



Animal and Plant Health Inspection Service

Strategic Foresight Case Study





LBL Strategies' *Mastering Foresight: Scenario-Based Planning* (*SBP*) certification course trains professionals worldwide on strategic foresight, with specific focus on learning how to design and run a scenario-based planning event for their organizations. The course is offered in association with George Washington University (Center for Excellence in Public Leadership) and the Baldrige Foundation Institute for Performance Excellence.

Overview

APHIS, the Animal and Plant Health Inspection Service, is an agency in the United States Department of Agriculture whose mission is to protect the health, welfare, and value of our Nation's plants, animals, and natural resources. APHIS works throughout the United States and internationally to safeguard the nation's agriculture, ensuring the economic well-being and public health benefits it provides to society. Ensuring an abundant and affordable food supply, safeguarding air travel against wildlife-related accidents, sheltering household pets from harm during a disaster, and protecting the trees in our forests and communities are just some of the ways APHIS' work touches people's lives.

Recent disruptions to agricultural health and sustainability have magnified the complexity of their mission. This landscape of threats, ranging from new invasive species to biotechnology challenges, has crafted a volatile, uncertain, complex, and ambiguous (VUCA) environment that could disrupt the nation's agricultural ecosystem and economy. Recognizing the need to navigate this dynamic terrain, APHIS representatives explored scenario-based planning (SBP) to plan for the uncertain future operating environment. The Agency believes that SBP can help determine evidence-based approaches that anticipate and prepare for future challenges and opportunities.

Through the training workshop, led by LBL Strategies, APHIS learned how to derive actionable insights and integrate them into their long-term planning. This critical foresight tool helps to ensure they remain a global leader that uses innovative and proven solutions in an ever-evolving world where safeguarding agriculture, the environment, and human health becomes more interconnected.



Approach

LBL Strategies provided an intensive, hands-on training workshop to leverage foresight tools and techniques called *Mastering Foresight: Scenario-Based Planning*. Students learned how to scan the environment for signals and trends, identify key drivers of uncertainty, write scenarios, and conduct a workshop to yield innovative solutions.

SBP is a critical foresight tool for APHIS for several compelling reasons. First, it empowers the Agency to proactively anticipate and prepare for a wide range of potential challenges, from disease outbreaks to natural disasters, refining response strategies and resource allocation. Second, SBP fosters organizational resilience and interdisciplinary collaboration, ensuring a coordinated and informed response to evolving threats. Third, it provides a structured decision-making framework, allowing APHIS to "back-cast" and prioritize actions based on scenarios, optimizing resource allocation. And fourth, SBP equips APHIS with a forward-thinking, strategic approach to safeguarding the nation's agricultural, natural, public health, and environmental interests in an increasingly interconnected, complex, and dynamic world. In summary, it provides a structured approach to embrace uncertainty and prepare for the unknown future.

The students followed a logical path for understanding the critical five phases for a scenario-based planning event:

PHASES:

- 1. Focus on the Future
- 2. Develop Alternative Worlds
- 3. Facilitate a Scenario-Based Planning Workshop
- 4. Analyze Future Investments
- 5. Apply to Strategy Formulation





PHASE 1 - Focus on the Future

Students initially learned to identify early signals of change and trends in the environment that suggest potential future changes. They were introduced to 'trend cards' (refer to the figure below) and used them to analyze how combining these trends might affect future operations.





PHASE 2 - Develop Alternative Worlds

Participants were trained to identify four key drivers and their potential directions that could influence the future landscape. In this context, the emphasis was on agricultural health and sustainability.

APHIS Driver Pole Description

Driver 1:	Global Trade	Description of the Future in 2040
Pole A: No Barriers		Trade agreements could allownobarrier trade internationally(no tariffs, no inspection requirements). More direct to consumer trade (e.g. long-distance drone delivery). Very shortterm international delivery.
Pole B: Breakdo	own	Trade only occurs in certain sectors. Complete breakdown of trade agreements Concerns about supply chain, protectionism, guarding against patent infringement stop trade. Conflicts interrupt trade. Major products not available.
Driver2:	W orkforce Issues	Description of the Future in 2040
Pole A: Sufficier	nt	Right people with the right skills and in the right positions.
Pole B: Insuffici	ent	Trouble with recruitment, retention, education and training availability.
Driver 3:	Consumer Attitudes	Description of the Future in 2040
Pole A: Support	ive/Open to Change	Public acceptance of changes to approaches in food production and costs.
Pole B: Rigid/Tr	aditional	Public rejects changes or new approaches and insists on status quo.
Driver4:	Climate Change	Description of the Future in 2040
Pole A: Impactfi	l	Wildfires are constant issue, major crop failures are routine, air quality reduced, water availability limited, large sectors of population are displaced, invasive species thrive, mosquitos and other pathogen-carrying insects travel to new places.
Pole B: Mitigate	d	Geoengineering, renewable energy sources, or other new technology make climate change a non-issue or mitigate against large temperature increase.
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The four drivers, each with opposing directions, resulted in 16 potential scenarios. From these, students chose four specific scenarios to thoroughly examine the impact of emerging signals and trends on the future. They brainstormed how the future may look given advances in all sectors across a PESTLE (Political, Economic, Social, Technological, Legal, Environmental) + I (Industry) framework.



One team's example is here - they called their scenario "A Dystopian Unravelling". It was later transformed to a full scenario (see Appendix A):

PESTLE+I trends/signa APHIS	category als	Economic	Social	Technological	The v	vorld in 20)40 Industry
World 4: BBBB "A Dystopian Unravelling"	US leaders impose Marshall law, intense surveillance	Countries become economically isolated	Shortened lifespans, bad nutrition, lack of access to healthcare, depression and	Social media is censored worldwide	US law not based on the Constitution	Natural resources contaminated or extinct/depleted	Collapse of agriculture
Global Trade: Breakdown. Complete breakdown of trade agreements	Regions of the US separate, break apart	Supply & food shortages	Wealthy grow more powerful and maintains education for themselves, public education falls apart	US unaware of science & technological advancements in other areas, average citizens fall behind	Regions & states allow/disallow immigration	World is hot/dry in some areas, other areas underwater	Remaining productive farmland is controlled by elites
Workforce Issues: Insufficient. Trouble with recruitment,	Political uprisings & rebel groups, civil wars based on economic class	Wealthy people set up an enclave, divided classes	Complete social isolation, misinformation, echo chambers, widespread distrust	Splintered internet, increased surveillance, hacking	US does not allow leaving	Landmass shrinking due to rising sea level	Fewer startups, less innovation, massive companies overtake everything
retention, education and training availability.	Widespread political divisiveness results in indecision & lack of funding for government programs	Hoarding, black-market trading, closed networks that only wealthy can access	Food & water riots, more crime	Decision between giving water to people or machines (i.e., data centers)	New laws restrict trade	New pandemics, famines, pests and diseases spread and thrive in new and unknown conditions	Long work schedules, low pay, no unions
Public rejects changes or new approaches and	Legislative branch controlled by corporations	Stock market collapse, banks collapse	Isolated demographics	Ideas are not shared globally	No 1 st Amendment/ Bill of Rights	Unsustainable environmental practices continue	No more checks and balances, few people/ companies advance
insists on status quo. Spread Pest/Disease: Widespread. More expansive range of pests/diseases, including new invasives.	Branches of government paralyzed, private amercenaries & mercenaries apply control	Out of control inflation, everything expensive	Decreasing population – starvation, disease, etc.		Regulatory takeover by mega- conglomerates & wealthy cause disregard of regulations that protect environmental and human health	Pollution problem increases, clean water supply shrinks	Decreasing ethios, desperation for survival

Once world parameters were decided and the future environment brainstormed, the teams created scenarios and vignettes. Another team's example vignette and scenario follows:



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Sample Full Scenario:

The World of 2040 – Safeguarding Agriculture in an Altered Landscape

(See Appendix A for all four scenarios)

Global Trade	Pests & Diseases	Workforce	Consumer Attitudes
No Barriers	Widespread	Sufficient	Rigid

In the year 2040, the world had undergone a profound transformation in the realm of agriculture. Gone were the days when nations held sole dominion over their food production. Instead, agriculture was now divided into distinct regions, each specializing in specific crops and commodities. These regions had formed their own alliances, trading freely with one another, unburdened by the barriers of national borders. Barrier-free trade, while beneficial in many ways, has inadvertently contributed to the spread of pests and diseases. Goods and agricultural products move seamlessly across borders, but so do hidden threats. The interconnectedness of our global economy has created an environment where diseases travel as freely as goods do.

This shift was born out of necessity. The world had seen a dramatic increase in the range and virulence of pests and diseases that devastated crops and livestock. Climate change had brought about erratic weather patterns, with severe cascading events occurring regularly. Entire harvests were wiped out in the blink of an eye, and traditional methods of pest control and disease management were rendered ineffective.

In this new world order, trade regions held the power. They influenced regulations and laws, often more than the governments of the former nations. The Animal and Plant Health Inspection

Service (APHIS) had adapted to these changing dynamics. They managed an agile workforce equipped with cutting-edge technology for pest and disease monitoring, surveillance, and risk mitigation. If APHIS could change its practices to maximize innovative tools and methods, their skilled workforce would be more than able to support new and expanding demand but the stakeholders and citizens are convinced that change is not needed as reflected in flat budgets and refusal to change standards and regulations.



An example of how this altered landscape looks in practice: in a U.S. State called "Verde Valley," a picturesque landscape that boasts fertile soil and a rich agricultural history, there have been many changes to an area that has for centuries been knows as

the breadbasket of the world, producing an abundance of grains, fruits, and vegetables. Even though farmers in the Verde Valley have access to markets worldwide, allowing them to export their produce and import goods with ease the local community in the

Verde Valley remains resistant to change. Traditional farming practices are deeply rooted in their culture, and many are hesitant to adopt new technologies or sustainable farming methods. This resistance poses a challenge in maximizing the region's agricultural potential. The power of trade alliances and increased costs of transportation and risk mitigation has increased expenses and fees that producers and growers must pay.

Due to the globalized nature of trade, pests and diseases from distant regions can easily find their way into the valley, endangering its agricultural output. Farmers must constantly adapt and invest in pest management and disease control measures and has made them. Add in the need to be vigilant and responsive to cascading emergencies caused by severe weather events caused by climate change and those in Verde Valley who work in any agricultural job are constantly taking many more steps backwards than forwards. They are increasingly turning to APHIS with requests to increase their support for emergency response to include ongoing surveillance and to improve processes that would allow cargo to move faster.

And even though the heart of APHIS's operations lay in the diligent monitoring of pests and diseases across the regions; Automated systems scanned for anomalies, and data poured in from every corner of the world. But public acceptance issues meant that people still needed to see a human touch in these crucial matters. Specialists were tasked with verifying all machine-generated data and supervising inspections, treatments, and other risk mitigation actions. This resistance to changes that would allow increases to efficiency and effectiveness meant that APHIS cannot provide additional support to Verde Valley in responding to emergencies or expediting inspections or monitoring.

The world had changed, and APHIS had to change with it but couldn't escape restraints from old-school stakeholders who resisted the new methods. They questioned the efficacy and efficiency of these changes, citing a lack of personal touch in pest and disease management. Despite the advancements, APHIS found itself locked in a constant struggle to convince skeptics and make headway in the fight to safeguard agriculture—and Verde Valley—in an altered landscape.



PHASE 3 - Facilitate a Scenario-Based Planning Workshop

After creating the scenarios and vignettes, participants engaged in a series of structured workshop exercises. They were trained to facilitate a scenario-based planning workshop using LBL Strategies' templates, ensuring organized and logical outcomes.

PHASE 4 - Analyze Future Investments

The structured training sessions guided participants through a logical sequence to enhance their future-focused thinking. This enabled them to devise inventive strategies and recommendations for future capabilities.

An example of final recommendations follows:



RECOMMENDATIONS

- Establish and strengthen relationships with the public, research agencies, and security agencies to continue safeguarding agricultural health and ensuring the food supply.
- Shift APHIS from prevention to pest management.
- Develop regulatory framework to facilitate healthy and sustainable micro-farming practices and new agricultural technologies and approaches.
- Invest in state-of-the-art tools and AI to keep up with new food production systems, bioterrorism threats, and public demands.
- Develop guidelines/techniques for assessing novel risks of genetic modification of crops.
- Get funding for potential R&D or acquisition of needed technology, especially in spatial analysis, digital forensics/interdiction.

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PHASE 5 - Apply to Strategy Formulation

At the end of the course, students converted prioritized investments and recommendations into strategic objectives to form the foundation for future strategies.

RESULTS

The 'Mastering Foresight: Scenario-Based Planning certification program equipped professionals with strategic thinking, the ability to spot opportunities, and to pinpoint required capabilities and resources for upcoming changes. Through this training, professionals learned how to:

- Design and run a foresight program
- Scan for signals and trends
- Identify future drivers of uncertainty
- Utilize a PESTLE framework
- Write scenarios and vignettes
- Lead a Scenario-Based Planning Workshop
- Prepare a communication plan to share recommendations with stakeholders
- Analyze foresight output
- Bridge the gap between foresight and strategy

CLASS FEEDBACK

- "It was one of, if not the best training I have taken since joining USDA. I greatly appreciate the opportunity to attend the course and your handling of the course.
 I will recommend it to others for any future offerings."
- "Thanks! This class has been fantastic--I'm so glad you invited me to it!"
- "The training's been a lot of fun! It is mind bending!!!"
- "Definitely a good fit for the work we do."



ABOUT LBL Strategies

Our mission is to help organizations focus, make better decisions, and grow by leveraging foresight to think and act strategically.

Since 1985, LBL Strategies has delivered strategy management education, training, and consulting to diverse sectors, including public, private, and nonprofit organizations. Over the years, we've established ourselves as a premier provider of strategic management certification preparation, with a 97% success rate for learners passing their industry certification on their first try.

Recognized by the International Association for Strategy Professionals (IASP), our partnership with institutions like George Washington University Center for Excellence in Public Leadership, IASP, and the Baldrige Foundation underlines our commitment to quality. With over a century of combined instructor experience in strategy management and a robust record in federal training, we've successfully guided hundreds of clients in honing and executing their strategies.

For more information, contact https://www.lblstrategies.com/

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APPENDIX A: Four Fictitious Scenarios for APHIS

Global Trade	Pests & Diseases	Workforce	Consumer Attitudes
Breakdown in Trade	Limited	Sufficient	Rigid

Harvesting Resilience: A Tale of Agriculture in 2040

In the year 2040, the world had witnessed a seismic shift in the way humanity fed itself. International agricultural trade, once the lifeblood of food distribution, had come to a grinding halt. It was a time of unprecedented challenges, but also remarkable innovation.

As a government worker in the United States Department of Agriculture, my daily routine had transformed into a relentless battle against a multitude of agricultural pests and diseases that seemed to be multiplying with every passing season. The climate crisis had created the perfect breeding grounds for these threats, and the range of their devastation was expanding at an alarming rate.

Our fields were no longer safe, and farmers faced an uphill battle to protect their crops and livestock. But amidst the chaos, something extraordinary was happening. The American public, once hesitant about new food technologies, had become remarkably open-minded. With traditional agricultural practices failing and international trade no longer reliable, people began to embrace alternatives.

Vertical farms sprouted in urban areas, harnessing controlled environments to produce crops year-round. Lab-grown meats became a staple, reducing the strain on our livestock and land.

Even insects, once considered taboo, found their way onto dinner plates as a sustainable protein source.

Interest in agriculture had surged. Young minds flocked to universities to study plant genetics, pest management, and food science. The government, realizing the need for expertise, offered incentives and scholarships to encourage the next generation to tackle these challenges head-on.



I had the privilege of working with a dedicated team of experts, but we faced unresolved issues that kept us awake at night. The delicate balance between embracing new technologies and preserving the environment was a constant dilemma. There were ethical concerns about the welfare of lab-grown animals and the use of genetic modification to enhance crop yields.

Additionally, the breakdown of international agricultural trade had geopolitical implications that couldn't be ignored. The world had become more fragmented, and cooperation among nations was essential to ensure food security for all.

Every day, as I entered the USDA building, I felt the weight of our responsibilities. The year 2040 had thrust us into a new era of agriculture, one where innovation was both our savior and our greatest challenge. We were determined to find solutions, to feed our nation, and to share our knowledge with the world. The unresolved issues were the fires that fueled our dedication, and we knew that the future of food depended on our unwavering commitment to overcome them.

My journey into this transformed world began in the small town of Greenville, Kansas, where my family had been farmers for generations. My parents had struggled to keep our family farm afloat in the face of increasingly unpredictable weather patterns and a growing array of crop pests. By the time I left for college, the once-thriving fields were a shadow of their former selves.

When I joined the USDA, I was assigned to a team focused on developing pest-resistant crops. Our lab was a hive of activity, with scientists working around the clock to engineer plants capable of withstanding the onslaught of new and resilient pests. Genetic modification, once a contentious issue, was now accepted as a necessary tool in the fight for food security.

As I delved deeper into my work, I couldn't help but wonder about the unresolved issues we faced. Were we inadvertently creating new problems while solving old ones? Would the genetic diversity of our crops be compromised, leaving us vulnerable to unforeseen threats? And what about the broader environmental impact of our interventions?

These questions weighed heavily on my mind as I attended a meeting of government scientists and policymakers tasked with addressing the challenges of 2040 agriculture. The room was filled with experts from various fields, each grappling with their own piece of the puzzle.



Dr. Maria Ramirez, a renowned plant geneticist, presented her research on the potential consequences of monoculture, a practice that had become increasingly prevalent as farmers sought to maximize yields in the face of limited arable land. She warned of the dangers of putting all our eggs in one genetic basket, citing historical crop failures caused by lack of diversity. "Nature thrives on diversity," she said passionately. "We must find a way to balance the need for high yields with the imperative of preserving genetic diversity in our crops."

Her words struck a chord with the audience, and a lively discussion ensued. It was clear that we needed a comprehensive strategy that considered not only short-term solutions but also the long-term sustainability of our agricultural practices.

Our conversation was abruptly interrupted by the arrival of a government official who delivered unsettling news. The breakdown of global agricultural trade had escalated, leading to increased tensions with neighboring countries. Food scarcity in some regions had already led to conflicts, and the situation was becoming dire.

Back at the USDA lab, I threw myself into my work with renewed determination. It was clear that we needed to find a delicate balance between embracing new technologies and preserving the environment. We couldn't afford to ignore the ethical concerns surrounding genetic modification and lab-grown meats, but we also couldn't afford to cling to outdated practices that were failing us.

In the midst of this turmoil, a glimmer of hope emerged from an unexpected source. A group of young researchers, fresh out of university, presented their findings on sustainable farming practices that combined traditional wisdom with modern technology. Their approach emphasized crop rotation, agroforestry, the use of natural predators to control pests, and novel technologies such as genetic engineering.

"We believe that by working with nature, rather than against it, we can build resilient and sustainable agricultural systems," one of the researchers explained.

Their ideas resonated with many in the room, and there was a growing consensus that a multifaceted approach, one that embraced both cutting-edge science and age-old wisdom, was the key to addressing our unresolved issues.



Global Trade	Pests & Diseases	Workforce	Consumer Attitudes
Breakdown	Widespread	Insufficient	Rigid

A Dystopian Unraveling: America's Fractured Future

In the year 2040, the United States had descended into a dystopian reality, a bleak consequence of unmitigated climate change and the erosion of social and political structures. The nation had fragmented, giving way to an era where powerful corporations held sway over territories, exacerbating inequality and oppression. The corporate elite ignored previous laws and regulations to achieve their selfish ends, and the average citizens bore the brunt of the effects of the environmental impacts such as severe water and air pollution and accumulation of trash.

Across the once-united land, climate change had brought about dire consequences. Extreme weather patterns ravaged crops, causing widespread food shortages. Dwindling water resources exacerbated the struggle for survival, leading to conflicts over access to clean water. The once-thriving agricultural heartlands now bore the scars of unsustainable exploitation and climate-induced degradation.

Pests and diseases ran rampant, fueled by changing climate patterns and weakened immune systems. Crops were decimated, and efforts to combat the surge of infestations often proved futile due to lack of resources. Likewise, unfettered disease outbreaks and human pandemics occurred frequently because of the shattered public health system. Most people lived in fear, succumbing to depression and even substance addiction to escape reality; others turned to crime to support themselves. Wealthy elites formed walled-off enclaves where they were mostly unscathed from increasing crime, shortages, and widespread pestilence. These walled-off areas were located in the remaining pockets of productive land.

Global trade, once the lifeblood of the nation, had disintegrated. The fragmented territories turned inward, completely halting immigration and prioritizing their own survival over international cooperation. Isolationism prevailed as the territories fought to secure scarce resources for their own populations. The once bustling ports and trade routes stood deserted, a haunting reminder of a bygone era. There was constant infighting inside of territories and an ongoing threat of war breaking out between groups.



The workforce faced its own set of challenges. With the breakdown of traditional economic systems, jobs were scarce and highly competitive. There was no more public education. Wealthy elites had private schools in their enclaves and used automation in areas and corporations they directly controlled, leaving a significant portion of the population unemployed and disenfranchised. The social fabric was destroyed as people struggled to find livelihoods, leading to rising tensions and discontent. Government institutions and agencies had collapsed in part due to the lack of funding, and the workforce had withered away due to lack of public education and widespread poverty.

Amidst these trials, the attitudes of the populace had become rigid, distrustful, and polarized. Fear, scarcity, and uncertainty had driven people to cling to their beliefs and identities with an iron grip. Trust in government and institutions had eroded, leaving a vacuum that was filled by misinformation and manipulation. Dialogue and compromise were casualties of this growing divide, further deepening societal fractures.

The year 2040 stood as a grim reminder of the cost of inaction and inability to adapt, a cautionary tale of the consequences of allowing corporations and other elites to take over the government and control resources for their own benefit. Only time would tell if humanity could rise from the ashes and rebuild a shattered world.



Bittersweet Harvest

Global Trade	Pests & Diseases	Workforce	Consumer Attitudes
Breakdown	Limited	Sufficient	Rigid

Scientific Briefing - Year 2040

Interdisciplinary Impact Assessment - 2040

I. Introduction^{**} In the year 2040, the world has experienced a significant transformation due to advances in agricultural technology, climate change mitigation, and their subsequent impacts on various facets of society. ^{**}

II. Agricultural Advancements** * **Impact on Farming:** Advanced AI-driven precision agriculture and genetic editing have revolutionized farming practices. Carbon-absorbing crops and autonomous machinery have bolstered yields while minimizing environmental impact. * **Individual Impact:** Farmers have transitioned to data-driven, automated systems. The younger generation found opportunities in modernized farms. **

III. Water Scarcity^{** * **}Global Water Crisis:^{**} Climate change-induced water shortages have become pervasive. Communities worldwide face water rationing, impacting daily lives. * **Individual Impact:^{**} Water has become a precious commodity, especially for those who lack access to clean water. Children grow up in a world where water scarcity is the norm. **

IV. Lab-Grown Meat and "J-coli"** * **Lab-Grown Meat:** Lab-grown meat initially promised to address ethical and environmental concerns. However, the emergence of "J-coli" raised concerns about safety and trust in these innovations. * **Individual Impact:** Individuals grapple with trust issues and food choices, with some reverting to traditional diets while others cautiously embrace lab-grown alternatives. **

V. Decline in Global Trade and Black Market^{** *} *Global Trade Disruption:** The decline in global trade led to a scarcity of exotic goods and reduced opportunities for travel. * **Black Market Emergence:** The black market for international agriculture became a lifeline for those seeking access to rare or prohibited goods. **

VI. Social Stratification^{**} * ^{**}Extreme Stratification:^{**} Society became increasingly polarized, with a dwindling middle class. Wealthy individuals retreated into opulent enclaves, while the majority faced hardships in dystopian megacities. * ^{**}Individual



Impact:** Daily lives of individuals were starkly influenced by their socio-economic status, affecting access to resources and opportunities. **

VII. Activism and Future Directions** * **Activism:** Activists emerged advocating for equitable resource distribution and social change. * **Future Prospects:** The choices made in this transformed world will determine whether technological progress benefits all or exacerbates societal divisions. This interdisciplinary impact assessment highlights the profound effects of technological advancements and climate change mitigation on agriculture, water resources, food safety, trade, and societal structures in the year 2040. Understanding these dynamics is crucial for future decision-making and policy formulation.



Global Trade	Pests & Diseases	Workforce	Consumer Attitudes
No Barriers	Widespread	Sufficient	Rigid

The World of 2040 – Safeguarding Agriculture in an Altered Landscape

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APPENDIX B: Four Fictitious Vignettes for APHIS





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A Bittersweet Harvest The best of times, the worst of times					
Global Trade	Pests & Diseases	Workforce	Consumer Attitudes		
Breakdown in Trade	Limited	Sufficient	Rigid		
 Agriculture in 2040: editing revolutionize Water Scarcity, ratio New food technolog Global disruptions, t thriving black market Population displaced stratification 	Advanced AI and ge farming ning, and disparities gies, new diseases rade decline, and a et ment & Extreme soc	enetic s tial			

