CIRCULAR CITY® GREENHOUSES

BY VAN DER HOEVEN

FEEDING THE FUTURE WITH HIGH-TECH GREENHOUSES THAT REUSE URBAN WASTESTREAMS

EXPLORE OUR WORLD

FEEDING THE FUTURE

Van der Hoeven Horticultural Projects, a greenhouse designer, builder, and operator with over 70 years of experience, has developed a concept dedicated to feeding the growing population in a circular and sustainable way.

These innovative greenhouses operate by utilizing urban and (agro)industrial wastestreams to cultivate nutritious, high-quality fruits, vegetables, and crops. This approach facilitates a transition from linear to circular economies on a large scale in various regions.

With our experience and knowledge, we are committed to accelerating positive change and contributing to global efforts for a sustainable future, particularly in the realms of food, water, and energy.

Circular City Greenhouses stands as a concrete example of the positive outcomes that arise when the water, energy, food, and waste sectors collaborate to close the loop. This initiative offers substantial benefits to cities, countries, industries, and, most importantly, people.

CIRCULAR CITY GREENHOUSES

The resources for high-tech greenhouses can all be obtained from urban waste streams using proven technology.

CO_2

Recovering CO_2 to stimulate plant growth and enhance crop yield and quality.

ENERGY

Using excess heat and energy originating from waste can create the optimal growing climate inside the greenhouse.

NUTRIENTS

The use of recovered nutrients paves the way to organic growth and greatly reduces the impact of synthetic fertilizer.

WATER

Circular City Greenhouses use much less water than open field agriculture (up to 95% less). The little that is used can be provided for by treated wastewater.

BENEFITS OF CIRCULAR CITY GREENHOUSES

- \+ Local and year-round production that is protected from the elements, providing food security and reducing import dependency
- \+ Fossil-free greenhouses in any climate: from the hottest deserts to the coldest winters
- \+ Less land use than open field agriculture, while still making use of natural resources, such as solar radiation
- \+ Increased water-efficiency that significantly reduces the fresh water demand, adding to a (more) water secure future
- \+ Tomatoes, bell pepper, cucumbers, strawberries, leafy greens, and more: high-quality crops at a high yield, with minimum use of resources and pesticide-free
- \+ Industrial symbioses that closes the loop by repurposing wastestreams: heat, water, energy, CO_2 and recovered nutrients.

SDGs 2 ZERO HUNGER 3 GOOD HEALTH AND WELL BEING 6 CLEAN WATER AND SANITATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 11 SUSTAINABLE CITIES AND COMMUNITIES 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION

www.circularcitygreenhouses.com • circularcitygreenhouses@vanderhoeven.nl