Navigating New Challenges in Australian Farming

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Tenacious Ventures, an ag-tech investment firm, has conducted "horizon scanning" to identify nearly 50 factors that could impact the risks and opportunities facing farmers and agricultural scientists by the 2030s. Working with AgriFutures Australia, the firm distilled this research into a list of 10 key emerging forces that are likely to present both challenges and opportunities for the agriculture industry. The research was published earlier this year by AgriFutures Australia in the report entitled *'Navigating a future of cross-sectoral forces. An updated horizon scan for the Australian agriculture, fisheries and forestry sector'.*

Horizon scanning is the proactive process of identifying future risks and opportunities. For berry farmers, this means paying attention to emerging trends in climate, technology, and market conditions, and adjusting practices accordingly. By adopting horizon scanning, farmers can anticipate changes, adapt quickly, and remain competitive.

Sarah Nolet, from research firm Tenacious Ventures has rightly pointed out that amongst other things COVID showed us we are often unaware of the things we actually depend on. From major disruptions to supply chains to insecure access to labour solutions, the pandemic has exposed how fragile our global structures actually are.

Australian berry farmers, like many in agriculture, face an evolving landscape of challenges and opportunities. Here are the ten forces and risks identified in the report which will shape the future for agriculture in Australia.

1. Rise of Artificial Intelligence

Artificial Intelligence (AI) is quickly becoming a key part of agriculture. Soon, AI will support many aspects of farming, from pricing and trade to production and security. Already, it provides more accurate, local climate forecasts, which help farmers decide where to grow crops. AI's role in farming will continue to expand, affecting labour, technology, and even regulations.

2. Mandatory Climate Disclosures

Businesses are under growing pressure to share information on their environmental impact, like emissions and natural resource use. Companies that disclose this information attract more customers and investors who value sustainable practices. Soon, disclosing this data will be required to access high-paying markets and secure better financial terms. Failing to disclose or disclosing poorly could lead to penalties and damage the company's reputation.

3. Radically Accessible Remote Production Data

Tools like satellites, drones, and sensors make it easier and cheaper to monitor farms remotely. Farmers can track water use, livestock location, and even flood conditions without leaving their office. However, this information is now also available to the public, which means anyone can monitor farming practices. While this access benefits farmers with better tools, it also requires them to manage how their farm information is perceived by others.

4. Geoengineering Advances

As the climate changes, there is a rising interest in geoengineering—techniques like cloud seeding to increase rain or solar shading to cool temperatures. These methods could help farms adapt to extreme weather, but they may have unknown long-term effects.

Australian farmers are not currently involved in discussions about geoengineering, meaning their needs and concerns might not be considered in future decisions.

5. From Incremental to Systemic Changes in Production Systems

Australia's agricultural research system has helped farmers continuously improve. However, complex global issues, such as climate change and social pressures, will require bigger changes. Farmers may need to consider new crops, products, and farming methods to keep their businesses resilient in the face of shifting demands and environmental challenges.

6. Global Conflict and Deglobalisation Shift Trade Trends

Australian agriculture depends heavily on global trade, especially with Asia-Pacific countries. However, conflicts and shifting trade routes are making markets less predictable, with price fluctuations and access issues. By 2035, Arctic routes could open due to melting ice, changing trade paths and impacting partnerships. Farmers may need to adapt to these shifting trade dynamics to protect their income.

7. Growing Risks from Climate, Human, and Animal Interactions

With global connectivity and changing climates, there is a rising risk of diseases spreading between humans, animals, and plants. Biosecurity—protecting farms from pests and diseases—is essential to prevent costly outbreaks. As these risks grow, Australia needs strong preventive measures to keep its reputation as a biosecurity leader and protect its agriculture from large-scale disruptions.

The recent entry of Varroa mite into Australia and even the spread of high impact local pests or diseases from one area to another highlights the need for on-farm biosecurity to jump to the very top of the priority list for every farm business if it is not there already.

8. Cybersecurity Threats Escalate

As farms become more digital, they are increasingly vulnerable to cyber-attacks, which could disrupt operations and harm food security. In 2020, a cyber-attack shut down 70% of the wool industry's trading system in Australia and New Zealand, costing millions. Future attacks could affect entire regions or industries, meaning that the agriculture sector must develop stronger defences and plan for both digital and physical impacts.

9. Rare Earth Mineral Demand Grows

Rare earth minerals are essential for products like batteries and green tech (solar panels, wind turbines). As demand rises, these minerals will become more expensive and harder to access, impacting costs for agriculture, which increasingly relies on technology. Price spikes or shortages in these minerals could create significant challenges for farmers who depend on technology for efficient production.

10. Climate Refugees Emerge

Climate change is making certain regions harder to live in, particularly in vulnerable areas. As a result, people are migrating to safer areas, which may change labour availability, demand for food, and customer demographics. Australian farmers may need to rethink how to attract labour and respond to new, climate-driven market needs.

In conclusion, these forces and risks highlight the need for awareness and adaptability in Australia's berry farming sector. Embracing new technologies, preparing for environmental challenges, and understanding market shifts will be essential for sustainable and profitable farming in the coming decades.

To read the full report, visit the berry industry RESOURCE LIBRARY at berries.net.au/resource-library and type *'Navigating a future of cross-sectoral forces'* in the Search box