

## Validating a new plant-growing technology in the greenhouse

Toronto-based mining company, International Zeolite Inc., has been working to build a North American market for its environmentally-friendly NEREA® product. The technology directly embeds nutrients in the honeycomb-like zeolite mineral, making it absorbent.

Research from the University of Havana has shown that if NEREA® is used as a substrate or a soil amendment, plants grow faster while using less fertilizer.

Keen to see if the product will perform equally well in Canada, International Zeolite partnered with Greenhouse Technology Network (GTN) to conduct validation tests and trials with both Vineland Research and Innovation Centre and the Horticultural & Environmental Sciences Innovation Centre at Niagara College.

Earlier research also conducted through GTN had identified hydroponic production of lettuce and leafy greens, soil amendment for nursery production and retail plant/home growing solutions as the best market opportunities for NEREA® in Canada.

Trials have now wrapped up, and the results are outstanding, says International Zeolite's President and Chief Operating Officer Mark Pearlman, who notes three key outcomes important for growers:

- Increased yield in a shorter amount of time
  - In lettuce and indoor crops, plants grown with NEREA® were market ready two to three weeks earlier than those grown without NEREA®. According to Pearlman, this means growers can produce 30 per cent more crops using the same amount of resources.
- Less fertilizer use
  - NEREA® reduces fertilizer use by 90 to 95 per cent, dramatically lowering input costs for growers.
- Reduced environmental impact
  - Instead of flooding crops with soluble fertilizer, plants get nutrients from NEREA® right at the roots, resulting in less run-off and leaching into the environment.

No changes to existing grower processes are necessary and the zeolite particles are rechargeable for indoor growers, meaning they can be retrieved from the substrate and resoaked with fertilizer.

"GTN and its partners have collaborated with us in a way that lets us bring a positively disruptive agricultural product to market – we couldn't do this without them," Pearlman says.



*Gerbera plants grown under different NEREA® mixtures at harvest.*