

BUSINESS PLAN AND INVESTOR PITCH DECK



AUTOGREEN

For automation of Greens...

HORTICULTURE | AGRICULTURE | AUTOMATION

AUTOGREEN SYSTEMS PVT LTD,

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BUSINESS PLAN: THE EXECUTIVE SUMMARY

AUTOGREEN SYSTEMS PVT LTD; a start-up company incorporated in Feb 2019 (STAGE: IDEATION) seeking seed funding of INR 5 million, for developing the prototypes and for field testing for Fertigation System for automation and precision supply of fertilizers and micro nutrients using sensor based farming and monitoring EC and controlling pH for Site Specific Nutrients Management (SSNM).

India has realized the absolute necessity of automation in horticulture and agriculture sector without which Doubling Farmers' Income and increased agri-exports is quite impossible. Thus, a prominent requirement exists for indigenization of world class technology to reduce fertilizer inputs and crop specific climate management for increasing horticulture production and export of fruits and vegetables. The world class technology for IoT based automation for farming is available in US and Europe market at very high cost which is beyond the reach for Indian farmer thus horticulture and agriculture sector in India needs indigenisation of world class fertigation technology.

'AUTOGREEN SYSTEMS PVT LTD'; working as associate business partner with Climate Control Systems Inc, Canada; for IoT based automation in agriculture sector takes an opportunity for indigenization of world class fertigation technology.

Salient features of our new fertigation system being developed are as below;

1. Touch screen Computer controlled & programmable system for different crop requirements
2. Software program to inject liquid fertilizer directly in to pressurized water line proportional to water flow with soil EC & pH monitoring and controls and further direct detection of N,P,K and other micro nutrients in soil.
3. Irrigation programs can self-start at preset time or root zone moisture level
4. Equipped with flow meter and sensors for monitoring EC and pH control.

Our new fertigation system will be able to meet out various possible requirements in combinations of N+K+P and other micronutrients demand for various plant stages for growing different crops and vegetables. This system is to be equipped with programmable and accurate flow regulation and controls on EC, pH using IoT technology and sensors applications. It will help to farmers by reduction in fertilizers input cost and to increase the productivity.

OUR VISION: "NURTURING MOTHER EARTH, ENSURING ENVIRONMENTAL SUSTAINABILITY AND PROMOTING GREEN TECHNOLOGY".



OUR MANAGEMENT



DIVYA GARG, Director

- B Tech (Electrical Engg.)
- RTU, KOTA (RAJ.)
- RESPONSIBILITY: ELECTRICAL SYSTEMS, PLC, SCADA



KRATI GARG, Director

- MBA (Student Entrepreneur)
- INDIAN INSTITUTE OF MANAGEMENT, INDORE (M.P.)
- RESPONSIBILITY: FINANCE & BUSINESS MANAGEMENT



VINAY KUMAR, Founder & CEO,

- B.E. (Mech), M Tech (Energy Engg.)
- MALVIYA NATIONAL INSTITUTE OF TECHNOLOGY, JAIPUR
- RESPONSIBILITY: PROJECT MANAGEMENT & DESIGN OF SYSTEMS
- PROFESSIONAL EXPERIENCE- 30+ YRS



OUR TEAM & ADVISERS

NAME	POSITION	SHARE	LINKEDIN PROFILE
DIVYA GARG, B Tech' AUTOGREEN	DIRECTOR	50%	https://www.linkedin.com/in/divya-garg-796367116/
KRATI GARG, MBA* AUTOGREEN	DIRECTOR	50%	https://www.linkedin.com/in/krati-garg-a02aa6164/
VINAY KUMAR, M Tech AUTOGREEN	FOUNDER & CEO	-	https://www.linkedin.com/in/vinay-kumar-a240b32b/
SANDEEP JWALA, B.E., MBA NOKIA India	ADVISER	-	https://www.linkedin.com/in/sandeep-jwala-170419b0/
PRADEEP K GUPTA, B.E. , MBA UAE	ADVISER	-	https://www.linkedin.com/in/pradeep-kumar-gupta-b1558824/
Ashish Goyal, B.E. , MBA, M.D. KUHNEZUG AG, DUBAI, UAE	ADVISER	-	https://www.linkedin.com/in/ashish-goyal-95699514/
ERIC LABBATE, CEO, Climate Control Systems Inc, Canada.	ADVISER	-	https://www.linkedin.com/in/greenhouseautomation/
SAMEER DATT, M S, (Mechatronics), GERMANY	ADVISER	-	
PUNEET GUPTA, B Tech, M S, MIS, US	ADVISER	-	https://www.linkedin.com/in/gupta-puneet/



OUR PRODUCTS & SERVICES



AUTO-FERTIGATION

STAGE- PROTOTYPE



AUTO-CLIMATE

STAGE- PROTOTYPE



OUR SERVICES:

TURNKEY PROJECTS FOR
GREENHOUSE DESIGN &
AUTOMATION

ASSOCIATE BUSINESS PARTNER:
CLIMATE CONTROL SYSTEMS Inc,
CANADA . www.climatecontrol.com



AN OPPORTUNITY: GOVT OF INDIA PLAN FOR DOUBLING FARM INCOME

1. **REQUIREMENT: INDIGENIZATION OF WORLD CLASS AGRI-TECHNOLOGY FOR INCREASING PRODUCTION FOR EXPORT OF FRUITS AND VEGETABLES**
2. **REQUIREMENT: FOR REDUCTION OF INPUTS COST**
 - **FERTILIZERS & MICRO NUTRIENTS**
 - **LABOUR COST**

REQUIRED SOLUTION: INDIGENIZATION OF WORLD CLASS TECHNOLOGY FOR

1. REDUCTION OF FERTILISERS USE AND INPUTS
2. CLIMATE MANAGEMENT SYSTEMS
3. SENSORS BASED FARMING TECHNOLOGY
4. WORLD CLASS DESIGN AND AUTOMATION OF GREENHOUSES



MARKET OPPORTUNITY IN INDIA

1: FERTILISERS : (In Lakh Tonnes)

YEAR	CONSUMPTION	PRODUCTION	IMPORTS
2013-14	239.59	160.92	67.31
2014-15	255.76	165.15	91.35
2015-16	267.53	178.10	100.09

Opportunity 1: Reduction in use and import of fertilisers is priority requirement of GOVT.

PROJECTED PRODUCTION OF HORTICULTURE PRODUCE (Production in Million MT)

CROPS	Base period production 2009-10	Target Production at end of 2016-17	Compound Annual Growth Rate (%)
TOTAL HORTICULTURE	245.09	336.42	6.5

Opportunity 2: Demand for better world class Fertigation technology exists

AREA AND PRODUCTION OF HORTICULTURE CROPS OUTPUT = 0.84% HIGHER ONLY

(AREA IN THOUSAD HECTARE)
(PRODUCTION IN THOUSAND TONNES)
(Source: Indian Express, Jaipur: 28.01.2020)

2018-19		2019-20	
AREA	PRODUCTION	AREA	PRODUCTION
25430	310738	25611	313351

Opportunity 3: Automation is required for export push for doubling of farm incomes

Source: Ministry of Chemical & Fertilisers & NHB Horticulture Statistics at a glance 2017

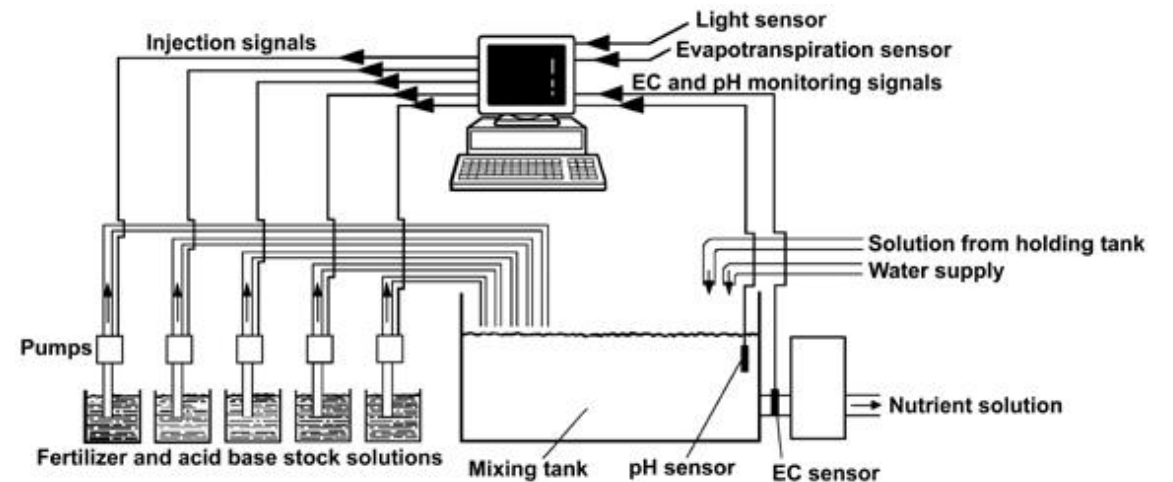


TECHNOLOGY: FERTIGATION FOR SSNM (STAGE- PROTOTYPE DEVELOPMENT)

'AUTOGREEN SYSTEMS PVT LTD' (as a start-up company)

Salient features of our new Fertigation system being developed;

- Touch screen Computer controlled & programmable system for different crop requirements for (INM) Integrated Nutrients Management and SSNM).
- Software program to inject liquid fertilizer directly in to pressurized water line proportional to water flow with soil EC & pH monitoring and controls.
- Irrigation programs can self-start at preset time or root zone moisture level
- Equipped with flow meter and sensors for monitoring EC and pH
- To meet out site specific nutrients management requirements in combinations of N+K+P and other micronutrients demands **for various plant stages** for growing different crops and vegetables. Programmable and accurate flow regulation and controls with EC, pH using IoT technology and flow sensors applications.





CURRENT STATUS AND TRACTION

PRESENT STAGE



MARCH 2021



DATA COLLECTION
FOR VARIOUS
CROPS
REQUIREMENTS

CEERI INCUBATION
CENTER, JAIPUR.

DEVELOPMENTS
FOR SENSORS

DESIGN AND
DEVELOPMENT OF
CONTROLLER

SOFTWARE
DEVELOPMENT FOR
FERTIGATION AND
CLIMATE
MANAGEMENT
TECHNOLOGY



PRIORITY TARGETS

YEAR	PRIORITY TARGET	REMARKS
2020	<ol style="list-style-type: none">1. R& D FOR SSNM FERTIGATION & CLIMATE MANAGEMENT2. PROTOTYPE FOR FERTIGATION STSTEM3. SOFTWARE DEVELOPMENT4. PROTOTYPE TESTING FOR FERTIGATION5. PROTOTYPE FOR CLIMATE CONTROLLER6. PROTOTYPE TESTING FOR CLIMATE SYSTEM	<p>PROCUREMENT OF SENSORS & PUMPS</p> <p>SOFTWARE DEVELOPMENT PROGRAM IN HAND.</p>
2021	<ol style="list-style-type: none">1. FIELD TESTING FOR FERTIGATION SYSTEM PROTOTYPE2. FIELD TESTING FOR CLIMATE SYSTEM PROTOTYPE	<p>IIHR, BANGALORE</p> <p>ICAR, NEW DELHI</p>
2022	<ol style="list-style-type: none">1. LAUNCHING OF PRODUCT FOR FERTIGATION- BY AUG 20212. LAUNCHING OF PRODUCT FOR CLIMATE SYSTEM- BY DEC 2021	
2023	PRODUCTION FACILITY DEVELOPMENT	<p>TARGET</p> <p>500 UNITS/ MONTH</p>



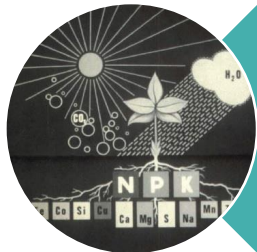
BUSINESS MODEL: B2C (E-COMMERCE)



SALE ON WEBSITE AND THROUGH
AMAZON
FLIPCART



LIFE TIME WARRANTY &
MAINTENANCE SUPPORT



CLOUD BASED DATA SYSTEM
FOR INPUT FERTILISERS



TARGET MARKET SIZE: FERTIGATION



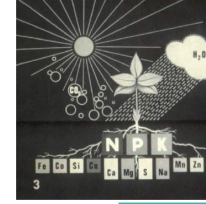
1. GREENHOUSE GROWERS

- FRUITS & VEGETABLES
- FLORICULTURE
- AROMA PLANTS
- HERBAL PLANTS



2. DRIP IRRIGATION USERS

- FERTIGATION TECHNOLOGY FOR LIQUID FERTILIZERS



3. FERTILIZER INDUSTRY

- CUSTOMISED DOSING SYSTEM



OUR COMPETITORS: FERTIGATION WITH EC, pH MONITORING

IN INDIA...

1. NETAFIM, INDIA

Venturi Type: INR 5-6 Lakhs

2. FARMAGAIN, BENGULURU

Venturi Type: Prototype Stage

3. JJ OVERSEAS, Mumbai.

Type: EC, pH Sensors

Venturi Type: Pre-set irrigation programs: INR 5 Lakhs

4. JAIN IRRIGATION

Venturi Type: Pre-set irrigation programs: INR 5 Lakhs

WORLD WIDE...

1. NETAFIN, ISRAEL

Venturi type: US\$ 8000 + Import Duty about 32%

2. Hoogendoorn, NL

3. CLIMATE CONTROL SYSTEMS Inc, CANADA

20 Pre-set program, IoT Based, Type-Sensors for EC & pH monitoring: US\$ 20000+ Import Duty about 32%

4. AGRICM- CHINA

Type: Four Pre-set irrigation programs, IoT based

Venturi Type: US\$ 8000- 11000 + Import Duty about 32%

5. DOSATRON, FRANCE.

COST ANALYSIS FOR NEW FERTIGATION SYSTEM

S No	DETAILS FOR PROTOTYPE DEVELOPMENT	AMOUNT IN RS
1	Prototype: with injection pumps, sensors and IoT system with touchscreen computer and weather station	500000
2	Software for fertigation system	500000
3	Salary & other expenditures	400000
	TOTAL APPROXI COST IN RS	14,00,000

S No	DETAILS FOR COSTS OF UNIT PRODUCTION	AMOUNT IN RS (ANNUALY)
	(A) FIXED COST PER ANNUAM (For production capacity up to 250 units per month)	
1	Rent for Industry with electricity & water@ RS 70000 PER MONTH	70000*12= 8,40,000
2	Software and IT development, tools & plants	16,00,000
3	Product promotion in trade fairs	25,00,000
4	Misc expenditure	60,000
	Total FIXED COST	Approx. RS 50 Lakhs
	(B) VARIABLE COST (per unit)	
1	Cost of material	2,00,000
2	Direct Labour & Technical staff salary	80000
2	Advertisement cost	40000
3	New Research & Development Cost	50000
	Total VARIABLE COST (per unit)	RS 3,70,000



REQUIREMENT: CAPITAL & INVESTMENT

YEAR	CAPITAL REQUIRED RS IN LAKH	OWN SHARE RS IN LAKH	SEED FUND INVESTMENT REQUIRED RS IN LAKH
2020	20	5	15
2021	20	5	15
2022	200	50	150
2023	200	50	150
2024	550	50	500



CORE COMPETENCIES

ASSOCIATE BUSINESS PARTNER WITH CLIMATE CONTROL SYSTEMS Inc, CANADA.

- CLIMATE CONTROL SYSTEMS, CANADA; AHS BEEN IN FERTIGATION MARKET FOR LAST 30+ YRS.
- WE ARE WORKING AS INDIA DEALER FOR CLIMATE CONTROL SYSTEM Inc, CANADA, FOR LAST 02 YEARS.

<https://www.climatecontrol.com/global-dealers-page/>

PROFESSIONAL TEAM AND MANAGEMENT

- ONE DIRECTOR AS QUALIFIED ELECTRICAL ENGINEER.
- ONE DIRECTOR AS MBA FROM IIM INDORE
- CEO IS QUALIFIED M TECH (ENERGY ENGG) HAVING 30+ YRS EXPERIENCE IN PROJECT MANAGEMENT AND ACADEMICS
- TEAM OF PROFESSIONAL ADVISERS

DESIGN AND CONSULTANCY

- WORKING IN THE FIELD OF GREENHOUSE DESIGN AND AUTOMATION
- ENERGY ENGINEERING
- FERTIGATION
- CLIMATE MANAGEMENT FOR GREENHOUSE



SUMMARY: MARKETING PLAN

PLATFORM / YEAR	2021-22 (AMOUNT RS IN LAKH)	2022-23 (AMOUNT RS IN LAKH)	2023-24 (AMOUNT RS IN LAKH)	2024-25 (AMOUNT RS IN LAKH)
TRADE FAIRS	10	10	20	20
SOCIAL MEDIA	5	10	10	10
E COMMERCE SITES	5	10	20	20
OUTDOOR PUBLICITY	5	20	50	50
TOTAL AMOUNT	25	50	100	100



CURRENT STATUS

	STATUS	DESCRIPTION
1	OUR TARGET CUSTOMERS	GREENHOUSE AND OPEN FIELD FARMERS
2	TARGET MARKET	AUTOMATION FOR FERTILIZERS AND IRRIGATION SYSTEMS
3	CURRENT STARTUP STATUS	IDEATION
4	NUMBER OF TOTAL EMPLOYEES	DIRECT- 03 INDIRECT- 04
5	SALARY & WAGES EXPECTED TO BE PAID FOR PROTOTYPE DEVELOPMENT	
	(A) APPROXIMATE WAGE BILL	RS 125000 PER MONTH
	(B) OTHER EXPENSES: MARKETING, TRANSPORTATION & TECHNOLOGY	RS 25000 PER MONTH
	TOTAL EXPENSES (A)+(B)	RS 150000 PER MONTH
6	SEEKING TOTAL INVESTMENT	INR 5 MILLIONS
7	ADDITIONAL INVESTMENT REQUIRED FOR DEVELOPMENT OF PRODUCTION FACILITY	INR 80 MILLIONS (AFTER SUCCESSFUL FIELD TESTING OF PROTOTYPES)
8	CO-INVESTORS OR PREVIOUS INVESTMENT HISTORY	NIL
9	START-UP STAGE	IDEATION
10	START-UP COMPANY STATUS	DPIIT RECOGNISED START-UP: DPIIT 43144



CHALLENGES AND NEED GAPS

	CHALLENGE	NEEDS
1	SEED FUNDING AT IDEATION STAGE	<ul style="list-style-type: none">• R&D FOR SENSORS FOR N,K,P AND MICRO NUTRIENTS REQUIRED• FUNDS REQUIRE FOR SALARY
2	MICRO NUTRIENTS MANAGEMENT & SOIL DATA NOT READILY AVAILABLE	TO GET ASSOCIATED WITH <u>PROJECT: MICRO NUTRIENTS MANAGEMENT AT IIHR, BANGALORE</u>
3	R&D FOR N,P,K AND OTHER MICRO NUTRIENTS SENSORS	COLLABORATION WITH OTHER INDUSTRY
4	COST FOR EC, pH, WC SENSORS	REQUIREMENT FOR LOW COST SENSORS

THANKS



AUTOGREEN

For automation of Greens...