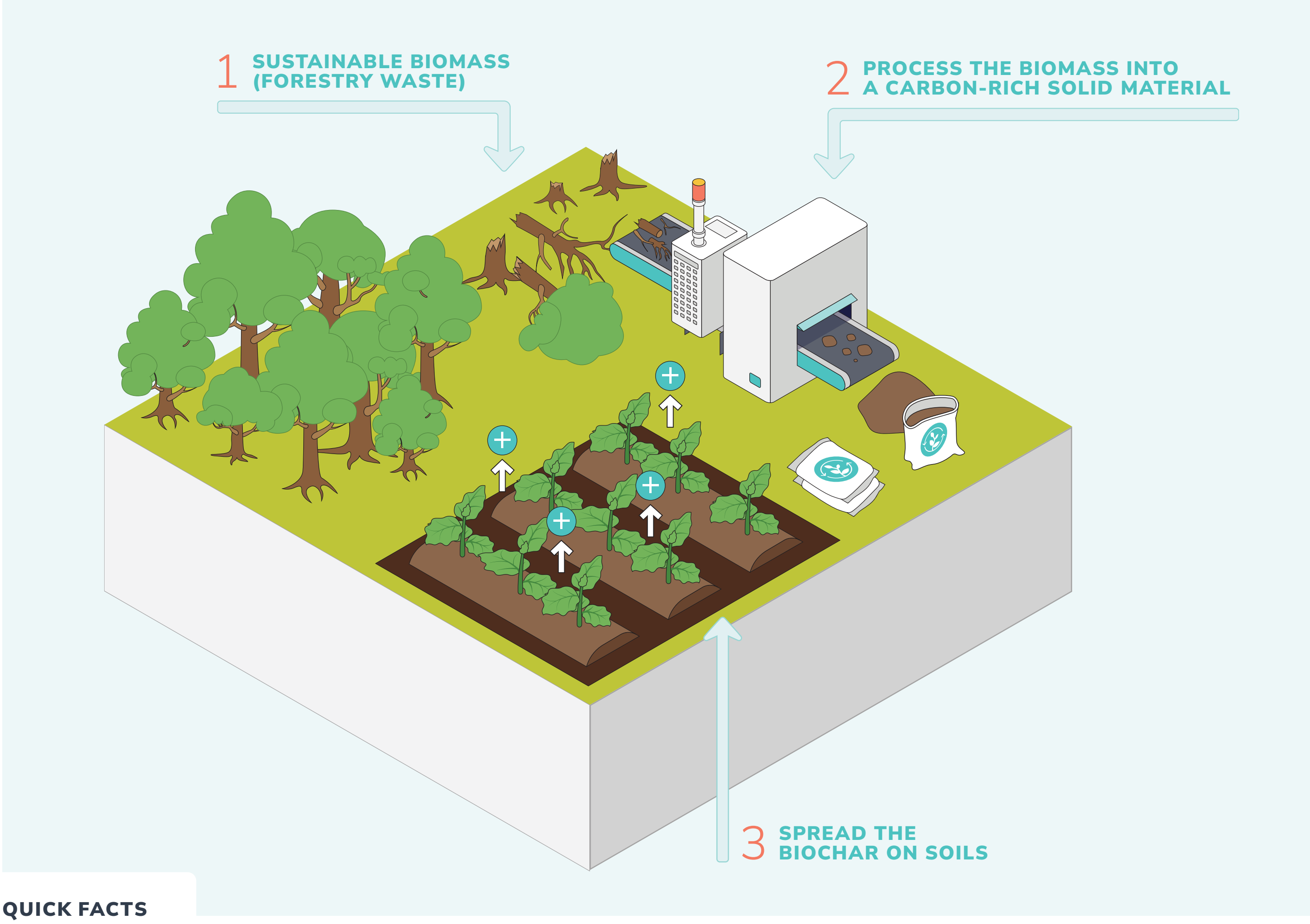
Carbon removal is Biochar

Turning biomass into black gold



QUICK FACTS

- Future Estimated Cost: \$10 - \$345 per tonne of CO_2
- Potential 2050 Global Capacity: 300M - 6B tonnes of CO_2 per year

What is carbon removal?

Carbon removal is the process of cleaning up carbon dioxide (CO_2) *already in the atmosphere* and storing it away for centuries or longer. Even if we cut emissions significantly, Canada cannot reach net-zero without also scaling carbon removal solutions to counterbalance any residual emissions. Beyond net-zero, carbon removal can help tackle historical emissions and turn back the clock on the worst impacts of climate change.

Carbon removal's potential in Canada

Carbon removal isn't just climate action, it's also an economic opportunity. Our research shows it will create jobs, position Canadian industries to compete globally, and make net-zero dramatically more affordable.

\$80B economic boost to Canadian GDP

\$13B in annual investment catalyzed across Canadian industries

40% - 70% cost savings on Canada's path to net-zero

How does Biochar work?

Think of: Charcoal bricks in your BBQ.

Biochar is made by heating agricultural and forestry waste at high temperatures with almost no oxygen present. This process, called pyrolysis, transforms the waste into a carbon-rich material that resembles charcoal.

Unlike regular charcoal, which releases its stored carbon when burned, biochar locks carbon away permanently. The heating process creates a material so dense and stable that the CO_2 that the plant pulled from the atmosphere when it was alive stays trapped in the biochar, instead of returning to the air.

When spread on farmland, biochar does double duty: retaining extra water and nutrients. This improves the soil health, helps grow crops, and stores carbon underground. This transforms Canada's agricultural and forestry waste into a profitable product that generates revenue for farmers and forest companies, creating healthier and more productive soil from materials that would otherwise be burned or left to decompose.

Why Canada?

1. **ABUNDANT AGRICULTURAL AND FORESTRY WASTE**
   Canada's $92B agricultural and $24B forestry sectors generate substantial biomass.

2. **STRONG DEMAND SIGNAL**
   Canada's 62 million hectares of farmland represent a significant market for biochar sales.

Co-benefits from Biochar

INCREASED CROP YIELD
Biochar enhances soil health, helping farmers grow more with less fertilizer and lower emissions.

WILDFIRE RISK REDUCTION
Biochar turns a wildfire hazard into a fertilizer, as it removes and utilizes forest waste that would otherwise intensify fires and threaten communities.

INDUSTRIES SUPPORTED

Farming · Construction · Forestry

Project snapshot

Carbonity, North America's largest biochar plant, is located in Quebec and produces over 30K tonnes of biochar annually.

AIREX ENERGY
Port-Cartier, QC. *Operational.*

BC BIOCARBON
Carrot River, SK. *Operational.*

CARBON LOCK TECHNOLOGIES
Manitoba. *Planned.*

CARBONIFIED
Acton, ON. *Planned.*

CIRCULAR CARBON CANADA CORP.
Timmins, ON. *Planned.*

G4 INSIGHTS INC.
British Columbia. *Planned.*

PYROCAL PTY LTD.
Victoria, BC. *Planned.*

Canada's carbon removal capacity across technologies

106K	12.4M
Current	Planned

12M TONNES OF CARBON REMOVAL CAPACITY IS EQUIVALENT TO:

- Taking 3.6M cars off the road
- Completely decarbonizing all domestic air travel

Canada is ready for removal
Visit the Carbon Console to explore more projects, technologies, and companies