





The Problem

In order for the Australian government to achieve the goal of \$100 billion dollars in agricultural production by 2030 the systems in place must operate at peak efficiency. In order for peak efficiency to be achieved, waste produce needs to be limited as it puts additional unnecessary strain on resources. This plan focuses primarily on keeping waste out of landfill. The reduction of waste starts in the paddock with the implementation of composting waste fruit, lowering cosmetic standards and implementing regenerative agricultural practises on all farmland. The fruit waste is to be taken to a local composting centre which will also take waste from the community further lowering the waste and the sale of the end product benefiting the industry. The last place food waste can easily be diverted is by lowering cosmetic standards imposed by customers and implementing green bins in residential, commercial and industrial settings. This plan outlines a number of ways in which food waste can be reduced within and outside the agricultural sector in order for production to reach peak efficiency.



In the Paddock

Regenerative Agriculture refers to methods of farming that are aimed at increasing soil quality/fertility, increasing biodiversity, and improving the water cycle. Regenerative Agriculture has positive impacts on most agricultural enterprises. It directly benefits crops by improving soil quality and fertility. And it indirectly benefits livestock by providing more nutritious pastures. Regenerative Agriculture practises improve soil quality, increase soil sustainability and improve the water cycle.

There are many aspects of Regenerative Agriculture that can be introduced to increase farm production, some of these include, using cover crops, no/minimal tilling, no use of synthetic chemicals, and rotational cropping. Using perennial plants (plants that live for longer than two years) as cover crops protects the soil, reduces erosion, and ensures the soil remains fertile. Tilling refers to the preparation of the soil before the planting of crops. Tilling has many negative effects on the soil. Tilling disrupts the fertility of the soil, disrupts soil structure, allows for erosion to take place, compacts the soil, and allows for weeds to take over.

Paddock to Plate- Reducing Waste at Every Stage

Minimal tillage is one method many farmers use to protect their soil and increase crop production. The use of synthetic chemicals is very popular in farming practises, however, it can have detrimental effects on the environment. Synthetic chemicals can leach into waterways, reduce the amount of organic matter in the soil, alter the pH of the soil, harms soil organisms, and can result in stunted plant growth. Rotational cropping is a method of farming that is already widely used. Rotational cropping refers to the practice of growing different crops in the same area across different growing seasons. This has many benefits, such as reducing pests and weeds, reducing the risk of resistant weeds and pests, and reducing reliance on one set of nutrients.

Composting refers to the process of decomposing plant and food waste and recycling organic matter. The result of composting is a mixture rich in nutrients and beneficial organisms that can be used to fertilise and improve the soil.

One way to minimise waste and maximise efficiency is to use waste products to make compost. The idea is that the waste accumulated on farms will be transported to a local compost facility. From there it will be recycled into a compost mixture. This mixture will then become available for the public to purchase. Using compost opposed to synthetic fertiliser is one easy way land holders can introduce regenerative agriculture into their farming practises. The compost is high in nutrients and contains many microorganisms that provide long-term benefit to the soil.

The intermediate

Continuing with the notion of community working together, the next phase of this initiative involves the use of compost and food waste management within the household. Approximately 5 million tonnes of food goes to landfill each year, costing the agricultural industry approximately \$2.84 billion annually. This waste is often not going through appropriate methods of disposal, resulting in excessive amounts of space wasted and unable to be used to its full potential. As the next step in this initiative, we propose that emphasis be placed on the repurposing of food; compost.



Paddock to Plate- Reducing Waste at Every Stage

Compost is becoming used in main-stream agricultural practises as it serves as a nutrient booster to the soil, effectively promoting healthier plant growth. Microbes within the soil feed on this composting matter and produce elements essential for plant growth and health including carbon dioxide, water and heat. Additionally, their activity within the soil pirates the land, allowing for increased water and nutrient retention. Thus begins the cycle of soil improvement and increased land efficiency and profitability. So how then, can community composting improve farm productivity and how can it assist Australia in reaching the Ag2030 goals?

As the link between paddock and plate, we propose that the government place support into community compost systems in order to reduce land wasted on food in landfill. We tend to view farms as isolated from the general community, however this approach calls for a paradigm shift to view everyone as a part of the solution; a fundamental aspect of the proposal.

To the Plate

The most useful and underutilised item in the kitchen, the green bin. The FOGO (Food organics and garden organics) bin has begun to roll around across most states and territories around Australia unfortunately not all states in Australia are up to date with new and improved recycling initiatives. Most states work under a three bin system (two with an opt in initiative) and only one under the basic two bin system. The introduction of the FOGO bin is a baby step in the right direction, but is it being used properly?

The aim of the FOGO bins in Australia is to improve recycling initiatives and reduce the amount of organic waste ending up in landfill. Items that end up in green bins are taken to local composting facilities so that they are given to farmers. The importance of these bins to the agricultural business is immense, and by increasing

It is important to now improve advertisement for FOGO bins to households and businesses to increase the amount of compost available to Australian farmers. To improve the profit in the industry, farmers should have improved access to this compost from the facilities. By improving access, farmers are able to reduce the cost of compost, being able to redirect it towards other funds such as wages, transport and other products. In reducing cost through a program designed to support farmers, it will produce the domino effect hopefully resulting in a profit by farmers.



Paddock to Plate- Reducing Waste at Every Stage

However, to improve the amount of compost available to farmers, it is important for Australian households and businesses to be actively engaging in newer recycling initiatives. Target 6 in the National Waste Policy outlines that by 2030 there is a goal to halve the amount of organic waste sent to landfill for disposal. To achieve this, a short term goal was to provide all Australian households with a FOGO bin by 2023. As of November 2021, it has been reported that approximately 30% of households have access to an organic food waste bin. This means that Australia is struggling to stay ahead of an almost ten year recycling initiative, with stress being placed on local government areas to be providing their own resources and funds towards this goal. The current issue is a national one. To combat this, the current National Waste Policy must be amended by the correct Agricultural and State departments and further endorsed, backed and funded by The Australian Federal Government. Ideas to include in the amendment include further educational policies regarding the importance of compost and the FOGO bins, advertisement on correct use of the three bin system and systems to actively provide feedback on household recycling.



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