PRAIRIE
ECO-INTEGRATED
SOLUTIONS
EMPOWERING THE FUTURE

Prairie Eco-Integrated Solutions delivers technologies for integrated solutions that connects and empowers communities and businesses with environmental consideration and actions. We deliver eco-friendly technologies and solutions through Fibre Optic builds, Power Generation, Safety and Monitoring technology, Agriculture technology, Safe Water technologies that are sustainable for the environment, with minimal to no carbon footprint. We are a Canadian company from the west part of Canada. Calgary Alberta. As the world is coming closer together to embrace our future with tech and necessities essential for our future to be successful. What makes Prairie Eco-Integrated Solutions unique is our integrated technologies and our ability to scale based on customer needs and demands. This will minimize crop loss, stabilize employment and bring food sovereignty. We are collaborative and innovative delivering on strategies with solutions that are environmentally friendly with sound business and community outcomes. Our Partner Eco System connects and empower communities and Business to meet their needs in all industries and communities through innovative technologies.

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Corporate Introduction

Centcom Construction Ltd.

Centcom Construction is a Calgary-based and operated general contractor that just celebrated its 40th anniversary. Evolving over the years from petroleum-related facilities to indoor growing, Centcom has always stayed at the forefront of the construction industry.
Centcom is led by President Chris Craig.

Aerovert

Aerovert is a freshly established company with years of experience in the produce cultivation and construction worlds. The combination of engineering and construction expertise has led us to design the best building catered to indoor vertical farming practices.
Headed by Evan Craig, **Aerovert** would manage the day-to-day business operations and management

Cultivatd

Cultivatd is a team of indoor farmers with decades of expertise and a shared commitment to the betterment of indoor agriculture farming. We combine our expert knowledge of product development, farm operations, and agriculture technology (AgTech) to ensure your project is a resounding success.

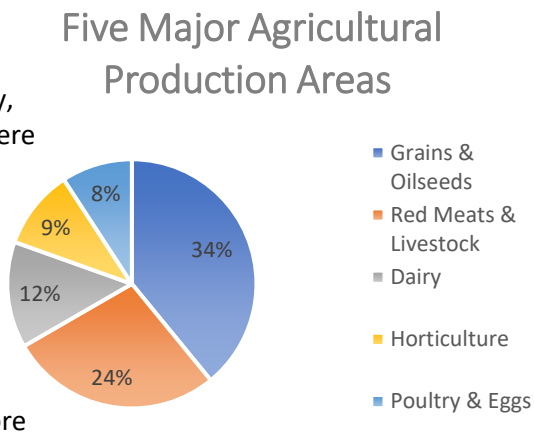
Cultivatd operations are run by Eric Bergeron, Cultivatd will provide a full-time master farmer to operate the farm onsite and provide training and on boarding for the local work force..

Canadian Agriculture

Agriculture is one of Canada's most important industries generating $111.9 Billion in Gross Domestic Products (GDP) and amounts to 6.7% of Canada's total GDP. Out of this number, the horticulture sector only accounts for a total of 9%, with the majority of that being grown in Ontario and British Columbia and consumed domestically while we import another $6.37 Billion worth of produce nationwide.

Crop Loss

Crop loss is not just weather-related but can also be attributed to diseases and pests as well. Statistics Canada does not keep a very accurate record of what percentage of crops are lost annually, but if we take the statistics of crop loss from the United States, there are various ranges: diseases account for 8 to 23%, insect damage 4 to 21%, and damage by weeds 8 to 13% which would result in an average range of 15.5%, 12.5%, and 10.5%



That is just the loss on the field, we experience another 5% loss of food during packaging and upwards of 10% during transportation. By the time food reaches us from its destination it has been in transit for 4 to 7 days, which reduces its shelf life before spoilage. These numbers contribute to 396 kilograms of food wasted or lost annually per person in Canada.

Food Importation Trends

Canada's Fresh Vegetable Imports by Commodity (CAN$ '000)					
	2015	2016	2017	2018	2019
Lettuce	$457,880	$419,745	$447,931	$442,602	$474,795
Cabbages, Kohlrabi and Kale	$373,824	$384,075	$374,847	$380,288	$416,936
Spinach	$156,597	$157,799	$161,440	$161,818	$159,593

Canada's Fresh Vegetable Imports by Commodity (Metric Tonnes)					
	2015	2016	2017	2018	2019
Lettuce	192,614	191,181	191,899	185,022	188,513
Cabbages, Kohlrabi and Kale	176,936	182,595	169,557	176,504	188,449
Spinach	43,680	44,193	46,588	46,620	45,934

What Is Vertical Farming?

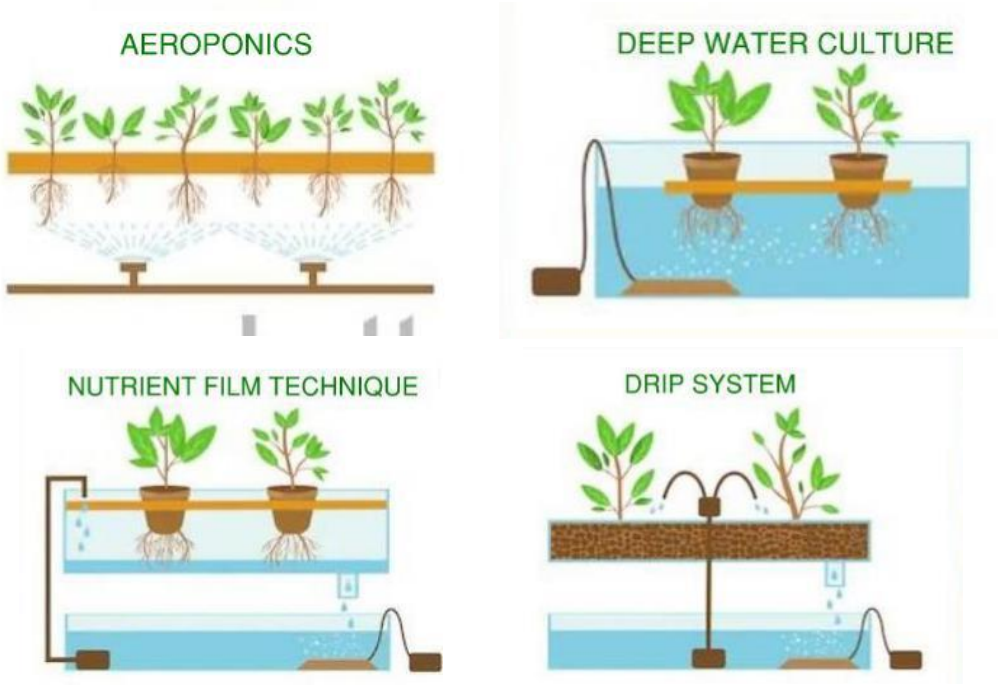
When we typically think of how food is grown, we imagine it growing in the ground in a big field. With the advent of hydroponics, produce production was further refined with more targeted nutrient solutions for the plants that do not use soil as a growing medium while using a fraction of the water used in traditional farming techniques.

As time went on, growing techniques and technology evolved to the point where we can grow produce with hydroponics in a completely indoor environmentally controlled system that layers crops one on top of each other. Welcome to **Vertical Farming.**

Different Methods

There are many different techniques of growing food in a vertical system. Each has its advantages and shortcomings, and certain plants grow better in a particular system. Here are just a few of the methods that can be used in a vertical farm.

- **Aeroponic systems:** Plant roots are suspended in the air and misted with a nutrient-rich solution. Excess water is treated & reused. The downside of an aeroponic system is the skill set to operate is demanding and leaves little room for error.
- **Hydroponics:** Hydroponic-based systems are typically easier to maintain than an aeroponic system and they provide more grace period if something were to go wrong. The downside is hydroponic methods tend to use more water however, there are ways that the water can be treated and reused to reduce waste. Here are a few different styles of hydroponics:
    - **Deep Water Culture:** Plants are grown in a nutrient-enriched water solution, opposed to soil.
    - **Nutrient Film Technique:** Utilizes a continuous flow of nutrients directly to root tips.
    - **Drip/Ebb & Flow:** Water plant areas and any excess slowly drain back into a reservoir. Great for plant species that are accustomed to periods of dryness.



What Can Be Grown?

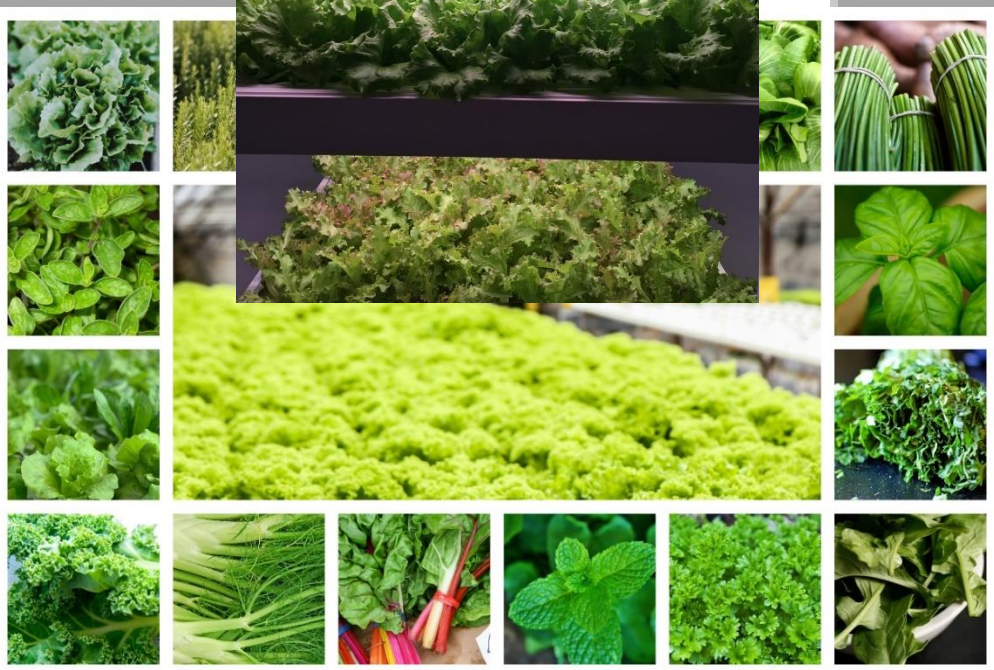
Indoor vertical farm facilities can grow a large variety of different crops. When it comes to the “best” crops to grow Leafy Greens and Herbs typically perform better than most other plant varieties. Here are just a few of the plants that grow exceptionally well in an indoor vertical system.

Leafy Greens

Butterleaf Lettuce
Arugula
Kale
Chard
Mustard Greens
Romaine Lettuce
Fennel
Microgreens

Herbs

Oregano
Mint
Chives
Basil
Lemongrass
Cilantro
Parsley
Rosemary



Aerovert's Mission

Alberta has always had a strong focus on farming and agriculture, but we are often limited to what we can be grown due to our long winters and limited growing seasons. Greenhouses have been able to help extend the season by a slight amount but overall, we are still seeing a vast majority of our daily produce imported from out of province and even out of the country. Due to this, we have all seen the prices for fresh produce increase at the supermarket and the prices are only going to keep rising.

At **Aerovert**, we want to bring back **"Home Grown"** food to Alberta, regardless of the season.

The **Aerovert** group has spent a considerable amount of resources researching vertical growing while engineering what it takes to achieve the most ideal indoor growing conditions. We have seen the current technology in the market today, but there is no perfect system any single company offers. We're looking to improve on everything we've encountered and work in conjunction with **Lethbridge College** to become an industry leader in vertical growing innovation and technology.

Example of Rooms Interior Contents

What Sets Aerovert Apart?

- **Research and Development: Aerovert** has partnered with Lethbridge College with our Research and Development. This will give us an advantage with Agritech industry innovation in developing new technologies, better growing practice, as well as build our automated intelligence to create “Smart Farm” technology.
- **Reduced Energy Cost:** Our experience in working with power through Co-Generation and Tri-Generation help us achieve lower electrical cost and carbon emissions to reduce our environmental impact and increase our revenue.
- **Employment:** Creation of dozens of full-time employment opportunities located centrally in Calgary.
- **Modular Designed:** Units are designed to retrofit into most existing spaces with minimal alterations to the base building with the capability of being dismantled and moved to new premises.
- **Reliable Production:** With a location within the city, **Aerovert** farms have the advantage of being in proximity to every resource needed for operation.
- **Suitable Technology:** Knowing which way plants grow best, we are not pigeonholed to any Hydroponic/Aeroponic technology as certain crops grow better with a different system.
- **Home Grown: Aerovert** will be contributing to supplying the increasing demand for local “Home Grown” food. We also hold an advantage as our products will travel significantly less which results in produce reaching the table faster and fresher.
- **Management:** Don Wong will be acting as President and CFO. Don is a proven leader in business and strategic planning helping clients successfully finance and improve their infrastructure portfolios. Formerly holding a role as Managing Director for Ameresco’s Asset Sustainability Group, Don provided management oversight for the public sector consulting practice involving capital planning/asset management and fiscal impact studies with a primary focus on developing and implementing innovative financial solutions to enable sustainable capital funding.

Development Advantages

- **Automated Intelligence:** Through data collection and analysis **Aerovert** will be in constant development of a “Smart Farm” system in creating best control practices that are suited for the various growing environments of the crops being produced.
- **Tri-Generation:** Natural gas-powered generator that will supply cheaper electricity, heating, and CO2
- **CO2 Injection:** Carbon Dioxide is directly pumped into the rooms with customizable ranges to increase product yields along with sensors and alarms to assure worker safety.
- **Replication:** Rooms are designed to be self-isolated from each other which results in environments that are catered to each type of crop.

- **More Environmental Sensors**: More fully integrated sensors that measure the PH of nutrient-enriched water, moisture content of soil, CO2 PPM, vapour pressure deficit (Temperature & Relative Humidity), lighting schedules, crop health & process tracking to keep growing conditions consistent and optimal.
- **Advanced Air Flow and Filtration:** Ensuring all plants at every level receive adequate air movement. This reduces the potential development of harmful microclimates while filtration plays a vital role in integrated pest management, room sterilization, and reducing exhaust of any potential odours.
- **Lighting:** Full spectrum, energy-efficient grow lighting with adjustable LED lighting that features custom suited light schedules for each different type of plant being grown.
- **No Chemicals or Pesticides:** Controlled environments have the potential to eliminate the need to use harsh chemicals used to remove pests and fungus.
- **Reduced Carbon Footprint:** Significantly fewer transportation costs and emissions due to location within the city
- **Water Conservation**: Approximately 10% of water is required compared to traditional farming practices**.** Also capable of treating & recycling up to 95% of the water leftover from cultivation as well as capture, treat, & repurpose condensation from room dehumidification.

I am writing on behalf of Aspier Technology Inc. (ATI-Watt) to express our interest in exploring business opportunities in Africa. Our company is committed to being a leading developer of distributed renewable energy projects that utilize cutting-edge technology to deliver sustainable energy solutions that benefit our clients and the environment. We are a Canadian company in Calgary, Alberta.

We believe that Africa presents tremendous potential for renewable energy development, and we are eager to explore how our expertise and technology can contribute to this growth. For qualified opportunities, ATI will leverage our relationships with various Canadian export development groups, funding sources, universities, and technical schools to develop this much-needed industry in Africa.

As a leading developer of distributed renewable energy projects, we utilize artificial intelligence, data analytics, proprietary software, and an integrated controller to generate carbon reporting and validate project solutions. We can deliver innovative and sustainable energy solutions by leveraging these advanced tools to our clients.

Working with ATI can bring numerous benefits, including increased productivity, reduced costs, and improved competitiveness. Our expertise and advanced technology can help to accelerate the development of renewable energy projects in Africa and contribute to the continent's sustainable growth.

Thank you for your time and consideration. We look forward to hearing from you soon.

Best regards,

Christopher Seenandan
VP, Business Development & IPD
ATI Watt ESG Doer

On behalf of Ron Clark – Clark Holdings inc.

COMMERCIAL AQUAPONICS INFORMATION

I am pleased to forward for your consideration a synopsis of a combination of technologies to revolutionize soil less food production. Our Alberta based company has been intensively working on commercializing the process called AQUAPONICS for the past 14 years (with 17 years of collaborating research data), and are out-performing other global research projects by 28-40% with increased food production. We have assembled an exemplary world class team and have sourced suppliers for the latest greenhouse technologies. This ensures an immediate start on construction to fast track building the facility and initiate food production. It will take one year after construction is completed for full production to be achieved. A reader's digest version of the process is as follows:

1. Warm water fish species (Tilapia or Sea Bass) are raised in tanks maintained at 24 C. We use super male fish (grow 2.5 X faster than females) with a production schedule of 24-26 weeks to reach 900 gram size to supply the restaurant filet market. Other species are viable but require more research.

2. Fish water and wastes are passed through a bio-digester where they are exposed to special bacteria; which transforms waste into liquid fertilizer. Solids are filtered out and exposed to tub flex worms whose digestion process transforms solid waste to liquid to go to the bio-digester. Water leaves and is concentrated with semi-permeable membranes with excess water recirculation back through the system.

3. Concentrated fertilizer goes to vegetables (standard hydroponics systems work because of concentrating syrup) and pond growing technology at 20C. In the fish water are natural hormones to promote root development (2-3X larger than normal hydroponics) with increased nutrient uptakes resulting in superior quality and volumes of production. Tomatoes, peppers, cucumbers, lettuce, basil and sixty varieties of crops have been trialed with organic certification of all production to soon be confirmed.

4. Water is again put through semi-permeable membranes with weak water solution going to another photo bio-reactor containing algae. This algae contains a higher concentration of oils than Canola and after crushing the pulp is full of Omega 3. This is made into pellets to be fed with all the waste biomass in the greenhouse back to the herbivore fish species. This allows us to produce an organically certified omega 3 enhanced farmed fish. We have continued research and are able to produce a secondary crop of Shrimp raised under the deep growing beds to further improve production.

The facility loses through plant transpiration only 1.5% of its water volume or @5% of water than soil based agriculture with radically superior organic certified production. No chemicals are used to produce the tons of fish and organic crops in generating a surprising volume of annual production. Daily production is easily presold to conventional distributors creating continuous cash flow. We are looking for a method of securing the necessary financing to secure facilities, complete construction, and initiate distribution to major clients. Ample security will be provided for capital injections. This technology will work anywhere within 100 miles of any major center with our team not being limited to just one project. Thank you for considering this technology. If you have any further questions please contact the writer.

Advantages of AQUAPONICS- The future of Agriculture

1. Produces 400% more produce than soil based farming and 28-40% more than the world's best Hydroponics
2. 60 different crops have been tested and proven viable
3. Qualifies for Organic and GAP certification
4. Uses less than 5% of water required for soil based farming
5. 365 days of constant predictable production of restaurant quality produce
6. Protein component is organically fed in a pristine environment under perfect conditions to maximize growth and quality. Most efficient feed conversion ratio of 1.25-1.5 lbs of feed per lb of marketable flesh produced
7. No environmental concerns with nothing leaving the facility that is not a marketable commodity
8. Institutional facility designed for 25 year useful life is pressurized so no need for any herbicides or insecticides required
9. Latest technology for energy efficiency designed into the project for reduction of long term expenses with a balanced environmental impact including Co-generation capacity
10. Everything is tested in our onsite laboratory for any safety concerns prior to any production leaving the facility
11. Year round labor required is 3-5 persons / acre of the operating facility

Next-Gen.

WATER GENERATORS

Next Gen is an American company from California focused on essentials for water consumption for our future.

- Groundwater independence. Many farmers rely on groundwater for irrigation, but excessive pumping can lead to depletion of aquifers. AWGs can help farmers reduce their dependence on groundwater and avoid overuse of this valuable resource.

- Sustainable farming. AWGs can help farmers adopt more sustainable farming practices by reducing their reliance on external sources of water, such as municipal water supplies or groundwater wells. This can help farmers reduce their environmental impact and promote sustainable agriculture.
- Summary. Overall, atmospheric water generators can be a useful tool for agriculture, helping farmers maintain crops and increase yields while reducing their environmental impact and operational costs.

Clean water at home when you need it.

- Solutions. AWGs are perfect for residential homes: Combined with an external water pump, AWGs can seamlessly tap into your home’s existing plumbing.
- Environmental benefits. AWGs can help households reduce their environmental impact by reducing the need for plastic water bottles and minimizing the energy and resources required to transport water.
- Lower environmental impact. AWGs can help households reduce their environmental impact by reducing the need for plastic water bottles and minimizing the energy and resources required to transport water.
- Health benefits. AWGs produce water that is free from contaminants, making it safe and healthy for drinking and cooking.
- Summary. AWGs provide residential homes with a reliable source of clean water that is good for the environment making them an ideal solution for households that want to reduce their dependence on external sources of water.
- Emergency response. AWGs can be used in emergency response situations, such as natural disasters or humanitarian crises to produce drinking water for affected populations.
- Disaster relief. In the aftermath of a natural disaster, AWGs can be quickly deployed to produce clean drinking water for affected communities. This can be especially useful in areas where traditional water infrastructure has been damaged or destroyed.
- Summary. AWGs help soldiers access clean drinking water in remote locations, they support emergency response and disaster relief efforts while promoting energy independence and cost savings.

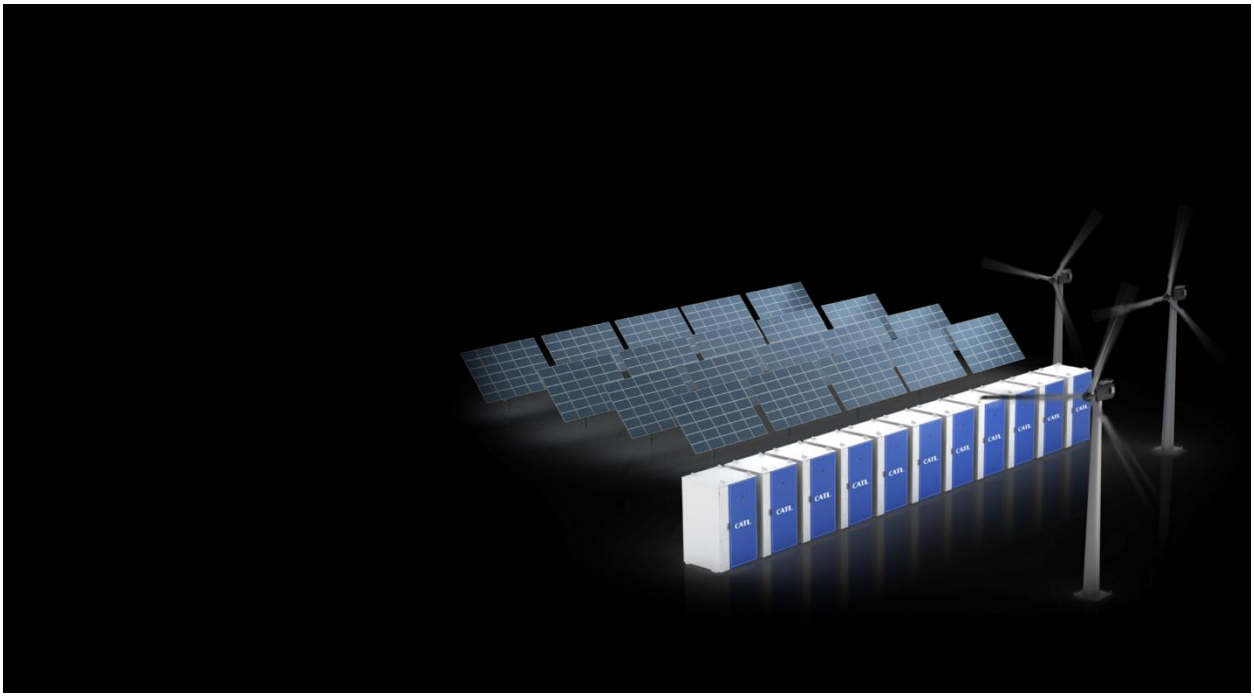
All about atmospheric water generators (AWGs)

Clean water from the air we breathe.

Atmospheric water generators (AWGs) are devices that extract moisture from the air to produce clean drinking water. These machines use a variety of technologies to condense the water vapor in the air and collect it as liquid water.

Solar-powered AWGs use the energy from the sun to heat the air and cause moisture to condense.

Atmospheric water generators can be useful in areas with limited access to clean water sources, as they can produce water from humidity in the air. They can also be used as a backup water source in emergency situations, such as during natural disasters or power outages. However, their efficiency depends on factors such as temperature, humidity, and air quality, and they may not be practical in all locations or situations.



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