE PRODUCER SURVEY AS:

Time-consuming paperwork for government incentive and risk management programs

Complicated admin due to inefficient land data

Time-consuming data entry and transferring processes for carbon programs

Regulatory cost and inefficiency

During in-depth interviews, this administrative burden was more clearly expressed in terms of the **lack of consolidated access to operational data**. According to the IDC, the average farm generates 500,000 data points daily, a number that is expected to increase 800% by 2036. Whether it be financial, agronomic, or tied to some sort of credit program, modern farming operations produce a plethora of relevant data that is most actionable when multiple data streams are combined. To this point, no informational solutions have answered the call for simplified consolidation.

Frustrated by flawed or incomplete options, many producers have regressed to simple (and time consuming) alternatives such as spreadsheets. One type of data that creates a stumbling block is that related to market opportunity and pricing. Producers lack real-time pricing information which could better inform their selling decisions. Separate research also suggests administrative burden is keeping producers from leveraging value-added opportunities; a University of Vermont study showed nearly a third of farmers forego conservation incentive programs for this reason.



“I use Farmworks, which is so ancient they are out of business, and it hasn’t had an update in 8 years. But I still can’t find anything to transition all those books, all of that data over to. I’ll go back 10 years and say ‘What was my biggest expense? What percent was interest in 2013 versus today?’ I want the ability to take my 25 years of log data, of log accounting and push it into something new so that I can go forward and continue with that.”



TECHNOLOGICAL ADOPTION

THE ISSUE OF TECHNOLOGICAL ADOPTION IS RELATED TO BOTH LABOR ISSUES AND ADMINISTRATIVE BURDEN. THE PRODUCER SURVEY DEFINED ‘**TECHNOLOGY ADOPTION BARRIERS**’ AS:

Delays and inconsistencies in financing and adopting new farming tech

Uncertainty about getting a good return on money spent on innovative equipment

Notable barriers to technology are cost and unclear value propositions. There is also a gross lack of industry standardization. For example, the USDA reported that only 42% of Indiana farmers have access to broadband internet - a condition that makes further informational integration nearly impossible.

Unknown or unclear ROI is another factor that impedes adoption. According to McKinsey, producers ultimately expect a 3:1 ROI to adopt a new technology but uncertainty surrounding new offerings make this difficult to estimate. Furthermore, informational limitations within their own operations impede accurate risk assessment. The factors of high cost and uncertainty have led to a situation where only 28% of North American farmers have adopted or plan to adopt precision agriculture technology over the next two years.



“Whatever (new technology) is out there I’m probably going to hear about it and then I’m going to go back to (my business partner) to say, ‘This is kind of where this is going.’ and then we talk about it. ‘Is this something we want to try? Does it make sense?’ You know, that sort of thing. It would need to show us a return on dollars and that’s how we proceed.”

SUMMARY

Indiana producers who participated in both in-depth interviews and an online survey echo similar sentiments regarding the inefficiencies they face in their operations. The primary inefficiency is that of **labor management** and its relationship to the **adoption** of various labor-saving **technologies**. Simply put, finding adequate labor is difficult. While the market has responded to this with a variety of costly technological solutions that reduce labor needs, producers are constantly faced with the strategic decision between investment risk and labor uncertainty. Access to a willing and flexible labor pool is needed in the short term. Looking forward, producers would benefit from a way to accurately assess the costs and benefits of technological adoption.

The ability to **consolidate** a variety of **disparate data** into an organized and easily **accessible interface** would save time while providing producers **clear operational assessment**. Operations’ data output has outpaced the management of that data. This causes a considerable burden when coupled with **paperwork** and **regulatory** hoops that must be executed in the name of compliance and/or to receive deserved benefits (credits, etc.). An **integrated information resource** that accurately consolidates and organizes a variety of operational data would help alleviate this pain point. The usefulness of such a tool would be amplified if this informational output were to become universally accepted by a variety of organizations (regulatory, financial, agronomic, etc.). Such a tool could not only save valuable time but could empower producers to make informed and accurate decisions as they consider operational issues of labor and technology.