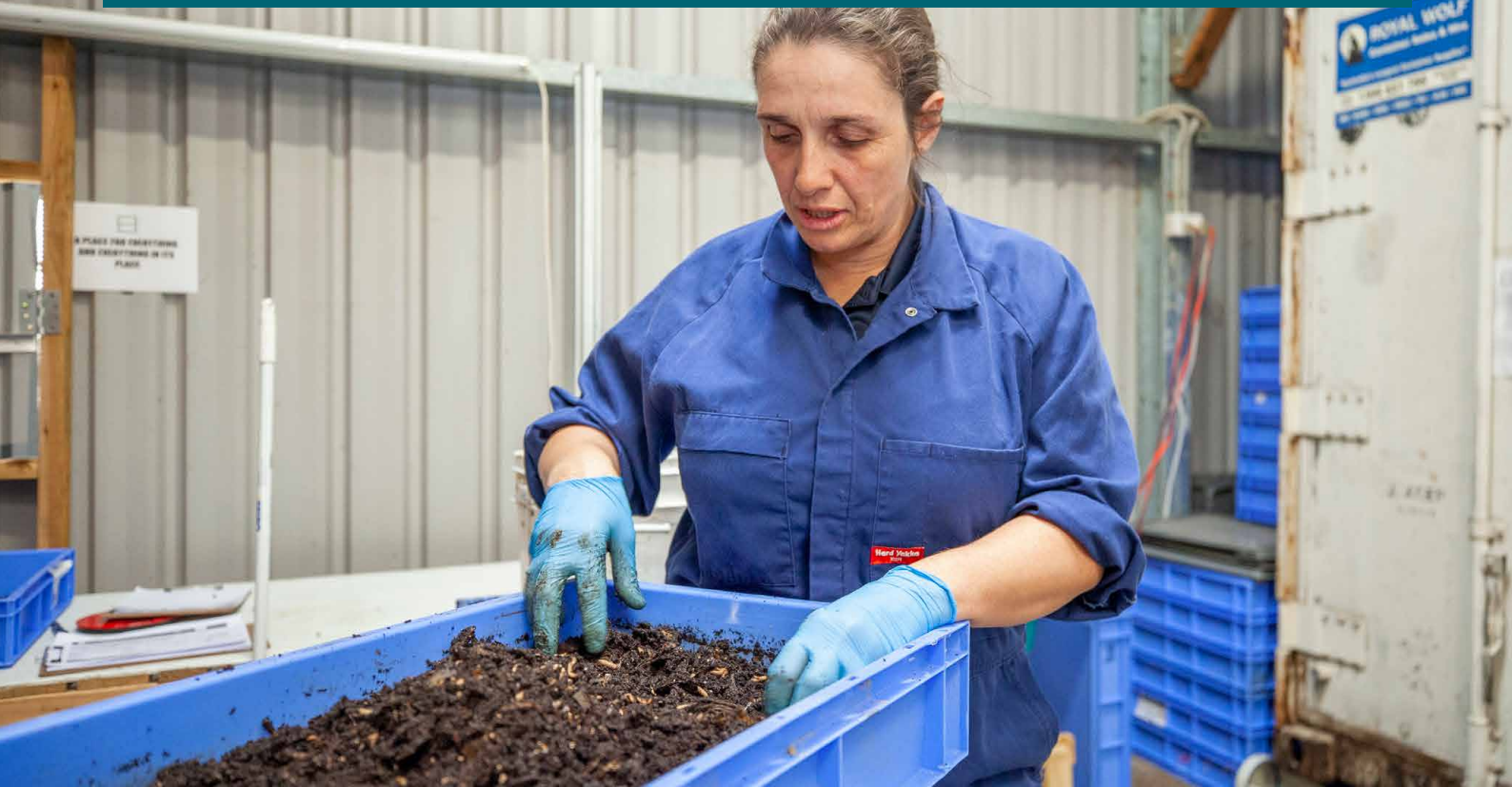


Australia: Food and Land Use



Olympia Yarger, CEO of the organisation GoTerra in Canberra, Australia. GoTerra uses robotic technology to manage food waste using insects, as well as creating high protein insect meal and valuable, nutritious soil conditioner.

Context

Australia is the most arid continent, with a highly variable climate and diverse environment. Over the past century, its ambient temperature has increased by 1-degree Celsius, and is projected to rise by a further 0.4 to 2-degrees Celsius by 2030. Agricultural land is increasingly under strain from climatic impacts, compounded by a history of intensive agriculture in a fragile environment. Although farmers have made important advances in land management, soil health is under threat. Almost 50 percent of soils in key agricultural regions are acidified, while soil carbon levels are historically low and the risk of erosion has grown with greater frequency of drought, flood and loss of ground cover. These processes threaten productivity, reduce crop choice and constrain yields.

Agriculture contributed three percent of Australia's GDP in 2018, with agricultural exports worth \$44.8 billion. As one of the world's largest exporters of beef, Australia has major impacts on other countries and industries. For instance, 1 million metric tonnes of soybean meal for animal feed was imported in 2018, a key commodity that is driving global deforestation. Australians also consumed three times the global average of meat per person a year, positioning the industry as central to both diet and economy.

Critical transitions

National government policy and analysis – including national research agency CSIRO's National Outlook 2019 – addresses all ten of the critical transitions set out in this report. Four of the key transitions include:

1

Healthy diets. The Collective for Action on Obesity has called for “concrete, comprehensive action and funding” to implement the National Obesity Strategy, as well as a “whole of society” response to tackling the “obesogenic environment”. Successful pilot projects include the New South Wales government’s Healthy Children’s Initiative, which provides training and public education on healthy diets and exercise in schools and health centres across the state.

2

Productive and regenerative agriculture. Australia has produced pioneers of regenerative agriculture, particularly among graziers, although many practices remain hotly debated and outside the mainstream. Small-scale impact investors such as Odonata are demonstrating the power of blended finance models to support sustainable agriculture, including in Tiverton, Australia’s first remnant-vegetation-only farm on volcanic plains grassland. Meat and Livestock Australia has set a 2030 carbon neutral target for the industry, with an R&D programme intended to deliver that goal. The Queensland State Government has committed to establish an AUS\$500 million fund offering additional revenue for farmers adopting practices that reduce water consumption and run-off from nutrients, sediments and chemicals, especially in the Great Barrier Reef catchment. In recent years, attitudes to the environment among regional communities have begun to shift, supported by the grassroots efforts of the non-profit, farmer-led Farmers for Climate Action.

3

Protecting and restoring nature. Australia’s diverse and valuable ecosystems – from perennial and hummock grasslands to temperate, old-growth forests and the Great Barrier Reef – are at risk from infrastructure development, agricultural run-off, invasive species, natural resource extraction and climate change. Efforts are being made to protect and restore these vital ecosystems, ranging from mangrove rehabilitation to forest protection and sustainable tourism around the Great Barrier Reef. Greening Australia’s Reef Aid programme works with farmers, communities and indigenous leaders to prevent agricultural runoff, rebuild eroding gullies and restore vital coastal wetlands in the Great Barrier Reef catchment. The WA Forest Alliance continues its 30-year campaign to win permanent protection for native forests in the south-west of Western Australia, while Greening Australia is working to create the country’s biggest carbon sink and establish one million hectares of habit in the Great Southern Landscapes.

4

Food loss and waste. Australia has a national strategy to halve food loss and waste, including a National Food Waste Baseline Report published in early 2019, focused on measurement, policy and innovation. It has also established the Fight Food Waste Cooperative Research Centre in Adelaide. Australia boasts a range of pioneers in reusing food waste, including GoTerra, a company that produces insect protein from food waste with minimal water requirements in shipping containers, and Yume, an online marketplace for quality surplus food.