



The Future of Food and Farming

Understanding What the Next Generation
of Farmers and Consumers Want



Executive Summary

Corteva Agriscience was launched in 2019 with the goal of enriching the lives of those who produce and those who consume – for generations to come. This commitment to the future has put Corteva at the forefront of shaping the next generation of agriculture. To better understand those who will be centrally responsible for the future of farms and food in the next 20 years, Corteva worked with independent research company Kantar to take the pulse of Gen Z and millennial (“next-gen”) farmers and consumers across five countries – Brazil, China, France, Russia and the US.

Corteva’s “Future of Food and Farming” study asked next-gen farmers and consumers about their vision for the future of food and farming and their role within it. Data showed that these two groups share many concerns and hopes for the food system they are inheriting, and a strong desire to be involved in securing its future.

IN PARTICULAR, THEY ARE INTERESTED IN:

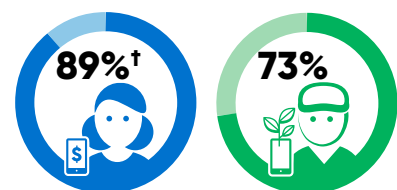
- 1 Protecting the Future of Food**
They worry about the integrity of our food system and are motivated to protect it.
- 2 Securing the Future of the Farm**
They are pessimistic about the viability of independent farms and want to help keep them thriving.
- 3 Amplifying Farmer-Consumer Voices and Engagement**
They want a much bigger say in how food is grown, sold and consumed.
- 4 Confronting Climate Change**
They want to change both farming and consumption to have less impact on the climate.





1 Protecting the Future of Food

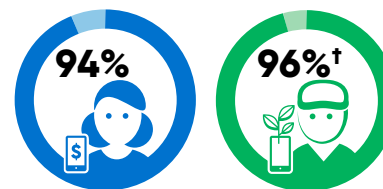
Gen Z / millennial farmers and consumers in all countries believe the future of food and farming is under threat and that global food insecurity is likely within 20 years.



% Very/Somewhat Concerned

Concern That the World's Population Will Not Have Enough Food for Its Nutritional Needs by 2040

Despite their concerns, next-gen farmers and consumers are realistic about the trade-offs involved in addressing the most pressing challenges facing food and farming and reject a “winner take all” approach. For example, **90% or more agree that everyone will need to compromise to secure the future of food** and, even though they are on opposite ends of the food chain, over 90% of next-gen farmers and consumers agree that they must realize that their futures are connected.



% Strongly/Somewhat Agree

Farmers and Consumers Must Realize That Their Futures Are Connected

Furthermore, they believe that if we can address the challenges faced by food and farming today, we will potentially avoid negative consequences, especially rising food prices, environmental destruction and global food shortages.

But next-gen farmers and consumers are not satisfied with today's solutions. Instead, both groups believe that the solutions to the challenges facing food and farming have not yet been invented, and over 90% agree that farmers will have to adopt innovative technologies and methods to succeed.

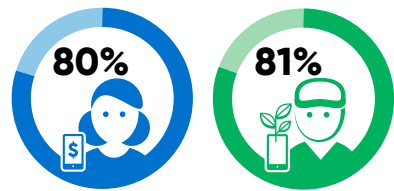
When asked about what they would most want to come together to solve, next-gen farmers and consumers agree that their most important priority is to help secure the long-term financial and environmental sustainability of farms. This suggests that they understand the complexity of meeting the world's demand for food while protecting and preserving both the environment and the viability of farming as a business.

“I think the consumers, the farmers, the ranchers – everyone – should get together, because things are really hard to solve.”

– Farmer, Brazil

2 Securing the Future of the Farm

The long-term survival of the farm itself is of concern to next-gen farmers and consumers – with eight in ten agreeing that it will be more difficult for farmers to make a living in the future. Perhaps even more disturbing is that 70% of consumers and 57% of farmers agree that in the future, smaller, family-owned farms will no longer exist.

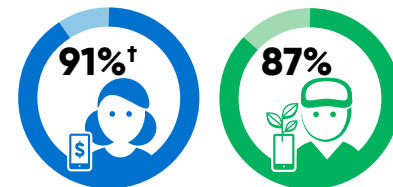


% Strongly/Somewhat Agree

It Will Be Difficult for Farmers to Make a Living in the Future

Furthermore, both groups worry that farming will be unable to keep up with rapidly changing consumer demands for food – although consumers are significantly more likely than farmers to feel this way.

However, next-gen farmers and consumers believe that they can act to help protect the future of farming. **They see more engagement and innovation as being essential to this effort, with over 90% agreeing that now is the time to develop innovative ways of taking on the challenges facing farming, and also agreeing that consumers need to become more involved in deciding how their food is farmed.**



% Strongly/Somewhat Agree

Consumers Need to Be More Involved in How Their Food Is Farmed

When thinking about the issues they would most like to see farmers and consumers coming together to solve, both groups rated as most important the sustainability of farms – defined as helping farms adopt more environmentally friendly practices

while still staying financially viable. Farmers across all markets rated “securing the viability of farms over time” as the second most important issue.

“Farmers must be more open. They have to find a platform where they can talk about their problems. Consumers have to support farmers by buying their products and trying to learn more about them.”

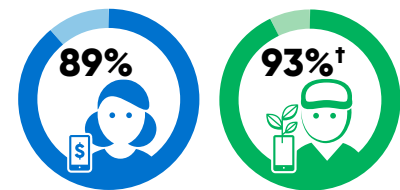
– Consumer, Russia





3 Amplifying Farmer–Consumer Voices and Engagement

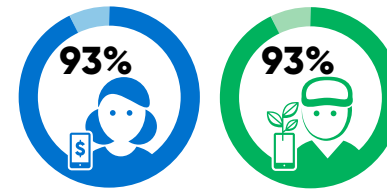
There is no doubt about who the next generation of farmers and consumers thinks is responsible for the future of food and farming – it’s themselves.



% Strongly/Somewhat Agree

The Future of Food and Farming Lies in the Hands of Today’s Young Farmers and Young Consumers

However, both groups acknowledge there are many obstacles to being able to work together to solve the challenges facing food and farming. Importantly, **both next-gen consumers and farmers feel they do not currently have a big enough say in how food is farmed, sold and consumed.** This is despite the fact that 80% of consumers and 94% of farmers agree that they already have opinions on what food should be produced and how.



% Strongly/Somewhat Agree

Both Farmers and Consumers Need a Bigger Voice When It Comes to Securing the Future of Food and Farming

Instead, they believe that the large players in the food supply chain, notably food wholesalers and farm-input suppliers, have the biggest influence on how food is farmed, sold and consumed. Others, like food manufacturing companies, corporate farmers and governments, also play a role.

Furthermore, when it comes to influencing consumer opinion about how food is grown, sold and consumed, both groups indicate that mainstream media, social media and food markets, wholesalers and retailers exert the most influence. At this time, independent farmers are not deemed a major influencer of consumer opinion.

It’s not surprising therefore that there was strong agreement that governments and food production companies need to listen to farmers and consumers when making decisions, and that consumers need to be more involved in how their food is farmed.

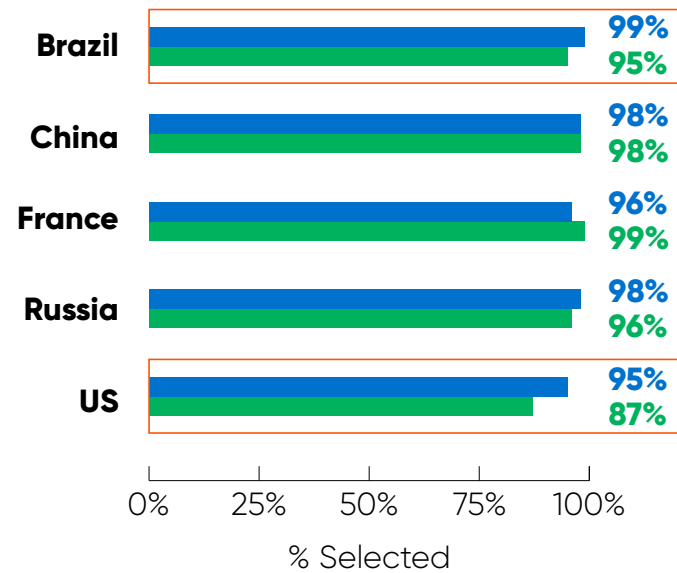
“I want to see consumers and our farms connect more closely. Why? Because the consumer and the farm are so disconnected. We need to be more equal, and we need to be able to communicate, and get together, and move forward.”

– Farmer, US

Despite their support for collaboration and partnership, farmers and consumers believe that certain barriers prevent them from coming together. Among these are lack of knowledge about – or understanding of – each other, perceived socioeconomic differences and no means of direct communication.

4 Confronting Climate Change

While there is much alignment on the issue of climate change, there are also points of differentiation, illustrating the complexity of the challenges facing the farmers and consumers of the future.



"I Believe Climate Change Is Occurring"

Overwhelmingly, next-gen farmers and consumers indicate they believe climate change is occurring, and the majority across markets believe that humans have contributed to it. The majority of those farmers and consumers who believe climate change is occurring also believe it will

have a negative impact on the global food supply in the next 20 years.

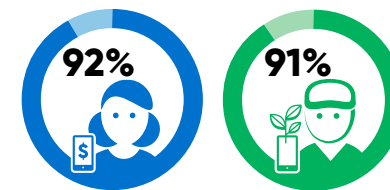
Those who believe in climate change say that the most serious threats to food and farming from climate change will be food price increases, new diseases that destroy crops and livestock, disruptions to crop-growing cycles, food shortages and the destruction of crops.

The top contributors to climate change in the next 20 years – according to the majority of both farmers and consumers – will be the burning of fossil fuels by industry and deforestation.

When it comes to prioritizing the challenges they would most like farmers and consumers to come together to solve, next-gen farmers and consumers across all countries put issues related to climate change at the top of their lists. They also do not see this as being only the responsibility of one group, with some indicating that they want to

join forces to find ways in which both farming and consumption can change to have a lower impact on climate.

In the end, they are aligned on the future they want, with over 90% of farmers and consumers agreeing that they want to live in a world where we don't have to choose between the environment and having enough to eat.



% Strongly/Somewhat Agree

We Don't Have to Choose between the Environment and Having Enough to Eat

"I think we need to focus on climate change – because that's going to change the way things are produced – and the main thing we have to do is to sustain farms."

– Consumer, US

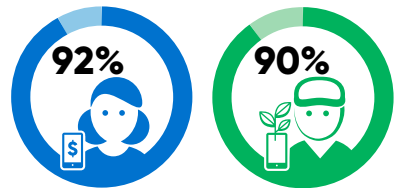




Conclusion

“The Future of Food and Farming” study clearly shows that the next generation of consumers and farmers share many concerns about the future. Both feel strongly about wanting more of a voice in determining the ways in which food is grown, sold and consumed. They especially believe that the future of food and farming is in their hands, and they want to come together to find innovative solutions to challenges.

They also understand that many challenges (such as how to simultaneously protect the environment and ensure the productivity of farms) will involve collaboration and compromise. Despite this, they still remain optimistic that – with ingenuity, cooperation and innovation – they can solve many of the challenges facing farming and food.



% Strongly/Somewhat Agree

Everyone Will Need to Compromise to Secure the Future of Food

The study is a strong impetus to taking a first step to give next-generation farmers and consumers a more prominent voice in matters related to how food is grown, sold and consumed and to create ways for these groups to get to know each other better and begin to have the exchanges and collaborations upon which the future will be built.



Detailed Findings



Methodology

“The Future of Food and Farming” study was commissioned by Corteva Agriscience to understand the perceptions of Gen Z /millennial farmers and consumers across five countries. Corteva utilized the field and data analytic services of Kantar, one of the world’s leading data, insight and consultancy companies.

The 15-minute survey was conducted in mid-2019 among next-generation farmers and consumers in five key markets. Respondents were recruited via email invitation or face-to-face and participated in a tablet or online survey in their preferred local language.

For the purposes of this study, next-generation farmers were defined as 16- to 38-year-old decision-makers on farms, and next-generation consumers were defined as 16- to 38-year-old nonfarmers. The survey was conducted among a minimum of 100 farmers and 500 consumers per country for a total of more than 3,000 survey respondents.

About Kantar:

The study was conducted using the field and data analytic services of Kantar. Kantar is the world’s leading evidence-based insights and consulting company. They have a complete, unique and rounded understanding of how people think, feel and act – globally and locally – in over 90 markets. By combining the deep expertise of their people, data resources and benchmarks and their innovative analytics and technology, they help their clients understand people and inspire growth.

Notations throughout this paper are as follows:

* indicates significantly higher difference compared to four other markets at a 95% confidence interval

** indicates significantly lower difference compared to four other markets at a 95% confidence interval

† indicates statistically significant difference between total consumers and total farmers at a 95% confidence interval

Orange rectangles on charts indicate statistically significant differences between consumers and farmers within a market

° indicates a NET

NEXT-GENERATION FARMER RESPONDENT PROFILE:

		Brazil (N=101)	China (N=137)	France (N=104)	Russia (N=110)	US (N=108)
Gender	Male	75%	53%	79%	67%	83%
	Female	25%	47%*	21%	33%	17%
	Nonbinary	-	-	-	-	-
Age	Gen Z (16-22) NET	12%	19%	6%	14%	11%
	Millennial (23-38) NET	88%	81%	94%	86%	89%
Legacy Status	Legacy NET	57%	92%*	77%	67%	81%
	Not Legacy NET	43%	8%	23%	33%	19%
Farming Tenure	Average Years	9.9	9.2	11.1	7.6	11.8
Farming Position/Level	Own/Co-own/Operate a Farm or Ranch	59%	75%	39%	75%	84%
	Farm/Ranch Manager	16%	10%	47%*	2%	7%
	Farm/Ranch Worker (e.g., foreman, herdsman)	17%	11%	9%	17%	8%
	Own/Co-own a Farm/Ranch but Rent It Out (i.e., absentee owner)	8%	5%	6%	6%	1%
Farm/Ranch Decision-Making Responsibility	Primary or Shared Responsibility NET (i.e., all, most or partner in decision-making)	88%	93%	96%	90%	88%
	Some Responsibility (i.e., some or minority of the decision-making)	11%	5%	4%	6%	12%
	No Responsibility NET (with some input or future responsibility)	1%	2%	-	4%	-

NEXT-GENERATION CONSUMER RESPONDENT PROFILE:

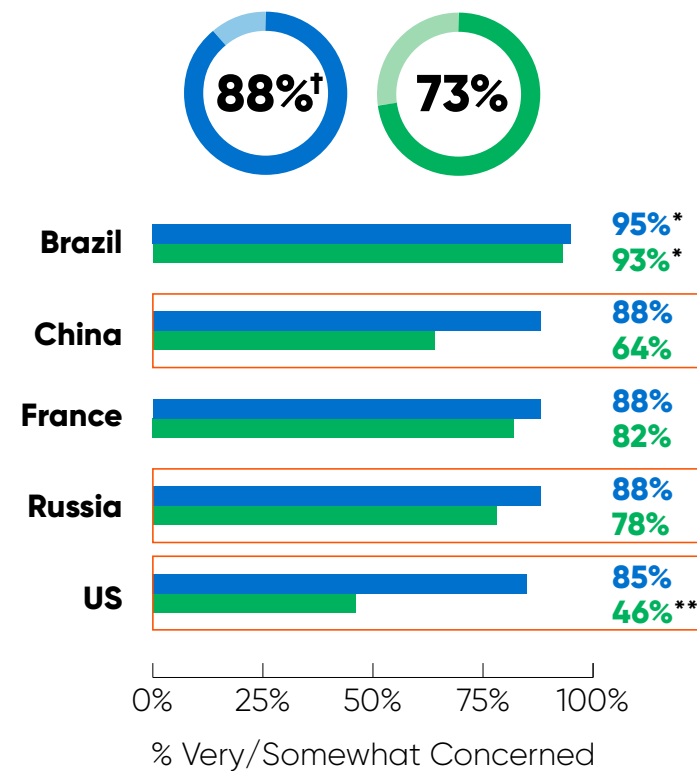
		Brazil (N=501)	China (N=540)	France (N=576)	Russia (N=552)	US (N=504)
Gender	Male	50%	53%	50%	48%	50%
	Female	50%	46%	50%	52%	49%
	Nonbinary	<1%	1%	<1%	<1%	1%
Age	Gen Z (16-22) NET	21%	18%	19%	18%	30%*
	Millennial (23-38) NET	79%	82%	81%	82%	70%
Urbanicity	Urban or City	93%	87%	52%	91%	51%
	Suburban or Near a City	6%	10%	23%	8%	30%*
	Rural	1%	3%	25%*	1%	19%
Household Food Consumption and/or Purchase Responsibility	Primary or Shared Responsibility NET (i.e., all, most or partner in decision-making)	95%	92%	91%	96%	78%
	Some Responsibility (i.e., some or minority of the decision-making)	3%	7%	5%	3%	10%
	No Responsibility NET (with no/some input)	2%	1%	4%	1%	12%*

1 Protecting the Future of Food

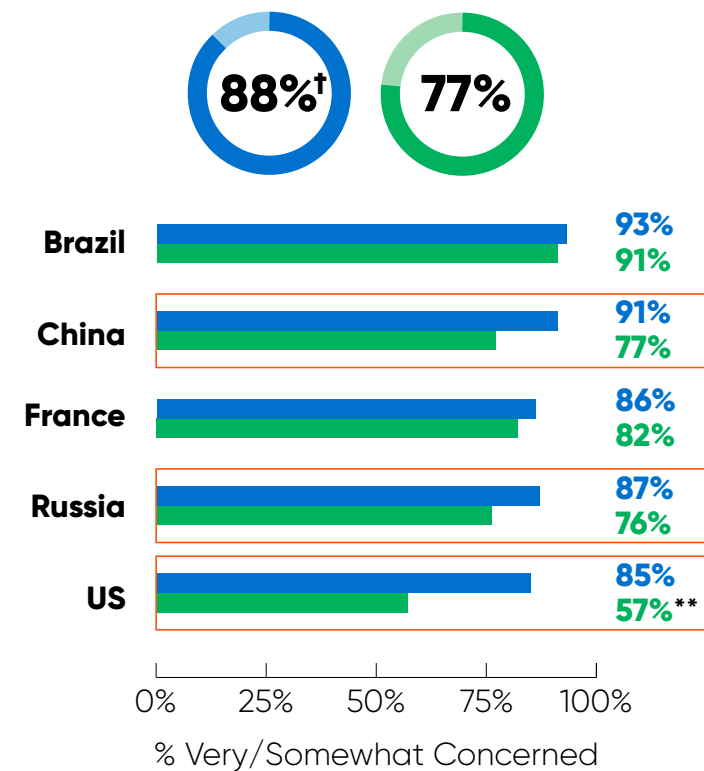
Both Gen Z / millennial farmers and consumers believe the future of food and farming will be under significant threat in the next 20 years. In fact, most next-gen consumers and next-gen farmers say they are concerned that the world's population will not have enough food for its nutritional needs by 2040 – in just 20 years.

Of primary concern – for both farmers and consumers – is that in the future we won't have enough natural resources, such as healthy soil and water, to grow the food we need, closely followed by a concern that we won't be able to get food to the people who need it most.

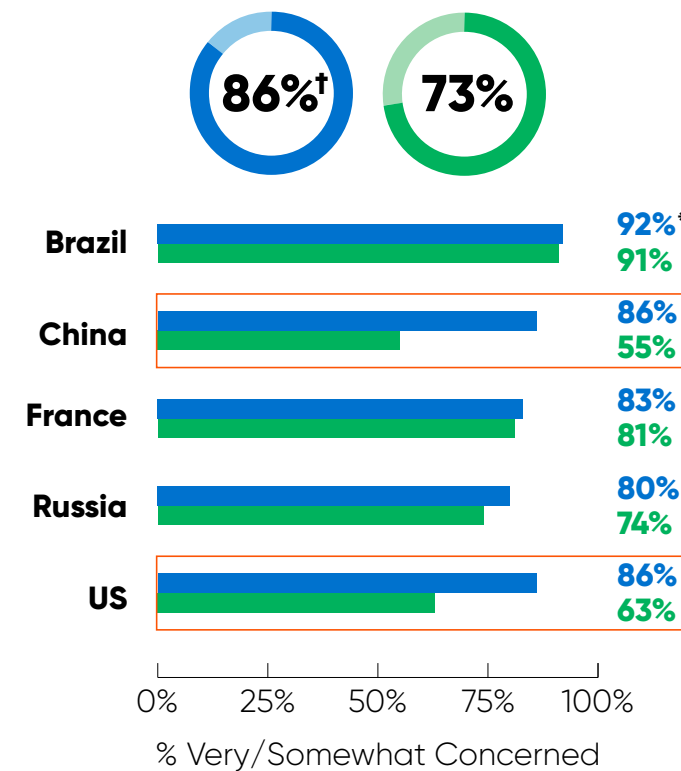
Consumers in Russia, China and the US are significantly more likely than farmers in these countries to be concerned about these issues.



Concern That the World's Population Will Not Have Enough Food for Its Nutritional Needs by 2040



Concern That We Won't Have Enough Natural Resources to Grow the Food We Need



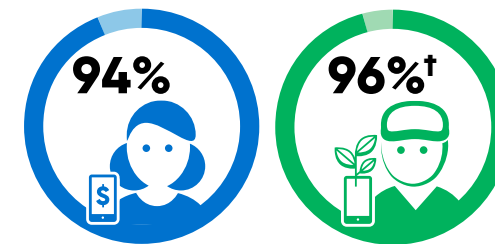
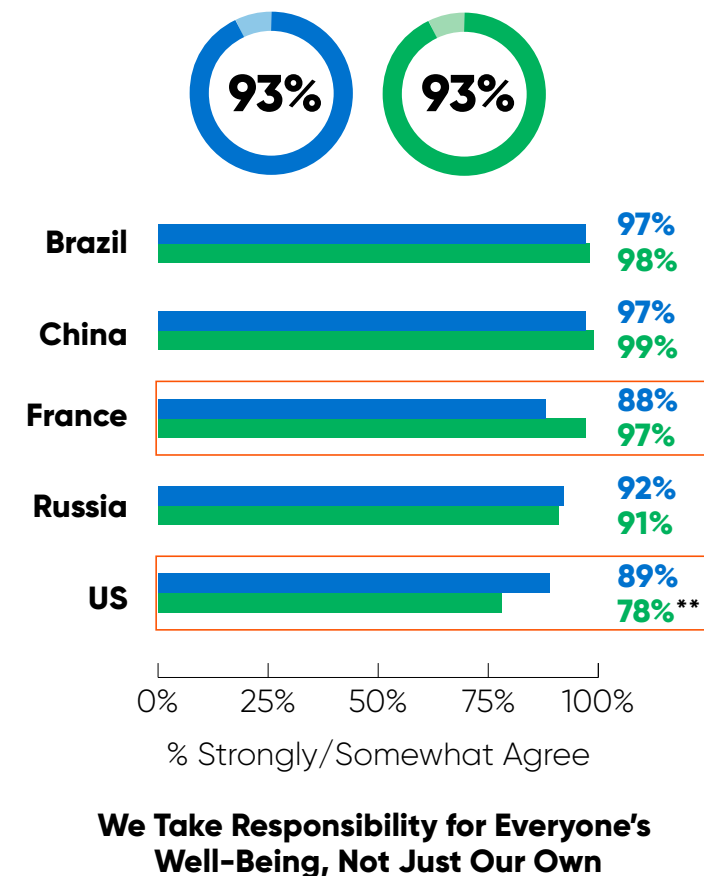
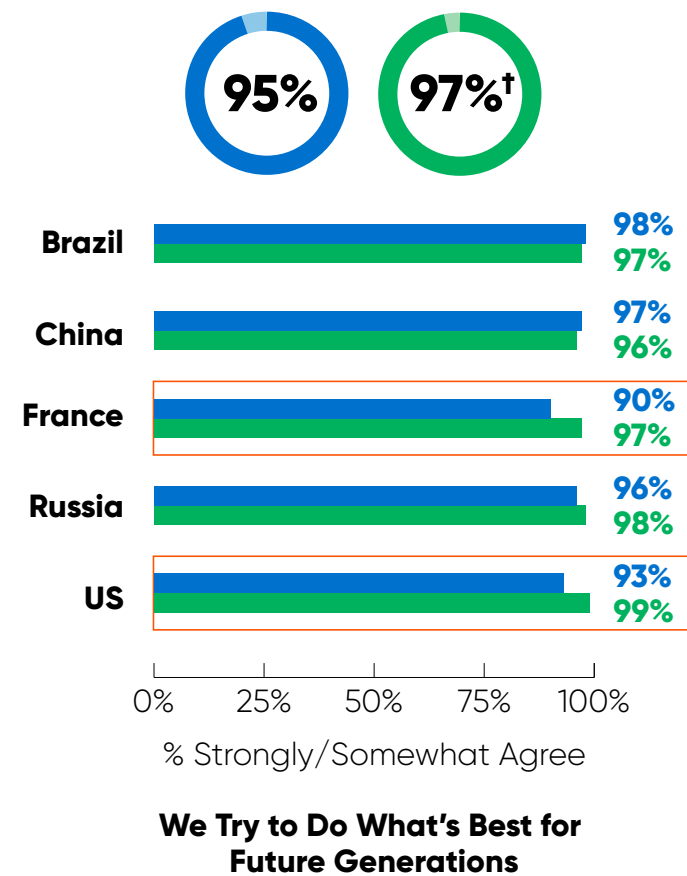
Concern That We Won't Be Able to Get Food to the People That Need It Most



Despite these concerns, both next-gen farmers and consumers have similar ideals for the kind of world they want to live in. Both groups prioritize wanting to live in a world where we try to do what's best for future generations, closely followed by wanting to live in a world where we take responsibility for everyone's well-being and not just our own.

Both next-gen farmers and consumers strongly believe that their futures are connected, and they show strong alignment regarding the issues they want to come together to solve.

I Want to Live in a World Where...



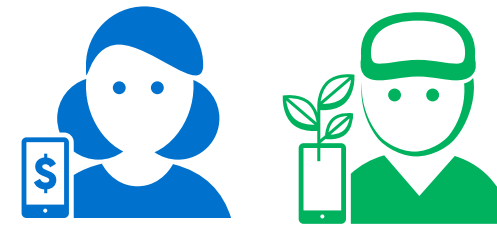
% Strongly/Somewhat Agree

Farmers and Consumers Must Realize That Their Futures Are Connected

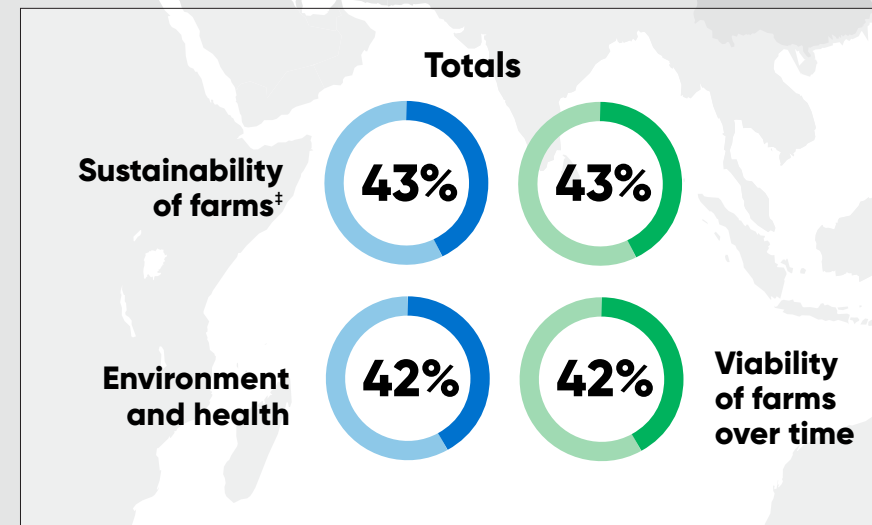
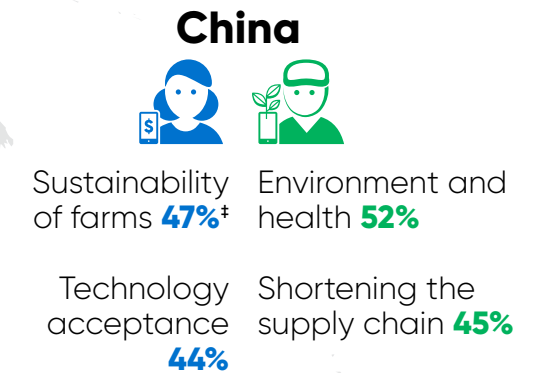
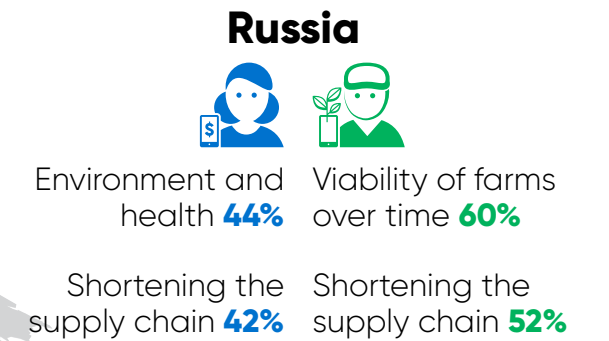
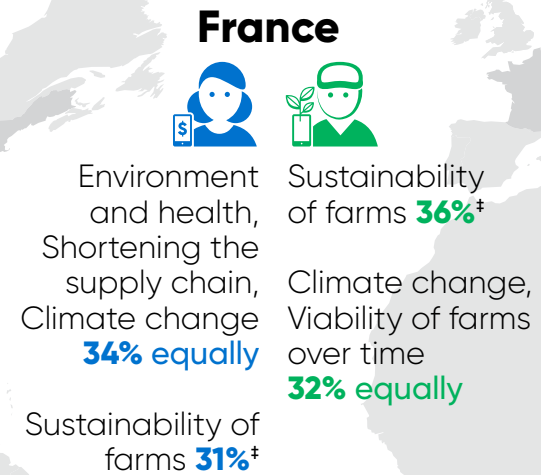
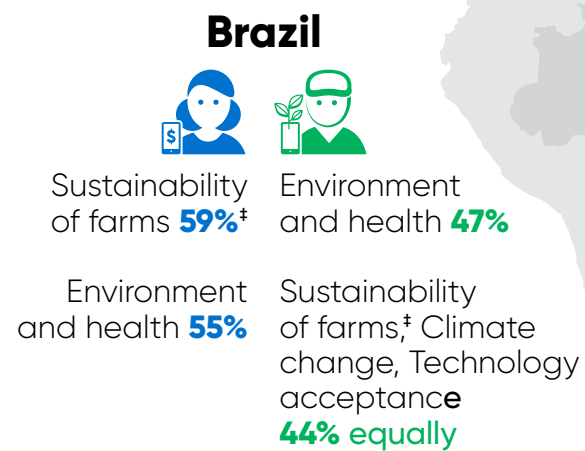
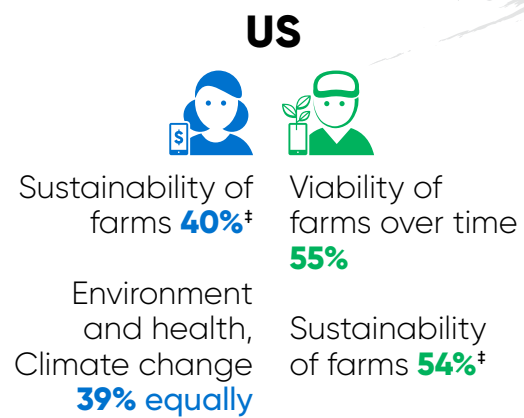


While putting the problem of the financial and environmental sustainability of farms first, these younger farmers and consumers also prioritize coming together to find ways of protecting the environment and health, specifically through limiting the usage of artificial pesticides and fertilizers (with least support for this among farmers in the US and France).

They also want to shorten the supply chain between the farm and the table and to take on climate change by finding ways in which farming and consumption can change to have a lower impact on the climate.

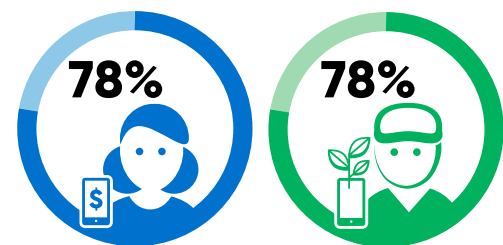


Consumer and Farmer Priorities



†Financial and Environmental

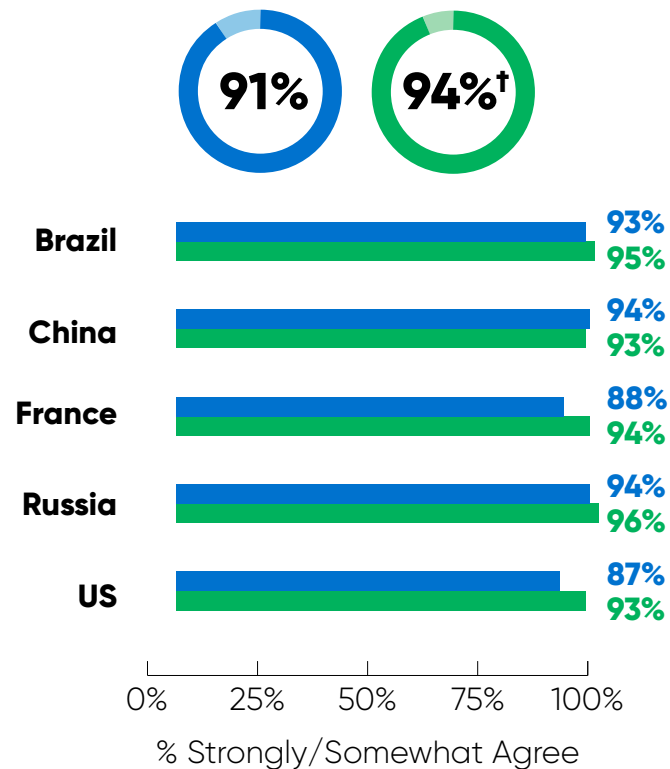
Next-gen farmers and consumers are optimistic that they can take on many of the challenges facing farming and food. But they are not looking towards existing answers. Instead, more than three in four believe that the solutions for the challenges they will face in the future have not yet been invented.



% Strongly/Somewhat Agree

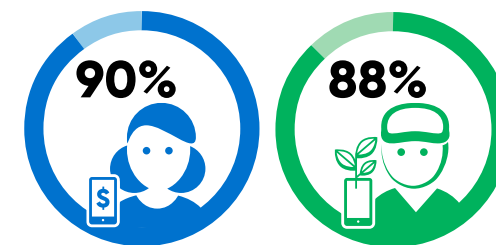
The Solutions for the Challenges We'll Face in the Future Have Not Yet Been Invented

Next-gen farmers and consumers agree that farming will have to change to meet the demands of the future, with the vast majority agreeing that farmers will have to adopt innovative new technologies and methods to succeed.



Farmers Will Have to Adopt Innovative New Technologies and Methods to Succeed

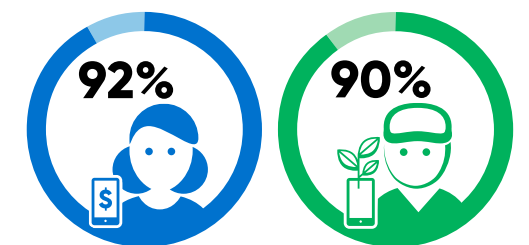
They are also realistic about what it will require to get there, agreeing that it will take both ingenuity and willingness to compromise from everybody to secure the future of food.



% Strongly/Somewhat Agree

It Will Take Ingenuity to Secure the Future of Food

Next-generation farmers and consumers agree that addressing the challenges facing food and farming will potentially allow us to avoid some serious consequences in the future – most importantly, rising food prices, environmental destruction and global food shortages.



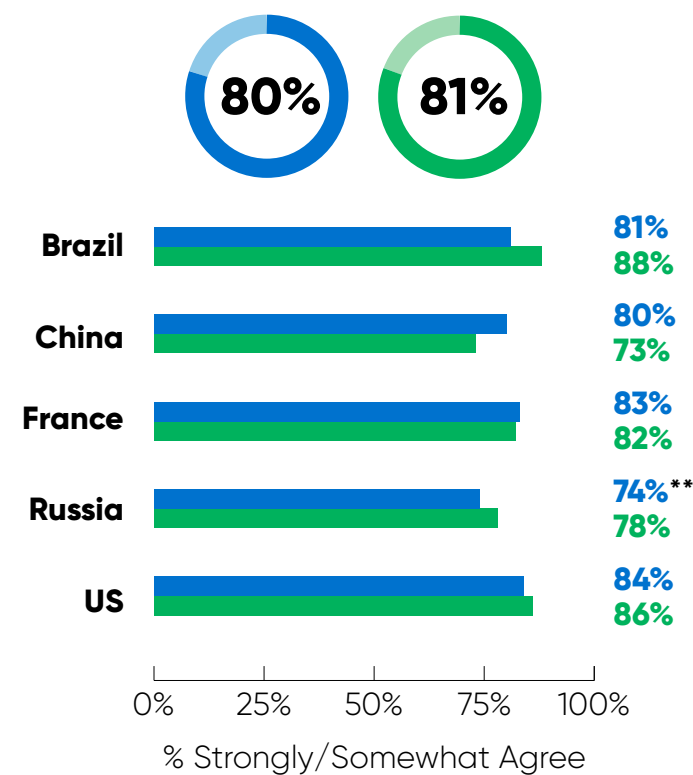
% Strongly/Somewhat Agree

Everyone Will Need to Compromise to Secure the Future of Food

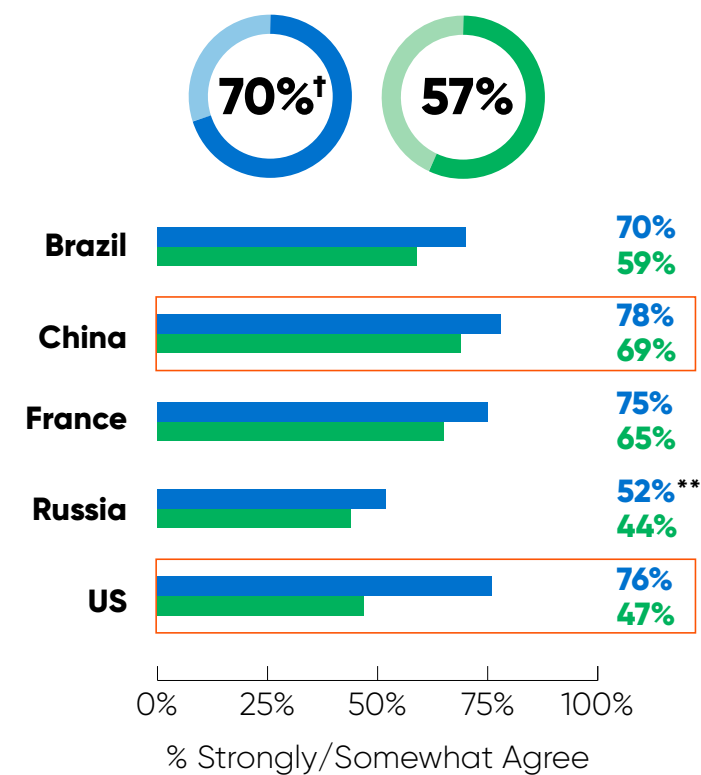
2 Securing the Future of the Farm

The long-term integrity of the farm itself is also of great concern to both groups. At least eight in ten of all respondents agree that it will be more difficult for farmers to make a living in the future, and most young consumers and over half of young farmers agree that in the future, smaller, family-owned farms will no longer exist.

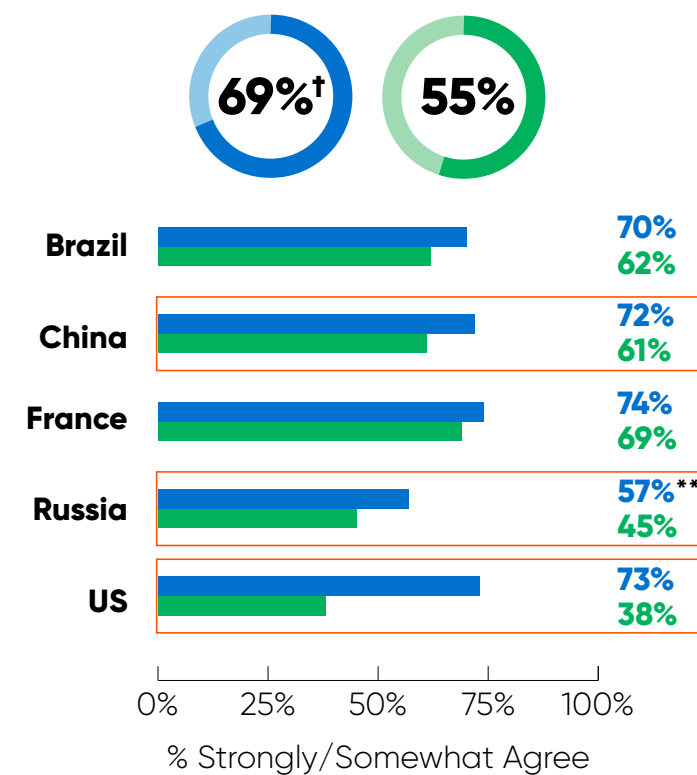
Furthermore, both groups worry that farming won't be able to keep up with changes in consumer demands for food – although consumers are significantly more likely than farmers to feel this way, especially in China, Russia and the US.



It Will Be Difficult for Farmers to Make a Living in the Future



Smaller, Family-Owned Farms Will No Longer Exist



Farming Won't Be Able to Keep Up with Changes in Consumer Demands for Food



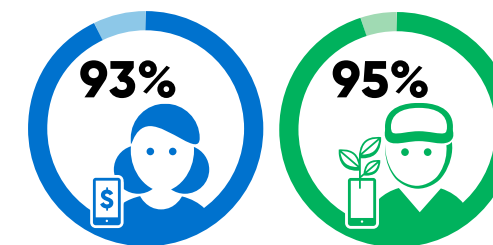
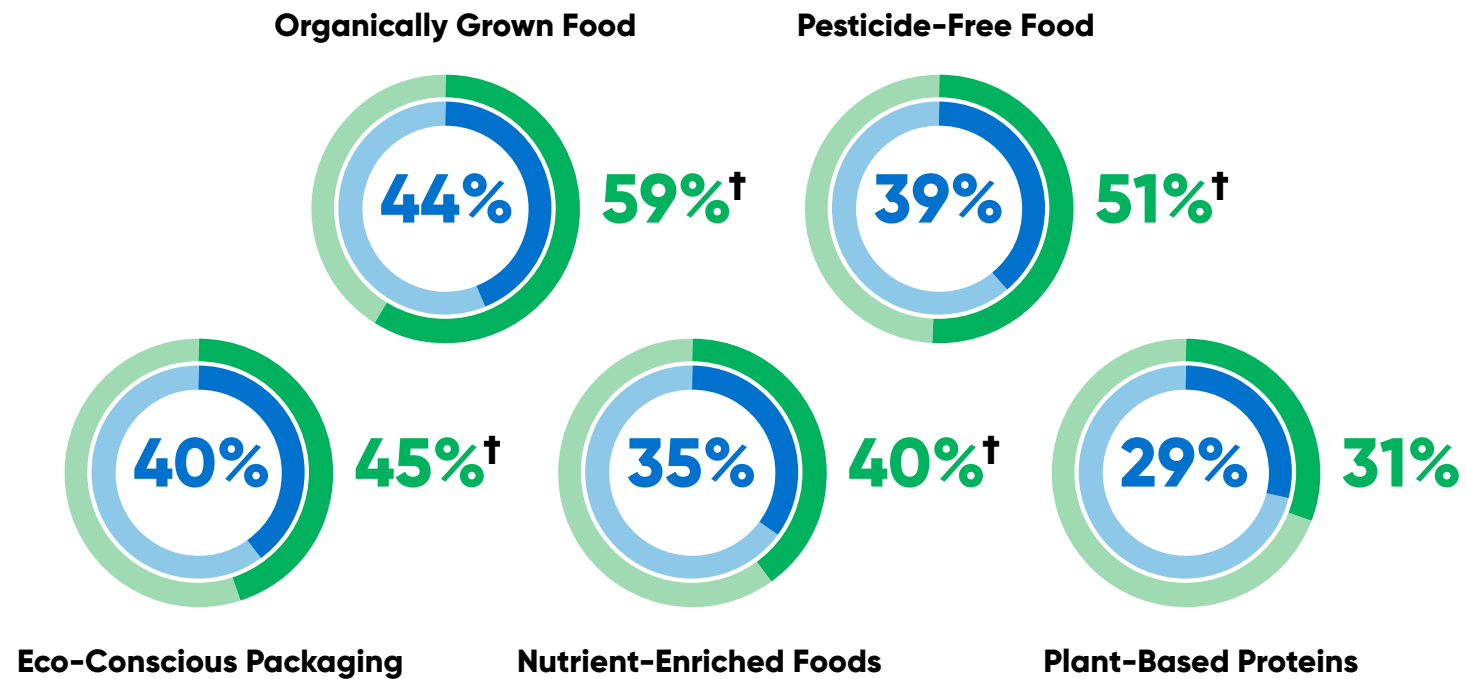
Both groups are in alignment about the consumer trends they think are most likely to stay/become mainstream in the future, putting organically grown food, pesticide-free food, eco-conscious packaging, nutrient-enriched food and plant-based proteins at the top of the list.

Most of these trends are likely to impact what is farmed and how, and also the ability of farms to adjust to meet market demands.

Next-gen farmers and consumers believe the future of farms can be secured, and they are strongly supportive of applying ingenuity and engagement to achieve this goal. Over 90% agree that now is the time to develop innovative ways of taking

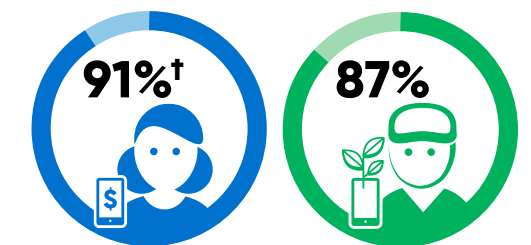
on the challenges facing farming in the future, and a significant majority agree that consumers need to be more involved in how their food is farmed.

Will Stay/Become Mainstream Consumer Food Trends in the Future



% Strongly/Somewhat Agree

Now Is the Time to Develop Innovative Ways of Taking on the Challenges Facing Farming in the Future



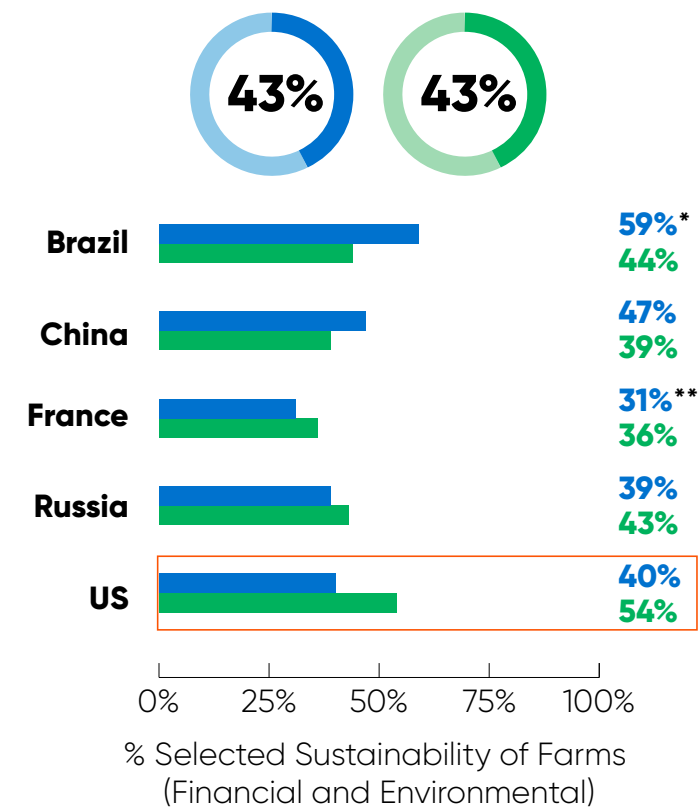
% Strongly/Somewhat Agree

Consumers Need to Be More Involved in How Their Food Is Farmed

When thinking about the problems they would most like to see farmers and consumers coming together to solve, both groups rated as most important the sustainability of farms – defined as helping farms adopt more environmentally friendly practices while staying financially viable.

Farmers across all markets rated “securing the viability of farms over time” as the second most important issue they want farmers and consumers to come together to solve. This was especially strongly felt among farmers in the US and Russia.

However, this item was only rated sixth by consumers overall, falling behind issues like protecting the environment and health by minimizing the use of pesticides, and shortening the supply chain between farmers and consumers.



Issues I Would Most Like to See Farmers and Consumers Come Together to Solve

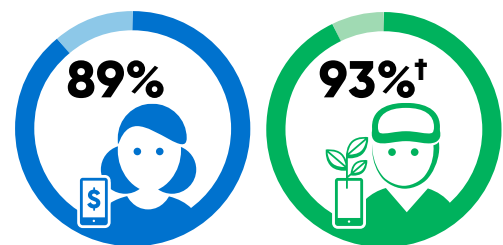


3 Amplifying Farmer–Consumer Voices and Engagement

There is no doubt about who the next generation thinks is responsible for the future of food and farming – it’s themselves – agreeing that the future of food and farming lies in the hands of today’s young farmers and young consumers.

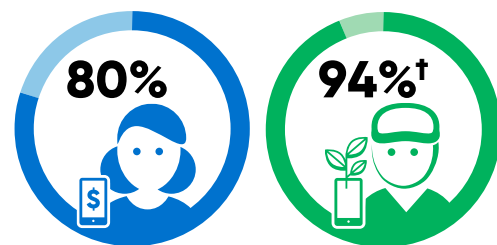
While a significant majority of next-gen farmers and consumers say they already have opinions about what food should be produced and how, neither group feels they have a big enough say in how food is farmed, sold and consumed.

Both next-gen farmers and consumers attribute the most influence over how food is grown, sold and consumed to big players in the food supply chain, including food wholesalers, farm-input suppliers, food manufacturers and corporate farm companies.



% Strongly/Somewhat Agree

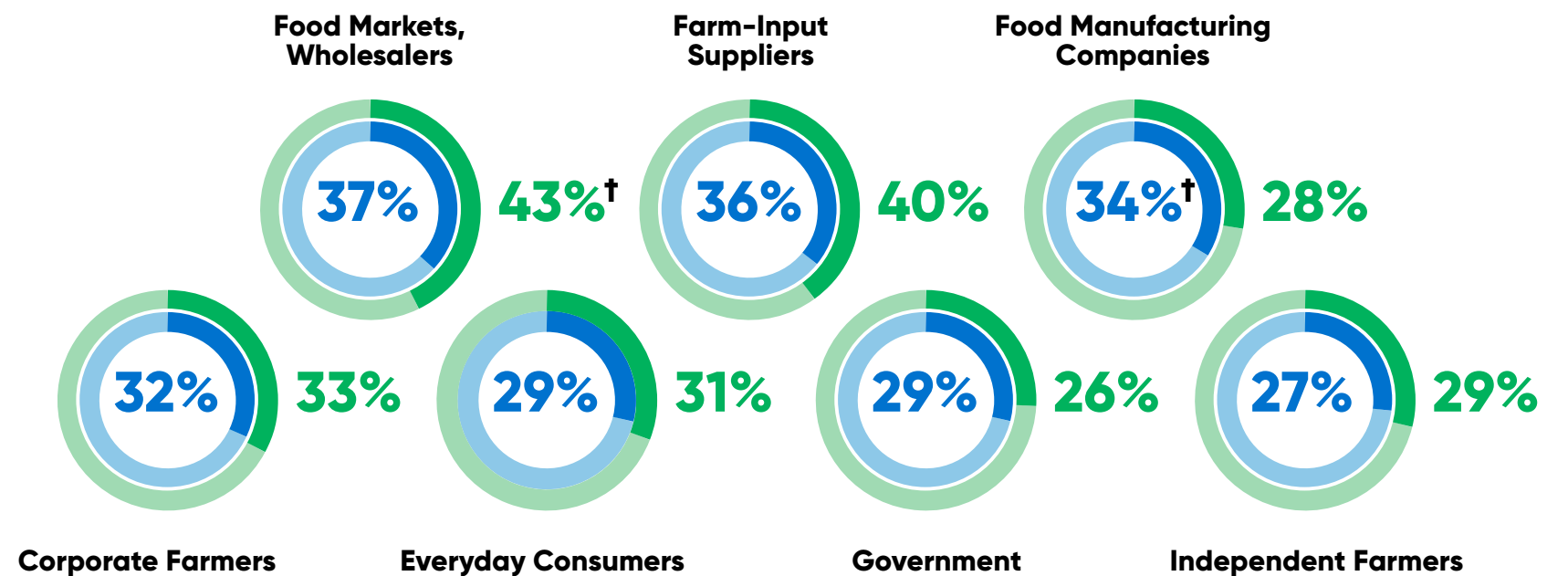
The Future of Food and Farming Lies in the Hands of Today’s Young Farmers and Young Consumers



% Strongly/Somewhat Agree

I Have Opinions on What Food Should Be Produced and How It Should Be Produced

Dominant Influence over How Food Is Farmed, Sold and Consumed



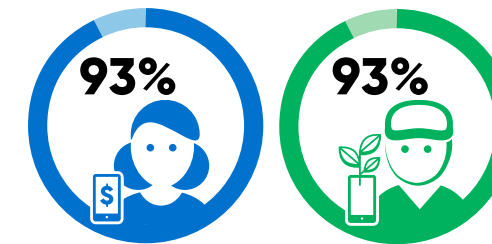
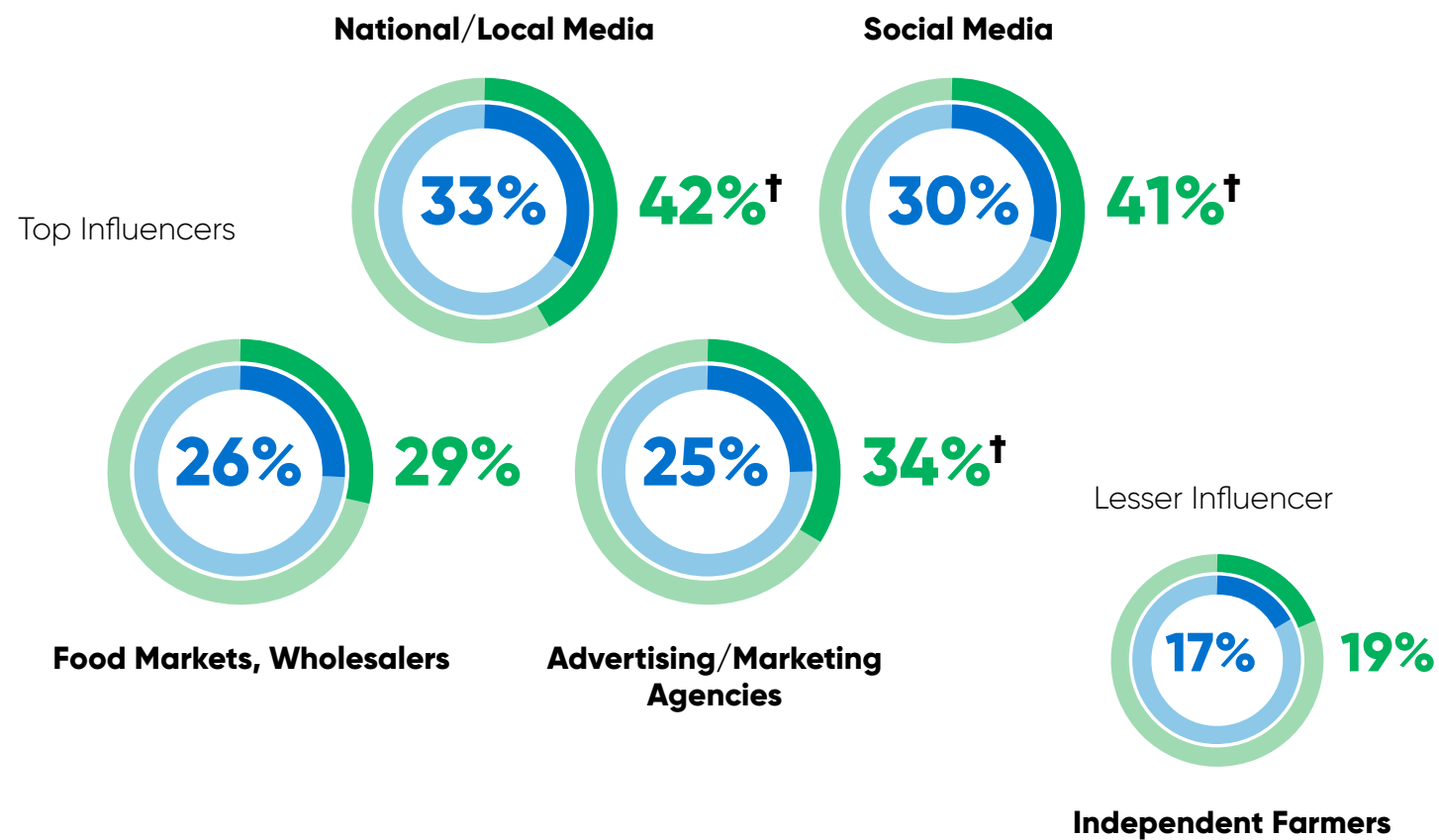
Furthermore, both groups agree that social and mainstream media – together with food wholesalers and retailers and advertising and marketing – exert a bigger influence on consumer opinion than do independent farmers.

Farmers are especially likely to feel that their voices are drowned out by other players when it comes to shaping consumer opinion.

It's not surprising therefore that nine in ten farmers and consumers agree that they need a bigger voice when it comes to securing the future of food and farming, and specifically that governments and food production

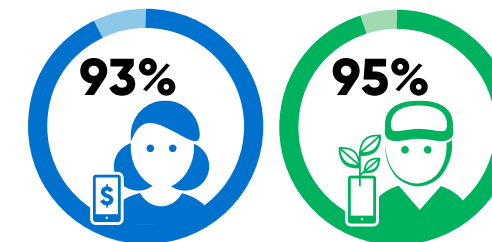
companies need to listen to farmers and consumers when making decisions about food production.

Influence over Consumer Opinion about How Food Is Farmed, Sold and Consumed



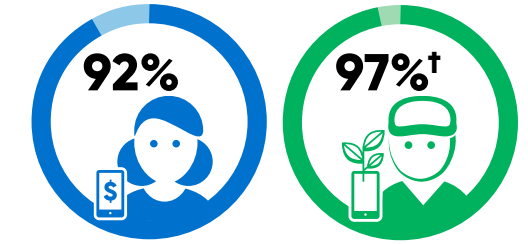
% Strongly/Somewhat Agree

Both Farmers and Consumers Need a Bigger Voice When It Comes to Securing the Future of Food and Farming



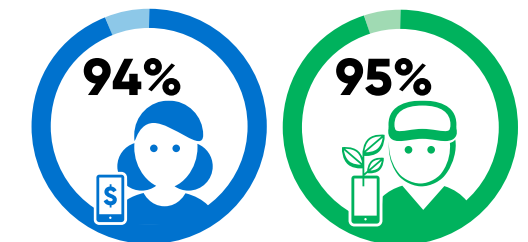
% Strongly/Somewhat Agree

Now Is the Time to Develop Innovative Ways of Taking on the Challenges Facing Farming in the Future



% Strongly/Somewhat Agree

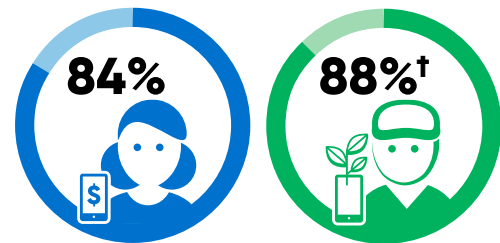
Governments Need to Listen to Farmers When Making Decisions about Food Production



% Strongly/Somewhat Agree

Food Production Companies Need to Pay More Attention to the Opinions of Both Consumers and Farmers

There is not only a strong desire to be heard, but also a willingness to act. The overwhelming majority of both next-gen farmers and consumers say they are willing to take personal responsibility for helping address the challenges facing food and farming.

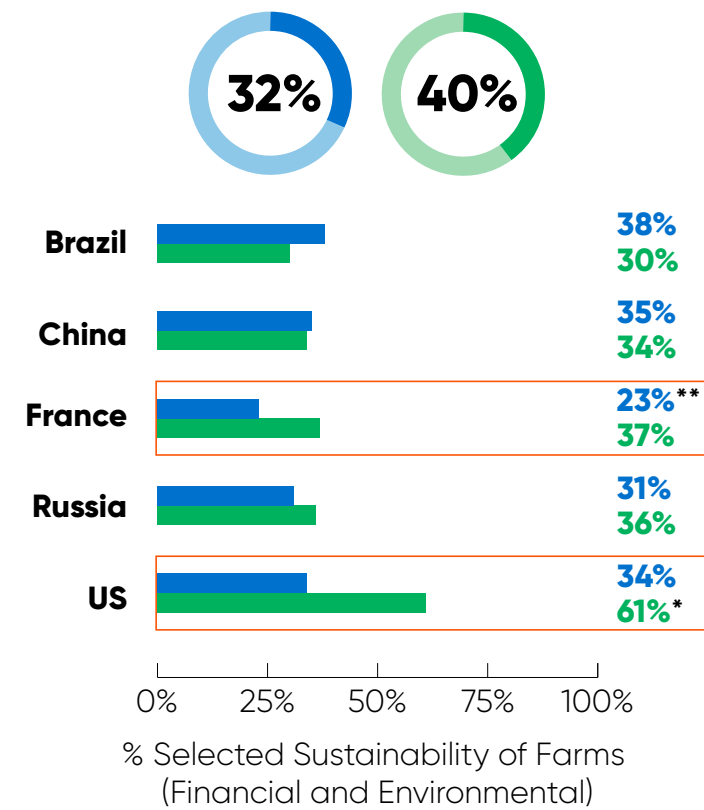


% A Lot/Some Responsibility

Willing to Take Personal Responsibility

Despite their support for coming together to help solve future issues, there are perceived barriers to doing so. Lack of knowledge about – or understanding of – each other, perceived socioeconomic differences, and no means of direct communication

are also often cited by farmers and consumers as barriers to working together to solve future issues.



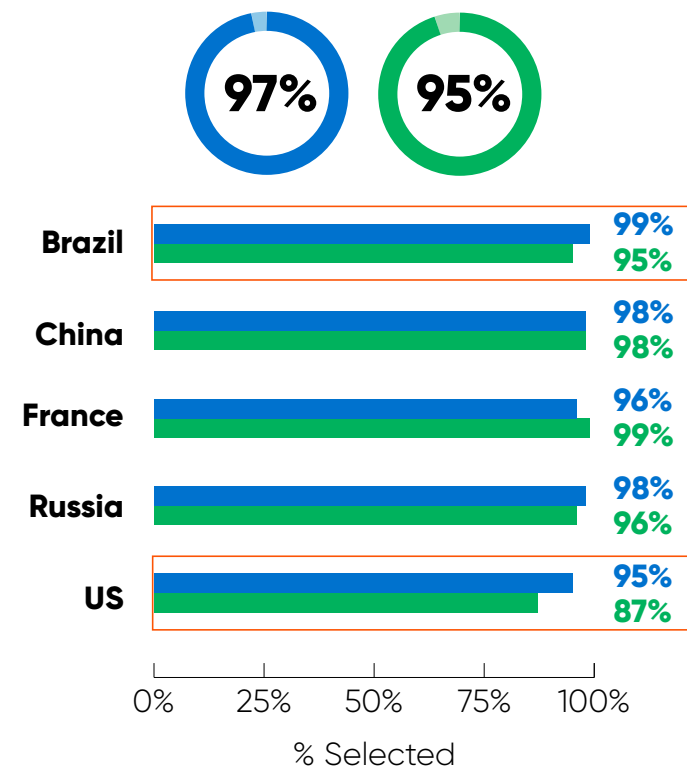
“Lack of Knowledge about the Other” as a Key Barrier for Working Together to Solve Future Issues



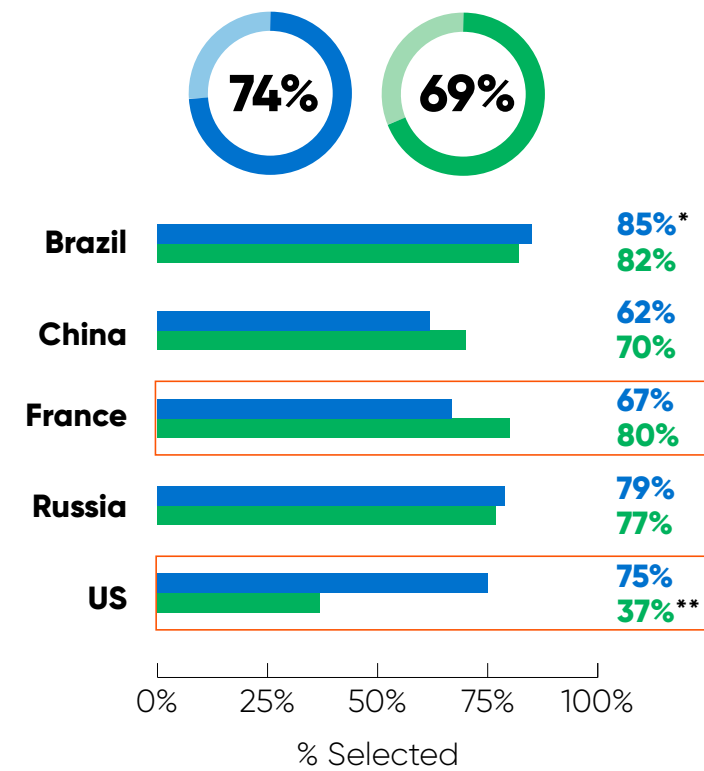
4 Confronting Climate Change

The overwhelming majority of next-gen farmers and consumers believe climate change is occurring, and most believe that humans have contributed to it.

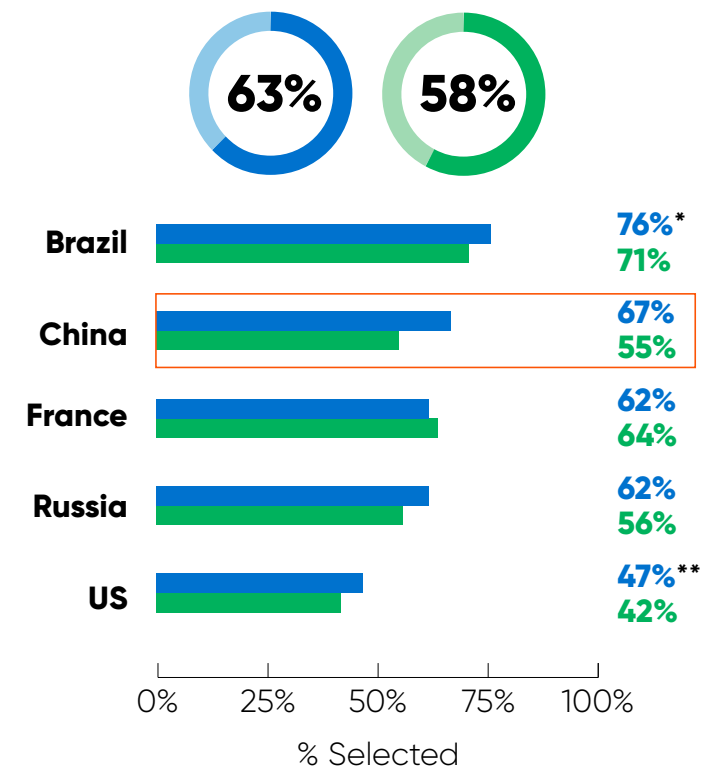
Most of the farmers and consumers who believe in climate change – the US being an exception – also believe it will have a negative impact on the global food supply within the next 20 years.



"I Believe Climate Change Is Occurring"



"I Believe Humans Have Contributed to Climate Change"



Climate Change Will Have Negative Impact on Global Food Supply in the Next 20 Years

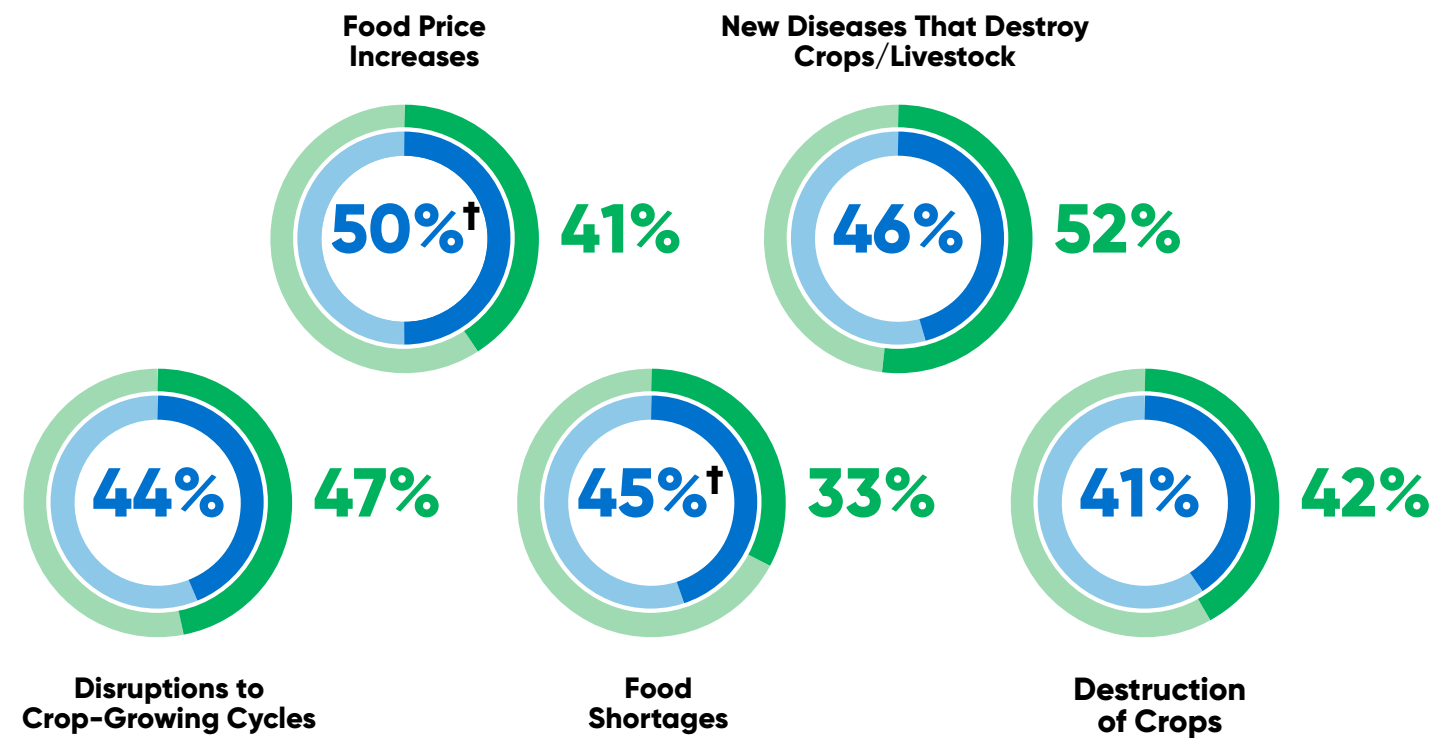


Next-gen consumers and farmers who believe in climate change agree that its most serious threats to farming will include food price increases, new diseases that destroy crops and livestock, disruptions to crop-growing cycles, food shortages and the destruction of crops.

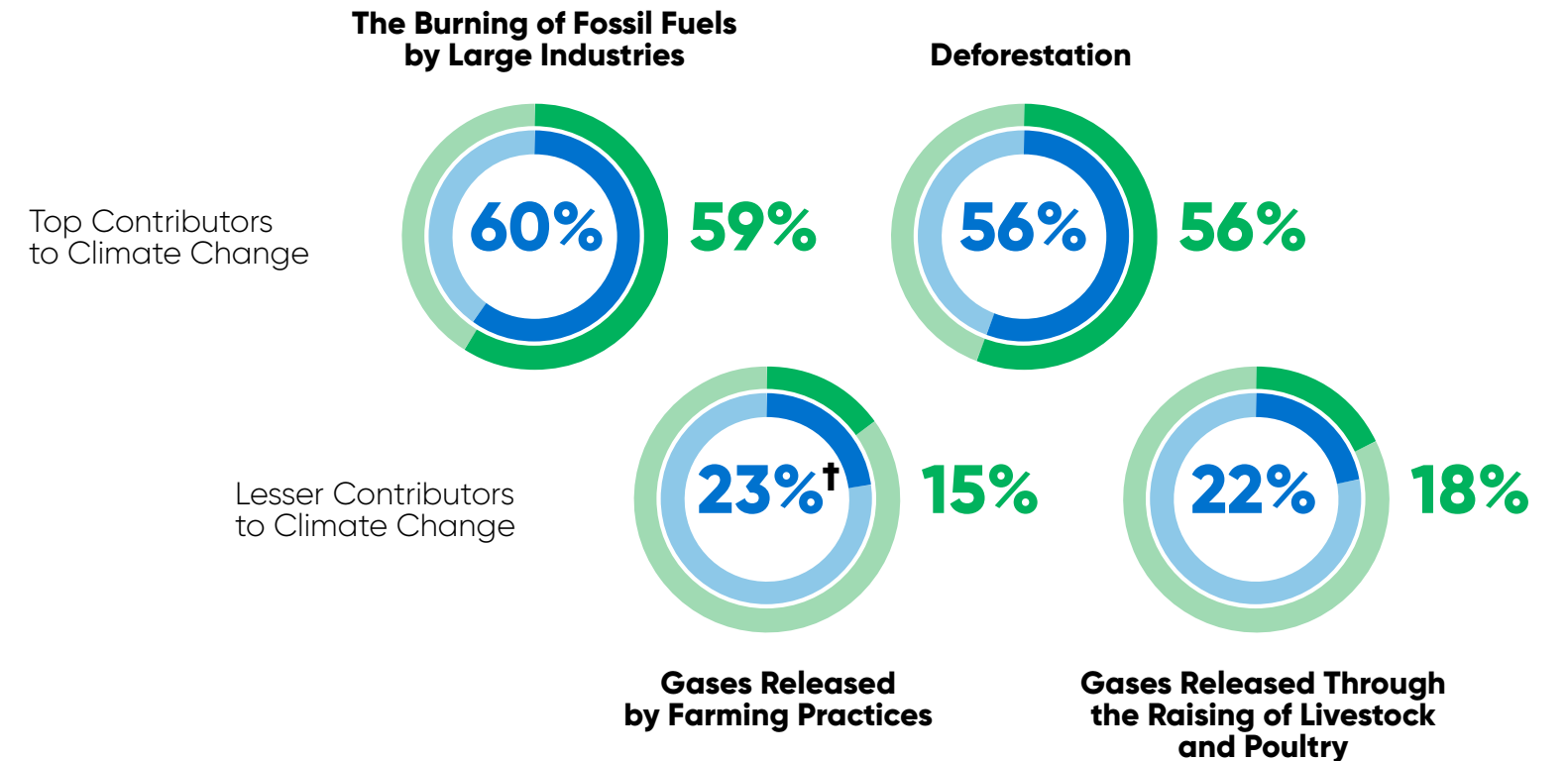
While the majority of farmers and consumers agree climate change is occurring and most of them think humans have contributed to it, many do not rate agricultural activity as among the most significant causes.

The top contributors to climate change – according to the majority of farmers and consumers – are the burning of fossil fuels by large industries and deforestation. Lower on the list are gases released by farming practices and through the raising of livestock and poultry.

Most Serious Threats Climate Change Might Pose to Farming in the Next 20 Years



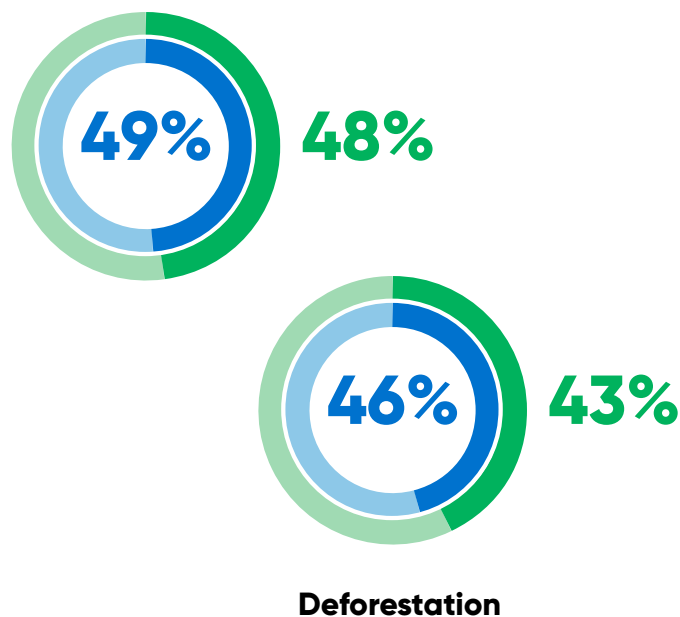
Biggest Contributors to Climate Change in the Next 20 Years



This may explain why, when consumers and farmers are asked what they believe can be controlled to minimize the impact on climate change in the next 20 years, both groups prioritize the burning of fossil fuels by large industries and deforestation.

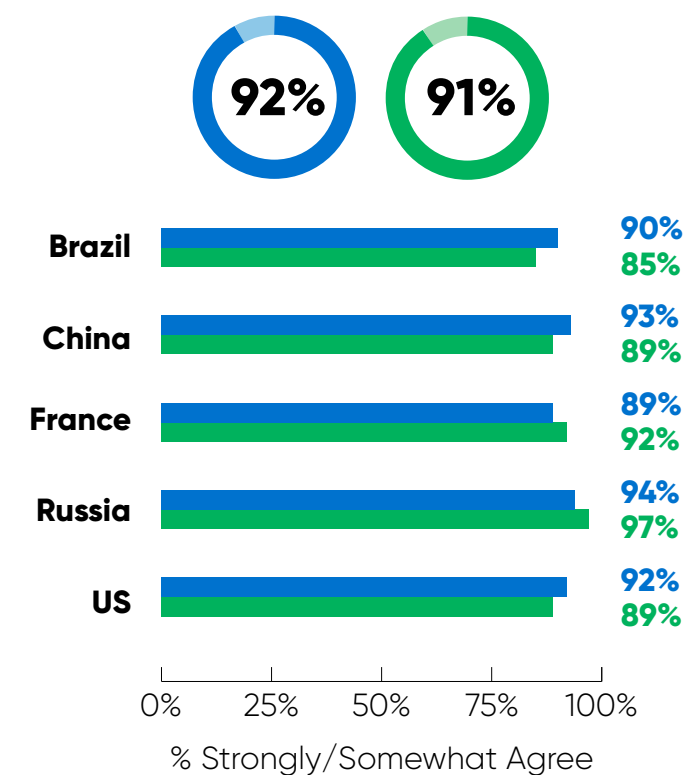
What Can Be Controlled to Minimize the Impact of Climate Change in the Next 20 Years

The Burning of Fossil Fuels (e.g., Oil, Coal, Gas) by Large Industries



Despite some misalignment when it comes to how they view the biggest contributors to climate change, next-gen farmers and consumers both put climate change towards the top of the list of issues they want to come together to address. Specifically, they say they want to find ways in which both farming and consumption can change to have a lower impact on climate.

I Want to Live in a World Where...



We Don't Have to Choose between the Environment and Having Enough to Eat

They also aspire to a future that protects both farming and the environment – a difficult challenge – with over 90% agreeing that they want to live in a world where no one has to choose between the environment and having enough to eat.



