

Design Build Operate Maintain



OUR COMPANY

Aigrow is a vertically integrated agriculture company in Sri Lanka. For the last 5 years we specialize in developing advance agriculture technologies to automate greenhouses and open fields.

Our technologies capture data from various sensors, and automates various controls to increase efficiency and yield. All the captured data is stored and analyzed in the cloud using Al based algorithms to optimize the water & fertilizer usage, temperature, humidity and various others factors that affects growth.

Aigrow also designs and builds complete turnkey greenhouses, and installs various technologies based on the customer needs. Our structures are designed for years of trouble free operations with service and maintenance to support the investment.

In addition we provide complete greenhouse operation and management services to take over greenhouses and run them as a service. We maintain transparent management practices to ensure that quality, reliability and efficiencies are maintained across the entire process.

OUR PRODUCTS & SERVICES

SERVICES —

DESIGN

Business Model Project Planning

BUILD

Site Preparation Construction

OPERATE

Training Agronomy Support Management

MAINTAIN

Routine Maintenance Repairs Calibrations

PRODUCTS -

MAIN PRODUCTS

Rooftop greenhouse

Home gardening

Commercial Green House

Relay controller

Climate control Add-on

Fertigator

SmartSense

Soil Moisture Sensor Unit

Hand Held

Software Solutions

Design - Business Model



Aigrow has extensive expertise to Design, Build, Operate, & Maintain (DBOM) greenhouses in Sri Lanka. We provide extensive market demand driven business models for our clients, and takes them through the following phases:

Project planning → Site preparation → Construction → Training phases → Operation

We are Sri Lanka's leading solutions provider for advance automation technologies including fertigation of plants, remote monitoring, gathering sensor based data to fertigate plants automatically and bring data driven agriculture to the forefront. Above all, through the entire life cycle of a commercial greenhouse operation, we provide agronomy support to optimize yield, decrease costs and to get the best profits possible.

Design - Project Planning



Sit down with one of Aigrow's commercial greenhouse experts to discuss if building a greenhouse is right for you. Our experts will go over the market demand, potential of your land, costs of construction and revenue opportunities by investing and developing a greenhouse at your location. Designing the right greenhouse is the most critical step in a successful greenhouse operation. Ensuring the proper heights, ventilation, thermal control, humidity control and providing adequate sunlight are essential elements to get the most revenue out of a greenhouse. Aigrow will ensure that all of these important data points are taken into account.

Once the design is finalized, our team will deploy resource teams to complete the site preparation, civil work, and structural work to install the greenhouse. Next we will install the growing systems within the greenhouse, complete the plumbing & wiring, and install various technologies depending on the clients needs. Our agronomist team will then take over the greenhouse to start the nursery, transplanting and operating the greenhouse for its first production cycle. We would then handover a turnkey greenhouse operation to our clients, or continue to manage the greenhouse with various engagement models.

Build- Site Preparation



Aigrow team will do multiple visits to the site to ensure all site preparation work is planned properly. We will help with getting the necessary approvals by providing the documentations and drawings as needed.

Once the approvals are in place, our site preparation team will be deployed with machinery needed to level the site, provide adequate drainage systems, and move out any rubble, soil or other materials.

Proper leveling, surface preparation, and drainage should be engineered to match the site, the amount of rain fall and other variables. In Sri Lanka with monsoon rains, it is very important that leveling and drainage is maintained to ensure year long operations. This also helps with maintaining proper humidity levels and to prevent fungus and algae growth in and out of the greenhouse.

Build- Construction



Aigrow specializes in constructing greenhouses and related growing tables, racks and other infrastructure needed to operate modern greenhouses. All our designs are meticulously engineered for quality, reliability and years of operation with maintainability.

We use quality materials, ensuring the proper thicknesses of steel is used for construction, which the greenhouse was designed for. Same applies to other materials like polythene, paint and weld joints.

Our team will procure all materials needed, transport to site, bring in all the tools and resources needed to complete the task. Our professional engineers will ensure that the construction site is kept safe, and all work done according to industry standards.

Operations







TRAINING

We provide extensive training programs for our clients, and their employees to be successful greenhouse operators. Our training programs include training on how to operate our equipment, agriculture best practices for greenhouse operations, and most importantly on agronomy.

Agronomy training includes fertilizer dosing, pruning, cleaning, identifying pests, fungus and nutrient deficiencies. We also provide training at Aigrow greenhouses so that employees are ready to start operations on day one.

AGRONOMY SUPPORT

Our team of qualified agronomists provides on site and remote support for all our greenhouse clients. We maintain records and advice the client and their teams on fertilizer dosing, watering, plant management and various others aspects of keeping well grown plants for optimum yields.

Our remote management includes voice support, video calls, and forms of instant communication means. We also provide real time dashboard level management for greenhouses with Aigrow technologies.

MANAGEMENT

For clients who does not want to get involved in the greenhouse operations, we provide complete management and operation as a service. We take control of the entire greenhouse complex, manage labor, crop cycles and various other aspects of the commercial operations.

Depending on various operational models, we take ownership of the yield, or hand over the yield to the client. We provide a flexible structure to engage with our clients with different sets of needs.

Maintenance







ROUTINE MAINTENANCE

Well maintained greenhouses can operate year round with no significant downtimes. Changing of filters, cleaning various tanks, equipment, channels and sensors extends the life cycle, significantly reducing operational costs.

Sign-up with Aigrow's maintenance services, and our experts will visit your site on a regular basis to keep your greenhouses trouble free for 24/7 production. Routing maintenance is included for Aigrow constructed greenhouses for a limited period of time.

REPAIRS & MODIFICATIONS

Ensuring all major repairs are completed as quickly as possible to minimize downtime is paramount to us. We take each and every client and their trust and investment with us very serious. Thus our clients can rest assured that Aigrow will be there for the long run to ensure that proper repairs and modifications are done on time, with the same quality standards our clients expect.

We also support our clients with modifications and expansions of their greenhouse facilities.

CALIBRATIONS

One of the most crucial points of an operational greenhouse for commercial use is to have well calibrated instruments. Fertilizer levels, micro nutrients, and climate control devices all operate based on sensor data, which needs frequent calibrations.

We provide calibration as a service for our clients, ensuring proper data can be collected at all times. Calibrations are also provided in our service and maintenance programs.

Products - Commercial Green House



Commercial Green House

Aigrow designs and builds custom greenhouses for various crop varieties. We utilize computer aided design techniques to simulate thermal management and wind resistance, and built to match highest engineering standards in the industry. To ensure years of trouble free operation, we use the highest quality materials to match the specific need, and environment of the greenhouse location. Our imported high grade polyurethane coverings, and heavy duty thickness steel can withstand heavy wind, and rain. Simulation can be done to calculate overall strength and wind forces

Depending on the customer requirement, we are capable of importing greenhouse structures or locally manufacture them. This enables us to be flexible with design changes, and build greenhouses with different dimensions to optimize the land usage and get the highest plant density possible. We manufacture various greenhouse types, including naturally ventilated with saw type design, mechanical ventilated with closed type designs to control climate conditions as needed.

Products - Home Gardening



Aigrow's Home Gardening Series for small gardens include everything you need. Stylish wooden planters, high quality plants and seeds, fertilizer, compost soil and all the advice you need from our team of experts. Optionally we provide delivery, installation and even an automatic irrigation system to make this the easiest and the most cost

We also provide complete home gardening products delivered to your door step from our Aigrow Store, conveniently located at the Trace Expert City in Maradana. You can also order via the web by visiting store.aigrow.lk.

Agronomy Support

effective solution to start producing your own vegetables, greens and herbs at home.

- Planters
- Plants

- Fertilizer
- Soils
- Tools

Products - Rooftop Green House



Interested in urban rooftop food production? Come and experience Aigrow's rooftop greenhouse in Maradana, to witness how to utilize your rooftop to grow your daily food requirements. We build Custom engineered greenhouses especially for rooftops, using highest grade materials. Our designs ensure the greenhouses are stable for high wind forces, while ensuring that no modifications are done to the concrete slab, thus avoiding any water leak issues.

By utilizing different growing systems within the rooftop greenhouse, we provide customers the options of various crops to grow in parallel. By managing proper crop cycles, growth rates and harvesting techniques, you can enjoy your favorite vegetables and greens right from your own home or apartment.

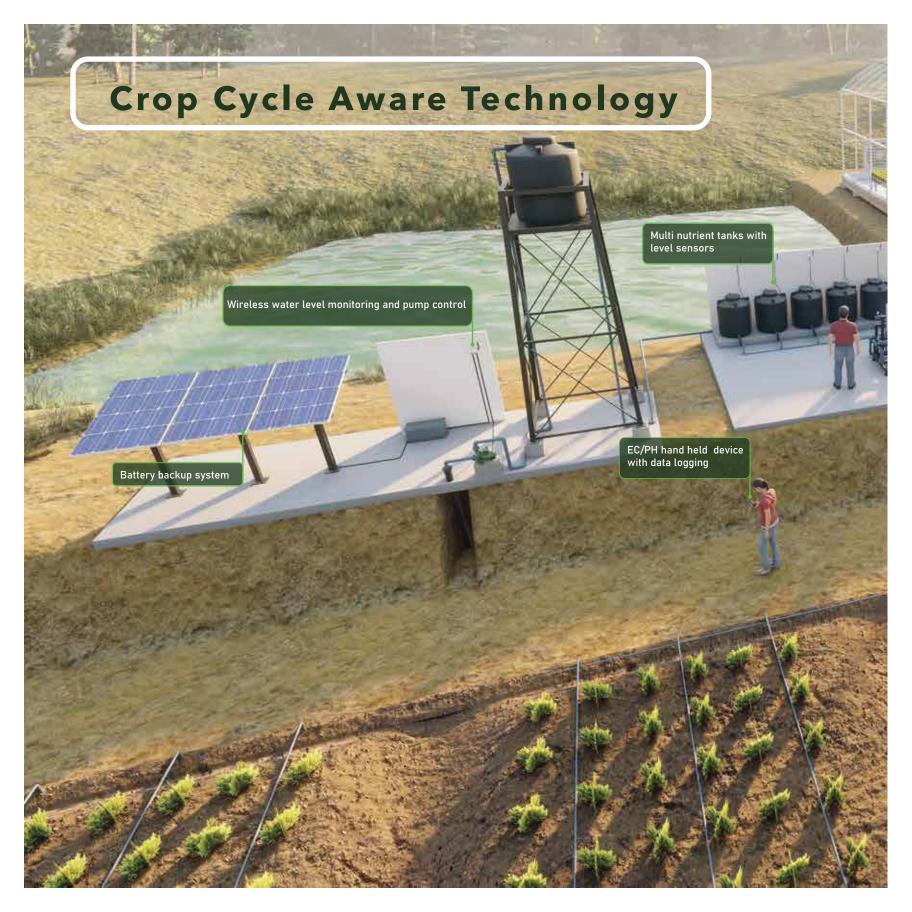
Plus enabling green technologies such as rooftop greenhouses will enable you to get additional credits for green building standards and certifications. Call us now to see how we can transform your unused rooftop in to a green wonderland.

Products - Crop cycle Aware Technology



As the seeds transition to mature plants, their daily intake of nutrients, and their need for sunlight, humidity, temperature and other environmental factors also change. AlGrow's technology understands this. It enables each of the devices to automatically vary the settings to match a plant's growth. The devices are aware of the crop cycle, and optimize the inputs to get the best results.

For example when a Tomato plant is transplanted, you would update the transplant date in the software. Immediately the software will download the matching recipe and configuration setup to each device notifying the correct fertilizer recipe, amount of sunlight, humidity and temperature to optimize the transplant stage and minimize stress. But as the plant grows, it will require a different fertilizer recipe, micro nutrients, and more sunlight etc. The system will automatically update each device on a daily basis to ensure that all those plant requirements are met precisely.





Products - Relay Controller



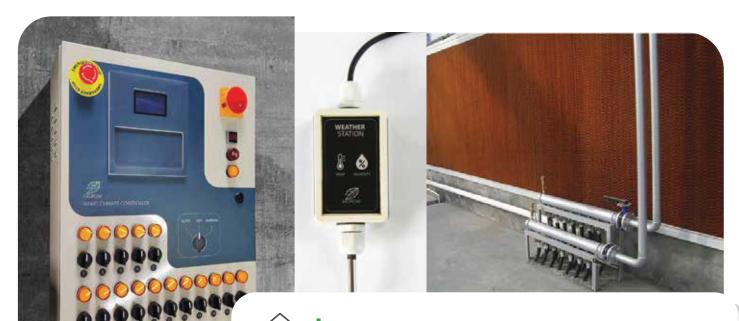


Relay Controller

With precision agriculture, controlling the pumps , shade nets, fans, cooling systems, and switches becomes vital. To optimize the plant growth, each device must be controlled through multiple decisions. Our Relay Controller can be configured to operate on time based schedules, and sensor inputs. It can also be configured to operate in remote modes, such as controlled by any other device nearby or from a remote site using the mobile app and the web UI.

Each event is captured in real time and can be analyzed with sensor input data using our cloud software. This enables agronomists to set up the greenhouse or open field and to precisely control their crop cycles to best yield possible.

Products - Climate Control Add-On



Climate Control Add- On

Accurately controlling the environment is one of the most effective ways to increase your yield, increasing revenue and efficiency of your greenhouse.

Aigrow's Climate Control Add-On to the Relay Controller is a cost effective way to bring advance climate control and environment monitoring features. This add-on is capable of controlling and monitoring temperature, humidity, lux and CO² levels of a greenhouse.

With our cloud connected features, all of the climate data is stored in the cloud. Climate data can be viewed in Aigrow's mobile app or on the browser in real time. With our AI based analyzer, the data can be analyzed for further optimizations.

Products - Fertigator



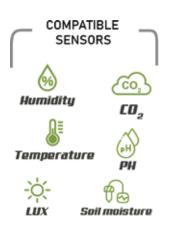
Fully scalable, fertigation system to fertigate multiple greenhouses from a single unit, with revolutionary "Crop Cycle Aware" technology. Enter the seed type being planted in to the system, and the fertigator automatically adjust the fertilizer levels for the plant's entire crop cycle on a day to day basis.

Aigrow's proprietary fertigator design enables fertigating of up to 16 different plant fields with different types of crops. Each plant field's fertilizer needs will be automatically adjusted to its daily needs depending on where it's crop cycle fertilizer demand is. These settings are automatically communicated from the cloud. Aigrow's large cloud based database securely stores multiple fertigation recipes for different crop type. Proprietary crop recipes can be stored securely under each client account.

In addition up to 16x dosing tanks with fertilizers, acid, base and micro-nutrients can be connected to the fertigator, and can be dosed based on EC, PH, volume or time based configuration.

Products - Smart Sense Cloud





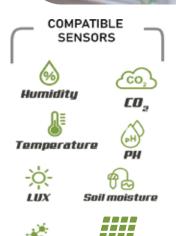
Smart Sense +cloud is a total solution for all your sensor monitoring needs. Monitor over 10 different kinds of sensors in real time and visualize data in the Aigrow's cloud based dashboard.

Highly configurable interface enables you to plug various types of compatible sensors, setup warnings and SMS alerts. Advance communication interfaces include MQTT, and server based APIs for easy integration with existing systems.

Simplify your data gathering needs by using a Smart Sense +cloud device, where all the sensor data are gathered via a single device, and visualized with the same time stamping. Our system enables you to analyse correlations between sensor data , and helps optimize and take your greenhouse management to the next level.

Products - Soil Moisture Sensor Unit





Solar

A scalable soil moisture measuring system for your greenhouse or for your open-field agriculture needs. Can be used with soil or coco peat based soil mediums. Unit comes with 5 individual soil moisture sensors. Can operate with solar power, and with the inbuilt battery it can run for 5 days without any power source. Effortlessly communicates the measured values via long range wireless interfaces to Aigrow's Smart Sense + cloud unit to display and store data in the cloud. This device can operate up to 500 meters away from the Smart Sense unit, truly enabling a large-scale soil moisture data gathering capability.

The Soil Moisture Sensor uses patent pending non contact tracing probes significantly increasing its lifetime. It also uses capacitance to measure the water content of soil, by measuring the dielectric properties . Highly customizable web and mobile app interface allows warnings and alerts to be issued via push based notifications, or SMS. Advanced visualization of the data, correlations with other sensor data and automation events can be configured via the advance Aigrow's cloud based interface

Products - Hand Held





Multi probe



USB/ Data logging



Stand

- Measures pH, conductivity and temperature on the go
- Brilliantly simple design that's easy to use, clean and calibrate
- Backlit display to capture every measurement with ease
- Includes a pH Probe and Conductivity Probe to cover all your nutrient uptake fundamentals
- 2-metre cable for measuring hard-to-reach locations
- \bullet Customise scales to your preference conductivity in EC, CF, PPM 500 (TDS) or PPM 700; temperature in °C or °F
 - **Q** Unlimited sensors inputs
 - \mathbb{Q} Real time data logging with cloud access
- $\ensuremath{\mathbb{Q}}$ Cloud based dashboard with SMS alerts
- Internal battery backup

Products - Green House Controller



Automate all pumps, lights, fans, misting systems, or any other device with a switch with an advance greenhouse automation controller. Take human errors and delays out of the equation, and bring "Crop Cycle Aware" technology to reduce costs and increase efficiency.

Crop Cycle Aware technology allows each device in the greenhouse to know which crops are currently in production and at which stage. So every device automatically reconfigures itself to provide the most suitable environment for the plants to grow.

With our cloud connected features, all of the control data is stored in the cloud. Control data can be viewed in Aigrow's mobile app or on the browser in real time. With our Al based analyzer, the data can be analyzed for further optimizations.

Products - Green House Management System



Greenhouse Management System (GMS)

Greenhouse Management System (GMS), a cloud based software solution brings all of our advance technologies together, adding superior centralized management features. Our software solution manages the crop cycles, nutrient levels, environment variables and all other information that is needed to optimize your yield. A complete device configuration interface is provided for our clients.

In addition you can track and predict yield based on the seed varieties. Predicted or Harvested yield can be added to the market place. Market place allow buyers to connected with our clients and purchase the produce directly.

Inventory

- Logistics
- Market Place

- Human Resources
- Packaging
- Data Analysis

Products - Mobile Apps

Plant Feed - Home Drip Irrigation App



AiGrow Market Place App



Farm Manager App





Aigrow Store

store.aigrow.lk





Online Ordering



Agronomy Support















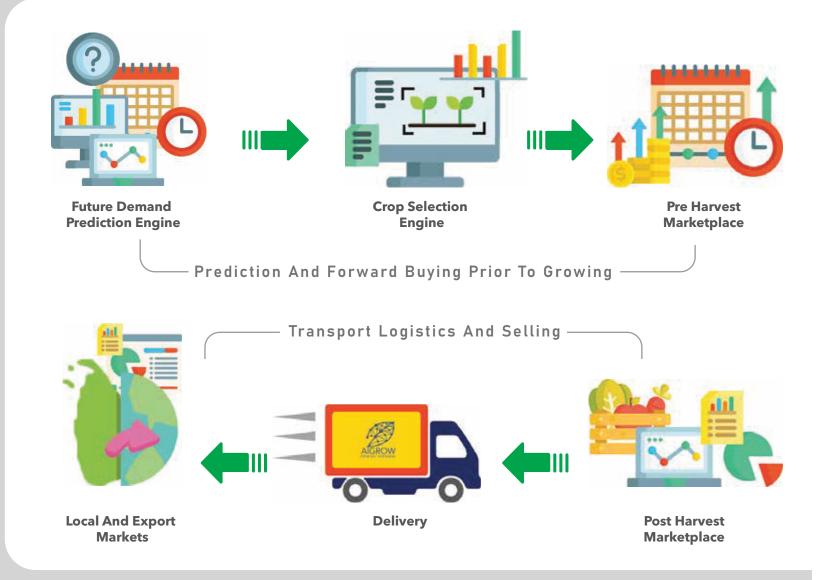






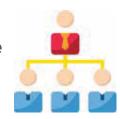


SOFTWARE MODULES



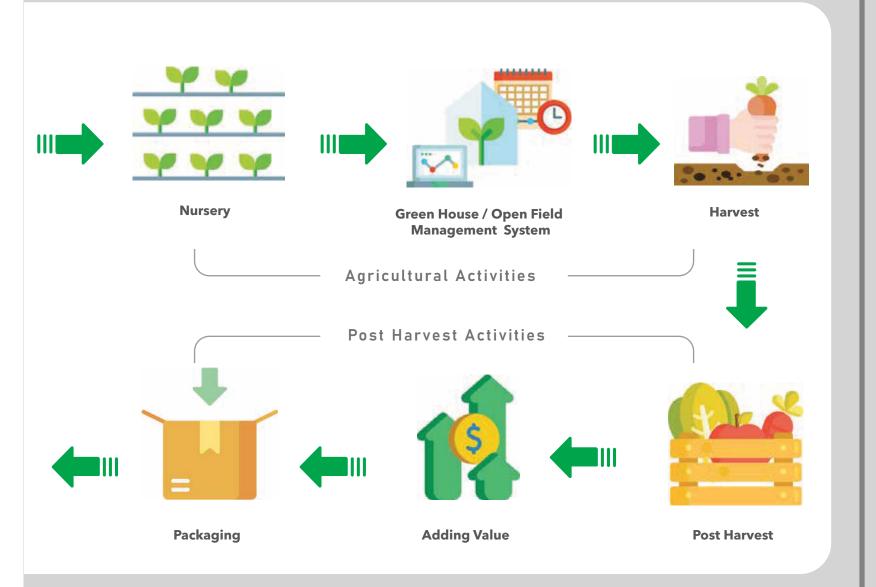
Supportive Modules

HR Module



Inventory







Quality Control



