

THE TRANSFORMATION NEEDED FOR GLOBAL FOOD SYSTEMS

*"A radical transformation of the global food system is urgently needed. Without action, the world risks failing to meet the UN Sustainable Development Goals and the Paris Agreement."
Prof Johan Rockstrom PhD.*

The Problem

The global food system is at a critical moment requiring transformation to overcome significant challenges. Current food systems are not fit for purpose and we have to question everything we know about food. Agricultural practices require changing and the consumption patterns of the global population need to be altered.

Agriculture is one of the main causes of the climate crisis. We are caught in a cycle of producing cheap food, where low costs drive higher demand for food, produce more waste, while clearing more land and using large volumes of fertilisers and pesticides. But crucially, at the same time, agriculture is also one of the core answers to the crisis. Food security and Sustainable Agriculture is thus a **critical ESG investment consideration in the context of solving these challenges.**

There are three fundamental challenges to the existing food system:

- Firstly, **climate change is threatening food systems – and conversely, food systems are causing climate change**, in the form of increasing droughts, floods, shifts in the extent and severity of pest and disease outbreak, reduced predictability of seasons and plant and animal heat stress. Meanwhile, agriculture is responsible for 30% of the world's greenhouse gas (GHG) emissions and this is only predicted to increase by 15-20% by 2050. Meat and dairy account for 14.5% of all global GHG emissions while agriculture uses one third of all land – creating a vicious circle of cause and effect.
- The second challenge is **the immense increase in the demand for food**. As the global population is set to reach almost 10 billion by 2050, the world will need 50% more food. The world is not on track to achieve Zero Hunger by 2030 but rather the opposite. 1 in 10 people globally are exposed to severe levels of food insecurity, and if trends continue, the number of people affected by hunger would surpass 840 million by 2030.
- Lastly, the **dichotomy between food insecurity and food wastage** is a significant problem. One third of all food is wasted before it is even consumed, whilst millions go hungry.

There is an urgent need for an integrated and collaborative approach to these problems including a global shift to plant-based diets; setting aside land specifically for the conservation of habitats and wildlife; and adapting the way we farm. It is increasingly clear that, in addition to global cooperation within the food industry and by governments, there is a crucially **important role for investors to play** in supporting the solutions.

Investors in agribusiness and food companies must leverage their shareholder voice to encourage their companies to better address sustainable farming techniques, better land and biodiversity management, better handling of food waste and innovative programs, better pesticide and pollution management, as well as sustainable farming accountability, accreditation, incentives and products that tackle climate change and advance food security. As evidenced by our engagement record, **this is a role that Ethical Partners takes very seriously**. Additionally, we believe that the economic opportunities here are vast, as well as obviously being an integral step to green value chains and to meaningfully impact our world.

What can be done, and what are our portfolio companies doing to address this crisis?

The global shift to **plant-based diets** is critical in mitigating climate change as cattle and sheep have the biggest impact on the environment. As an example, a global switch to veganism could save 8 billion tonnes of carbon dioxide per year by 2050. In contrast, current business as usual agriculture production produces 13.7 billion tonnes of carbon dioxide per year. This large reduction originates from the freeing up of land, the reduction in livestock grazing and using land to plant forests that are capable of removing carbon dioxide from the atmosphere. Proteins produced from cows and sheep are 30 times more GHG intensive than those from vegetable proteins.

In fact, if cows were classified as their own country, they would emit more GHG emissions than any country except China. There is however a myriad of ways that new diets are being developed including plant-based proteins (i.e., soy and peas), new animal protein sources (i.e. insects), biotech innovations for lab-cultured meat and mycoproteins from fungi. Global consumption of fruits, vegetables, nuts and legumes will have to double, while consumption of foods such as red meat and sugar will have to be reduced by 50%.

Therefore, **Ethical Partners is pleased to see some of the companies we have close engagement with, such as Woolworths** having plant-based food development as part of their core sustainability strategy. One of their goals is to lead the future of protein to minimise their impact on the environment in sourcing products whilst improving the lives of animals. They are actively expanding their range of plant proteins and will report on the approach and key metrics that is a part of this strategy by 2022. Similarly, **Coles** has launched a plant-based range of food in response to consumer demand and are planning to continue this growth. This is something that we will continue to engage on with companies.

There is further a need to completely **reorient agricultural practices from producing high quantities of food to producing healthy food in more efficient and productive ways**. Innovations and digital technologies have the potential to raise crop yields by 50% and reduce emissions from farming over the next two decades. Adaptation projects have supported smallholder farmers in building climate-smart agriculture, incorporating new techniques in water harvesting, crop and income diversification, developing markets for climate-resilient crops, improve land management, and weather insurance. This is known as precision agriculture and focuses solely on farming efficiency. One example of this is 'FutureFeed' cattle feed. By feeding livestock this seaweed supplement, it could help secure global food security and fight climate change simultaneously. The seaweed feed both reduces methane emissions by 80% and has the potential to increase livestock productivity. One of Ethical Partners holdings, **GrainCorp**, is a part of the seed investing portfolio in FutureFeed and expects to see commercial volumes of the feed additive by mid-2021. We also engage with our agricultural stocks, including **Bega, GrainCorp and United Malt Group**, as well as **Woolworths and Coles**, to ensure that they are focused and working with a deep commitment towards improving the way they farm, and we have been pleased to see some great initiatives in this space. For example, one of our holdings, **United Malt Group**, are working with universities and researchers to develop high yielding barleys with better disease resistance and lower fertiliser usage.

Companies are innovating

There are also a range of **new innovations being piloted** including artificial intelligence to help sort crops better, advanced analytics to monitor oceans to reduce overfishing, and shifting from fossil-fuel farm equipment to zero-emission counterparts. **Woolworths** is committed to sustainable seafood, particularly as global fish consumption is expected to rise by 20% by 2030, and therefore only source seafood that are third-party certified or independently verified as environmentally responsible. As food waste itself is a significant GHG emitter, the improved efficiencies in farming will help reduce this too. It is predicted that **food loss and wastage will need to halve** by 2050. The financial costs of food wastage are substantial and amount to around USD 1 trillion each year. Cutting food loss and waste levels in halve will reduce the significant financial costs associated with that as well as the need to produce more food by 2050. Ethical Partners has engaged with the major listed agricultural companies and supermarket holdings to ensure that this is also an area of deep focus. Over the last year, **Coles** has diverted 65% of food waste by working with SecondBite and Foodbank to provide unsold, edible food to Australians in need. Woolworths similarly have a focus on food waste with a goal of zero food waste going to landfill by 2025. They divert 100% of their food waste and since the launch of 'The Odd Bunch' initiative in 2014, the range has sold more than 156,000 tonnes of otherwise wasted fruit and vegetables.

It is also crucial to note that, **agriculture is the main threat to biodiversity** as 86% of the 28,000 species at risk of extinction are from agricultural practices. The loss of biodiversity for food and agriculture is further undermining our ability to feed and nourish an ever-growing population. The shifts in the way we eat and the changes to agricultural production methods will help avail this land but will also require strong and coordinated governance of land and the oceans. This is why Biodiversity is a major theme of engagement for Ethical Partners this year with all our holdings. One pleasing initiative in this space is by **Bega**, who have launched B honey, a new brand that underpins their commitment to the beekeeping industry in reducing biosecurity risks. Made from 100% pure Australian honey, customers who purchase B honey are supporting the Purple Hive Project. The 'Purple Hive' is a solar powered digital device to help early detection of the Varroa Destructor, thereby helping to protect bees and the Australian agriculture industry

Furthermore, the food and agriculture sectors **exacerbate existing water shortages and stresses**. It is estimated that with an additional 11 million people living in capital cities by 2050, with increasing frequencies and severity of droughts and floods across Australia, that competition for water will only increase. Australia's water trading system has been criticized as farmers battle for access to water while environmentalists try to increase water flows to protect river ecosystems. There is significant collaboration and effort needed across the industry and communities to help to address it. Ethical Partners work with companies to help encourage initiatives in this space. For example, **Bega** initiated a continuous improvement water exercise for the production of Vegemite at their Port Melbourne site. This resulted in turning off seal cooling water during non-production periods whereby 613,000 litres of water per year is now saved.

Healthy diets to reduce health costs

Additionally, the **adoption of healthy diets** is projected to lead to a reduction of up to 97% in health costs globally. The health problems stemming from poor diets costs trillions of dollars a year in healthcare and have long-term economic impacts. Diseases related to poor diets place a massive burden financially on health systems. It is expected that the average OECD member country will spend 8.4% of their health budget on treating the consequences of obesity between 2020 and 2050. **Ethical Partners is a signatory to the Access to Nutrition Initiative** that aims to drive the sector's performance on healthy and affordable diets. Several of our portfolio companies are also actively working on increasing the health profile of foods and promoting newer, healthier products, including Woolworths and Coles. Similarly, Bega have committed to three goals in order to help provide more nutritious products. They are developing a nutritious profiling standard based on the WHO's nutritional recommendations and Australian Dietary Guidelines and have set targets to remove 15 tonnes of salt

from their product portfolio and reduce sugar by 10% in Bega Peanut Butter by 2023. This is something we encourage and continually engage on with them.

To conclude, the world is faced with a huge challenge whereby we need to feed a significantly larger number of people, while using less land, mitigating climate change, wasting less food, improving biodiversity and improving nutritional value. It is a very complex challenge and opportunity that requires collective action from governments, industry and the investment community in order to solve, and in which, **we believe active investors like Ethical Partners Funds Management have a key role to play.**

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