The Pulse of Brazilian Farmers

We sat down with 1,350+ farmers across Brazil, uncovering the challenges and emerging innovations that are shaping the future of agriculture. From climate resilience to economic pressures and sustainability breakthroughs, here's what's top of mind for those who feed the world.

June 2025
By Arthur Ramos, Luciano Guidolin, Lucas Moino,
Matheus Munhoz, Amanda Barros and Santino Lacanna

BCG

Boston Consulting Group partners with leaders in business and society to tackle their most important challenges and capture their greatest opportunities. BCG was the pioneer in business strategy when it was founded in 1963. Today, we work closely with clients to embrace a transformational approach aimed at benefiting all stakeholders—empowering organizations to grow, build sustainable competitive advantage, and drive positive societal impact.

Our diverse, global teams bring deep industry and functional expertise and a range of perspectives that question the status quo and spark change. BCG delivers solutions through leading-edge management consulting, technology and design, and corporate and digital ventures. We work in a uniquely collaborative model across the firm and throughout all levels of the client organization, fueled by the goal of helping our clients thrive and enabling them to make the world a better place.

Contents

The 2025 Pulse of Brazilian Farmers covers…

84% of Brazil's farmland and **87%** of gross value of agriculture and livestock production

1,350+
Farmers

30,000+
Data points collected

15+
Technologies & sustainable practices

10+
States covered

Soy, corn, livestock

… and other **10+** crops covered

1,000+
Interview hours

20,000+
km traveled by interviewers

Foreword

Brazilian farmers are at a pivotal inflection point. They are currently one of the country's most vibrant sectors, well-positioned to expand as a global leader in food supply. The five million farm establishments in this country have made it the world's top beef exporter and a dominant force in soybean, sugarcane, orange, and corn production.

Perhaps because 70% of these farms are family-owned, many people don't realize how vast and influential the sector is. It employs 28 million people across its value chain—from suppliers of seeds and fertilizers to growing and ranching to storage to transportation and logistics to worldwide distribution—and represents 25% of Brazil's GDP.

Faced with soaring input costs, geopolitical change, and climate variability, Brazilian growers and ranchers see an opportunity to raise their competitive advantage. They are embracing mechanization, advanced soil management practices, and biological inputs with more intensity. They seek ways to enhance efficiency and mitigate risks, and to add a new layer of sophisticated, evidence-based production and innovation. Policymakers also increasingly see the country's agriculture sector as a source of national advantage.

Yet for all of that, Brazil's agricultural sector holds significant potential to be better served by its financiers, vendors and suppliers. Farming technology tends to be produced by global enterprises and designed for farms in the US, Europe, and Asia rather than for Brazil's unique land use patterns and tropical climate. Credit availability does not always match the sector's growth potential. Farmers have diverse interests and priorities, and those who look closely at their perspective tend to design better products and thrive as their suppliers.

With all this in mind, BCG recently surveyed more than 1,350 agricultural producers across more than 15 Brazilian states. We conducted more than 1,000 hours of in-person interviews to gain deeper insights into their behaviors and perspectives. Leveraging BCG's Demand Centric Growth® (DCG) methodology, we applied a structured, data-driven approach to analyze the diverse profiles of farmers, uncovering the core drivers behind their decisions and investment patterns.

This report explains the survey results and ramifications for the agribusiness, technology, and banking industries. It is designed as a versatile guide for industry executives, policymakers, and civil society leaders, offering a comprehensive view of the evolving needs, challenges, and priorities of Brazilian farmers and the businesses that serve them.

When asked about the barriers to adopting new technologies and practices, farmers tend to mention cost and complexity. Limited access to credit remains a significant constraint. High interest rates and collateral requirements often make technological investments inaccessible, especially for small farmers. Even when financing is available, many farmers face additional challenges in navigating new technologies and integrating them into their operations effectively. Without adequate technical support and more local engagement, innovative solutions risk low adoption rates.

To overcome these challenges, agribusiness and financial services companies must embrace a truly farmer-centric approach—one that prioritizes local needs, acknowledges Brazil's particular challenges, and minimizes the risks associated with innovation mismatch. They must increasingly tailor technology development and deployment to their Brazilian customers.

The transformation of the Cerrado—once considered unproductive land—into one of the world's most efficient food production platforms shows how Brazilian growers leveraged agronomic advancements to expand production. Ranchers have undergone a slower technological transition, traditionally relying on extensive pastureland rather than higher-input farming systems. However, rising land costs and increasing ecological pressures are driving a shift toward pasture intensification, genetic improvements, and enhanced livestock management techniques.

An effective farmer-centric approach must acknowledge the diversity among Brazilian farmers. Their distinct needs, emotions, and circumstances influence how they assess risk, adopt practices, and make investment decisions. It is essential to develop tailored strategies that engage farmers as active partners in shaping the future of agribusiness. Their perspective and power are vital in establishing Brazil as a resilient, competitive powerhouse in food and biodiversity.

Lucas Moino
Partner

Executive Summary

1. There are distinct producer profiles shaped by behavioral patterns, needs, and demographic characteristics. These profiles influence how they adopt technology, manage risk, and perceive financial returns. Using BCG's proprietary tool Demand Centric Growth, we identified seven profiles: Performance-First, Steady-Hand Explorer, Hassle-free, Smart-Ranch Ops, Legacy and Trust, Future-Fit, and Eco-Vision. They are shaped by a combination of demographics, necessities and behaviors including views on sustainability and technology adoption.

2. Each farmer operates under a unique set of decision-shaping forces. Purchasing patterns are influenced by trusted advisors, preferred channels, as well as functional and emotional attributes. Inputs are guided by agronomists and cooperatives, while sales are often driven by salespeople, with good cost-benefit and soil stewardship as key attributes. Equipment purchases rely on dealers and trade shows for demonstrations and are mainly handled through dealerships, with productivity and family care as central considerations. Data systems are shaped by agronomists and dealers, typically sold by sales representatives with productivity and farm understanding as critical drivers.

3. Productivity investments are now outpacing land expansion. Half of farmers (49%) aim to boost productivity, 42% combine it with expansion, and only 9% focus solely on new areas. This shift reflects higher land costs, legal limits, and a maturing sector. The pattern extends across systems: growers often combine strategies (45%), while ranchers, facing more constraints, focus on productivity (59%). This emphasis has pushed Brazil's productivity index to 2x the global average.

4. Farmers are open to new technology and processes, yet remain risk-averse. While over 70% say they actively seek improvements on their farms, this willingness doesn't always translate into early adoption. Risk tolerance varies with production system: 53% of growers are comfortable with risk, versus 36% of ranchers. On technology, most wait for proven results, only 22% of growers and 9% of ranchers are early adopters. Farmers' strategies closely mirror their profiles' risk appetite, and an effective solution design must account for distinct profiles.

5. Technology adoption in Brazilian agribusiness is high by global standards, yet uneven across the country. High-tech adopters like the Smart-Ranch Ops profile lead in uptake, while more conservative farmers lag despite often needing to modernize their assets. Encouragingly, Brazilian growers adopt technology at rates comparable to U.S. corn belt farmers. This signals the innovation potential and the need for programs that drive broader adoption across profiles.

6. There is space to deepen technology adoption by advancing tropical-specific solutions. The size and overall technological readiness of our agriculture sector suggest there is a larger potential market. On average, agribusiness has adopted as many technologies as the US, exemplifying its development. In most other sectors, Brazilian technology uptake lags 6-10 years behind the US. Thus far, few agritech products have been designed explicitly for Brazilian farmers. A seed planter designed for the US might not fit on narrower Brazilian roads, for example.

7. Producers are acutely aware of climate impact, viewing it as a serious threat to their business. In the survey, 94% cited prolonged droughts as their top concern, and nearly half identified climate change as the greatest threat to their operations, compared to just 14% who see it as an opportunity. As climate effects grow more severe, embedding adaptive strategies into financial planning and operations will be critical for long-term resilience.

8. Technology and sustainable practices are adopted in lockstep. These two elements are highly correlated to most farmers. They are more inclined to invest in technologies and lead the implementation of practices, especially when they perceive financial value. In contrast, profiles with fewer resources raise more barriers to adoption. Even profiles that value sustainability, such as Future-Fit, struggle with the cost of adoption. Expanding access to financing and technical support can help bridge these gaps.

9. Credit allows larger farmers to diversify their investments, while smaller ones face greater access and risk constraints to invest. Credit enables greater adoption of technology and practices. Among farmers, 80% have used credit, but access varies. Large-scale producers are better served, 67% have secured financing, while only 52% of smallholders have done so, with 88% relying on public programs. Although 39% of respondents cite high interest rates as a concern, smallholders face added hurdles: strict collateral demands, complex approvals, and limited visibility. Expanding accessible financing can bridge gaps and support growth across farm operations.

10. There is confidence in the future, though sector-wide challenges temper the mood. Most producers feel positive about their own operations as 83% expressed confidence in their farms' future. Expectations for 2025 are equally upbeat, with 68% anticipating production growth. However, optimism is less consistent across the broader sector. Innovation-driven profiles, such as Performance-First, are notably more confident, while more risk-averse farmers show lower optimism, at around 50%. Agribusiness players must navigate this behavioral diversity to unlock the sector's full growth potential.

1. The Brazilian Farmer

1.1 Framing the Producers in Brazil

Brazilian farmers share common traits but also reflect different backgrounds and approaches, balancing tradition and adaptation in an evolving agricultural landscape. While farming remains a family-driven activity, over 70% of respondents have relatives working on the property, the sector also reflects ongoing renewal, with around 15% being new farmers. Experience runs deep. The average farmer has been in the business for 20 years, and more than half belong to at least the second generation of family ownership.

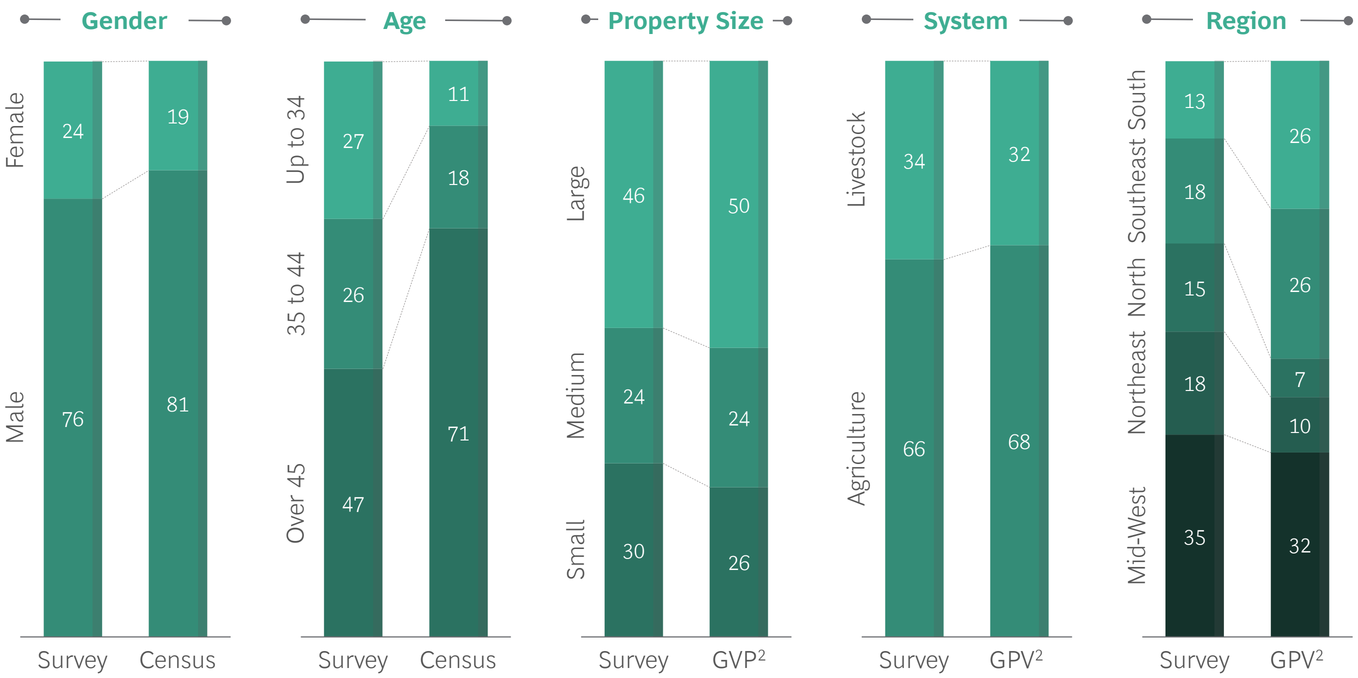
Brazil's farming population is also younger than that of some major agricultural markets. In Brazil, less than half of the farmers (47%) are over 55. For the US, this share reaches 63%. This younger age profile suggests a stronger generational transition and a more inclined workforce toward modernization. At the same time, the sector remains predominantly male, with around 80% of farmers being men.

Beyond family structures, cooperatives play a key role in Brazil's agricultural landscape, with nearly 4 in 10 surveyed farmers participating—a trend consistent across age groups. In Brazil, over 1 million farmers are members of more than 1,000 agricultural cooperatives spread across the country. While participation is slightly lower among the largest producers, cooperatives remain an important collective model, providing access to resources and strengthening resilience for farmers (both growers and ranchers).

Exhibit 1 - Sample consistent with census data and intentionally weighted toward larger operations

Survey sample breakdown

Percentage of total respondents and farmers recorded in the census[1]



Notes: Survey weighted by production system (agriculture or livestock) and property size weighted by Gross Value Production and age and gender weighted by number of establishments. Small: properties up to 4 fiscal modules, rounded to 100 hectares. Medium: properties between 4 and 15 fiscal modules, rounded to 100–500 hectares. Large: properties exceeding 15 fiscal modules, rounded to farms over 500 hectares. 1. IBGE Agricultural Census from 2017; 2. Gross Production Value. Source: Survey 'The Pulse of Brazilian Farmers' (N = 1,358); BCG Analysis

1.2 Uncovering the Different Farmer Profiles

Farmers are not a homogeneous group—their decisions are shaped by multiple factors, ranging from operational needs to personal outlooks on investment and innovation. While previous insights show differences in behavior, a more structured, data-driven approach can be applied to pinpoint the underlying variables that truly define farmer profiles and their needs.

To achieve this, we applied BCG's Demand Centric Growth® (DCG) methodology. This proprietary segmentation approach goes beyond traditional demographic groupings to uncover the core drivers of farmer decision-making by using statistical modeling and insights from industry experts.

Rather than relying on broad market trends or predefined categories, DCG® identifies the variables that have the most statistical significance in shaping demand, providing a precise and actionable view of how farmers approach investments in technology.

This research examined over 40 farmer needs when purchasing technology—whether inputs, equipment, or farm data systems—categorized into functional (what farmers wanted the technology to have) and emotional needs (how farmers wanted to feel when making the purchase).

The study used statistical modeling and decision tree analysis to examine a wide range of demographic (e.g., age, gender, farm size, crops) and behavioral variables (e.g., risk tolerance, openness to change, investment preferences) to determine which had the most significant impact on differentiating groups of farmers based on their functional and emotional needs. By identifying the key variables that most distinctly separate these groups, the research was able to define clear farmer profiles (or segments), each characterized by its unique set of needs.

Based on survey analysis, five key dimensions emerged as the drivers to segment the decision-making needs: production system, age, sustainability, technology adoption, and investment preferences. These five variables provided the foundation for a demand map, segmenting Brazilian farmers into distinct groups based on shared behavioral patterns and technology purchasing criteria.

Exhibit 2 - Farmers are not all the same — five key variables define their profiles based on technology purchasing behavior

Production System

The dynamics of production cycles from agriculture or livestock influence producer's behavior

Age

A farmer's stage in their career can impact openness to change, willingness to adopt tech and long-term planning

Sustainability

The degree to which farmers prioritize sustainability varies widely, shaping how they evaluate new solutions

Technology Adoption

How farmers approach innovation— early adopters or more cautious —affect the pace at which solutions gain traction

Investment Preferences

Some farmers focus on maximizing productivity through operational improvements, while others prioritize expansion

Sources: Survey 'The Pulse of Brazilian Farmers' (N = 1,358); BCG Analysis

Based on analysis of the five dimensions, we segmented the population of Brazil's farmers into seven basic archetypes:

Growers profiles with limited focus on sustainability:

1. Performance-First: Young, tech-savvy growers who prioritize results, efficiency, and business-driven decision-making over sustainability

2. Steady-Hand Explorer: Experienced but flexible growers who seek dependable, accessible solutions while carefully considering new opportunities.

3. Hassle-free: Older growers who prioritize ease of work, safety, and satisfaction over financial returns or cutting-edge innovations

Ranchers profiles with limited focus on sustainability:

4. Smart-Ranch Ops: Tech-driven ranchers who embrace innovation to enhance efficiency, simplify work, and grow their cattle operations

5. Legacy and Trust: Tradition-focused ranchers who value reliability, family-driven decisions, and a steady, trusted approach to farming

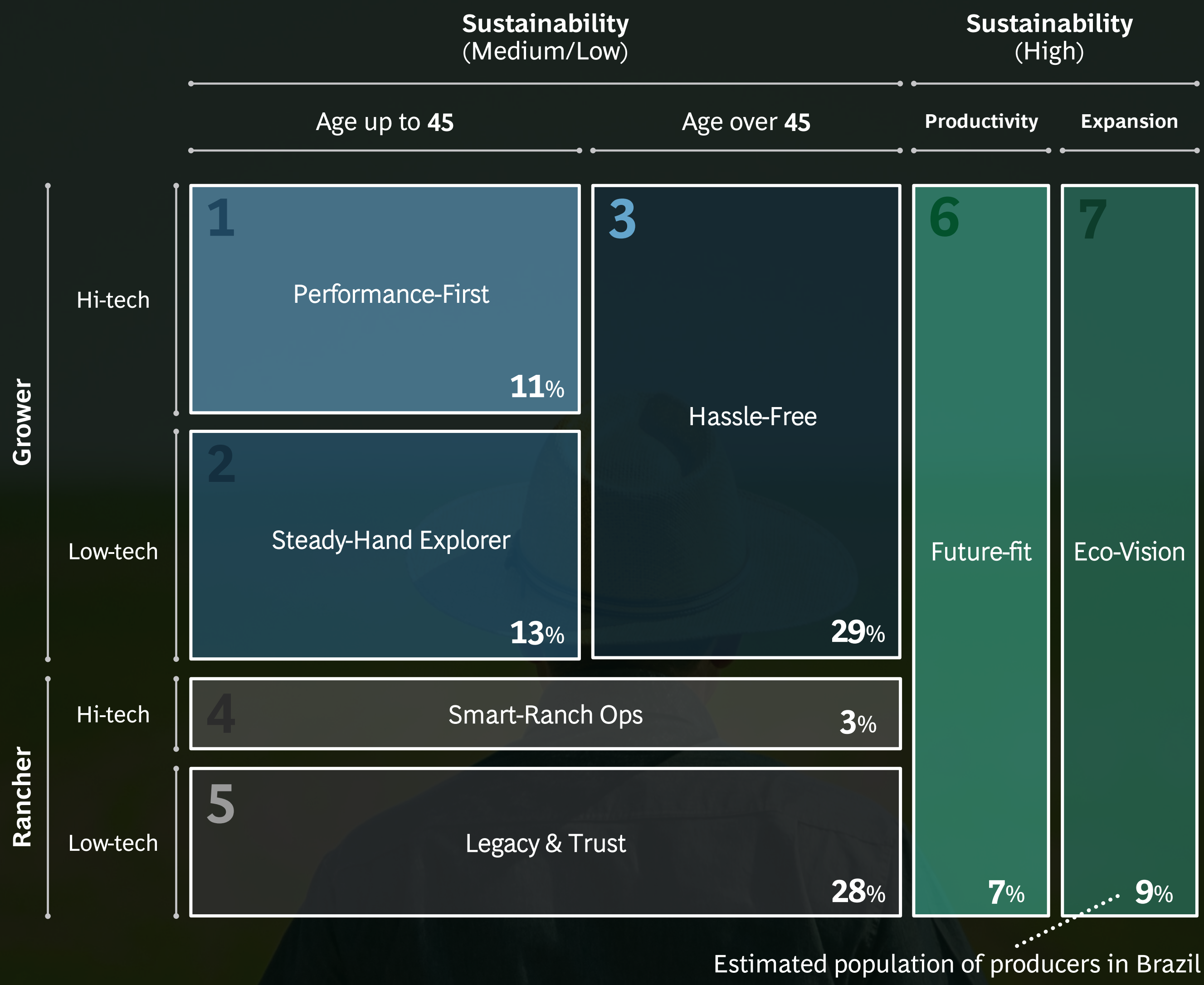
Mixed production system profiles highly attuned to sustainability:

6. Future-Fit: Mid-aged producers who combine efficiency and sustainability, making results-focused decisions with limited appetite for risk

7. Eco-Vision: Entrepreneurial land expanders who seek scale operations while maintaining environmental responsibility and external recognition

This structured segmentation allows for a more nuanced and data-backed understanding of farmer needs—going beyond what they produce to why and how they make investment decisions. Each category has its own priorities, its own view of technology, investment and sustainability, and its own channels for distribution of its products. They all have a view of the future in common: that they need to marshall their efforts and investments to thrive during the next few years.

What are the producer profiles in Brazil?



Performance-First
Young, tech-savvy growers who prioritize results, efficiency, and business-driven decision-making over sustainability

Steady-Hand Explorer
Experienced yet adaptable growers who prefer reliable, accessible solutions while cautiously exploring new opportunities

Hassle-Free
Older growers who prioritize ease of work, safety, and satisfaction over financial returns or cutting-edge innovations

Smart-Ranch Ops
Tech-driven ranchers who embrace innovation to enhance efficiency, simplify work, and grow their cattle operations

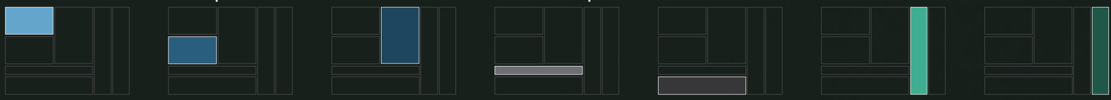
Legacy & Trust
Tradition-focused ranchers who value reliability, family-driven decisions, and a steady, trusted approach to farming

Future-Fit
Mid-aged producers who combine efficiency and sustainability, making results-focused decisions with limited appetite for risk

Eco-Vision
Entrepreneurial land expanders who seek to scale operations while maintaining environmental responsibility and external recognition

Note: Hi-tech growers have purchased at least three of the listed technologies over the last 3 years. Hi-tech ranchers have purchased at least two of the listed technologies over the last 3 years.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

A blend of technical and emotional factors shapes behavior



	1 Performance-First	2 Steady-Hand Explorer	3 Hassle-Free	4 Smart-Ranch Ops	5 Legacy & Trust	6 Future-fit	7 Eco-Vision
They are...	• Confident • Ambitious • Profit-driven	• Pragmatic • Attentive • Skeptical	• Achievers • Family-driven • Change-averse	• Confident • Pragmatic • Profit-driven	• Family-driven • Skeptical • Practical	• Sustainability-driven • Profit-driven • Confident	• Sustainability-driven • Innovators • Ambitious
They look for...	• Efficiency • Versatility • The best product	• Affordability • Reliability • Versatility	• Comfort • Convenience • Simplicity	• Efficiency • Convenience • Versatility	• Reliability • Simplicity • Affordability	• Efficiency • Productivity • Versatility	• Recognition • Cost reduction • The best product
They are not...	• Sustainability-driven • Emotionally-driven • Family-influenced	• Family-influenced • Sustainability-driven • Result-driven	• Sustainability-driven • Result-driven • Innovative	• Emotionally-driven • Family-influenced • Sustainability-driven	• Peer-influenced • Innovators • Sustainability-driven	• Large farmers • Peer-influenced • Risk takers	• Explorers • Risk conservatives • Large farmers
Don't look for...	• Well-being • Comfort • Safety	• Easy work • Financial return • Best technology	• External recognition • Financial return • Sustainable impact	• Best technology • Reliability • Sustainable impact	• External recognition • Business expansion • New technologies	• Reliability • External recognition • Easiness to use	• Easiness to use • Accessibility • Versatility

Main metrics by profile

Sample	11%	13%	29%	3%	28%	7%	9%
Production System	100% Growers	100% Growers	100% Growers	100% Ranchers	100% Ranchers	50% Growers 50% Ranchers	60% Growers 40% Ranchers
Average Property Size	2,242 ha (1.6x avg.)	1,667 ha (1.2x avg.)	1,600 ha (1.1x avg.)	2,811 ha (2.0x avg.)	959 ha (0.7x avg.)	1,185 ha (0.8x avg.)	1,399 (1.0x avg.)
Average Age	34	34	53	37	49	42	41
Experience (+5 years)	85%	77%	91%	83%	90%	83%	87%
Risk Tolerance	55%	45%	50%	71%	31%	46%	68%
Credit Adoption	78%	65%	65%	46%	40%	57%	62%
Sustainable Practice Barrier	Implementation	Cost of adoption	Implementation	Cost of adoption	Cost of adoption	Cost of adoption	Financial Return
Barriers for Credit	• No financing need • Use own resources	• High interest rates • No financing need	• High interest rates • No financing need	• No financing need • Use own resources	• High interest rates • No financing need	• Use own resources • Afraid to take credit	• High interest rates • Use own resources

Note: Hi-tech growers have purchased at least three of the listed technologies over the last 3 years. Hi-tech ranchers have purchased at least two of the listed technologies over the last 3 years.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

1.3 Expectations and Strategic Outlook

When looking ahead, Brazilian farmers remain optimistic about their mid-term prospects, with 83% confident in the future of their farms. However, optimism declines to 59% when considering the broader sector, reflecting concerns over climate change, taxes, and other external risks. While producers are confident in their ability to manage challenges on their own farms, their optimism about Brazilian agriculture is more restrained due to uncertainties beyond their control, such as climate change and trade levels.

The optimism gap is pronounced across the farming sector. Profiles that emphasize technology adoption, efficiency, and sustainability tend to be the most optimistic. Eco-Vision farmers, for example, lead in confidence, with 98% believing in their businesses and 91% in the broader sector. In contrast, more conservative segments, such as Hassle-Free farmers, who prioritize stability and risk aversion, exhibit lower confidence levels, with just 51% optimistic about the industry's future.

Short-term expectations highlight a clear divide. 68% of farmers anticipate higher production levels for 2025, with Smart-Ranch Ops (83%) and Performance-First (80%) archetypes leading in optimism, but Legacy and Trust (59%) remain more cautious. The outlook likely reflects expectations of recovery after a 7.2% drop in the 2024 Brazilian harvest, following challenging weather conditions, including severe drought—the most intense in 70 years—and flooding in key agricultural regions. Brazil's national statistics agency, IBGE, projects an 11.1% production increase for 2025, supported by anticipated improvements in weather conditions.

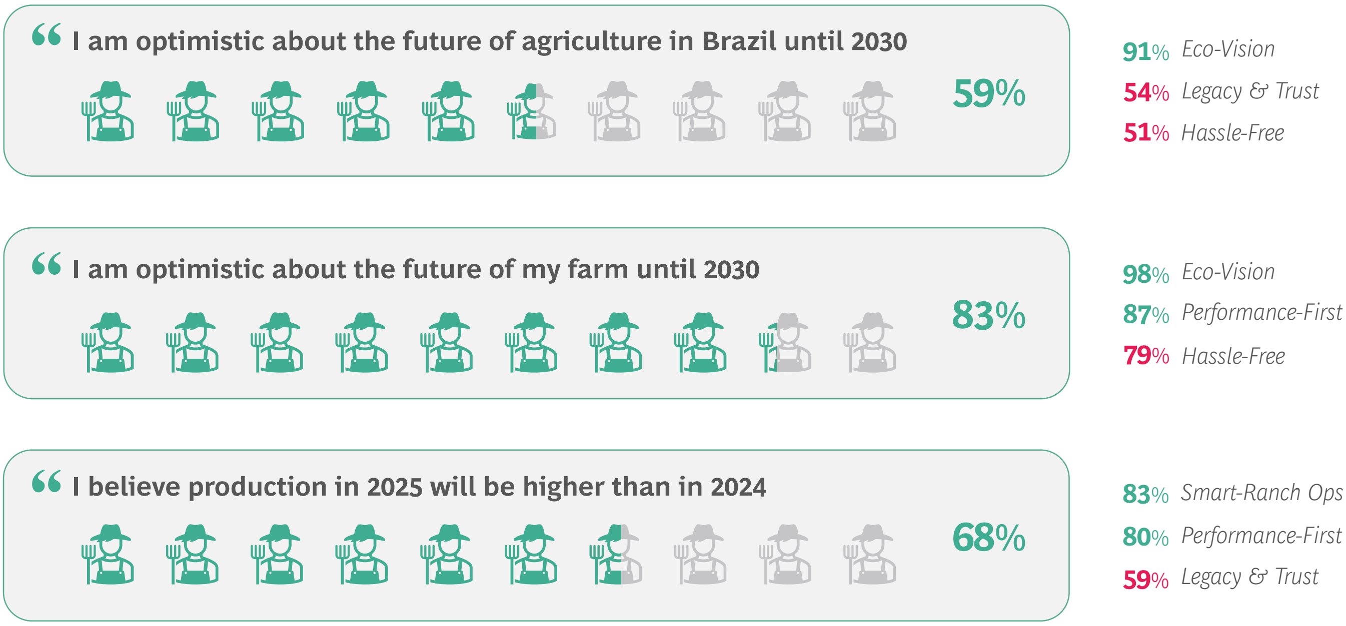
Among those expecting growth, most foresee moderate gains—74% predict increases of up to 20%, while only 5% anticipate growth exceeding 40%. These expectations align closely with IBGE's projections, indicating that producer sentiment largely reflects broader market forecasts.

Larger farms express the highest confidence, with 77% expecting production increase, while medium (54%) and small-scale (64%) producers take a more cautious expectation, possibly reflecting greater operational and financial constraints. Optimism is also more pronounced among younger farmers. 84% of those aged 18-34 expect to produce more in 2025. Only 62% of those aged 45+ expect the same. These figures suggest a more positive short-term expectation among the next generation of producers.

Exhibit 3 - Brazilian farmers remain confident in their operation, but are more cautious about the sector and short-term outlook

Brazilian farmers perspectives for short & mid-term

In percentage of respondents that agree with the affirmations below

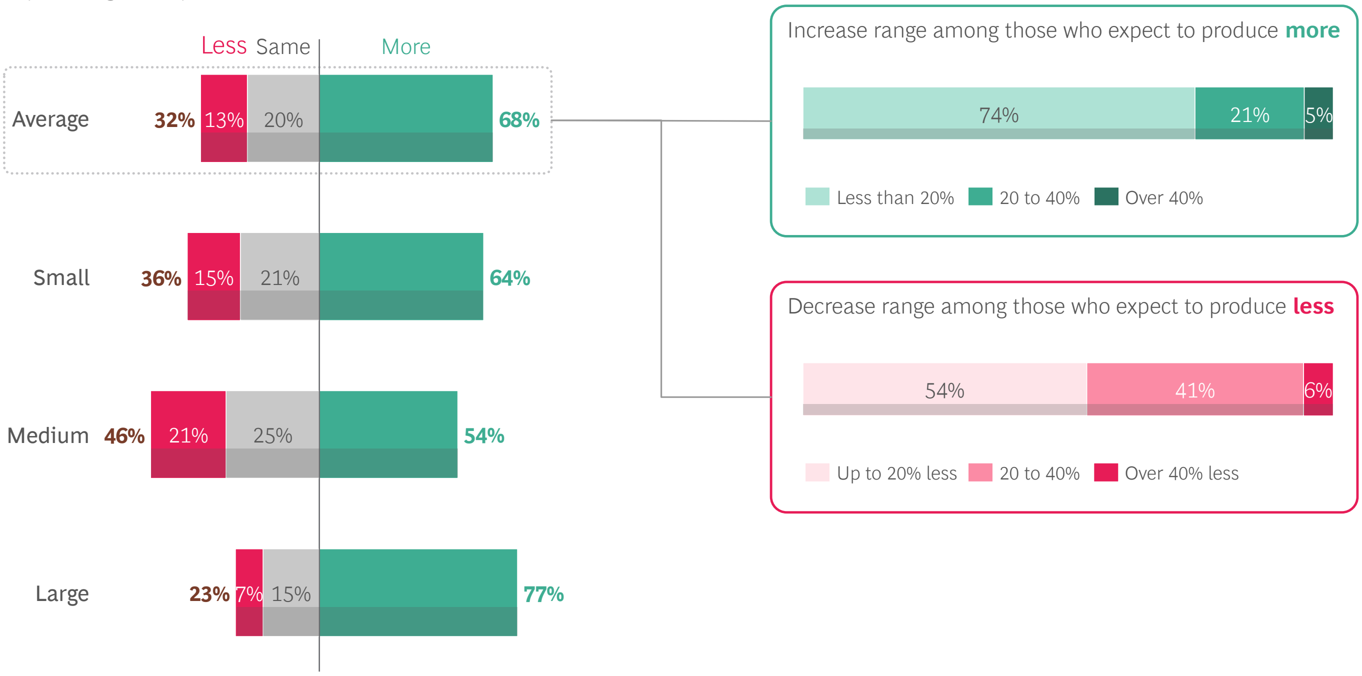


Sources: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Exhibit 4 - The anticipated end of El Niño and a supportive global trade landscape strengthens expectations of increased output in 2025

Expectations for the 2025 production cycle

In percentage of respondents



Question: How much [more/less] do you believe you will produce in 2025? Note: Does not consider farmers who mentioned they don't know, which accounted for 2% of the total.

Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

While farmers express confidence in their own operations, external challenges remain a significant source of concern. Risks related to climate, costs, and macroeconomic volatility are shaping decision-making, reinforcing why optimism about production does not necessarily translate into certainty about the broader sector.

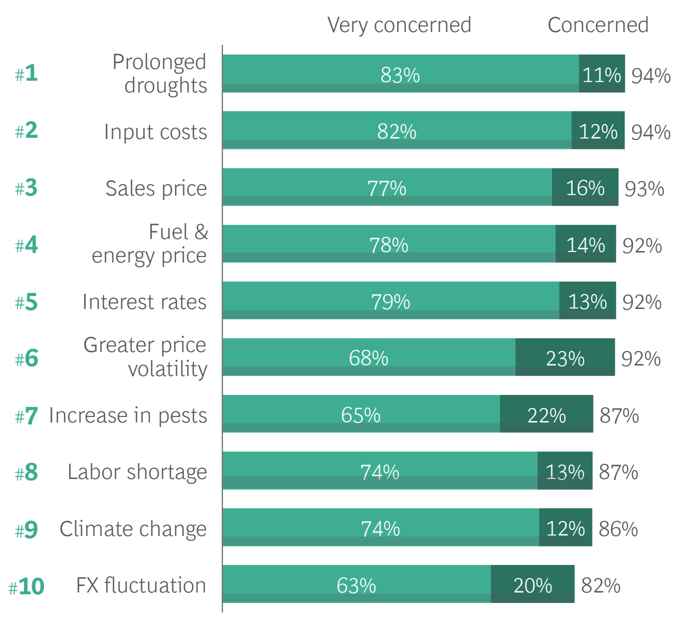
Climate risks are at the forefront: Farmers are aware of the increasing unpredictability of weather patterns, with prolonged droughts ranking as their number one concern (94%). In some regions, additional climate threats stand out. For farmers from Rio Grande do Sul, flood concerns are 24 percentage points higher than average, reflecting the extreme weather events that have impacted the region. Similarly, wildfire concerns are 19 percentage points higher in the Midwest, where drier conditions pose more significant risks.

Market volatility adds financial uncertainty: Rising input costs (94%), fluctuations in sales prices (93%), and increased price volatility (92%) are among the most pressing concerns, which increases the difficulty of financial planning for producers. The rise of the dollar has been a key highlight in Brazil's agricultural sector. In December 2024, the dollar reached a historic high of R$ 6.30, creating a mixed impact on Brazilian agribusiness: while exporters gained a competitive edge, small and medium-sized producers dependent on imported inputs faced significant financial strain.

Cost pressures create financial strain: Soaring fuel & energy prices (92%) and interest rates (92%) have placed increasing strain on farmers. Brazil’s high usage of hydropower for its electricity supply makes energy costs highly sensitive to drought conditions. This concern intensified in 2024 as severe droughts have reduced water levels in key river basins, driving up electricity prices. At the same time, rising interest rates have made financing more expensive, with Brazil’s central bank keeping its reference interest rate (Selic) at 13.25% a year to combat inflation, tightening credit access for producers.

Exhibit 5 - Producers face mounting uncertainty, with drought risk and cost volatility compounded by regional challenges

Brazilian farmer main concerns
In percentage of respondents



Equipment prices, shift in environmental regulations, increase in wildfires, shift in consumer demands are not in the top 10

All concerns in the top 10 are either directly linked to or significantly affected by climate change

Farmers in RS are 24 p.p. more concerned about floods than their peers, reflecting the recent flood challenges they have endured

FX volatility are a greater concern for farmers whose crops rely heavily on exports (5 p.p. higher).

Wildfires are a greater concern for Mid-West farmers compared to others (19 p.p. higher than other regions)

Question: Of the topics I’m about to read, how concerned are you about each one? Do you have any specific concerns about climate change affecting your production?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysiss

Climate change is seen as a significant risk, but sustainability is underestimated as an opportunity. When asked about the greatest risks and opportunities for their businesses, farmers overwhelmingly cite climate change as the top threat, 50% say it is the main reason their business could fail, surpassing concerns about economic instability (16%) or access to credit (6%). This finding reinforces the growing impact of extreme weather, prolonged droughts, and shifting rainfall patterns on agricultural production. Profiles such as "Performance-First", whose members are high adopters of technology, see this topic as more threatening than the average view (+15 p.p.), while rancher segments fall under the average. Climate remains the top risk for the farmer group.

> **The main risk that could lead my business to failure is climate instability, especially droughts.**

Despite this, only 14% view sustainability as a key success factor, suggesting that most farmers approach environmental risks reactively rather than proactively. While the challenges are widely acknowledged, few farmers currently position sustainability efforts as a competitive advantage, highlighting a gap between risk awareness and strategic adaptation.

Business Knowledge is both a risk and an asset: business knowledge ranks equally as both a significant risk (17%) and a key enabler of success (17%), reflecting its central role in farm viability. Producers recognize that financial planning, market awareness, and operational efficiency are essential for their businesses as levers for success and ways to avoid risk.

> **Plan the business well and make the best deals and investments.**

> **Poor investment decisions due to insufficient understanding of the industry.**

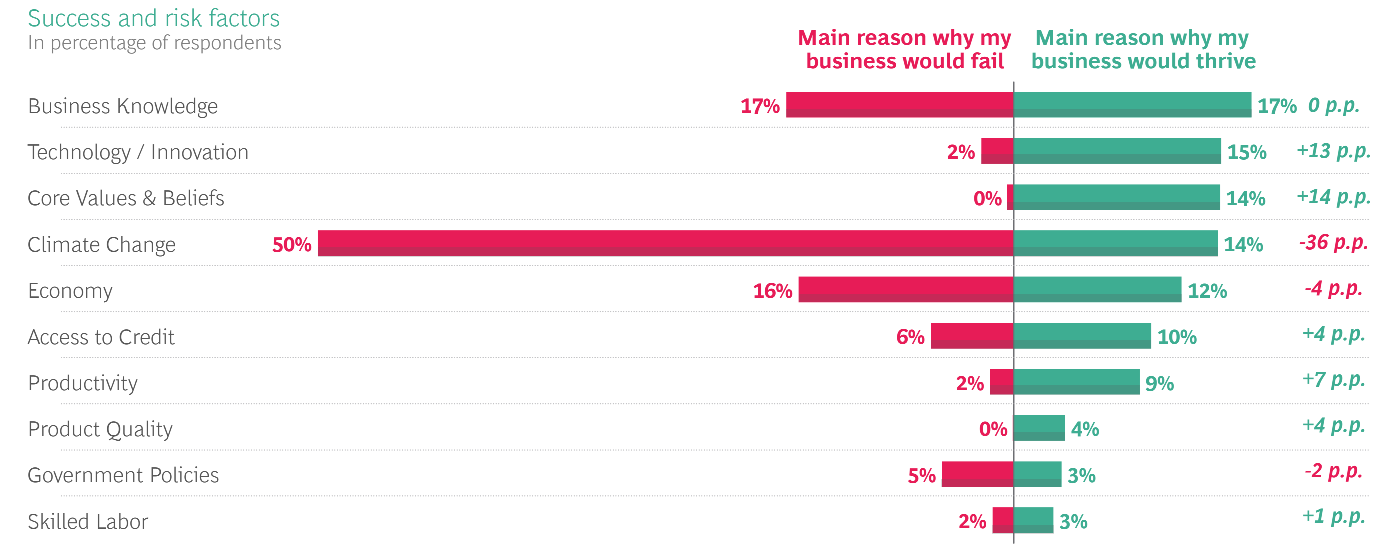
Core Values & Beliefs play a foundational role: beyond financial and operational factors, core values & beliefs (14%) shape how farmers perceive both risks and opportunities. Resilience, determination, and a strong work ethic are widely valued, but cultural aspects—such as family unity and faith—also play a central role in decision-making. Many farmers see a strong family bond as essential to business continuity, ensuring knowledge transfer and shared responsibilities across generations.

> **First and foremost, God's will is to implement sustainable practices that work in the long term.**

Technology and innovation are linked to success: while climate change is seen primarily as a threat, technology and innovation (15%) show a 13 p.p. increase in importance when comparing failure vs. success, underscoring its role in risk mitigation and productivity gains.

> **Expertise in adopting techniques to enhance productivity and reduce operational costs in my soybean cultivation.**

Exhibit 6 - Farmers see climate change as the greatest threat to their businesses; success hinges on knowledge, innovation, and values



Question: What is the main strength that can lead your business to success? What is the main risk that can lead your business to failure?
Source: Survey 'The Pulse of Agribusiness in Brazil' (N = 1,358); BCG Analysis

When it comes to investment strategies, Brazilian farmers overwhelmingly favor productivity gains over land expansion exclusively, 49% of producers prioritize increasing efficiency, while 42% balance both strategies and only 9% prefer expanding into new areas.

The preference for intensification is also pronounced among small and medium-sized farmers, where over 50% prioritize productivity. In contrast, large-scale farmers are more evenly split, with 48% combining both strategies.

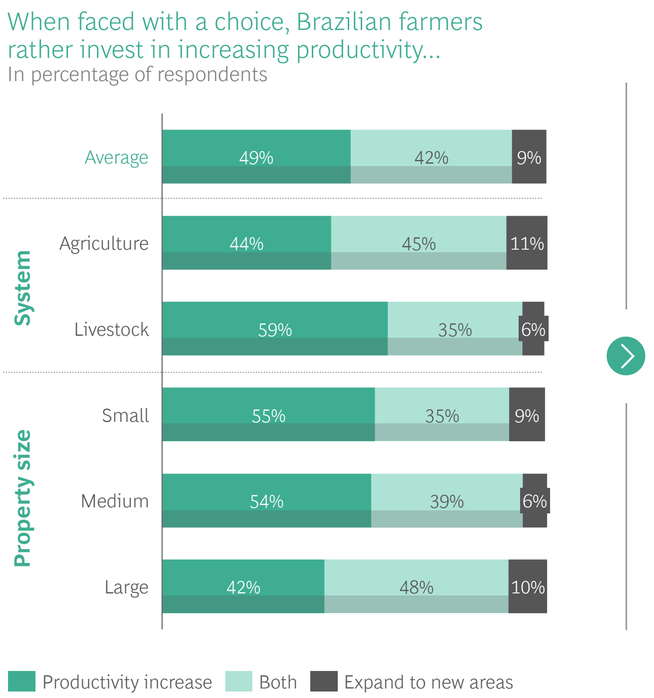
These choices reflect a long-standing shift in Brazil's agricultural model, where technological advancements have driven significant productivity growth. Since 1980, Brazil's productivity gains have prevented the expansion of approximately 450 million hectares of farmland, reflecting the sector's shift toward an efficiency-driven mindset. This expansion underscores the importance of continued investment in innovation, sustainable intensification, and financial support to help farmers scale production while minimizing environmental impact.

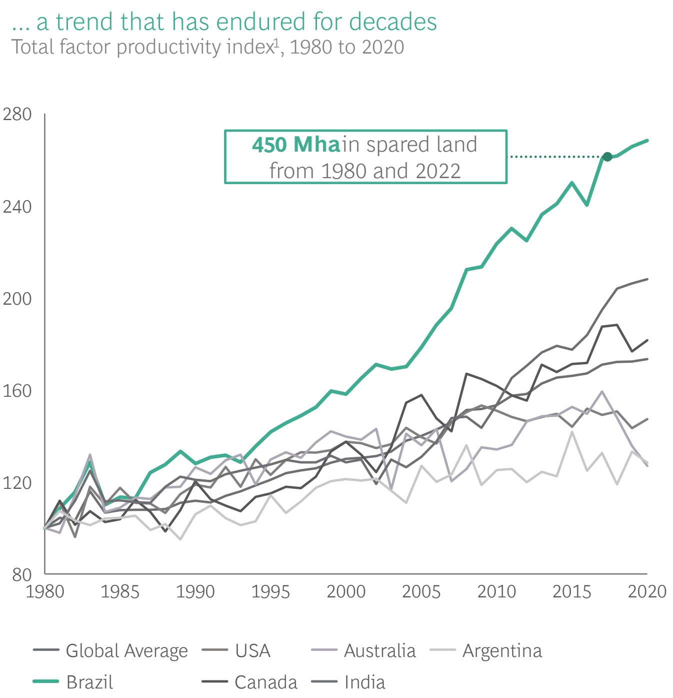
While most farmers prioritize productivity gains over land expansion, those with legal space available still see growth opportunities through expansion. Among large-scale producers, 39% plan to open new productive areas, compared to 22% of medium and 19% of small farmers. However, a significant portion—particularly smaller producers—has reached legal limits or prefers intensification over expansion. Eco Vision is the profile that most intend to expand (59%), since their investment preferences rely on expansion.

The main driver of expansion is business growth (79%), followed by improving soil rotation (27%) and increasing land value (18%). On the other hand, those who choose not to expand cite a preference for productivity improvements (35%), as well as challenges such as high costs (27%) and limited credit access (13%).

These findings highlight two distinct approaches to growth—one driven by expansion where legally possible and another by maximizing output within existing land. This double trajectory requires tailored financial and technological solutions that support efficiency-driven and expansion-oriented strategies, as well as hybrids of the two.

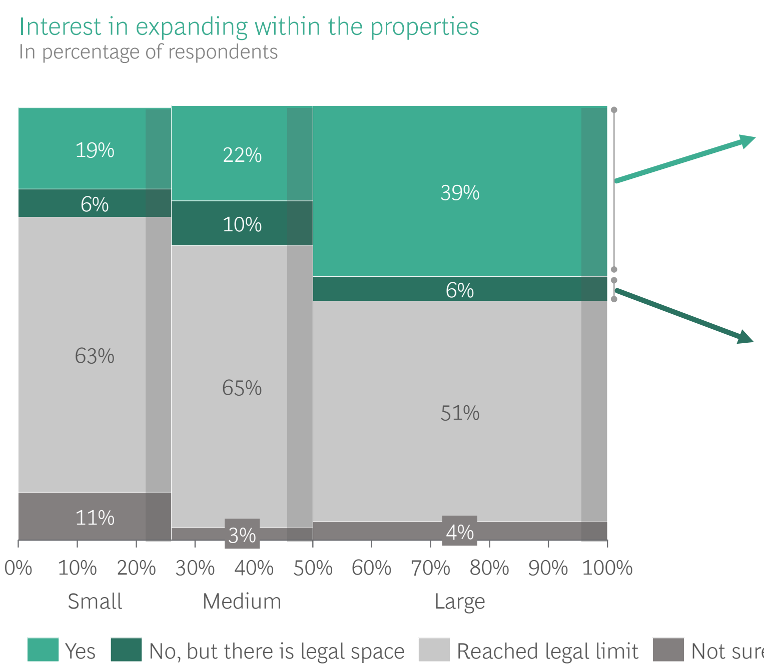
Exhibit 7 - Most producers, especially ranchers, when faced with a choice, prioritize investing in productivity over expanding land holdings...





Question: When investing in your property, what do you prefer? 1. TFP measures how effectively resources are transformed into agricultural products, considering land use, labor and capital.
Source: USDA; Insper Agro Global; IBGE; Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Exhibit 8 - ... but this does not diminish the appetite for expansion; those with natural areas legally available for growth intend to develop them



Questions: Do you plan to open new productive areas within your current property by 2030? If so, what motivates opening new lands? If not, why?Note: Property size share weighted by Gross Production Value.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

2. Technology Buying: Needs, Emotions, and Behavior

Understanding the key drivers and barriers to technology adoption is essential for accelerating innovation at scale, ensuring that Brazilian agriculture continues to evolve—not just in size but in maturity, sophistication, and sustainability. Technology adoption is influenced by a combination of economic, operational, and emotional factors, shaping how and why farmers invest in new solutions.

Analyzing farmers' perceptions, decision-making processes, and purchasing behaviors provides critical insights into what drives adoption, where barriers exist, and how agribusiness stakeholders can better support innovation uptake. By identifying patterns in technology investment, we can uncover growth opportunities, enhance market strategies, and ensure that solutions align with the real needs of producers.

2.1 Levels of Technology Uptake

Farmers tend to be cautious rather than early adopters of new technology: even among those open to change and tolerant of some level of risk, most farmers do not position themselves as early adopters of new technologies. Only 18% consider themselves early adopters, a significantly lower figure compared to those who say they seek change (76%) or take risks (47%). These findings suggest that, for many farmers, adopting new technologies represents a higher level of perceived risk than other types of changes.

Adoption speed also differs by age. Younger farmers (18–34 years) are far more likely to embrace innovation, with 29% considering themselves early adopters—a strong contrast to older farmers, where early adoption rates decline significantly. This generational difference may reflect more exposure to technology, more willingness to experiment, and a longer time horizon for recouping investments.

Among production systems, growers (22%) adopt new technologies faster than ranchers (9%). Several factors may contribute to this difference, including greater awareness of emerging market innovations, external pressures for efficiency, market-driven sustainability initiatives, and more frequent reinvestment cycles in machinery and inputs, among others.

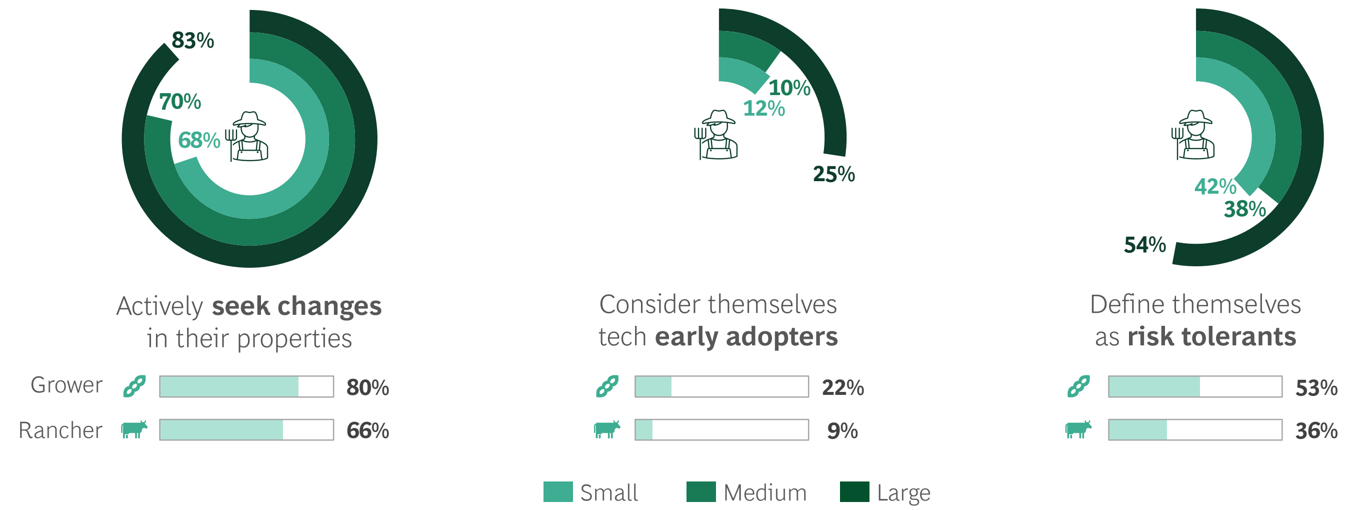
Farmers' self-perception aligns closely with classic technology adoption curves. The majority place themselves in the "early majority" segment (62%), meaning they wait until an initial group of adopters has validated a technology before integrating it. Very few see themselves as "innovators" (6%) or "early adopters" (11%).

While the overall adoption curve is similar for both groups, growers tend to move slightly faster than ranchers. Among growers, 65% belong to the early majority, while 22% see themselves as innovators or early adopters. Ranchers, however, are more hesitant—58% fall into the early majority category, while 9% identify as innovators or early adopters. Moreover, ranchers are 5x as likely to place themselves in the "laggards" category (14%) compared to growers (3%), indicating a slower pace of adoption in the livestock sector.

Exhibit 9 - Larger producers more actively pursue change, adopt technology, and have the means and capacity to take on more risk

Attitude of Brazilian farmers toward innovation

In percentage of respondents who agreed with the statement[1]

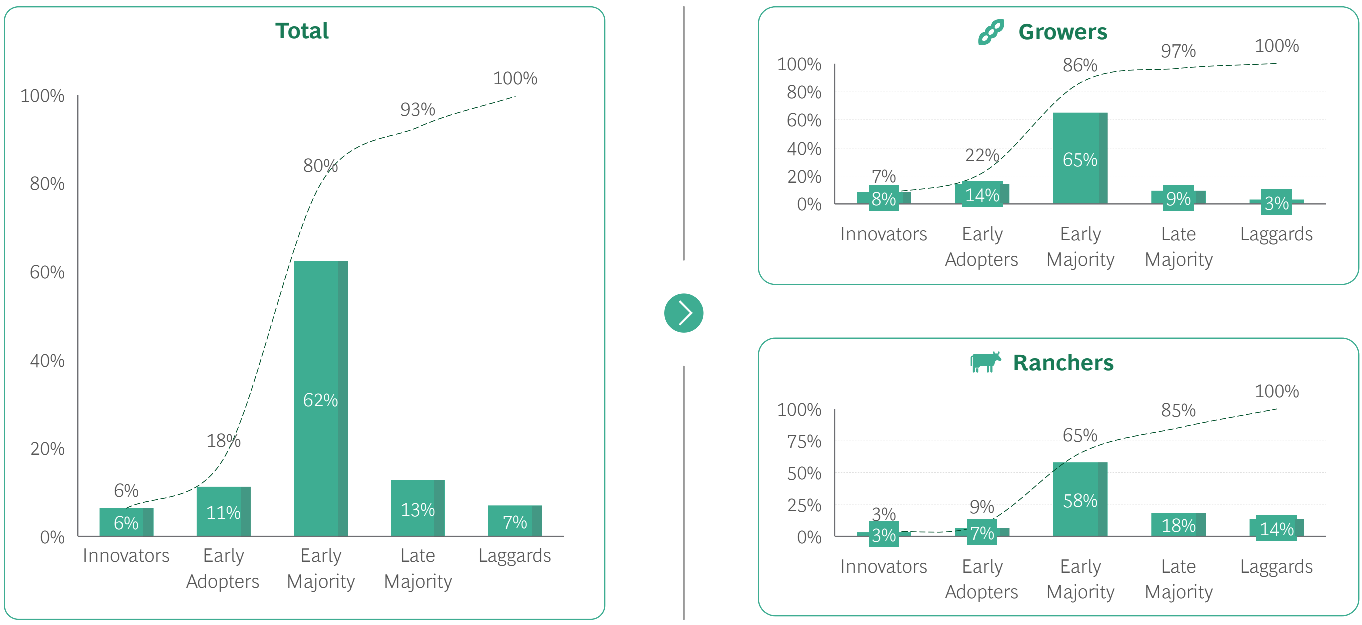


Question: What are your general attitudes towards changes on your property? How would you describe your attitude towards adopting new agricultural technologies? Which of the following options best describes your risk tolerance?
Notes: 1. Percent of respondents that have answered "totally agree" or "agree" for the statement.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Exhibit 10 - Brazilian producers typically avoid investing in new technologies until tested by a small group; ranchers are even more cautious

How farmers perceive themselves regarding the timing of technology adoption

In percent of respondents by technology adoption category



Question: How would you describe your attitude toward adopting new agricultural technologies?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Another behavioral dimension of the farmer profile is their decision-making mindset—how open they are to change, their willingness to take risks for potential returns, and their approach to innovation. Are farmers risk-tolerant and quick to adopt new technologies, or do they take a more cautious approach, waiting until solutions are proven?

Farmers actively seek change: Most Brazilian farmers are looking for ways to improve their operations—76% say they actively seek change. However, how they pursue these improvements varies by farm size and production system.

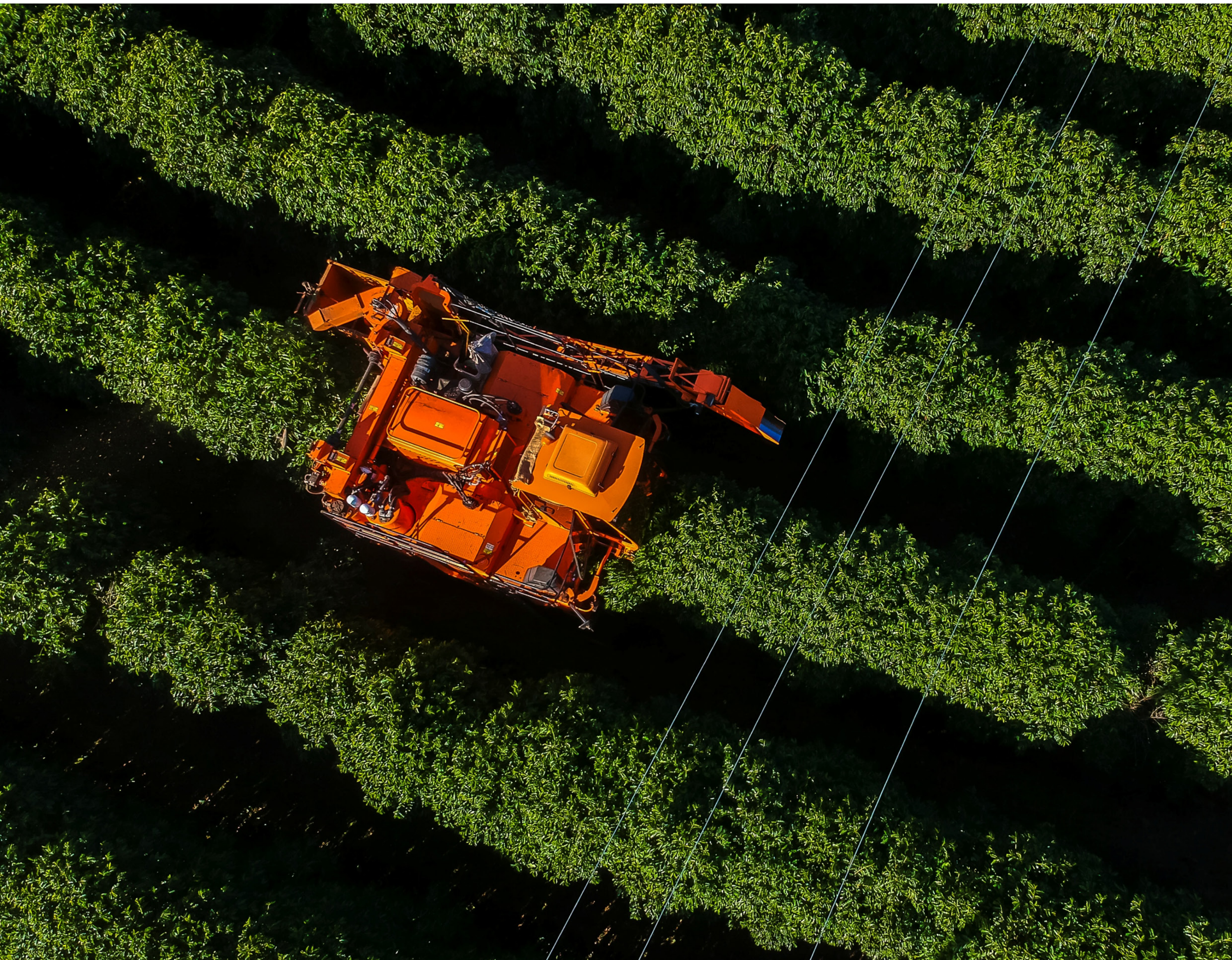
Larger farms and growers are the most proactive: 83% of large-scale producers and 80% of growers actively pursue change, compared to 68% of smallholders and 66% of ranchers. Ranchers, on the other hand, have a slightly more conservative profile, which could be influenced by both generational and cultural factors, as well as external elements such as production cycle differences between systems.

Producers want change, but not at any cost: although most farmers seek change, they are far more divided when it comes to risk-taking. While 47% describe themselves as willing to take risks, a significant 44% say they actively avoid them. This gap suggests that, while farmers recognize the need for transformation, a relevant number of them still prioritize stability over uncertainty.

54% of large-scale producers are comfortable taking risks, compared to 38% of medium and 42% of small-scale farmers. This divergence in risk profiles follows a well-established cycle in agricultural economics. Larger producers have better access to credit, often backed by higher collateral, which allows them to finance technological upgrades with relatively lower financial strain. Increases in their economies of scale further reduce per-unit investment costs, making it easier to absorb potential setbacks associated with early-stage technology adoption.

In contrast, smaller farmers operate with tighter margins and limited financing options, making them risk averse. Without financial buffers to cushion potential losses, they tend to delay adoption until the technology is widely validated (57%).

Besides that, production systems also show differences, with growers more open to risk (53%) than ranchers (36%), a pattern consistent with their approach to change. These results suggest that, while both groups consider the need for adaptation, their strategies for managing uncertainty differ.



Farm size and producer age strongly influence technology adoption among Brazilian growers. Younger and larger growers lead adoption, with growers aged 18 to 34 years old adopting 33% more technologies compared to those over 45. Also, large farms, especially those run by farmers aged 35 to 44, adopt more technologies than small farms. For this age group, large landowners implement 2x as many technologies as small property owners, likely due to greater access to capital, more access to technical assistance, and the ability to integrate new technologies at scale.

When analyzing technology awareness and adoption, growers exhibit a high penetration of inputs, a moderate adoption of equipment, and a lower level of data systems purchase. GMO (Genetically modified organism) seeds (67%) and biologicals (59%) are the most widely acquired technologies, indicating a strong focus on crop performance and sustainability. Input adoption is driven by its operational nature and immediate impact. Unlike capital-intensive investments, inputs deliver quick, tangible results, such as increased pest resistance, improved soil fertility, and enhanced crop yields. These short-term effects make inputs highly attractive, especially given Brazil's high interest rate, which can be two to three times bigger than in other countries like the US, India, and Europe. Financing large equipment becomes more challenging, particularly for small farmers. Brazil has also been recognized for its global leadership in bio-input adoption, which has been supported by government initiatives that reinforce the findings. The proven effects of particular inputs are essential factors in their adoption. For example, GMO seeds enhance pest resilience and adaptability to diverse soils, while biologicals boost productivity and reduce reliance on chemical fertilizers. They both address farmers' top priorities: cost efficiency and yield gain. This trend is more pronounced among growers, as seeds and biologicals are essential for crop management.

However, adoption rates for equipment and data systems remain low, with all categories below 10% in purchase rates. Among these, Advanced Irrigation (1%) is the least adopted equipment, while In-Field Sensors (2%) rank lowest among data-driven technologies, indicating limited investment in automation and precision agriculture. The low adoption of critical technologies, such as irrigation, leaves farmers more vulnerable to water crises—an issue expected to intensify in the coming years due to climate variability, highlighting the need for greater resilience in agricultural systems.

Beyond low adoption, awareness levels are also a challenge, particularly for equipment and data systems such as farm management systems (35%) and individual measurement solutions (44%).

Ranchers adopt technology cautiously. Currently, younger and larger ranchers are acquiring more technology, and their purchases are becoming similar to those of growers. Those aged 18 to 34 adopt 1.6 technologies on average—almost threefold the average of those over 45. Larger ranchers implement 1.4 technologies compared to 0.9 for smaller ones, suggesting that scale also influences adoption. Ranchers, like growers, prioritize inputs over other technologies. As an example, GMO seeds (34%) and biologicals (22%) are the inputs most used by ranchers who also grow crops. Our survey found that 33% of the ranchers were also growers.

For equipment and data systems, we observed a low rate of purchase for the technologies assessed, with each item acquired by less than 10% of the ranchers surveyed. For example, for equipment, the purchase of mechanized systems (8%) and advanced irrigation (1%) remains minimal. Data systems technologies, such as in-field sensors (2%) and individual measurements (3%), show low engagement, with over 50% of ranchers unaware of these solutions altogether. The overall lower purchase rate for equipment and data systems suggests the potential for boosting awareness of these technologies and also incentivizing purchase.

When comparing both production systems, growers show higher absolute levels of technology adoption, particularly in inputs and mechanization. They adopt three times more technologies than ranchers (3.0 vs. 0.8 on average), and their engagement with precision equipment is substantially higher. However, the lower number of technologies adopted by ranchers may indicate a different dynamic in the types of technologies needed for scale rather than just a slower adoption rate. As with growers, younger and larger ranchers tend to adopt more technologies, reinforcing the influence of farm size and age on innovation uptake.

This disparity aligns with the risk tolerance and innovation curve insights characterized in the farmer's profile. Growers, particularly those with larger farms, exhibit a higher risk appetite and a stronger inclination toward early adoption. Meanwhile, ranchers, with their lower risk tolerance and potentially different technological needs, tend to wait until innovations are widely validated before integrating them. The high level of unawareness about equipment and data systems among ranchers further reinforces their position as late adopters, suggesting that greater exposure to and education on digital solutions could be a critical factor in increasing adoption.

Exhibit 11 - Technology adoption varies widely across growers and ranchers, shaped by farm size and age

Question: Which of these agricultural technologies have you heard of? When was the last time you purchased each of the technologies listed?
Source: Survey 'The Pulse of Brazilian Farmers' (N= 377 Growers and 232 Ranchers); BCG Analysis

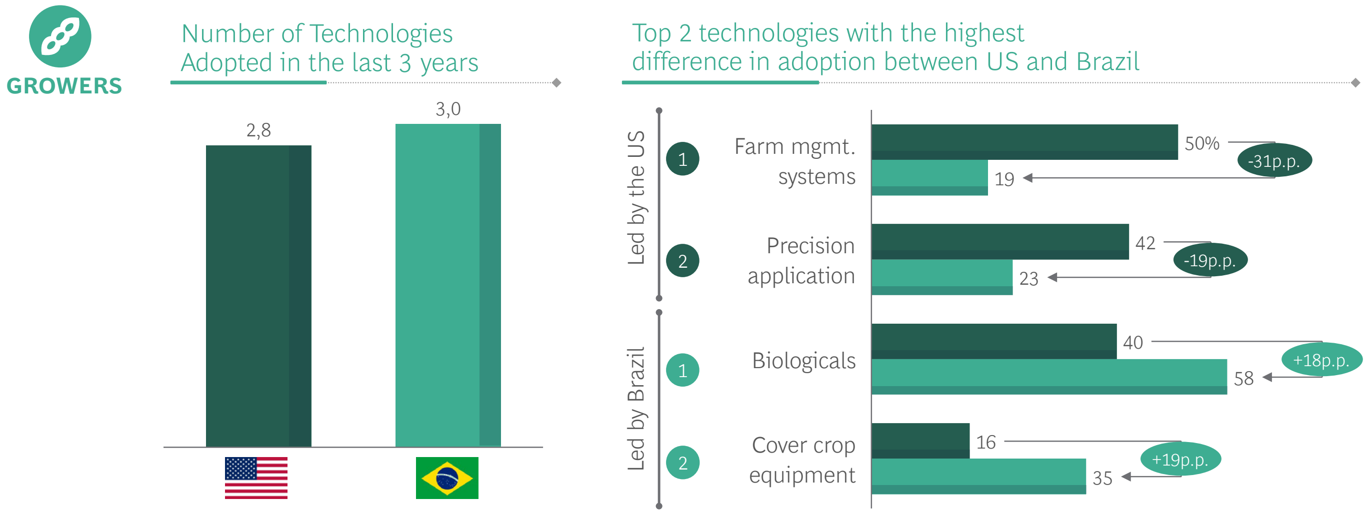
BCG conducted a large-scale survey in 2024 in the US, leveraging its proprietary DCG tool to assess US growers' technology adoption and decision-making drivers. The survey gathered insights from 1,000 growers in the US, providing a comparative perspective on adoption patterns, purchasing behavior, and sustainability priorities.

Brazilian farmers have adopted as much technology as Americans across the same surveyed categories. On average, Brazilian growers adopted 3.0 technologies in the last three years, compared to 2.8 in the US. However, adoption patterns vary: US growers lead in precision agriculture, with significantly higher adoption of farm management systems (50% vs. 19%) and precision application (42% vs. 23%), reflecting a more advanced integration of digital tools. In contrast, Brazilian farmers lead in biological inputs (58% vs. 40%) and cover crop equipment (35% vs. 16%), likely due to Brazil's tropical climate, higher pest pressure, and greater focus on regenerative practices.

Beyond adoption rates, Brazilian and US growers share key behavioral similarities, such as openness to change and an active pursuit of new technologies. However, US farmers tend to take bigger risks, likely due to greater capital access and a more competitive market. In technology purchasing, resellers and agronomists are key decision influencers in both countries. Brazilians rely more on sales representatives, while US growers engage more with dealerships, indicating different trust dynamics in the buying process. Sustainability is valued in both markets and is driven by regulations, consumer expectations, and land productivity considerations. Carbon credit adoption remains lower in Brazil despite high interest.

These insights highlight both the maturity gaps and unique opportunities in each market, reinforcing the need for tailored strategies to drive technology adoption and purchasing behavior in different agricultural landscapes.

Exhibit 12 - Despite similar averages in tech adoption, Brazil and the U.S. growers differ in market maturity, leading to distinct opportunities



Question: When did you last buy each of the listed technologies?
Source: USDA; Survey 'The Pulse of Brazilian Farmers' (N = 377) and US Grower Technology Usage Survey (N=587); BCG Analysis

Exhibit 13 - Understanding country differences and similarities among growers is key to a tailored and effective approach

GROWERS

Topics	Similarities between Brazil and US	Differences between Brazil and US
Behavior	• Respondents in both markets are **open to change and actively seek new ways** to evolve	• **US growers take bigger risks,** likely due to greater capital access and a more competitive market. • US growers perceive themselves as innovators, while Brazilians tend to be more reserved
Technology	• **Overall awareness rate around 70%,** and adoption rates varying according to the technology type • **Resellers and agronomists are key decision influencers** due to their expertise and proximity. • **Physical sales remain dominant,** with growers valuing direct relationships with suppliers • **Revenue growth is the top priority,** while sustainability is considered when financially viable.	• **Brazil adopts more biological inputs than the US,** likely due to its tropical climate and higher pest pressure • **Brazilians rely more on sales reps, while US growers engage more with dealerships,** reflecting different trust dynamics • US growers expect a **smooth buying process** (e.g., good customer service, while Brazil don't have this expectation)
Sustainability	• **Both value sustainability,** influenced by regulations, consumer expectations and land productivity	• **Carbon credit awareness and adoption are lower in Brazil,** but interest is high

Question: When did you last buy each of the listed technologies?
Source: USDA; Survey 'The Pulse of Brazilian Farmers' (N = 377) and US Grower Technology Usage Survey (N=587); BCG Analysis

2.2 The Buying Journey: Trust, Timing, and Channels

The agricultural technology purchasing journey depends on technology type, farmer priorities, influencers, and distribution channels. Some purchases are long-term strategic investments, while others are routine operational expenses.

For inputs such as seeds and biologicals, farmers prioritize reliability, sustainability, and safety. Agronomists play a central role as key influencers, with cooperatives also serving as trusted sources—particularly for smallholders. Farmers primarily buy from sales representatives and retail stores, highlighting the importance of direct relationships and in-person recommendations. Additionally, input purchases are more frequent and operational, leading to a hybrid purchasing approach. When it comes to purchase channels, sales representatives and retail stores are the primary sources, while brand dealerships are less commonly used for inputs. Farmers prefer these channels for their direct recommendations and convenience, as inputs require frequent purchases.

When acquiring machinery and mechanized solutions, farmers prioritize usability, safety, and compatibility with existing infrastructure. Equipment is a high-stakes investment, so farmers rely on resellers for their expertise. Trade shows also play a key role, serving as an essential touchpoint between OEM (original equipment manufacturer) companies and farm owners. Large-scale producers prefer buying from brand dealerships for direct manufacturer support.

For data systems such as management systems and in-field sensors, farmers prioritize simplicity, profitability, and productivity gains. Farmers hesitate to adopt data systems due to low familiarity, making peer influence essential. While agronomists remain a key source of guidance, resellers and friends/family also shape opinions, reinforcing the importance of trusted recommendations in driving adoption. Unlike inputs and equipment, data system purchases rely less on physical retail channels and more on trade shows and sales representatives, likely due to the need for personalized demonstrations and technical explanations. Brand dealerships have a more minor role in data system sales, suggesting they don't fully meet farmers' needs for digital solutions. Instead, more decentralized and specialized providers appear to be gaining traction in this space.

Exhibit 14 - Needs, influencers, and channels vary depending on the purchase

Needs, influencers and channels when purchasing

Top three responses, in percentage of respondents

When buying...	Inputs	Equipment	Data Systems
Farmers look for...	1. Reliability 2. Sustainability 3. Safety	1. Usability 2. Safety 3. Compatibility	1. Simplicity 2. Profitability 3. Productivity
Their influencers are...	1. Agronomists ▲ 2. Resellers = 3. Cooperatives ▲	1. Resellers ▲ 2. Agronomists ▼ 3. Trade shows ▲	1. Agronomists = 2. Resellers ▼ 3. Friends/Family
Their main channels are...	1. Sales representative ▲ 2. Retail store ▲ 3. Brand dealership ▼	1. Brand dealership ▲ 2. Sales representative ▼ 3. Retail Store ▼	1. Sales representative = 2. Trade shows ▲ 3. Brand dealership ▼

▲: Higher than average ▼: Lower than average

Questions: When I bought this technology, I wanted a product that or I wanted to feel. Thinking about the last time you purchased this technology, how important were the suggestions from this stakeholder? Thinking about the last time you purchased this technology, which of the following options best describes how you made the purchase?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

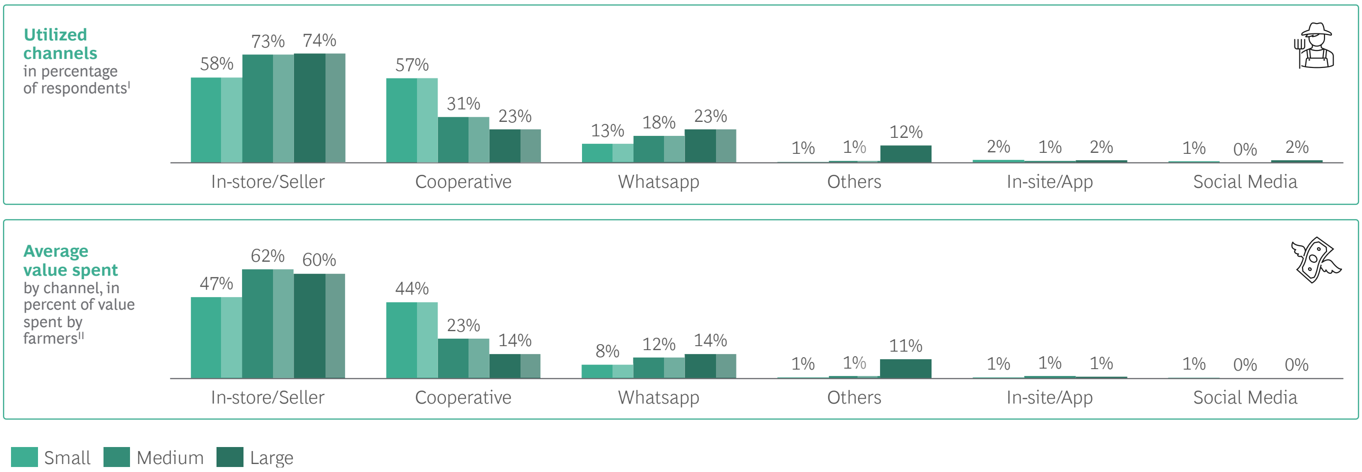
A deep dive was conducted into the purchasing behavior of inputs, which are acquired more frequently and through a distinct sales journey compared to equipment and data systems. Smallholders rely on personal relationships and cooperatives for input purchases. Over half of small-scale farmers have cooperatives as their primary channel, reinforcing the role of these networks as key intermediaries for credit access, recommendations, and logistics.

In-store sellers dominate across all farm sizes, with medium and large producers spending around 60% through this channel. Digital transactions remain limited, but messaging apps are emerging as a key tool for operational input purchases, creating online sales opportunities.

Technology type shapes the purchase journey: inputs are routine buys driven by agronomists and cooperatives, while equipment is a long-term investment influenced by resellers and dealerships. Data systems, still in the early adoption phase, require more trust-building through peer networks and expert guidance. Additionally, farm size plays a significant role in channel preference. Smallholders rely more on cooperatives, while larger farms prefer direct relationships with retailers and suppliers. Messaging Apps's growing role in purchases presents an opportunity to expand digital sales, especially for inputs.

Exhibit 15 - Brazilian producers rely heavily on strong personal relationships and cooperatives, particularly smallholders

Preference of channel when purchasing inputs



Questions: 1. What are your most frequent channels for purchasing supplies? 2. Estimate the percentage of the value of supplies purchased through each channel:. Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Growers' purchasing decisions vary based on technology type, financial conditions, and trust in advisors. "Inputs are routine, equipment and data systems are long-term investments tied to economic cycles and trust.

Growers purchasing GMO seeds, biologicals, and slow-release fertilizers prioritize productivity, efficiency, and cost-effectiveness. As operational necessities, inputs are less tied to financial cycles—purchased in both good (41%) and bad years (28%). Most transactions happen in person (50% via salespeople, 20% in retail stores), with agronomists as key influencers. Farmers rely on trusted advisors and direct relationships, explaining low online purchase rates. Payment is predominantly upfront (46%) or in installments (30%), highlighting the importance of cash flow management for these operational expenses.

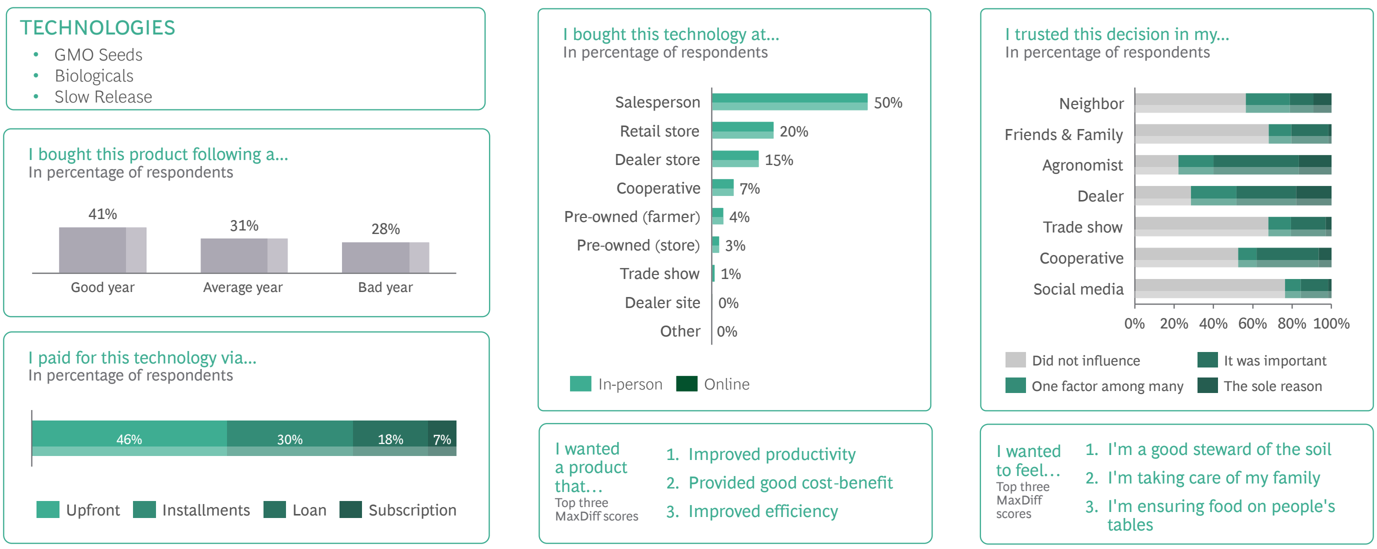
For machinery like auto-steer, precision irrigation, and cover crop equipment, farmers buy machinery strategically—60% make a purchase after a good year and 36% in an average year. Dealerships (45%) and sales representatives (31%) dominate the sales channel, as farmers seek expert guidance, demonstrations, and after-sales support. Farmers prioritize usability, safety, and compatibility, taking a cautious approach to the implementation process. Financing methods are similar to inputs, with 48% paying upfront but a slightly higher reliance on loans (21%).

Farm management software and in-field sensors remain underutilized, with purchasing decisions partially tied to financial cycles, though less so than equipment. Farmers prioritize productivity and efficiency, buying from salespeople (42%) and trade shows (23%) for hands-on exposure. The influence of agronomists and dealers on these decisions is similar, reinforcing the importance of expert recommendations. Subscription models (19% of purchases) suggest that flexible financing options for digital tools have fair penetration, given its need for updates and support.

Key findings across technology types

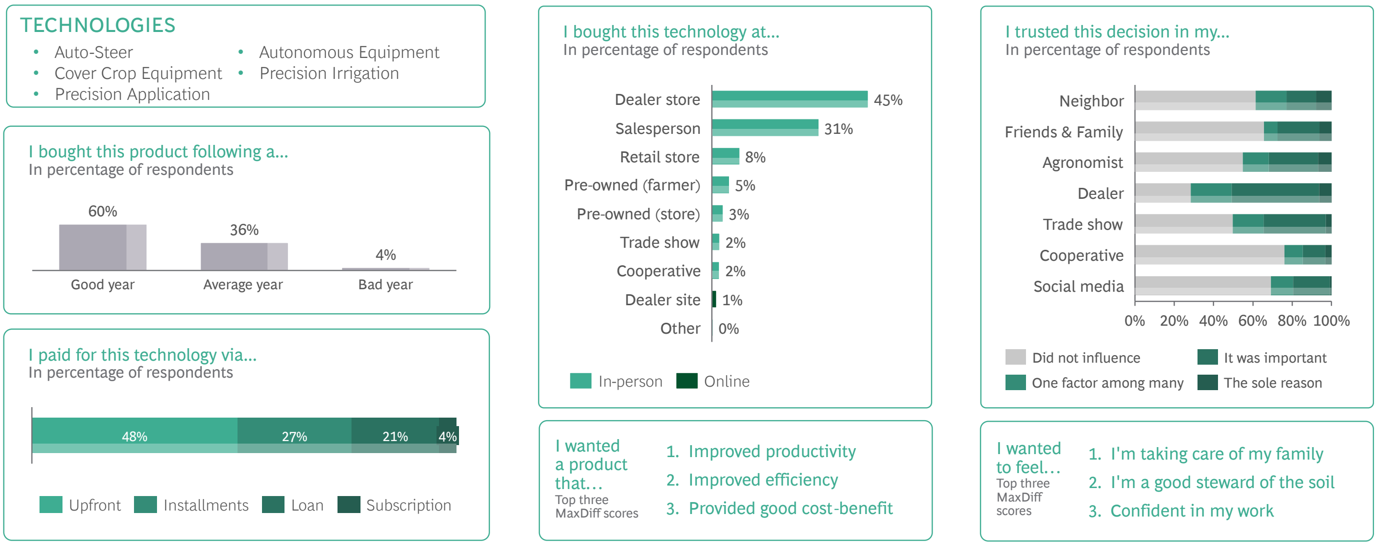
- Input is essential and frequently purchased, with agronomists guiding farmers of all sizes and cooperatives serving as a key source of influence for smallholders, as in-person transactions remain dominant.
- Equipment is a high-cost, long-term investment, heavily tied to financial cycles, purchased primarily through dealerships, with expert guidance and financing playing a more significant role.
- Data systems remain niche, requiring both financial confidence and trust in their effectiveness, with peer recommendations (friends, family, cooperatives, and social networks) playing a critical role in purchase decisions.
- Understanding these different purchasing behaviors is crucial for aligning sales strategies, financing options, and advisory support to each technology category.

Exhibit 16 - Growers – Inputs purchase insights



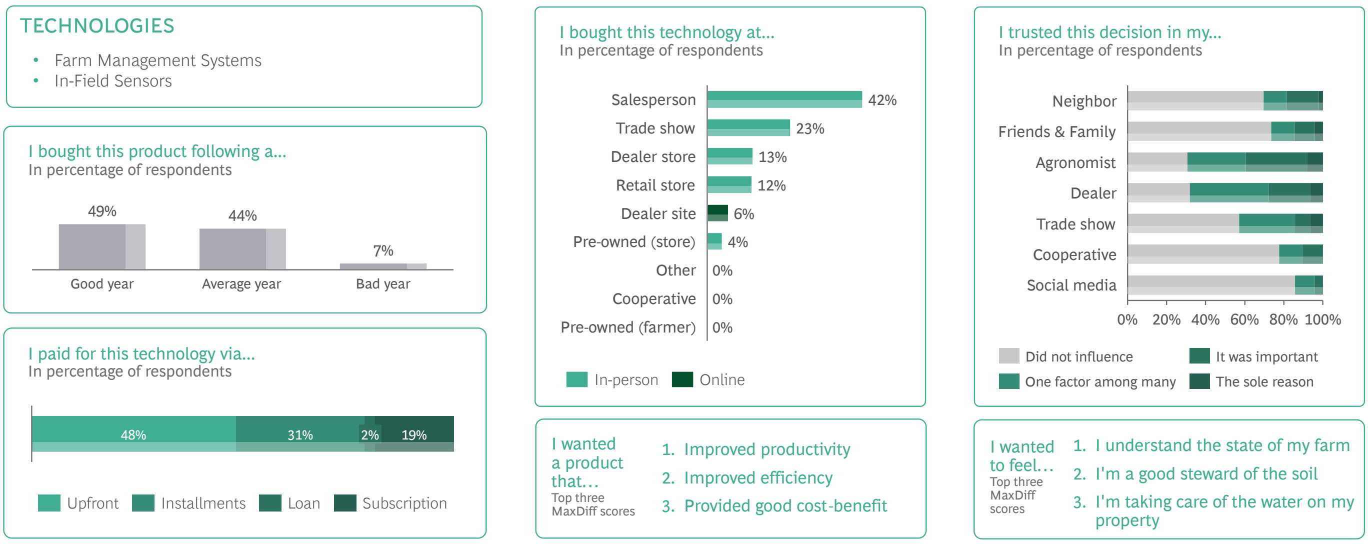
Question: How would you describe the production year of your purchase? How did you pay for this technology? Where did you buy it? Who did you trust to make the purchase decision? 1. Others encompass.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 112); BCG Analysis

Exhibit 17 - Growers – Equipment purchase insights



Question: How would you describe the production year of your purchase? How did you pay for this technology? Where did you buy it? Who did you trust to make the purchase decision? 1. Others encompass.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 131); BCG Analysis

Exhibit 18 - Growers – Data Systems purchase insights



Question: How would you describe the production year of your purchase? How did you pay for this technology? Where did you buy it? Who did you trust to make the purchase decision? 1. Others encompass.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 30); BCG Analysis

2.3 Purchasing Patterns by Farmer Archetype

Distinct farmer personas, each with unique attitudes toward risk, innovation, and decision-making, play a relevant role in technology adoption. While some groups actively integrate a broad range of technologies, others adopt inputs while purchasing less equipment and data systems.

Among growers, Performance-First farmers are the most tech-driven, adopting an average of 5.7 out of 10 technologies and adopting a broad mix of inputs, equipment, and digital tools. These young, profit-driven growers seek efficiency, versatility, and the best products, leading to the highest purchase level for all technologies, especially auto-steer (86%) and farm management systems (43%). On the other end of the spectrum, Steady-Hand Explorers adopt the fewest technologies (1.7 on average), reflecting their cautious relationship with innovation and possibility.

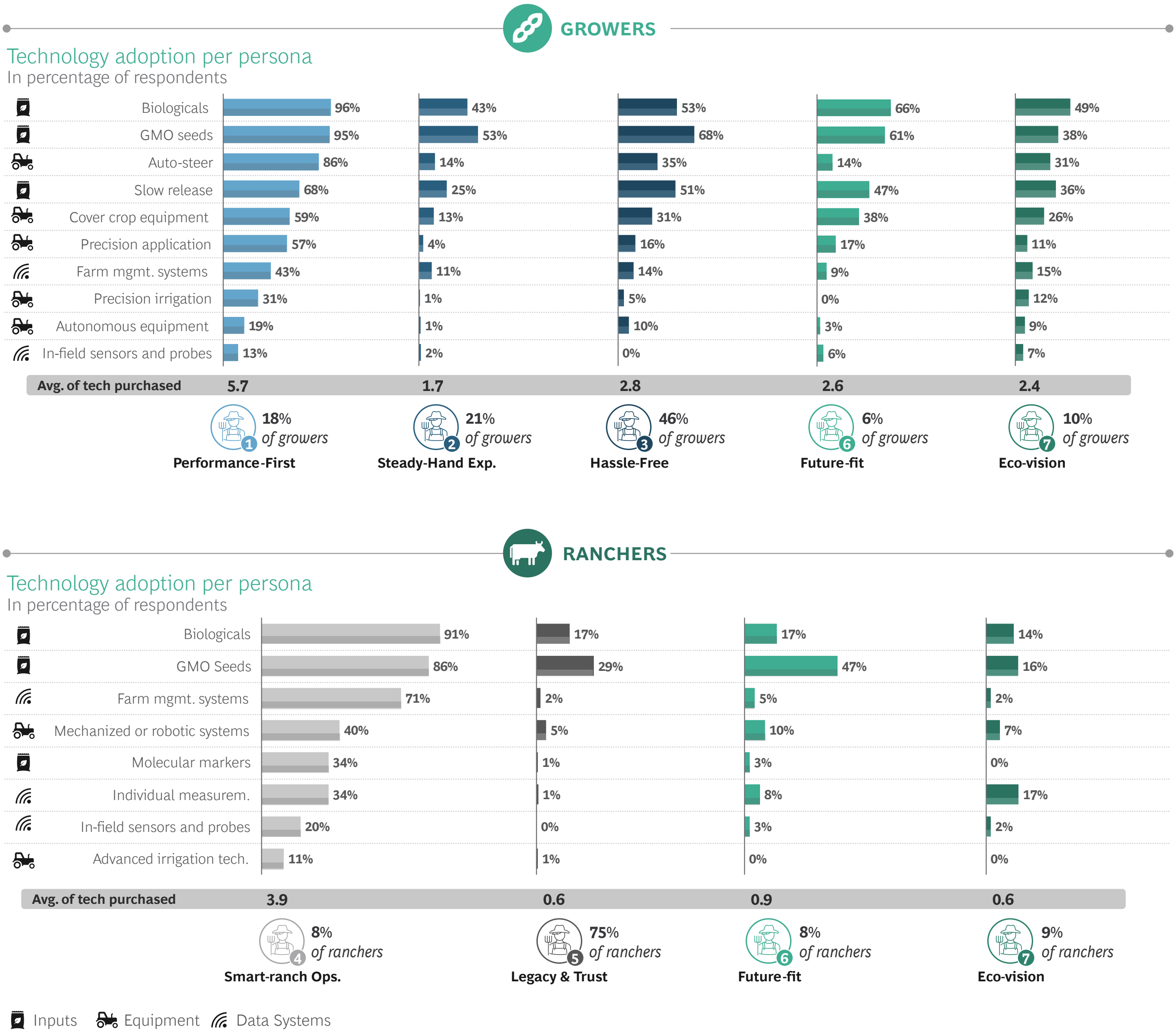
These growers prioritize reliability and accessible solutions, with limited engagement in mechanization and digital tools—adopting auto-steer (14%) and management systems (11%) at minimal levels. Meanwhile, Hassle-Free (2.8), Future-Fit (2.6), and Eco-Vision (2.4) growers adopt similar levels of technology, mainly focusing on inputs. Their investments are primarily concentrated in biologicals, GMO seeds, and cover crop equipment, while automation and precision tools remain underutilized.

Among ranchers, Smart-Ranch Operators (3.9 technologies on average) are the most engaged adopters, prioritizing efficiency, mechanization, and digital tools. This group has the highest adoption of farm management systems (71%) and mechanized equipment (40%), reinforcing their focus on operational improvements and precision livestock management. Conversely, Legacy and Trust (0.6), Future-Fit (0.9), and Eco-Vision (0.6) ranchers exhibit low adoption levels, with a stronger focus on input-related technologies. Purchases of biologicals and GMO seeds reflect the presence of ranchers who are also growers (33%). Legacy and Trust ranchers are the most skeptical, prioritizing tradition and affordability while avoiding high-risk innovations. Future-Fit and Eco-Vision ranchers, despite their sustainability orientation, do not necessarily purchase technologies beyond input with scale.

Across both growers and ranchers, inputs such as biologicals and GMO seeds are the most widely adopted technologies, while equipment and data systems remain significantly underutilized for most personas. Even among the most tech-driven personas, such as Performance-First growers and Smart-Ranch Operators, adoption of in-field sensors and precision irrigation remains low. This adoption suggests that for all profiles, technology uptake pathways are needed with specific approaches tailored for each profile's risk appetite and current level of tech adoption, leveraging financing mechanisms, knowledge, and assistance gaps.

Among the Future-Fit and Eco-Vision personas—found in both growers and ranchers—technology adoption is significantly higher among growers. Future-Fit growers adopt an average of 2.6 technologies compared to just 0.9 for Future-Fit ranchers, while Eco-Vision growers adopt 2.4 technologies versus 0.6 for ranchers. Therefore, production systems play a key role in technology adoption, even among farmers with similar values and purchasing behaviors. Farmers' technology adoption behaviors closely align with their underlying motivations and risk tolerance. Tech-driven farmers prioritize efficiency and profit, while traditionalists value reliability and affordability. These differences highlight the need for tailored strategies to encourage adoption, ensuring that new technologies align with each group's specific needs and decision-making processes.

Exhibit 19 - Technology adoption remains uneven across farmer profiles, with inputs outpacing equipment and data systems



Have you purchased this technology in the last three years?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 377 Growers and 232 Ranchers); BCG Analysis

Farmers' technology adoption is driven not only by functional benefits like productivity and cost-efficiency but also by emotional factors such as trust, legacy, and sustainability values. Each persona balances these aspects differently, influencing what they prioritize when purchasing, what holds them back, and how they make decisions.

Overall, tech-driven farmers prioritize efficiency and profitability, while pragmatic adopters focus on reliability and accessibility. Traditionalist ranchers and low-risk growers emphasize security, family legacy, and financial constraints, slowing their adoption of automation and digital tools. Understanding these motivations is crucial for tailoring technology offerings and reducing adoption barriers.

Performance First: Young, large-scale growers prioritize productivity and cost-effectiveness. Cost remains a significant barrier, likely due to the high interest rates associated with technology acquisition. They seek credit only when necessary, likely due to their preference for financial independence. Their decisions are business-driven, with less emphasis on differentiating themselves from other farmers.

Steady-Hand Explorer: Risk-averse growers who prioritize efficiency and reliability. They prioritize accessible, proven solutions and aim to feel confident in their work. Cost is also a barrier, along with necessity reasoning.

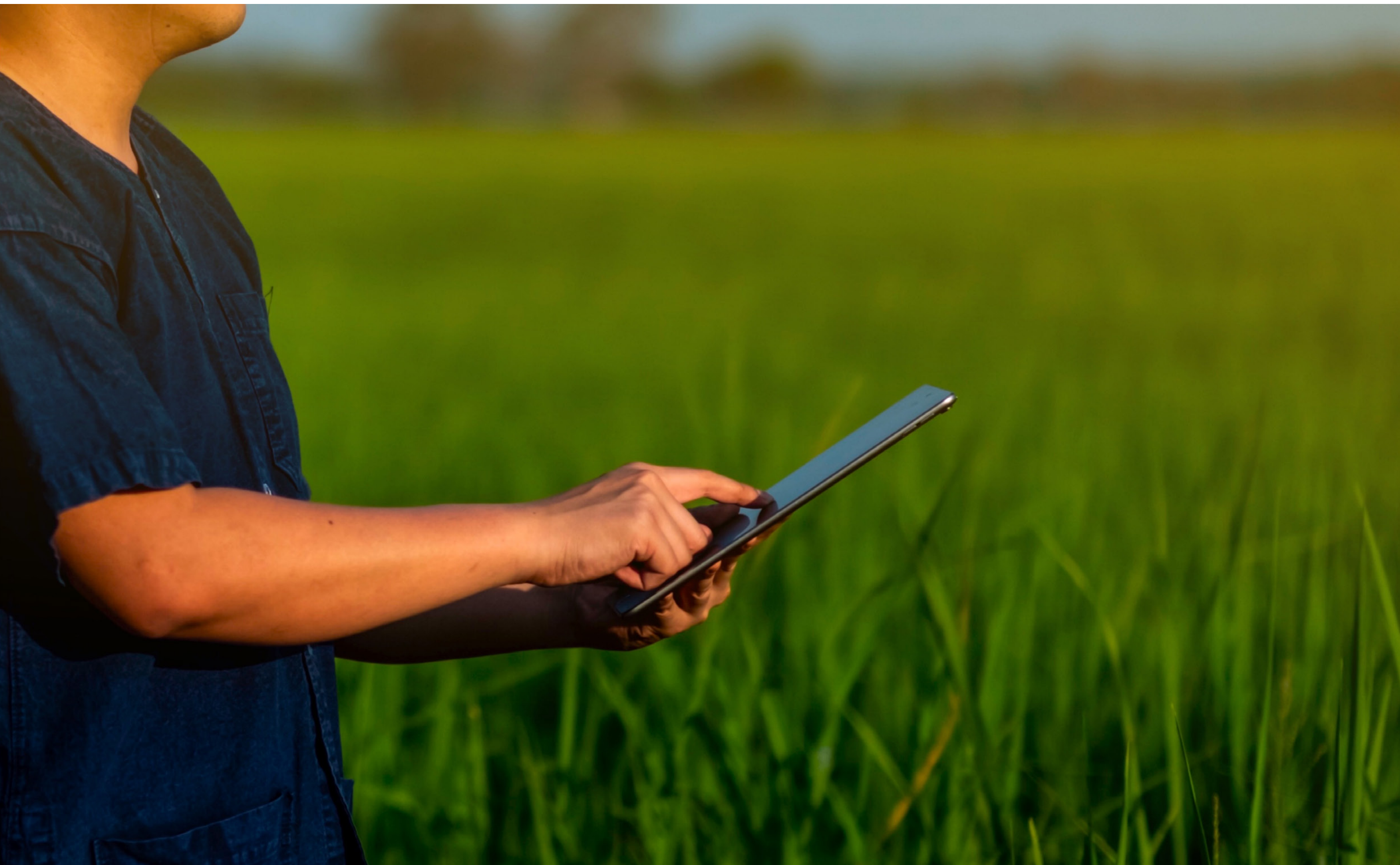
Hassle-Free: Older growers who prioritize ease of work and safety over financial returns. Their purchasing decisions focus on low-risk, well-known solutions connected to the farm and their family. While cost and necessity are the main barriers, limited access further constrains their ability to adopt new technologies.

Smart-Ranch Ops: Young, tech-driven ranchers with a strong risk-taking profile, prioritizing efficiency and cost reduction when acquiring technologies. They are driven by confidence and focus on farm operations. Necessity is the main barrier to credit adoption, suggesting a preference for self-financing over external funding.

Legacy and Trust: Conservative ranchers who prioritize tradition, stability, and family-driven decisions. They have the smallest average property size among personas and face significant barriers to credit, particularly due to cost, necessity, and limited access

Future-Fit: Farmers that are cautious adopters, balancing efficiency with financial constraints. As growers and ranchers, they invest in proven technologies but avoid costly, cutting-edge tools over ROI concerns. Their decision-making is driven by a strong sense of purpose, prioritizing family, soil stewardship, and the responsibility of producing food for society. Cost and necessity are the main barriers to credit adoption.

Eco-Vision: Risk-taking farmers who integrate sustainability as a core value. When purchasing, they prioritize productivity and cost-benefit. Like Future-Fit farmers, they have a strong sense of purpose but face fewer credit barriers, though necessity remains a constraint.



3. Sustainable Practices: Adoption and Friction Points

As part of understanding farmer profiles from a behavioral perspective, the study examined how they perceive the importance of sustainability—an increasingly relevant factor in agricultural decision-making. While most farmers acknowledge its significance, it varies across generations, genders, and production systems.

Sustainable agriculture plays a crucial role in enhancing production, building environmental resilience, and supporting long-term farm sustainability. Brazil's ABC+ Plan, a key government initiative, promotes practices through defined levers that improve soil health, water efficiency, and carbon sequestration, reinforcing the sector's role in climate adaptation and low-carbon agriculture. Similarly, the National Program for Conversion of Degraded Pastures (PNCPD) supports the restoration of pasturelands into more productive and sustainable systems, further driving the adoption of regenerative practices. Examining how farmers engage with these practices provides valuable insights into the drivers of adoption and the barriers that must be addressed to accelerate sustainability at scale.

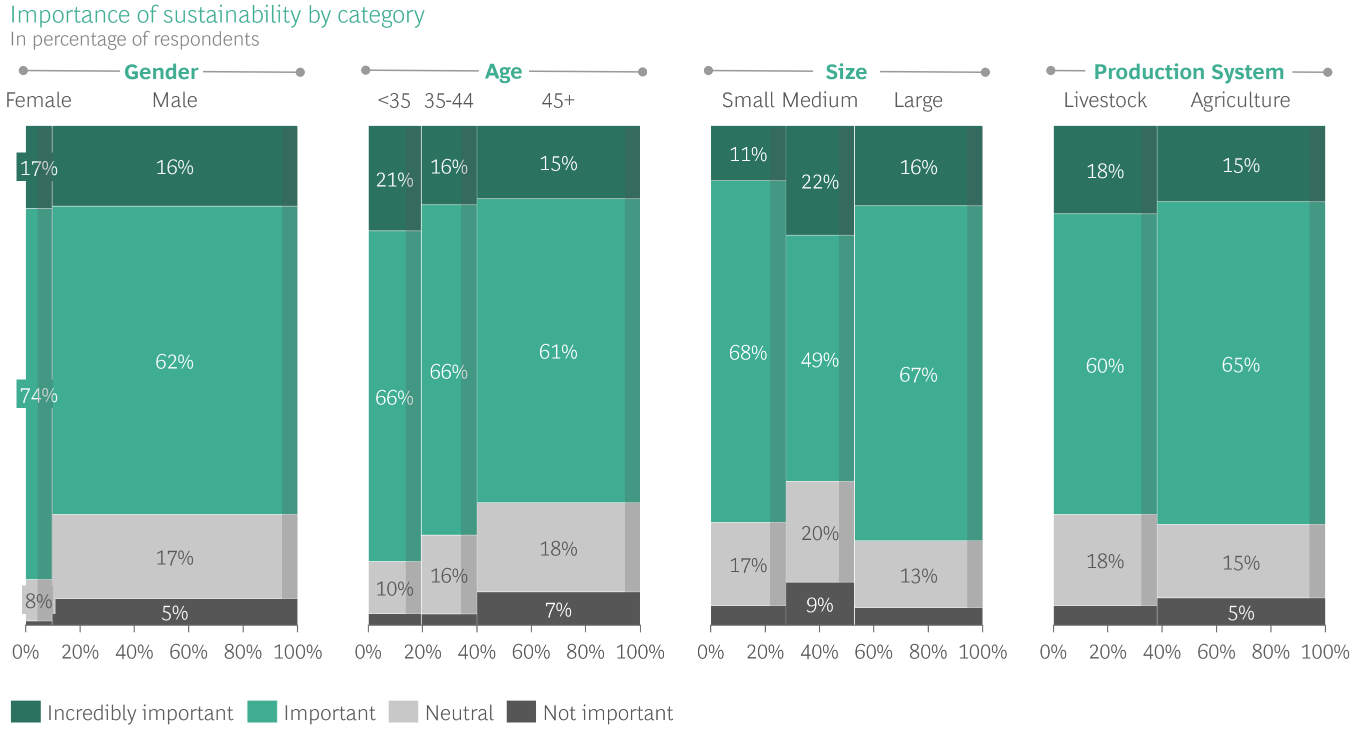
Understanding how farmers adopt sustainable practices is key to promoting long-term efficiency and environmental resilience. This section explores the adoption of these practices among farmers, assessing their prevalence, perceived benefits, and challenges to scaling.

3.1 Perceived Value and Adoption Dynamics

Across production systems, both growers (80%) and ranchers (78%) recognize the importance of sustainability. The slight difference between them highlights its strong relevance across the sector, reinforcing its relevant role in shaping future decision-making.

Younger farmers are the most likely to see sustainability as a priority—87% of those under 35 years consider it important, with 21% rating it as "incredibly important." Among those over 45, overall importance drops by 11 percentage points, reinforcing a generational shift in attitudes. Women farmers also place greater emphasis on sustainability, with 91% considering it important—12 percentage points higher than male respondents.

Exhibit 20 - Brazilian farmers recognize the importance of sustainability in the long run for their business, especially the younger and women



Question: How important is environmental sustainability to you? Note: X-axis results are weighted by the 2017 IBGE Census
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); IBGE; BCG Analysis

The adoption of sustainable practices in Brazilian agriculture varies across production systems, with some practices widely adopted while others face barriers due to low awareness or perceived complexity. Among growers, no-till farming (97%) and pasture & crop rotation (93%) are the most widely adopted, reinforcing the consensus that these practices are well-established and mature in Brazil's agribusiness. As an example, for no-till farming and pasture and crop rotation, growers benefit from increased yields and improved soil health, making it a cost-effective and sustainable method that aligns with both economic and environmental priorities. Similarly, biofixation of nitrogen (72%) is another widely adopted practice, particularly in soybean production, where natural biological nitrogen fixation significantly reduces reliance on synthetic fertilizers. Given Brazil's position as the world's largest producer and exporter of soybeans, this practice has been widely explored and integrated by growers as a key strategy to improve soil fertility and lower input costs.

Other practices such as Integrated systems (27%) and irrigation (22%) show moderate adoption, while organic systems (11%) and animal waste management (10%) remain niche, with higher levels of unawareness (44–48%). Production traceability and reforestation also show low adoption despite moderate awareness, possibly due to implementation costs, complex requirements, and unclear financial returns.

For ranchers, pastureland recovery (82%) leads to adoption, highlighting its critical role in improving degraded lands and proven efficiency. However, other practices—such as production traceability (18%), Animal waste management (13%), and irrigation (10%)—see low uptake and high unawareness (up to 48%). This gap suggests that practices crucial to sustainable development remain underutilized, presenting a significant opportunity for scaling through targeted awareness and support initiatives. Similar to growers, reforestation stands out as the practice with the highest rate of unwillingness to adopt, representing a significant challenge in expanding biodiversity-focused initiatives. Addressing this barrier is crucial, given reforestation's role in improving ecosystem resilience and enhancing long-term sustainability in livestock systems.

A key factor influencing adoption trends is the overlap between production systems—30% of surveyed growers were also ranchers, and 33% of ranchers were also growers. This factor explains the cross-adoption and awareness of certain practices more commonly associated with the other production system. For example, 30% of growers adopt Pastureland Recovery, a practice typically linked to livestock operations, while 34% of ranchers adopt Pasture & Crop Rotation, a technique more common in crop production. This overlap highlights the interconnected nature of sustainable practices across different farming systems and suggests an opportunity to further integrate regenerative techniques across both sectors.

Across both groups, a notable share of farmers is open to adopting new practices—suggesting that greater access to information, financial incentives, or proof of benefits could accelerate adoption. Conversely, certain practices face outright rejection, particularly those requiring higher upfront investments or more complex management, such as reforestation and irrigation.

There is a connection between practices perceived as both financially and environmentally valuable and their adoption rates. Among growers, no-till and crop rotation rank highly in both dimensions, reinforcing their widespread adoption and proven ROI. Also, nitrogen biofixation is well perceived over other practices, mainly for producers with soybeans experience.

For ranchers, pastureland recovery is the only practice perceived as both highly sustainable and financially attractive, reflecting its dual role in improving productivity and land resilience combined with its widespread adoption (82%).

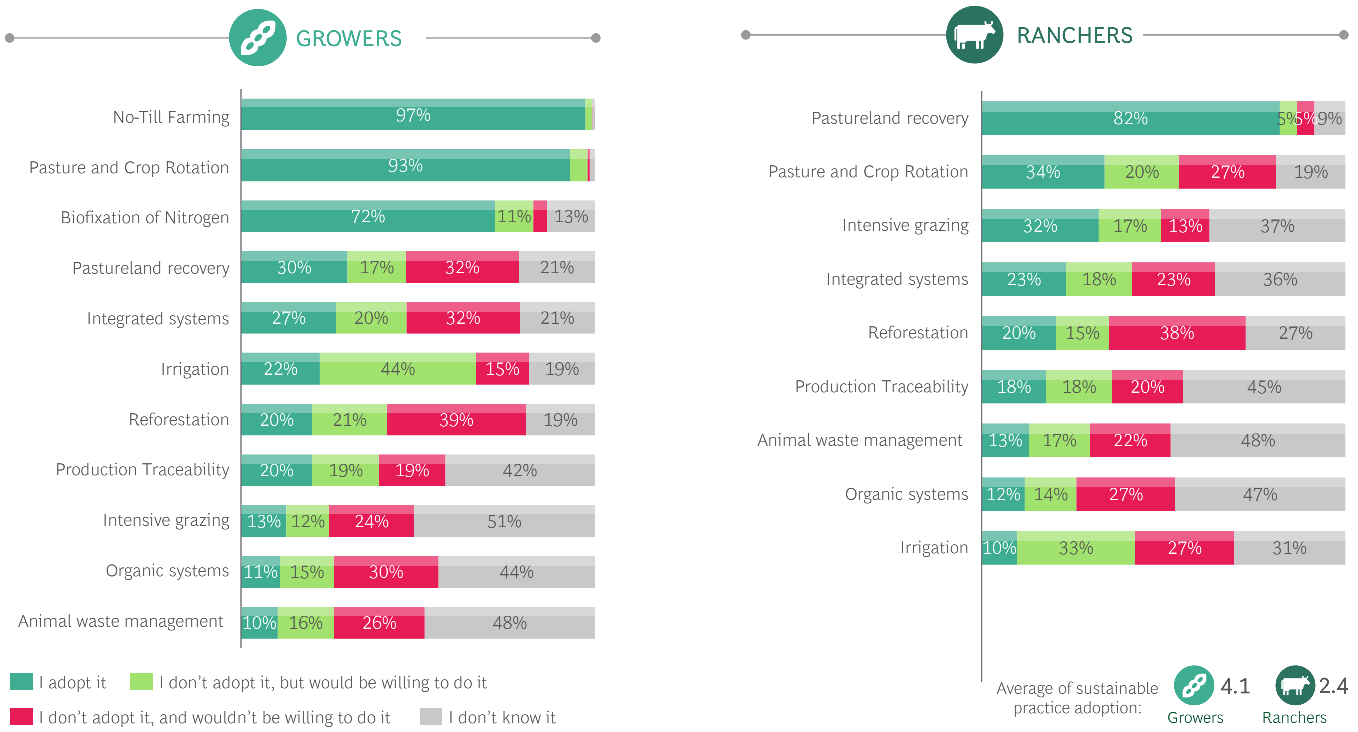
However, growers tend to recognize the value of more practices than ranchers. The growers have had higher exposure to sustainability initiatives, technical assistance, and access to structured markets that reward regenerative agriculture. In contrast, ranchers adopt fewer practices and may be more selective, prioritizing techniques that provide immediate operational improvements or have more compelling and less risky business cases.

Establishing credible measurement, monitoring, reporting, and verification (MMRV) systems is a critical step toward increasing the perceived value of sustainable practices. By providing precise, verifiable results, MMRV frameworks can enhance farmer confidence in the financial and environmental benefits of these practices, ultimately driving broader adoption.

Exhibit 21 - Several low-carbon practices are now firmly embedded, as a new wave begins to take shape to extend progress

Awareness and adoption of sustainable practices

In percentage of respondents

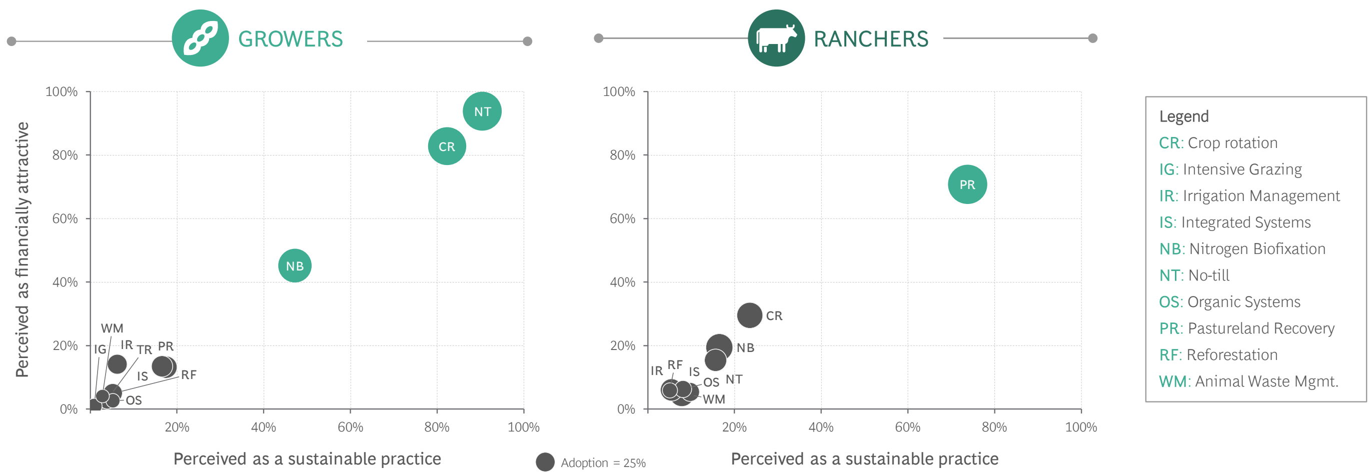


Questions: Among the practices below, which ones do you know? And which of these do you adopt? Note: 30% of growers are also ranchers and 33% of ranchers are also growers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Exhibit 22 - Producers adopt sustainable practices primarily based on their view of the financial returns such measures bring to their assets

Financial return perception on sustainable practices

In percentage of respondents



Questions: Among the sustainable practices you adopt what practices bring most benefits to your farmer? Among the sustainable practices you adopt what practices you consider more impactful to sustainability return?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Interestingly, farmers who prioritize sustainability values are not necessarily the ones adopting the most sustainable practices. Instead, high-tech personas, such as Performance-First and Smart-Ranch Ops, lead in both awareness and adoption. At the same time, Eco-Vision and Future-Fit farmers—who emphasize sustainability—tend to be slower adopters.

Several factors may influence this gap:

- High-tech farmers have bigger farms and more access to technical assistance and credit, making them more comfortable integrating both mechanization and sustainable practices into their operations.

- Sustainability-driven farmers with smaller farms may lack financial means or technical knowledge despite their strong environmental commitment, which slows actual implementation.

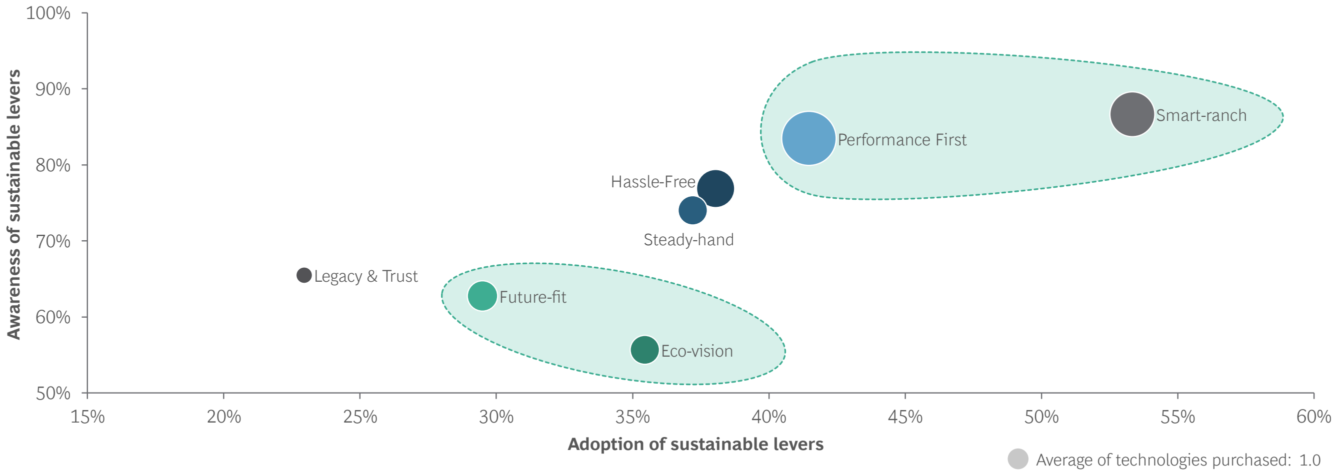
- Regulatory and market incentives play a role, as high-tech farmers are more likely to operate in structured supply chains that reward sustainable adoption. In contrast, smaller, sustainability-driven farmers may lack direct economic incentives to justify large-scale implementation.

The adoption of sustainable practice is closely linked to financial return perception and technological sophistication rather than purely environmental commitment. Growers, particularly high-tech ones, tend to see more value across a broader range of practices, while ranchers are more selective, prioritizing immediate operational benefits. To bridge the gap between awareness and adoption, targeted education, financial incentives, and technical support will be crucial in accelerating sustainability adoption across all farmer segments.

Exhibit 23 - The embrace of sustainability owes more to a producer's sophistication than to their ecological convictions

Awareness and adoption by farmer group

In percentage of respondents



Questions: Among the practices below, which ones do you know? And which of these do you adopt? Have you purchased this technology in the last three years?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

3.2 Structural Barriers to Scaling Sustainability

While many farmers recognize the benefits of sustainable practices, several key barriers limit widespread adoption. These challenges fall into four main categories: lack of assistance, financial constraints, perceived value, and structural limitations (e.g., property restrictions and resource access). The impact of these barriers varies between growers and ranchers, as well as across different farm sizes.

Cost is the most cited challenge, with 45% of growers and 40% of ranchers considering sustainable practices too expensive. While credit access is not widely mentioned as a reason for rejection (7% for both groups), the affordability of financing remains a major concern. This situation suggests that farmers, especially smaller ones and ranchers, struggle with loan conditions that make investments in sustainability more difficult for them compared to larger farmers.

One of the biggest challenges is the difficulty of implementation, cited by 35% of growers and 23% of ranchers. Growers, who generally have more complex production systems, may require more technical support to integrate sustainability into their operations. Additionally, 16% of ranchers say they lack knowledge compared to 9% of growers, reinforcing the need for education and advisory programs, particularly in livestock operations, to scale up awareness.

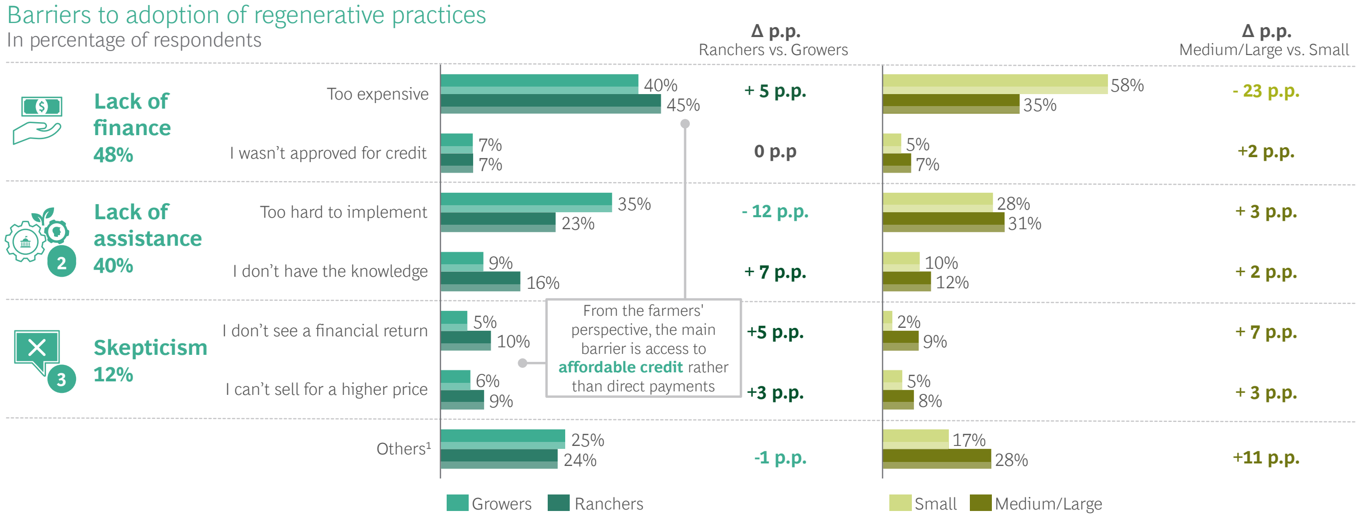
Structural and Operational Barriers: Beyond financial and technical concerns, some farmers cite structural limitations, such as land availability, geographic restrictions, and limited autonomy in decision-making. These factors still represent constraints that must be considered when designing solutions for broader adoption that are adaptable to Brazilian farming conditions.

Financial constraints are significantly more challenging for small farms, with 58% citing cost as a major barrier, compared to 35% of medium and large farms. Smaller operations face more significant difficulties in financing large CapEx sustainability investments due to several factors: Limited access to credit, higher interest rates, and fewer financial assets to use as collateral. For all these reasons, it is challenging to secure favorable loan conditions. Additionally, smaller farms often have tighter cash flows, prioritizing short-term operational expenses over long-term investments. These constraints reduce their ability to adopt capital-intensive sustainability practices. Tailored financial mechanisms, such as low-interest credit lines or incentive programs, can help bridge the adoption gap.

Among personas, Performance-First—the group of growers with the highest technology adoption—ranked cost as their third-largest barrier, following implementation challenges and other constraints. In contrast, personas such as Future-Fit, Hassle-Free, Smart Ranch Ops, and Legacy and Trust identified cost as their primary barrier. While cost remains a common challenge across all groups, some profiles encounter additional constraints based on their current adoption stage and greater access to financing.

Scaling sustainable practices require a combination of technical assistance, more affordable financing models, and more substantial market incentives. Growers face more significant challenges, while ranchers struggle more with knowledge gaps and financial return concerns. Additionally, smaller farms experience more financial strain, reinforcing the need for tailored support to ensure broader adoption across all farm sizes.

Exhibit 24 - Brazilian producers seek support and access to credit lines to scale the adoption of regenerative practices



Questions: Why haven't you adopted this sustainable practice on your property yet? Note: 'Others' category represents a combination of the three main barriers, including responses such as geographic limitations, restricted resource access, property constraints, lack of interest, and limited autonomy in farm decision-making. Source: Survey 'The Pulse of Brazilian Farmers' (N = 421); BCG Analysis

To better understand sustainability-related opportunities and barriers, we conducted a deep dive into carbon credit programs. We found that specific carbon credit program awareness remains low in Brazilian agribusiness, with only 33% of farmers stating they are aware. Even among those who are aware, participation is still limited, particularly among small-scale farmers, reinforcing the need for education on how these programs work, clearer financial incentives, and trust-building efforts to drive engagement.

Awareness is higher among large-scale farmers, with 45% familiar with carbon credit programs, compared to only 17% of small farmers. Larger farms appear to have more exposure to sustainability-linked financing and structured supply chains.

Despite awareness, actual participation remains low—only 14% of large farmers and 5% of small farmers are enrolled. However, 31% of large farmers express intent to join, compared to just 17% of smallholders, signaling potential for growth if key barriers are addressed.

Among those participating in carbon credit programs, the majority (61%) generate credits from low-carbon agricultural practices, reinforcing the strong link between regenerative farming and carbon market opportunities. Biomass (24%) and energy projects (15%) also contribute, while reforestation (14%) and REDD+ (6%) remain secondary, likely due to complexity and investment requirements. These findings align with the broader adoption trends observed in both production systems, where reforestation shows relatively low adoption—20% among growers and 20% among ranchers—while also facing high unwillingness to adopt, at 39% and 38%, respectively, as previously analyzed.

For personas comparison, Performance-First farmers have a higher participation rate in carbon credit programs, with 37% enrolled and 25% attempting to join—well above the average of 10% enrolled and 28% trying to enter. This participation rate reinforces the same pattern observed in technology and sustainable practice adoption: farmers with greater access to resources and stronger integration into structured supply chains are more likely to participate in carbon credit markets.

There are three main barriers to further scale adoption of these practices, according to the Brazilian farmers:

- **Lack of Knowledge and Information.** 43% of farmers are unfamiliar with carbon credit programs, and 39% cite a lack of clear information, showing that education and transparency remain critical gaps

- **High Costs and Uncertain Returns.** Farmers perceive participation costs as high, and 15% believe the financial return is too small, showcasing the need for financial support and clearer business cases.

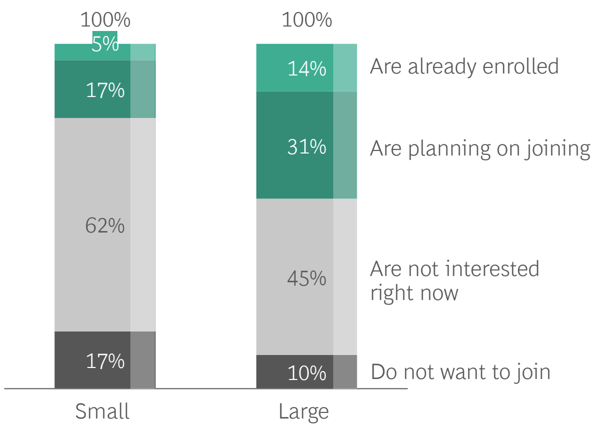
- **Cultural and Market Trust Barriers.** 11% of farmers do not trust the carbon credit market, and another 11% find participation too complex, reinforcing the need for more streamlined and transparent processes aligned with stable policies

Scaling carbon credit adoption will require greater awareness, clearer financial incentives, and simplified and stable participation models. Larger farms are more engaged, while smaller farmers remain hesitant, primarily due to a lack of familiarity and perceived complexity. Expanding education efforts, improving transparency, and offering tailored financing solutions could help unlock greater participation across all farm sizes.

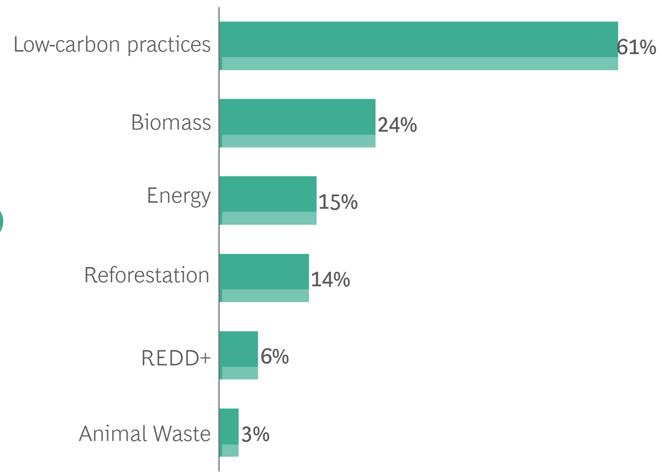
Exhibit 25 - Awareness of carbon credit programs is still low; most ongoing initiatives are tied to low-carbon practices and biomass

Carbon credit program awareness
In percentage of respondents

33% of farmers have heard about carbon credit programs...
... and, **of these...**



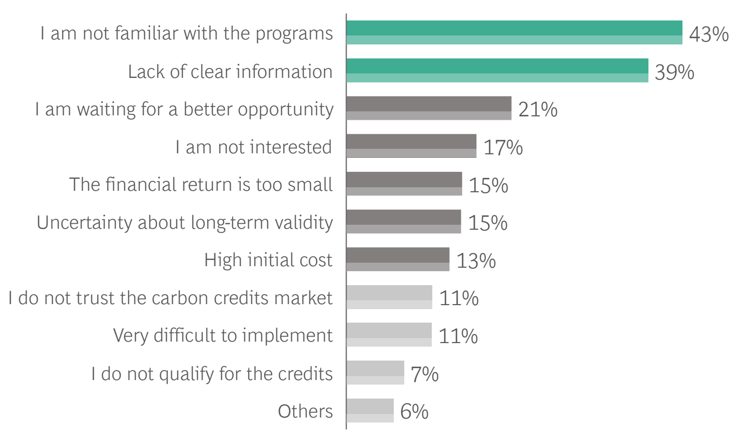
Carbon credit origination
In percentage of respondents who participate in programs



Questions: Are you aware of any carbon credit programs? If so, are you involved in carbon credit programs? If so, what is the main source of the carbon credits in the program you are involved in?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 609); BCG Analysis

Exhibit 26 - The main barriers to adopting programs are access to clear information on quality, financials, and technical requirements

Barriers to increase participation in carbon credit programs
In percentage of respondents



Lack of knowledge and information
Farmers report that their main challenges are a lack of clear information and transparency of the carbon credit programs

High costs, low return perception
Many producers also report a lack of knowledge about returns, while perceiving the costs of participation and certification as high

Cultural barriers in the way
Although a smaller group, some producers are hesitant to join due to a general lack of trust in the programs and their benefits

Questions: Why are you not interested in participating in carbon credit programs?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 125); BCG Analysis

4. Financing: Access, Allocation, and Obstacles

4.1 Credit Uptake and Policy Levers

Credit plays a critical role in supporting Brazilian farmers, with utilization varying significantly by farm size and production system. While credit is widely used (~80% currently use or have already been used in the past), a large portion remains reliant on government-backed programs, particularly among small and medium-sized farms.

Larger farms are the most active credit users, with 67% utilizing financing, compared to 55% of medium-sized farms and 52% of smallholders. The larger farms may have greater financial literacy, easier access to structured credit lines, or larger capital needs that require financing.

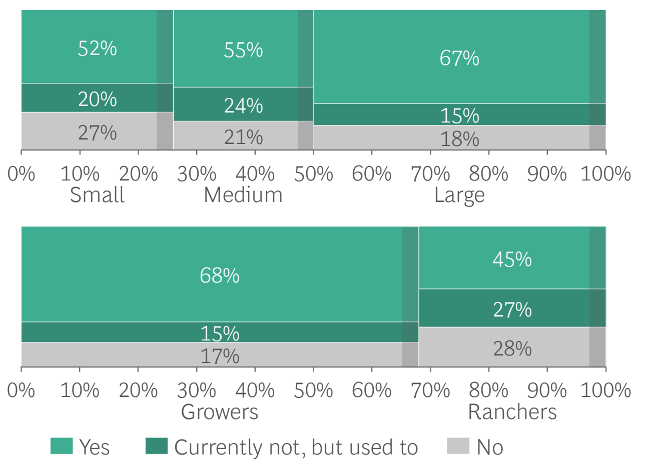
Additionally, growers (68%) rely on credit more frequently than ranchers (45%), likely due to higher input costs, equipment investments, and structured supply chains that encourage financing adoption. Ranchers, in contrast, have a lower credit adoption rate, which suggests they may depend more on self-financing or reinvestment from cattle sales rather than external credit lines. Beyond farm size and production system, high-tech-oriented farmers—such as Performance-First growers and Smart Ranch Ops ranchers—are also more likely to use credit compared to their lower-tech counterparts within the same production system. Their greater willingness to invest in innovation, upgrade equipment, and integrate advanced solutions often makes financing a key enabler of their growth strategies.

Government-backed credit plays a crucial role in sustaining small and medium-sized farms, with 88% of smallholders and 73% of medium-scale producers relying on public credit programs, compared to 62% among large farms. Smaller farms may have fewer private financing options and depend more on subsidized programs to sustain operations. In contrast, larger farms show declining reliance on government credit, with 38% using private financing mechanisms, which could indicate greater access to commercial loans, international funding, or the ability to reinvest profits more effectively.

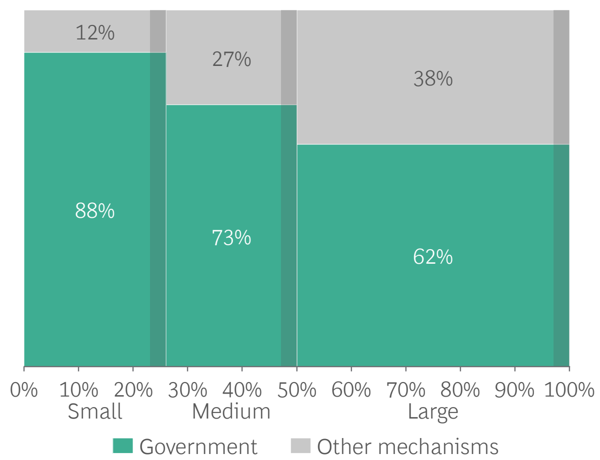
Credit access is widespread but varies by farm size and production type. Larger farms and growers show the highest adoption, while smallholders and ranchers face greater challenges in securing private financing, making them more dependent on government-backed programs. Addressing financial access gaps and expanding private-sector financing could help diversify funding sources and enhance investment capacity across all farmer segments.

Exhibit 27 - Credit in Brazil is a key source of support for producers, with a significant portion tied to government programs and incentives

Utilization of credit lines by farmer size
In percentage of respondents



Utilization of Brazilian Government credit lines
In percentage of respondents



Questions: Do you use any financing for your property? Have you used financing supported by any government program?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 1.358); IBGE; BCG Analysis

4.2 Credit Allocation Patterns

The use of credit in Brazilian agriculture varies significantly by farm size and spending category, with smaller farms focusing more on operational costs (OpEx) while larger farms allocate more financing to capital expenditures (CapEx). Additionally, investment in storage remains low despite being a well-known bottleneck in Brazilian agribusiness.

Across all farm sizes, operations and input purchases are the most common uses of credit, with a relatively small gap between small, medium, and large farms. Smaller producers primarily rely on financing for short-term cash flow management rather than long-term investments.

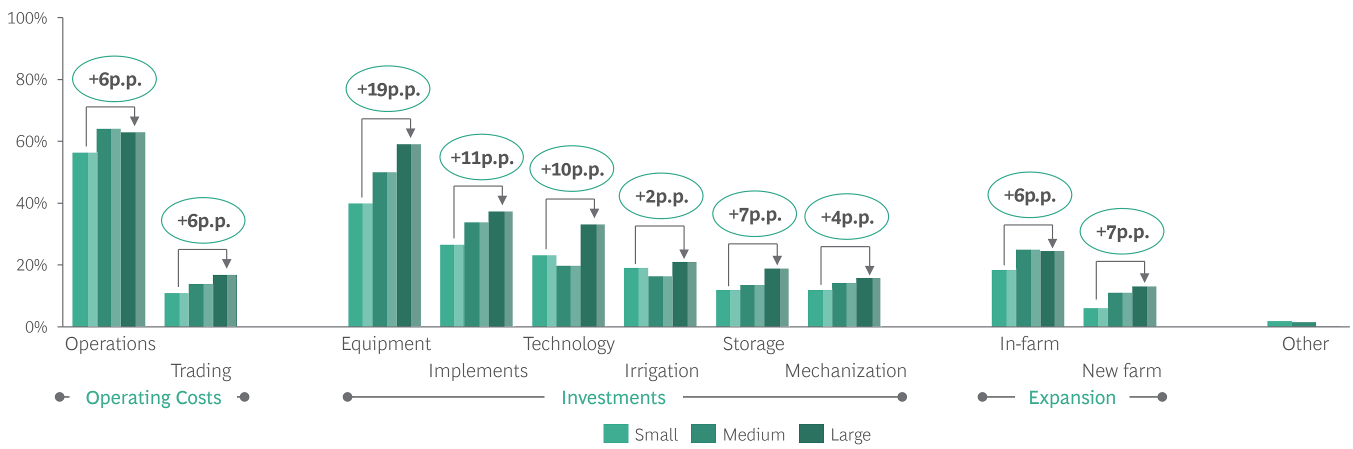
Larger farms allocate significantly more credit to equipment purchases, with a 19-percentage point difference compared to smaller farms. Similarly, investment in technology is 10 percentage points higher among larger farms, reinforcing their ability to invest in innovation and modernization. In contrast, smaller farms may face more financial constraints or prioritize immediate operational needs over long-term efficiency gains.

Despite storage being a well-known challenge in Brazilian agribusiness, investment levels remain low across all farm sizes. These investment levels may indicate that producers either lack access to specific financing for storage infrastructure or rely on external solutions such as cooperatives and third-party storage facilities.

Exhibit 28 - Producers primarily finance working capital and equipment, with less than one-fifth allocated to new technologies and expansion

Destination of credit lines by farmer size

In percentage of respondents



Questions: For what purpose do you use the financing?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 811); BCG Analysis

4.3 Further Barriers to Financial Inclusion

Despite the importance of credit in supporting Brazilian agriculture, several key barriers limit access and utilization, particularly among smaller farms. These barriers fall into four main categories: perceived risks, lack of necessity, lack of access, and lack of knowledge. The impact of these barriers differs by farm size, with smaller producers generally facing more significant constraints in securing financing.

The most significant barrier across all farm sizes is high interest rates, which 39% mention as a roadblock, making credit less attractive or financially unfeasible. Additionally, many farmers fear taking on debt, especially those with small farms. Their reluctance may stem from past experiences with financial instability or a preference for conservative financial management. While this concern is present across all farm sizes, larger farms may have better negotiation power for better rates, while smaller farmers face a higher relative cost of borrowing.

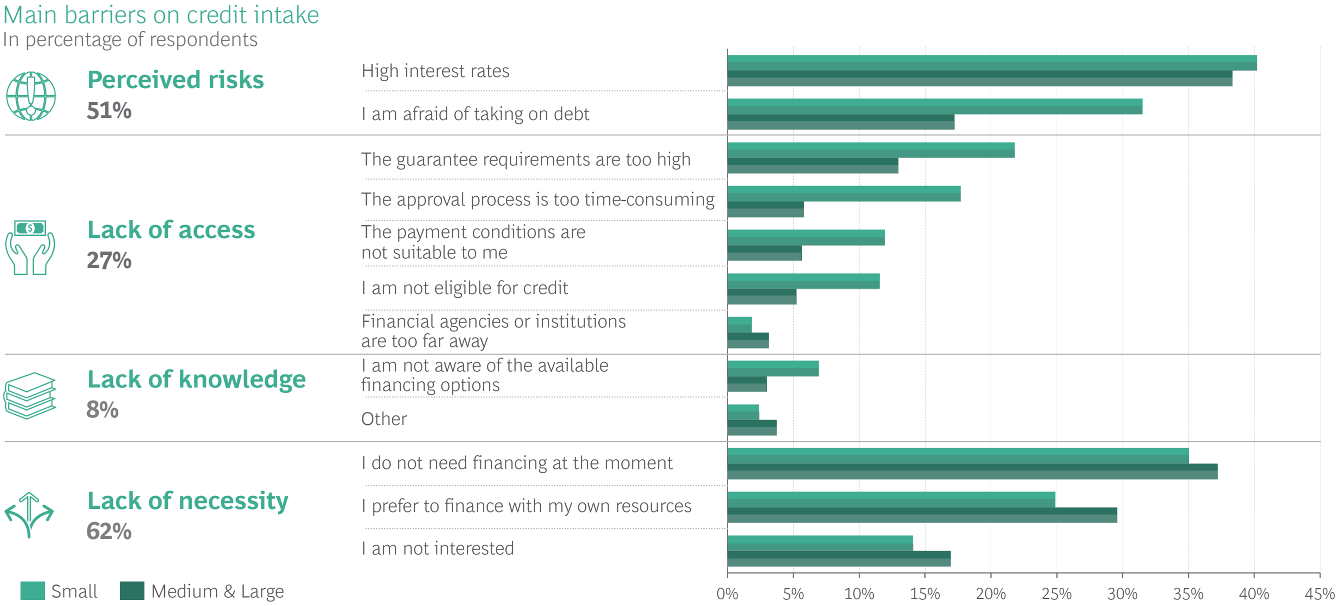
Farmers often also indicate that they do not currently need financing or prefer to operate with their own resources. This independence is more common among larger farms, which may have more financial reserves and stronger reinvestment capacity. However, among smaller farmers, a perceived lack of necessity may also reflect deeper constraints—such as limited access to attractive credit conditions—rather than a genuine lack of demand.

Beyond perceived risks and the lack of a clear understanding of how credit could benefit their businesses, even those who recognize its advantages face barriers to access. Guarantee requirements and lengthy approval processes are often cited as key obstacles to obtaining credit, more frequently for small farmers. These requirements may include land titles, machinery, or other high-value assets as collateral, which many small producers may not have or may struggle to formalize. Additionally, some credit lines demand third-party guarantors or personal guarantees, adding another layer of difficulty for those without strong financial networks. As a result, small farmers are particularly affected, as they may lack sufficient collateral, or the necessary financial documentation required by lenders. Larger farms, with more structured financial records and assets, likely find it easier to meet credit criteria.

Despite these challenges, lack of knowledge does not initially appear to be a significant barrier, with only 4% of farmers citing it as an issue. It may be that government programs such as Pronaf (National Program for Strengthening Family Farming) and Pronamp (National Program for Supporting Medium-Sized Producers) provide broad visibility into available credit options. However, there may be additional financing opportunities that farmers are not fully considering, which could help improve access and address other barriers, such as high interest rates and restrictive eligibility criteria. Expanding awareness of these alternatives could play a role in bridging the gap in credit adoption.

Credit adoption is not solely a matter of availability but also of accessibility and financial viability. Smaller farms struggle more with access and awareness, while larger farms face fewer structural constraints but may still avoid credit due to cost concerns. Addressing high interest rates, simplifying access to financing, and improving financial education could help bridge the gap and enable broader credit adoption across all farm sizes.

Exhibit 29 - The barrier to more credit is balancing favorable terms and repayment conditions with attractive rates – in challenging times



Questions: Why don't you use financing?
Source: Survey 'The Pulse of Brazilian Farmers' (N = 546); BCG Analysis

Conclusion

Brazilian farmers stand at the center of the country's agribusiness future. Their potential to scale solutions, ability to navigate pressure, and willingness to invest in the long term have positioned them as vital agents of national transformation. Their success is critical not only for their business sector and country but also for global food security and biodiversity preservation. Strengthening their role is key to advancing sustainable development goals in Brazil and worldwide.

The research underlying this report was designed to look beyond surface-level demographics—such as farm size, production system, and age—to uncover the behavioral and emotional drivers that shape farmers' decision-making. We engaged directly with over 1,350 producers across 15 states, conducting more than 1,000 hours of in-person interviews. Through robust statistical modeling, we captured the nuances behind how farmers think, invest, and evolve. Our seven profiles suggest a wide variety of attitudes and preferences, all influencing the way the sector evolves.

A mix of promise and constraint emerges in this survey. Farmers are motivated and capable, yet many of them face persistent barriers—financial, technical, and structural—that limit the widespread adoption of technologies and sustainable practices. At the same time, clear signals of opportunity include a strong interest in innovation, an openness to change, and a growing awareness of the value of sustainability.

Addressing these challenges and unlocking these opportunities will require coordinated action from across the agriculture-related ecosystem in Brazil and elsewhere. A harmonized effort from public institutions, financial actors, and agribusiness companies is essential. By placing farmers at the center—understanding their realities and co-developing practical solutions—we can drive scalable impact and build a more resilient agribusiness model.

This survey is part of BCG's broader commitment to supporting the Brazilian agribusiness. Through our dedicated expertise in this sector and around sustainability, we help clients navigate complexity and design strategies that are both economically viable and socially grounded. We welcome continued dialogue and collaboration—and stand ready to provide deeper insights, tailored analysis, and strategic support in advancing this shared agenda.

About the Authors

Arthur Ramos. Managing Director and Partner at BCG, and leader of BCG's Climate & Sustainability practice in Brazil. He has over 25 years of experience, with a strong track record in energy and infrastructure. He can be reached at ramos.arthur@bcg.com

Luciano Guidolin. Managing Director and Partner at BCG. He brings over 25 years of executive experience in strategy, finance, and operations, having led large-scale organizations across chemicals, agribusiness, and infrastructure. He can be reached at guidolin.luciano@bcg.com

Lucas Moino. Partner at BCG and a member of the Industrial Goods practice, Lucas leads the Agribusiness and Corporate Venturing verticals in South America. He has 20 years of professional experience in the agribusiness industry. He can be reached at moino.lucas@bcg.com

Santino Lacanna. Partner at BCG with 14+ years of management consulting experience. He leads the Social Impact practice in Latam and the People & Organization practice in Brazil and is a core member of the Climate & Sustainability practice. He can be reached at lacanna.santino@bcg.com

Matheus Munhoz. Project Leader at BCG and a member of the Agribusiness and Climate & Sustainability practices. He is a topic expert in regenerative agriculture, supply chains, and operations. He can be reached at munhoz.matheus@bcg.com

Amanda Barros. Associate Director at BCG and leader of the Center for Customer Insight (CCI) in Brazil. She specializes in distilling B2C and B2B insights using methodologies such as surveys, interviews, and social listening. She can be reached at barros.amanda@bcg.com

The authors would like to thank the following contributors and partners:

- **Jack Bugas** (Partner and Associate Director)
- **Luisa Motta** (Senior Analyst - Center for Customer Insight)
- **Luiz Lamarca** (Associate)
- **Pedro Cavalcanti** (Senior Associate)
- **Felipe Chenet** (Consultant)
- **Antonia Rodriguez** (Analyst – Climate and Sustainability)

References

1. Brazilian Central Bank (2025). Benchmark Interest Rate (Selic). Link

2. Brazilian Institute of Geography and Statistics (IBGE). (2025). Systematic Survey of Agricultural Production. Agricultural Production Statistics, 4-5. Link

3. Brazilian Institute of Geography and Statistics (IBGE). (2024). Systematic Survey of Agricultural Production. Agricultural Production Statistics, 4-5. Link

4. Brazilian Ministry of Agriculture and Livestock (2023). Gross Agricultural Production Value (VBP). Link

5. Brazilian Ministry of Agriculture and Livestock (2024). Líder global na utilização de bioinsumos, Brasil apresenta panorama regulatório de registros biológicos na ABIM. Link

6. Brazilian Ministry of Agriculture and Livestock (2025). Mapa reúne parceiros para discutir estratégias de fomento ao Sistema Plantio Direto na agricultura brasileira. Link

7. Brazilian Ministry of Agriculture and Livestock (2021). Brasil lidera produtividade agropecuária entre 187 países, aponta estudo do USDA. Link

8. Centro Paulista de Estudos Agropecuários (2025). Fatores da produtividade na agropecuária. Link

9. Centro de Estudos Avançados em Economia Aplicada – ESALQ/USP – CEPEA (2025). Mercado de Trabalho do Agronegócio. Link

10. Embrapa (1999). Perguntas e respostas sobre plantas transgênicas. Link

11. MapBiomas (2023). Área de agropecuária no Brasil cresceu 50% nos últimos 38 anos. Link

12. National Center for Monitoring and Early Warning of Natural Disasters – Cemaden/MCTI. (2024). Drought Analysis in Brazil: Diagnosis and Future Projections. Link

13. Trading Economics (2025). Taxa de Juros – Lista de Países. Link

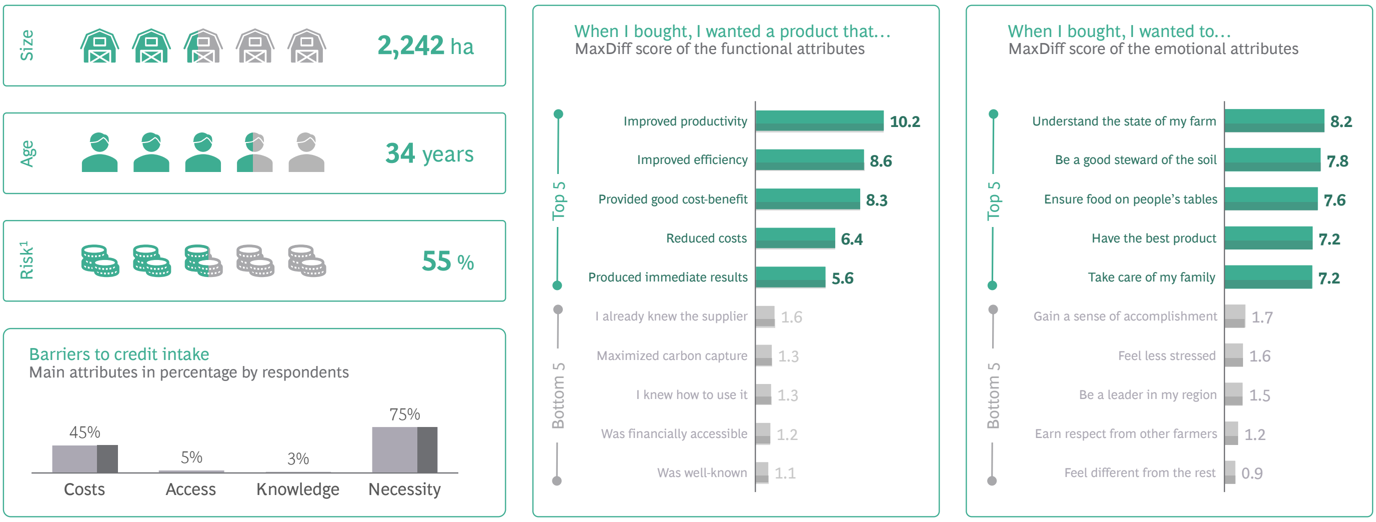
14. @Tech (2019). Panorama mundial e perspectivas da pecuária nacional. Link

15. World Agri-Tech (2018). The farming industry's breakthrough product enables reduced chemical fertilizer use and helps farmers reach top-end yield potential. Link

16. Organization of Brazilian Cooperatives (OCB) (2024). Brazilian Cooperativism Yearbook 2024. Link

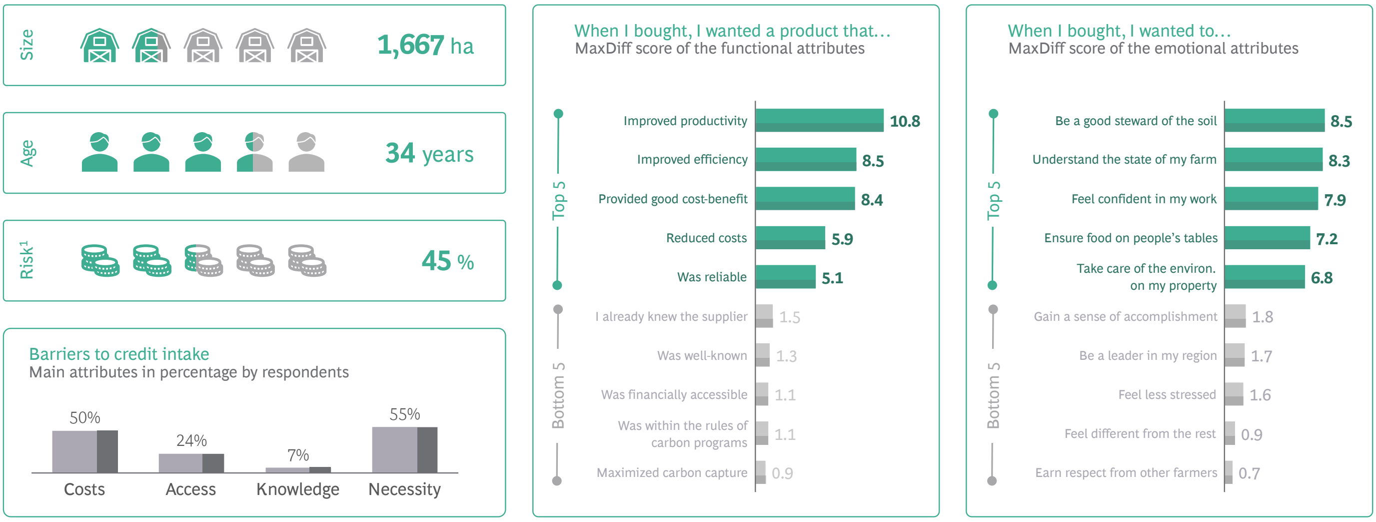
Annex: Farmers profiles deep dives

Exhibit 30 - Performance-first: Young, tech-savvy growers who prioritize results, efficiency, and business-driven decision-making



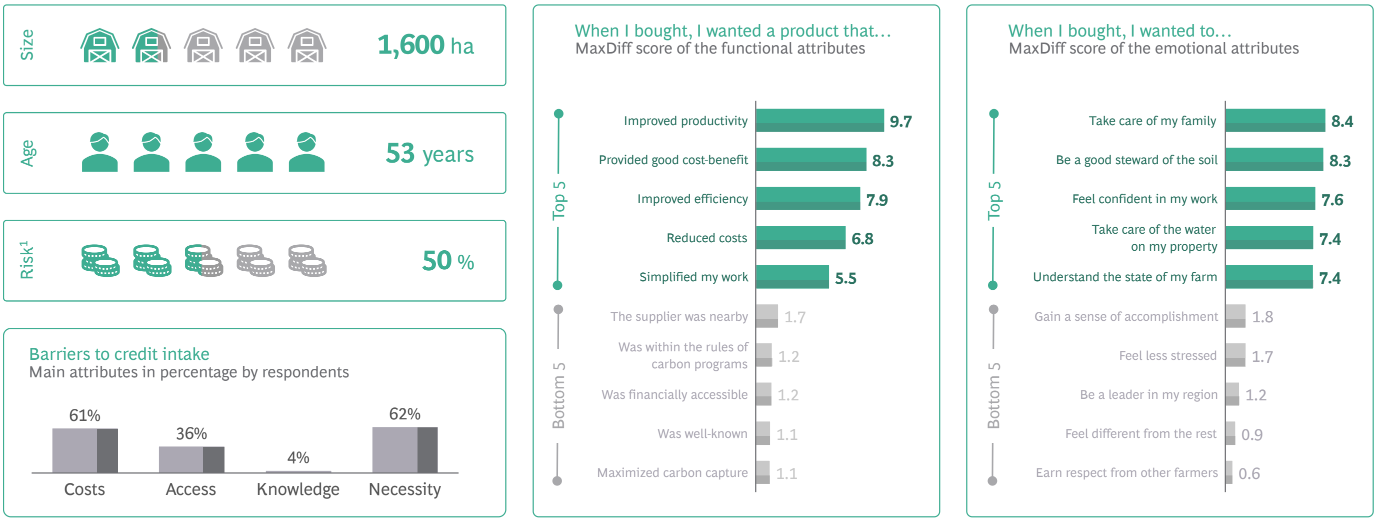
Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 67); BCG Analysis

Exhibit 31 - Steady-hand Explorer: Experienced yet adaptable growers who prefer reliable, accessible solutions while cautiously exploring them



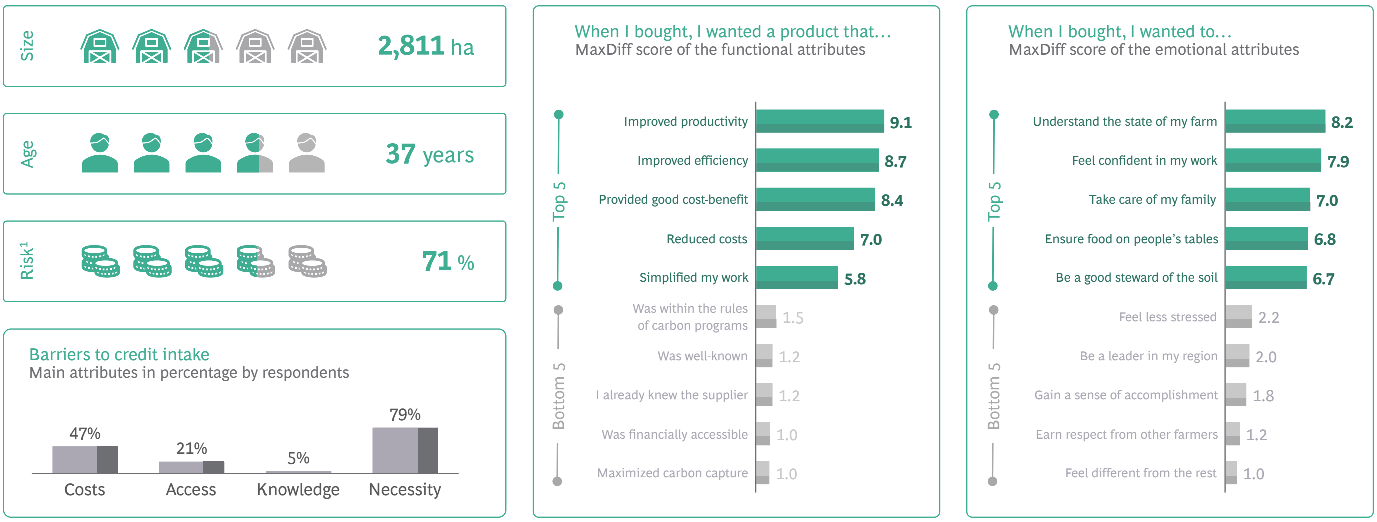
Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 78); BCG Analysis

Exhibit 32 - Hassle-free: Older growers who prioritize ease of work, safety, and satisfaction over financial returns or cutting-edge innovations



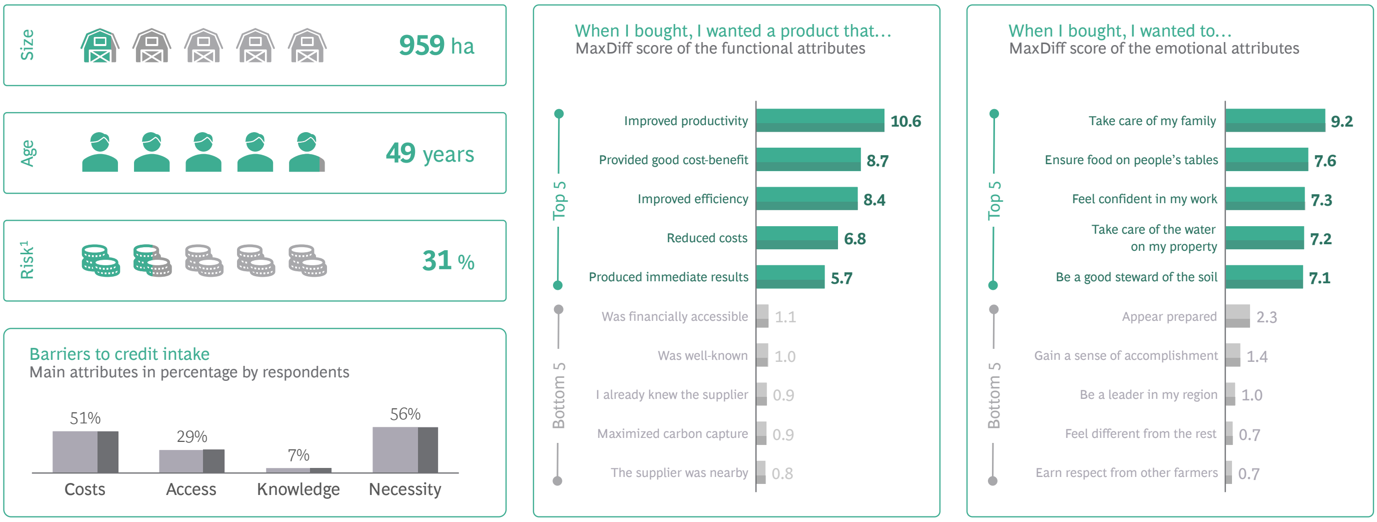
Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 175); BCG Analysis

Exhibit 33 - Smart-ranch Ops: Tech-driven ranchers who embrace innovation to enhance efficiency, simplify work, and grow their cattle operations



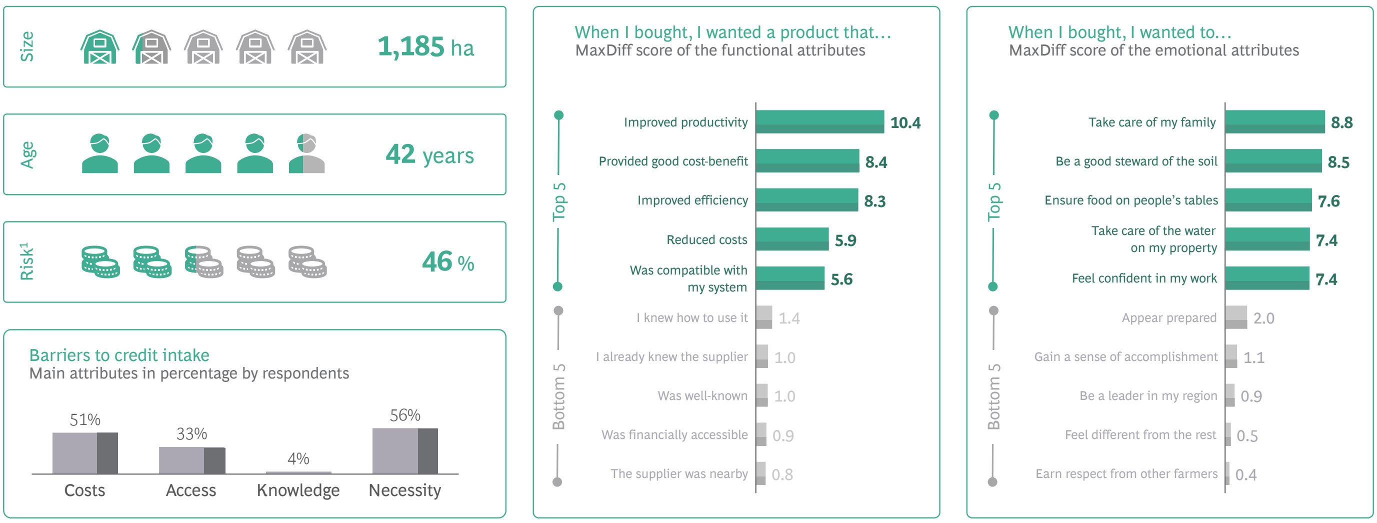
Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 18); BCG Analysis

Exhibit 34 - Legacy & Trust: Tradition-focused ranchers who value reliability, family-driven decisions, and a steady, trusted approach to farming



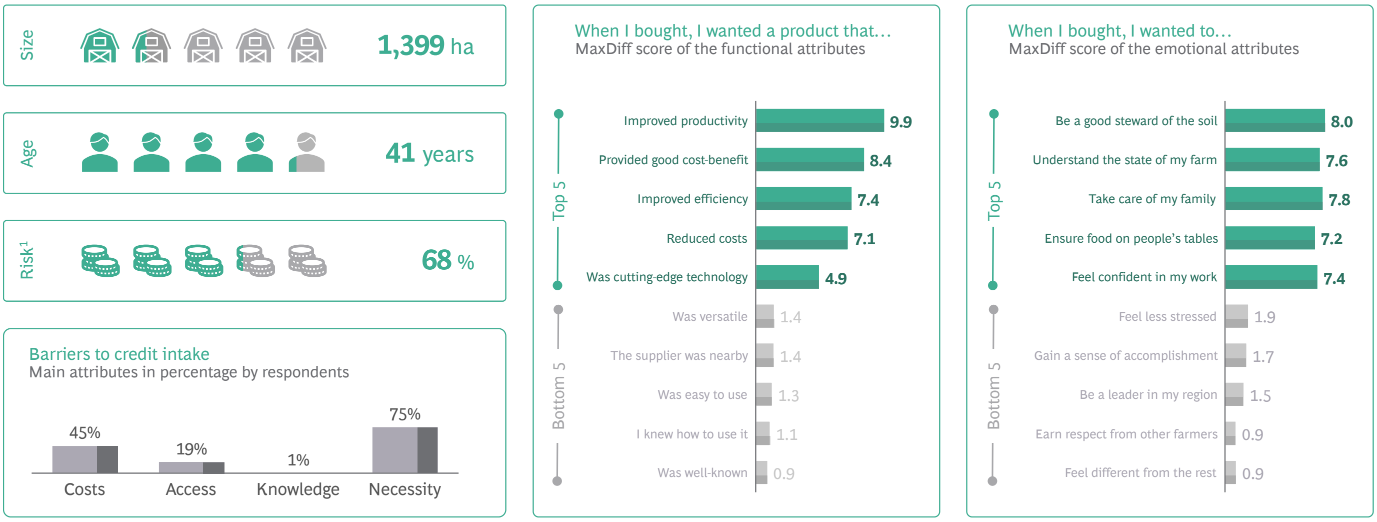
Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 174); BCG Analysis

Exhibit 35 - Future-fit: Mid-aged producers who combine efficiency and sustainability, making results-focused decisions



Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 41); BCG Analysis

Exhibit 36 - Eco-vision: Entrepreneurs who seek to scale operations while maintaining environmental responsibility and external recognition



Note: MaxDiff is the relative importance of different needs among all surveyed farmers, in which all attributes will add to 100. 1. Percentage who see themselves as risk takers.
Source: Survey 'The Pulse of Brazilian Farmers' (N = 57); BCG Analysis

Disclaimer

This document has been prepared in good faith based on information available at the date of publication without any independent verification. BCG does not guarantee or make any representation or warranty as to the completeness of the information in this document nor its usefulness in achieving any purpose. Readers are responsible for assessing the relevance of the content of this document. BCG will not be liable for any loss, damage, cost, or expense incurred or arising by reason of any person using the information in this document. To the fullest extent permitted by law, BCG shall have no liability whatsoever to any party, and any person using this document hereby waives any rights and claims it may have at any time against BCG with regard to the document. Receipt and review of this document shall be deemed agreement with and consideration for the foregoing.

This document is based on primary qualitative and quantitative research executed by BCG. BCG does not provide legal, accounting, or tax advice. Readers are responsible for obtaining independent advice concerning these matters. This advice may affect the guidance in the document. Further, BCG has made no undertaking to update the document after the date hereof, notwithstanding that such information may become outdated or inaccurate. BCG does not provide fairness opinions or valuations of market transactions, and this document should not be relied on or construed as such. Further, any evaluations, projected market information, and conclusions contained in this document are based upon standard valuation methodologies, are not definitive forecasts, and are not guaranteed by BCG. BCG has used data from various sources and assumptions provided to BCG from other sources. BCG has not independently verified the data and assumptions from the sources used in these analyses. Changes in the underlying data or operating assumptions will clearly impact the analyses and conclusions.

This document is not intended to make or influence any recommendation and should not be construed as such by the reader or any other entity.

This document does not purport to represent the views of the companies mentioned in the document. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by BCG.


BCG