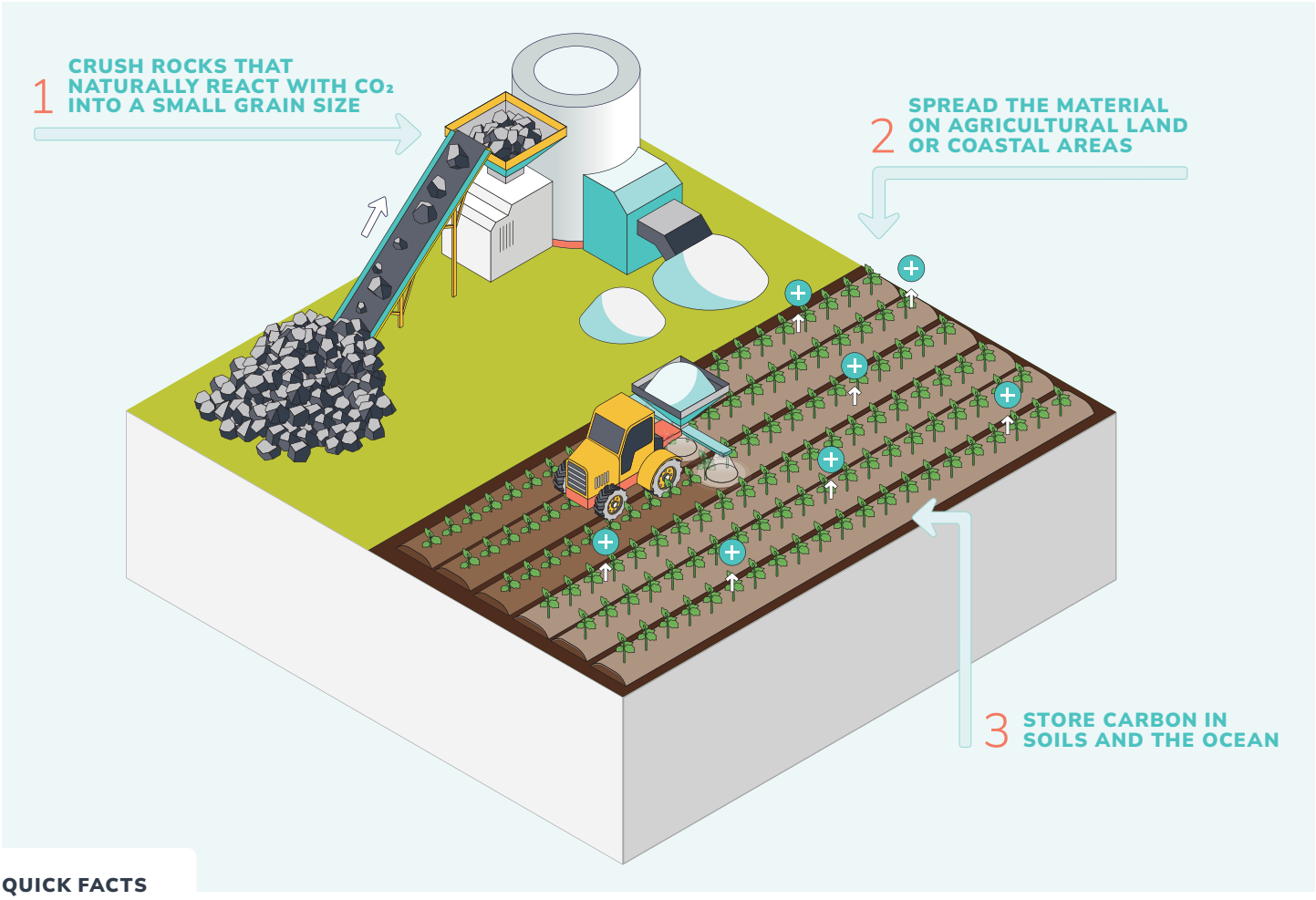
Carbon removal is Enhanced Rock Weathering

carbon removal canada

Turning farmer's fields into carbon sinks



QUICK FACTS

- Future Estimated Cost: $50 - $200 per tonne of CO_2
- Potential 2050 Global Capacity: 2B - 4B 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 Enhanced Rock Weathering work?

Think of: Grinding coffee beans.

Certain rocks naturally absorb CO_2 from the atmosphere as they break down, but this normally takes a long time. Enhanced Rock Weathering (ERW) speeds up this natural process, taking weeks instead of what nature usually accomplishes over millenia.

By crushing these rocks into fine powder, we dramatically increase their surface area, making them absorb CO_2 thousands of times faster. The crushed rock can then be spread on farmland or coastal areas where it does double duty: it acts as a natural fertilizer that improves soil health while continuously pulling carbon from the air and locking it away in stable compounds in the soil and oceans.

As rainwater washes through the treated soil, it carries dissolved carbon into rivers and eventually the ocean, where it's stored permanently as stable minerals. This mimics the natural carbon cycle but at a pace that can make a real difference for climate change.

ERW allows Canada to boost crop yields and create new revenue streams for farmers. This positions Canada to lead in the growing carbon removal market using our existing mining and agricultural infrastructure.

Why Canada?

1 **STRONG AGRICULTURAL SECTOR**
Canada's $92B agriculture industry provides over 62M hectares of farmland and enormous deployment potential.

2 **ACCESS TO MINERALS**
Canada's existing mining industry can supply the crushed rock materials needed for ERW applications.

Co-benefits from ERW

INCREASED CROP YIELD
ERW enhances soil health, helping farmers grow more, while also lowering their emissions.

SUPPORTS RURAL AND AGRICULTURAL COMMUNITIES
ERW connects the agricultural and mining sectors as farmers earn revenue from increased crop yields, while mining companies get new consumers.

INDUSTRIES SUPPORTED

- Farming
- Mining
- Construction
- Transportation

Project snapshot

A farmer spreads wollastonite on their field outside Kingston, ON in a free program provided by UNDO.

UNDO
Simcoe, ON. *Operational.*

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