

INTRODUCTION TO BIOCHAR

ANZBIG
Fact
Sheet #1

More than 50 million tonnes of residual biomass (including agriculture residues, green waste, and other organic waste) is burned or landfilled every year in Australia. This causes pollution, including greenhouse gas emissions, and wastes precious resources. These renewable resources can be converted into a solid form of carbon called biochar.

WHAT IS BIOCHAR?

Biochar is a charcoal-like product made by heating any form of organic matter (biomass) in a controlled process with limited oxygen, called pyrolysis. This product is called biochar when it is used as a soil amendment, or for other uses that store the carbon in a durable form.

Through the use of these technologies, we can capture, utilise and store carbon (CCUS) for the long term (centuries to millennia), reduce waste, produce clean and renewable bioenergy, and remove CO₂ from the atmosphere.

WHAT SECTORS WILL BENEFIT

There are many proven and emerging markets for biochar that increase profitability and reduce, or drawdown carbon including:

- Agriculture, horticulture, livestock and cropping
- Soil carbon sequestration
- Water management and filtration
- Mine and land rehabilitation
- Building and construction

BIOCHAR'S GLOBAL VALUE

The Intergovernmental Panel on Climate Change (IPCC) has recognised biochar as a Negative Emissions Technology (NET), urgently required at scale to remove excess carbon dioxide from our atmosphere, assessing its global potential at up to 6.6 Gt CO₂e per year, or the equivalent of 10-15% total annual global GHG emissions. Biochar is considered to be one of the lower-cost and scalable NETs, with the IPCC estimating that 1.3 -1.8 Gt CO₂e per year could be achieved for under USD \$100/tCO₂e.

Large international corporations committed to net-zero, including Microsoft, Shopify and Patch, already buy international voluntary market carbon removal certificates from Australian biochar producers.

With more uses for biochar emerging, the global market is growing and is estimated to be worth \$USD 3.82 billion by 2025. This is a substantial increase from its 2018 value of \$USD 1.48 billion. Potential and existing biochar industries in Asia, the US and Europe are rapidly expanding.

OUR BIOCHAR OPPORTUNITY

Australia is on the cusp of developing a world-leading biochar industry, thanks to our technologies, research, and high-potential resources.

Our industry is shovel-ready to scale up and create important economic, social, and environmental opportunities from a \$50-\$100 million dollar per annum industry to a minimum \$1-5 Billion dollar industry by 2030.

The next step is commitment and leadership from corporates, capital, government, entrepreneurs, and academics wanting to be Net-Zero. The Australian Biochar Industry 2030 Roadmap outlines a pathway forward for Biochar Industry scale up.

