

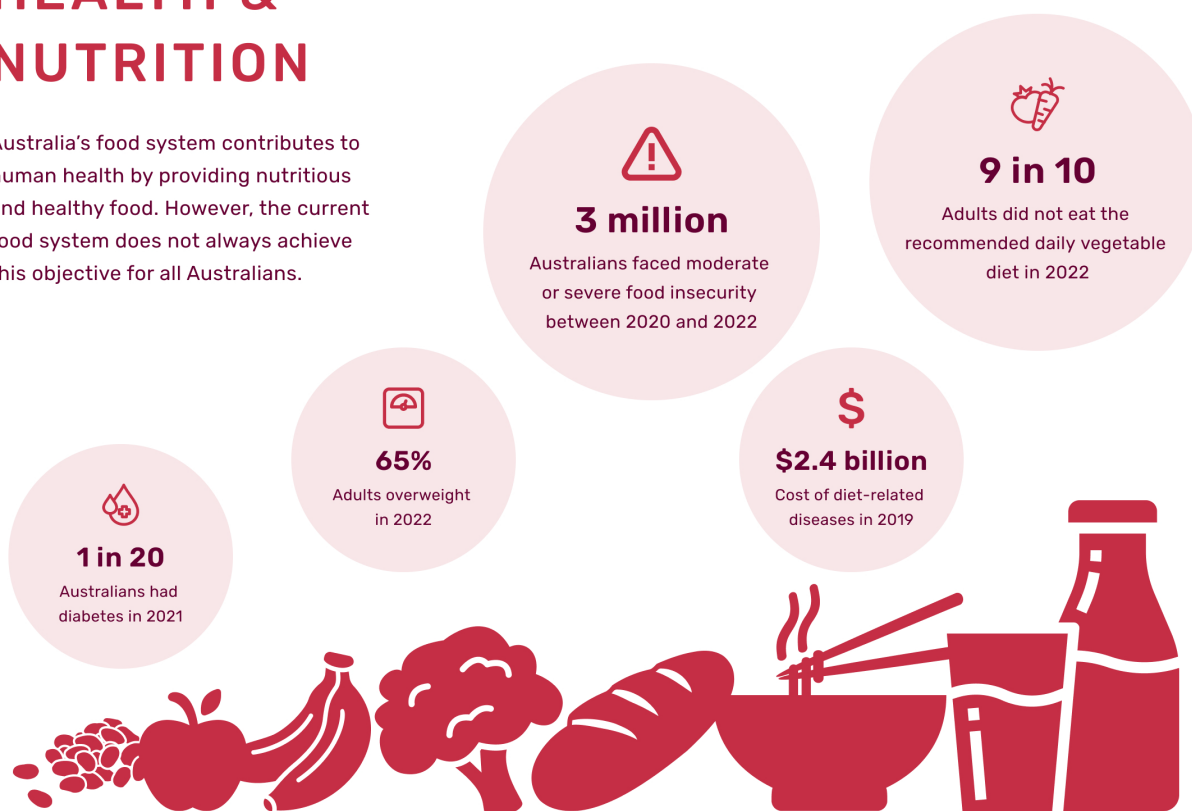
Food system outcomes

Food systems meet important goals

The food system refers to all of the complex and interconnected activities, institutions and inputs required to feed people, which result in multiple outcomes, both intended and unintended. These outcomes generally arise from various food system activities that affect individuals, society, the environment and/or the economy.

HEALTH & NUTRITION

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Australia's food system contributes to human health by providing nutritious and healthy food. However, the current food system does not always achieve this objective for all Australians. For example, between 2020 and 2022, an average of 11.4% of Australians experienced moderate or severe food insecurity¹. In 2022, 1 in 2 Australian adults (56%) did not consume the recommended daily fruit intake and more than 9 in 10 (94%) did not consume the recommended daily vegetable intake². A study by Lewis et al. (2021) suggested that less than 4% of Australians consume a healthy, equitable, and sustainable diet in line with the Australian Dietary Guidelines³.

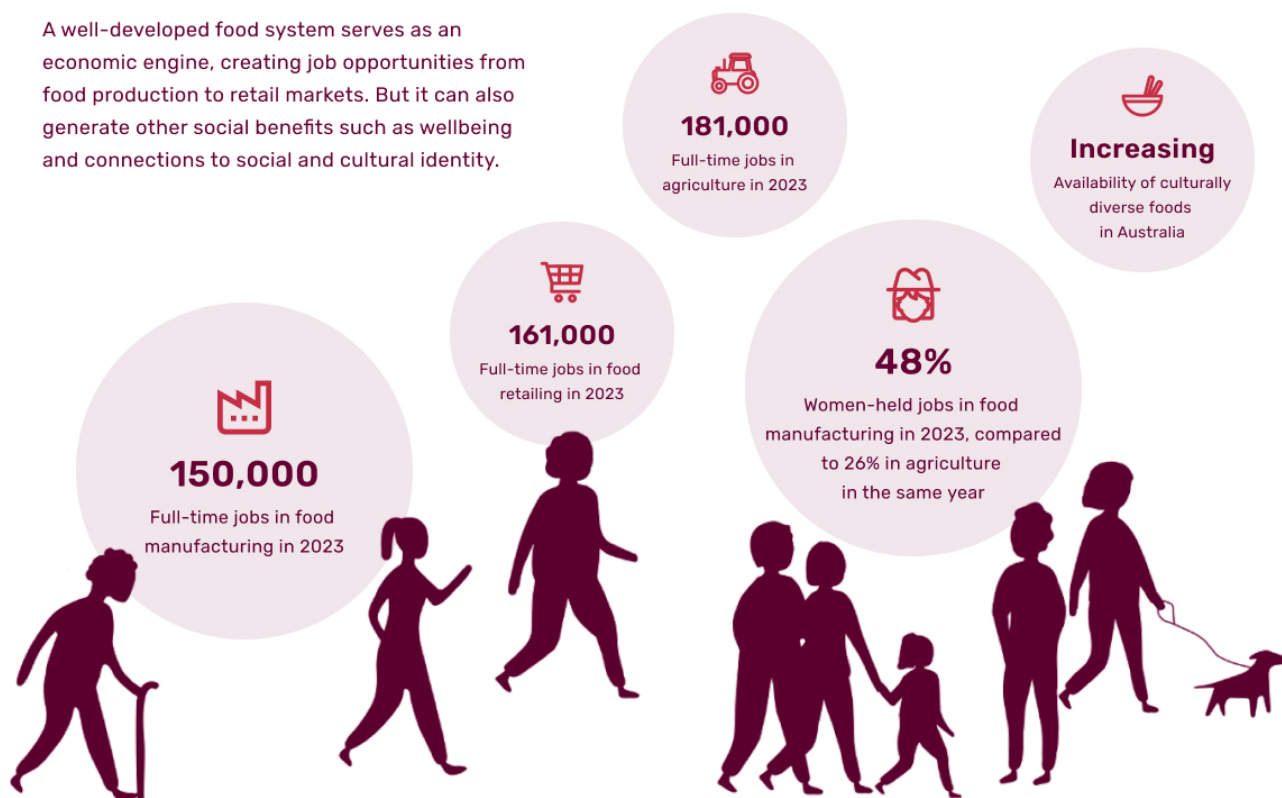
Australia's current food system is characterised simultaneously by inadequate access to nutritious foods in some regions, particularly remote and rural communities, and overconsumption of unhealthy foods in other regions,

particularly in urban and peri-urban areas with a high density of takeaway food outlets. Marketing of food is minimally regulated in Australia, so interactions between farmers, processors, retailers, and consumers play a crucial role in determining what is produced, what is brought to market and at what price it is sold.

The promotion and consumption of ultra-processed and sugary foods has contributed to the prevalence of less healthy food choices by Australians, contributing to diet-related diseases like cardiovascular and other non-communicable illnesses. The Australian Bureau of Statistics reports that 5.3% of Australians had diabetes in 2022⁴, and that almost two thirds (65%) of adults were overweight or obese⁵. In 2019, the cost of diet-related diseases and their consequences was estimated to be \$2.44 billion each year⁶.

SOCIETY

A well-developed food system serves as an economic engine, creating job opportunities from food production to retail markets. But it can also generate other social benefits such as wellbeing and connections to social and cultural identity.



A well-functioning food system generates social benefits such as employment, wellbeing, and connections to social and cultural identity. It preserves food cultures and promotes food literacy and equity. A well-developed food system serves as an economic engine, creating job opportunities from food production to retail markets. For instance, in 2023, there were 181,000 full time jobs in Australia’s agricultural sector, with women working in 26% of these jobs⁷. There were 150,000 full time jobs in Australia’s food product manufacturing sector, with women working in 48% of these jobs, another 161,000 full time jobs in food retailing (40% women). In 2023 there were also an additional 71,000, 56,100 and 249,500 part time jobs in agriculture, food manufacturing and food retailing.

Food systems can support and celebrate diverse social identities by valuing and preserving unique culinary traditions and practices. This enhances a sense of community and belonging and helps to develop mutual respect among different cultural groups. Australia is a multicultural country with increasing availability of culturally diverse foods over recent decades, resulting in a transformation of Australian cuisine from a traditional 'meat-and-three-veg' meal towards greater diversity⁸.

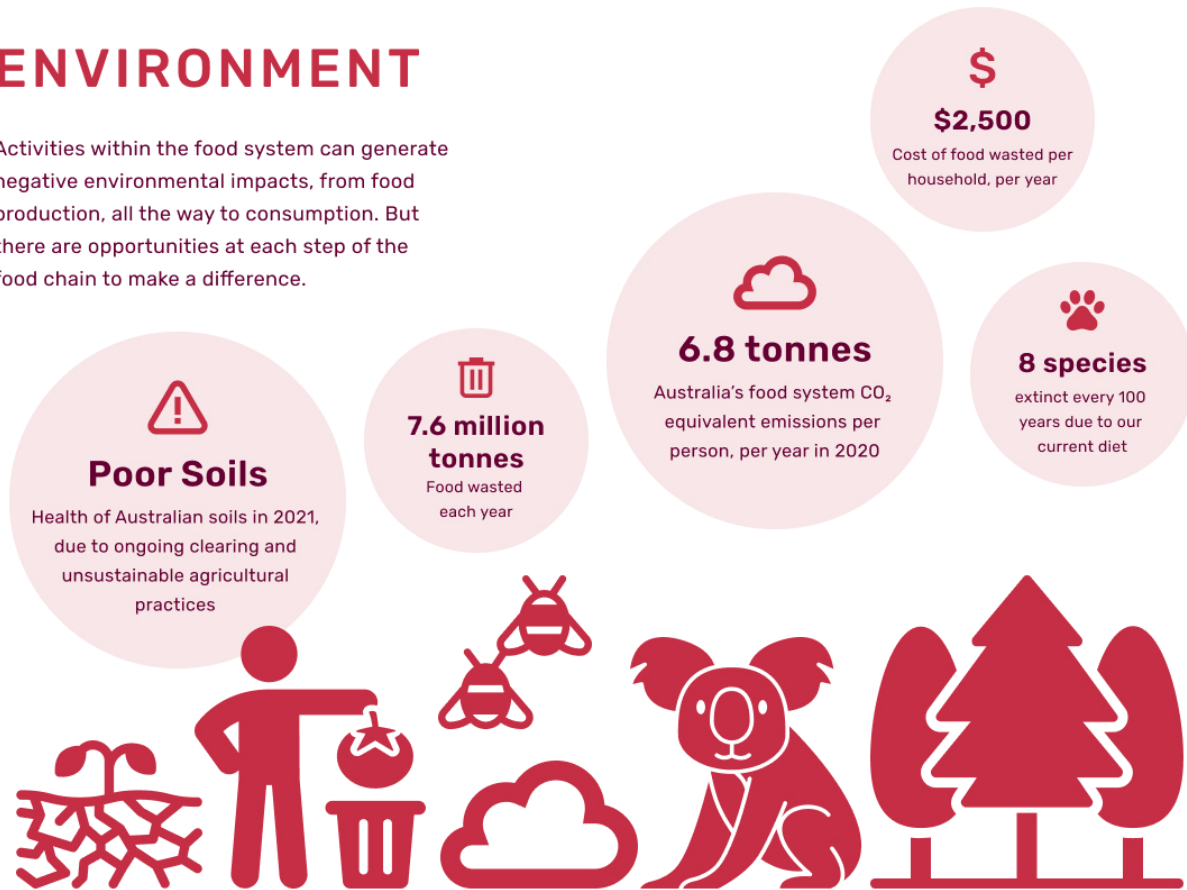
Food systems can strengthen cultural identities, traditions, and community bonds by preserving and promoting local food cultivation and gathering. Promotion of indigenous food practices and native plant-based foods can foster a sense of belonging and cultural continuity⁹. Similarly, food systems can facilitate food literacy, ensuring

that individuals have the knowledge and skills to make informed and healthy food choices. This contributes to improved public health, reduces food-related illnesses, and promotes greater overall wellbeing.

Food systems can also sometimes yield less desirable social outcomes. The industrialisation of Australia's food system has reduced the diversity of species consumed^{10, 11}, with implications for the loss of biodiversity and related knowledge. An emphasis on large scale retailing via supermarkets can make it difficult for local food producers to establish niche markets, reducing the diversity of foods available, and breaking down local linkages between food and culture.

ENVIRONMENT

Activities within the food system can generate negative environmental impacts, from food production, all the way to consumption. But there are opportunities at each step of the food chain to make a difference.



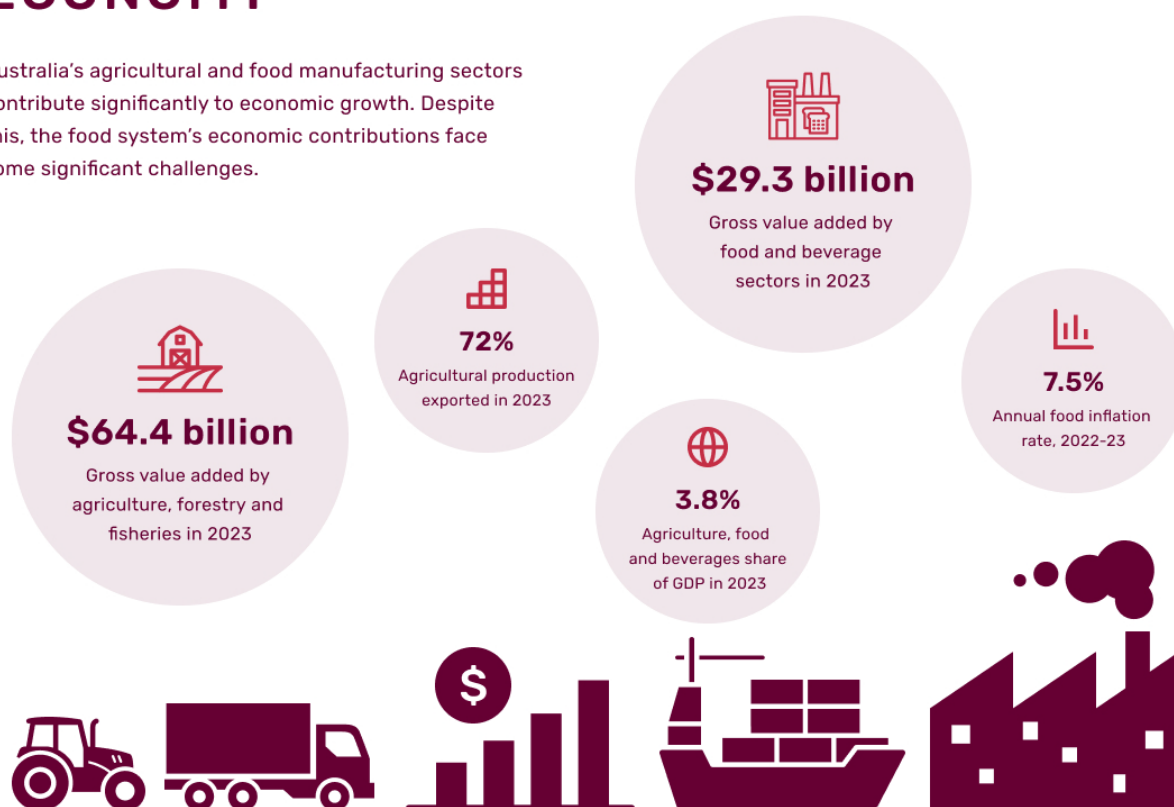
Activities within the food system can generate negative environmental impacts. Inputs to agriculture such as fertilisers, herbicides and pesticides combined with the use of heavy machinery can degrade soil productivity and water quality. The 2021 *State of the Environment Report* rated the health of Australia's soils as poor because of ongoing clearing and unsustainable agricultural practices¹². Agriculture is the third most commonly listed threat to 57% of the species listed as threatened under the Environment Protection and Biodiversity Conservation Act of 1999¹³. It has been estimated that eight species become extinct every 100 years due to our current diet¹⁴.

Food production contributes to greenhouse gas emissions and climate change. Statistics from 2020 indicate that greenhouse gas emissions from the Australian food system are substantial, at around 6.8 tonnes of CO₂ equivalent per person per year¹⁵. Livestock production and fertiliser use contribute to these emissions.

Our current ways of farming, processing, and consuming food result in substantial food loss and waste. Supermarket purchasing standards are driven by consumer demand for idealised forms of fresh produce and result in significant waste of edible food. Australians are estimated to waste around 7.6 million tonnes of food across the food supply chain annually, which is equivalent to 312 kg per person per year and costs up to \$2,500 per household per year¹⁶.

ECONOMY

Australia's agricultural and food manufacturing sectors contribute significantly to economic growth. Despite this, the food system's economic contributions face some significant challenges.



Australia's agricultural and manufacturing sectors contribute significantly to economic growth. In 2021-22, agriculture and food manufacturing contributed 3.8% to Australia's gross domestic product¹⁷. Australian agriculture is heavily export-oriented, with 72% of the total value of agricultural, fisheries, and forestry production exported annually¹⁸. Food and beverage manufacturing is the largest manufacturing sector in the Australian economy (\$29.3 billion), and with agriculture (\$56.1 billion) added more than \$93 billion to the Australian economy in 2023¹⁷.

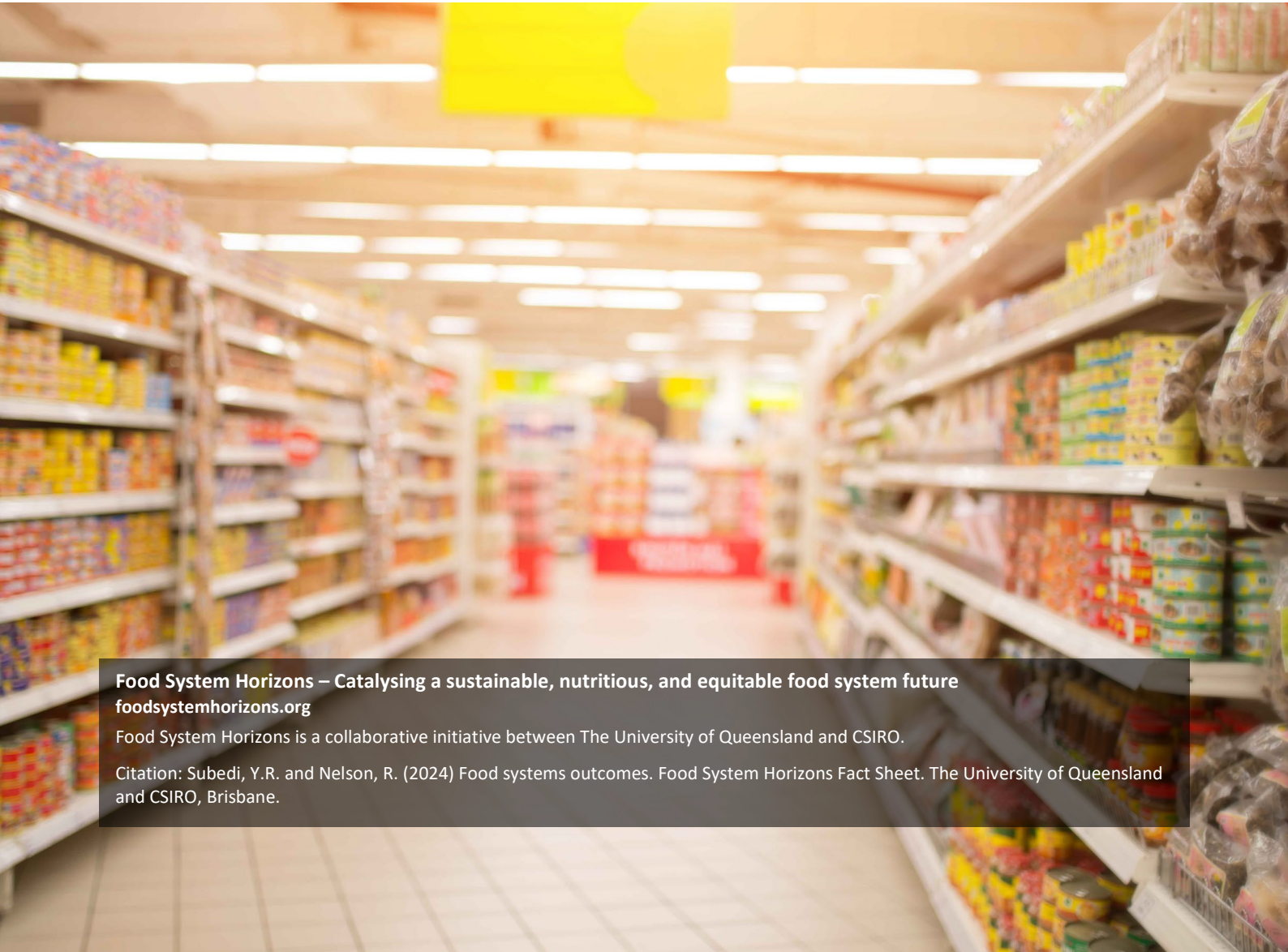
Other economic outcomes of food systems are more challenging, especially food price inflation and its effect on the affordability of healthy diets. Rising food prices in recent years have disproportionately affected low-income households and members of vulnerable communities with low purchasing power. Australia has faced significant rises in food prices, with an annual food inflation rate of 7.5% in 2022-23. This average rate of inflation hides some important extremes¹⁹. For example, dairy prices increased by 15.2% during 2022-23, raising concerns about affordability and accessibility for low-income consumers.

A systems perspective is needed

Harnessing the food system to achieve better outcomes is an ongoing challenge. The outcomes of the system are not straightforward or linear, due to interactions between food activities, actors, and processes occurring at different scales. This means that changes in one component of the food system are less likely to produce a substantial improvement in overall outcomes, than coordinated changes to interacting components of the system. A 'systems' perspective is needed to examine how the diverse components of the food system interact so that participants can work collaboratively to generate preferred future food systems. This requires working differently together in many areas of our food system.

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Food System Horizons – Catalysing a sustainable, nutritious, and equitable food system future
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