



Emesh Farms Technik
Healthier planet

POLYHOUSE

HYDROPONICS

AGRI TECH

LANDSCAPING

www.emeshfarms.com



ABOUT US



A vision of an IITan to change the way we grow and eat started in the year 2014. Emesh is a brain child of someone who was passionate about technology and agriculture in India. Love for the country got him back to India and the state of agriculture motivated him to get into hydroponics.



Emesh is committed to developing indigenous, **highly efficient, cost conscious and serviceable technology and components** used as ingredients in customer deliveries. **Over 75+ commercial turnkey hydroponics projects in India and overseas .**



Emesh is backward integrated and **manufactures almost all components** related to greenhouse, hydroponics, automation and agronomy. This gives it the power to custom design every client solution and helps with the cost and quality control. **We have our own farms also and grow hydroponic and soil based vegetables in around 10 Acres.**



These vegetables are grown exclusively to cater to Pharmaceutical markets. We also operate our customer farms and do long term buy back contracts. **We provide end to end consultancy to procure government subsidy as well.**

OUR PROFESSIONAL TEAM



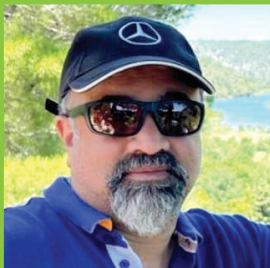
MANOJ NIGAM

IIT Roorkee, 1996 batch, M-tech in CS, 20 years of corporate experience and 8+ years of hydroponics, agritech expertise



USHA NIGAM

Responsible for Pan -India sales for the entire product portfolio. New Business Development, Events and Exhibitions, Lead Generation, Product Development & Innovation



SHAILESH GADRE

Pharma Industry veteran. Have introduced many patented products and molecules in Indian pharma industries. Responsible to close sales contracts with pharmaceutical companies



BHAGYASHREE SAWANT

B.Tech Mumbai University, 12+ years of sales and Customer service experience and Hydroponic grower herself, she manages the sales in Emesh



PANKAJ PATIL

B.Tech Mechanical, started with production and design, in the last 8 years, he grew by innovating new components, new technologies and simplifying the complex machines in Indian agriculture context.

8 L SQM

Projects constructed

19

Indian states

75+

Commercial
project
completed

650+

Fodder machine

6+

Countries



WHAT IS HYDROPONIC?

“ Hydroponics is one of many methods to grow your own food. This method focuses on growing plants without soil ”



Difference between soil based agriculture and hydroponics

In soil based agriculture the soil acts as a medium providing

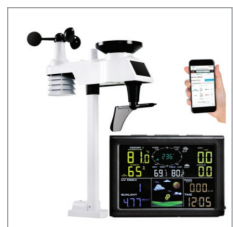
- **Nutrients**
- **Physical anchoring**
- **Moisture retention**



Nutrients are a **well-balanced targeted solution** for individual plant needs



Hydrotone and type clay balls, glass wool, jiffy bags, oasis cubes are the anchoring medium



Programmer logic controller to measure actual moisture surrounding the growing medium

Advantages of hydroponics



Watering only when the moisture levels are low. Thus **reducing the water use**. Moisture is maintained around the roots so the plant is always in an ideal condition to absorb nutrition



Nutrients are a well-balanced PPM, PH science that is AI managed so the taste, growth and health of the plants is at its optimum at any given time



Physical support is only needed for anchoring the plant to the nutrition systems like NFT, DWC, aquaponics, felt, grow bed, grow bag, dutch bucket.



Since there is no soil plants do not have soil based pest pressures

This is also a closed system where inlet and outlet of **water is measures precisely** to keep optimum growing condition which **can't be done in soil based system** as monitoring is done randomly and not for the entire system.

The food flowering and fruiting is not just season dependent. It can be achieved based on market needs to some extent.



Why use hydroponics in urban farming?



Space is at a premium in urban farms and 1 acre of hydroponics is equivalent to can achieve several acres of rural farming output. Vertical farming can almost triple the space thus reducing the actual square footage need.

You need 2-3 people to manage upto an acre of farm so labor flux is well managed



Machines takes care of the science of growing so the skill of the actual farmer is not required through the process



Water is recycled and collected so only the one that is absorbed is lost in the cycle thus drastically **reducing water cost.**

Hydroponics can be achieved in closed greenhouses or polyhouses which are **controlled environment systems** so the purity of the growing food can be monitored especially for highly regulated industries.



OUR SOLUTIONS COMMERCIAL HYDROPONIC VEGETABLE SETUPS



Outdoor Protected solution

Commercial Hydroponic gardens on land and terrace for different kinds of vegetables.

All formats of **Hydroponic solution, sensor based, automated available in all formats like NFT, DWC, Dutch Buckets, Vertical Towers, Growbed etc.**



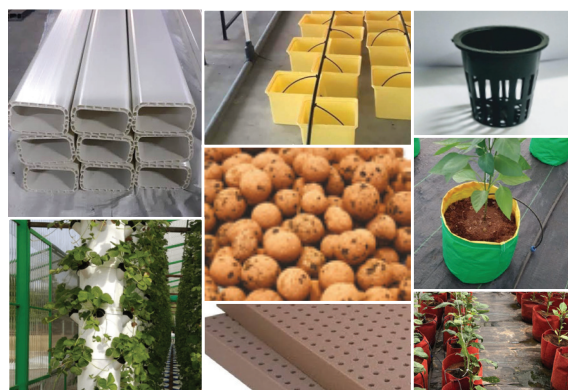
Terrace Hydroponic Garden

Hydroponic Units in Terrace for commercial or family use. **Terrace is best suited for small vertical gardens** that offers landscaping and chemical free daily vegetables. It can also be converted into high density commercial use with Fan Pad covering and grow light supplements.



Indoor Hydroponics

Commercial Hydroponic high density vertical farms with Grow lights. These farms are best suited for the exotic vegetables farms. Our expertise focuses around Energy efficiency, optimum cost of production and very high per square feet production output. Our patent ready solution includes moving lights, flexible rack heights, energy efficient cooling etc



Hydroponic Components Retail

We manufacture and retail all types of components used in Hydroponic setups like **NFT pipes, Vertical Towers, Dutch buckets, Geo Fabrics Grow bags, Net Cups, Oasis Cubes, Hydroton, Nursery Trays, Fodder Trays** etc. Nutrients, Growth boosters, Exotic vegetable seeds and medicines.



POLYHOUSE SOLUTIONS



Fan Pad Greenhouse

Best suited for **Hot temperature zones for growing** exotic leafy vegetables and herbs.

Emesh Farms experts use **innovative technology and multilayer protection** to reduce the temperature to around 12-14 degree Celsius from ambient in dry areas. Our automation controllers offer single control panel to both greenhouse and hydroponics or soil based irrigation.

“ Emesh manufactures all components required in **Polyhouse, Hydroponics, Software and Hardware parts of Automation.** We have three manufacturing divisions in company: **Plastic, Fabrication and Control Panel** Our own manufacturing capability gives control on the design, quality, delivery timeline and cost effectiveness. ”



Naturally Ventilated Greenhouse

Best suited for mild temperature range areas and plants that can sustain big temperature variations. Examples are Tomatoes, Cucumber, Capsicum, Brinjal, Bitter Guard etc. These Polyhouses don't offer big temperature variation from the ambient but are cheaper to construct and consume very less electricity.



Shade Net House

Its the **most cost effective protection** cultivation setup. Shade Net House gives protection from Insects, cut light and heat and provide an isolation to the crop inside. Mechanism like **foggers, side curtain, gives good environment control shade-net, ventilation etc.**

AUTOMATION AND SPECIALIZED SOLUTIONS



Greenhouse Controller

Fully automated Greenhouse controller that controls all Polyhouse components based on sensors and AI. It also integrates Irrigation and fertigation unit and ensures that customer gets all farm automation needs in one solution. **Single solution can serve one or many polyhouses together.**



IOT based Inline Fertigation Automation with Weather station

IOT and sensor based Fertigation and Irrigation system for open field farmers. This advance solutions can control fertigation to many Acrege using Soil sensors, **Rain sensors, weather sation and much more.** It allows crop wise fertigation selection and micro zoning of farms.



IOT and Cloud based Auto Doser

Sensor based nutrient mixing and auto doser for small and big set up. Three tank mixing unit injects precise quantity of nutrients or Ph down/up based on the pre-set EC and PH. **Complete solution is IOT based** and provides trends and data logging.



We manufacturer **both hardware and software** in-house at our facility in MAHAPE, Navi Mumbai.

We take pride in keeping close touch with **farmers and delivering fitting solutions** as per Indian needs. Innovation and constant evolution are two tag line of this division.





SPECIFIC SOLUTIONS



Boombar Irrigation

Best suited for Nursery and high density plantation. No need to do lengthy ground irrigation setup and worry about monitoring water to every plant. It is possible to do all through Arial watering using boombar irrigation **This innovative solution is quite cost effective and fast to implement and very easy on the operations.**



Whether Station Controller

Weather is becoming quite extreme and every year we witness HUGE crop loss due to sudden changes in climate. Weather station based automation gives warning and takes actions based on rains, high winds, soil temperature, moisture, air or water temp, humidity etc. Controller is fully automated and IOT based



Felt based Planters

This innovative solution takes away needs of daily watering to plant. Plant receives uniform and continous nutrition without the pumps or manual sprays. It is best suited for home based system and landscaping solutions, which requires resilience to low maintenance.

Emesh has developed many innovative designs and types of Felt.

“ **Lots of new innovations globally** are driving the infusion of **new technologies across Hydroponic and High tech plantations.** Emesh team is very active in global conferences, exhibitions and always brings the new trends that suites Indian needs. ”

HYDROPONIC FODDER AND SPROUTS



Fully Automatic Fodder Machine

Temperature and environment controlled; fully automated; ultra high density Hydroponic fodder unit delivers green grass on day basis to cattle, horses, goats, chickens etc. **This sprouted grass is very healthy and it reduces feed cost, increases the milk in milking cattle.**



Shadenet Based fodder Unit

Semi automatic, shadenet unit works most of the time except in winter. During winter, fodder output reduces. For remaining months, ultra high density Hydroponic fodder unit delivers green grass on day basis to cattle, horses, goats, chickens etc. This sprouted grass is very healthy and it reduces feed cost, increases the milk in milking cattle.



Wheatgrass and Sprout Machine

Temperature and environment controlled; fully automated ; ultra high density. **Hydroponic wheat grass and sprout unit can delivers best quality** wheat grass, sprouts, micro greens of various varieties for human consumption. Experience and matured design plays together to ensure that every small aspect of the growing and ease of operations are taken care for long term operations.

“ **Hydroponic Fodder is sprouted and very highly digestible.** Usually, concentrate feeds digestion percentage is quite low in cattle and almost 40%-45% of feeds comes out in dung without digesting. But, when it is fed together with Hydroponic fodder, overall **digestion percentage increases to 80%-85%.** This reduces feed cost, increase health and milk. ”

SUBSIDY AND GROWING CONSULTANCY



Government Subsidy

We do liaisoning for all government agencies e.g. NHB, NHM, ICAR, Nabard and other schemes to facilitate subsidies and project approval. Our expertise and responsibility includes Planning and designing of project, Agency liaisoning, Bank project report, Bank loan, Commissioning of projects, and Disbursement of subsidy amount to customer account.



Operations and Buy back support

One of the most crucial and important factors for ensuring a successful Hydroponic Greenhouse project is the agro-technical and agronomic knowledge. We help in operations with SOP, training, monitoring and hand holding. We also do buy back of produce in select cities to help customers till they develop their own channels.



Growing Consultancy

Since most of the entrepreneurs are not from Agriculture field, providing hands-on training, knowledge and is a must to overcome all agronomy and operations related challenges. Our trained and experienced team. Provides consultancy and operations support

“ Our engagement with customers is much deeper than just the project setup. We happily partner with customers from planning, design, **government subsidy and after the project setup** for operations support, consultancy or even buy back. ”

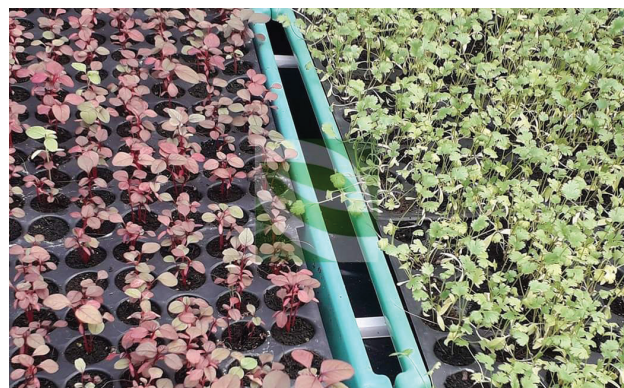
NUTRIENTS AND CONSUMABLE SUPPLIES



Hydroponic Nutrients and Growth Boosters

We make **Hydroponic nutrients** using our **patented formula**, with right combination of essential Macro and Micro elements and additions of several important ingredients for faster growth of plants.

The formula includes bio-activators which **improve overall plant health**, resistance to pathogens and nutrient uptake. There are different nutrients for different kinds of plants and growing stages.



Seeds and Medicines

We do trading and sourcing of best quality exotic vegetables seeds that germinate with highest percentage.

We also, provide bio medicines, preventive and corrective both to ensure that plants grow and provide the output as intended.

Plant Growth Media

Magical media mix made from right quantity of Cocopeat, vermicompost, perlite and vermiculite. It offers very high Ph stability.



Emesh has developed plants lab to keep experimenting and deriving the **best nutrient and boosters formula for various kinds of plants**. Emesh is developing a huge database with intellectual copyright of plant behavior, symptom and effect of various combinations of nutrients, which it uses in **customer consultancy and supplies**.





HERBAL HYDROPONICS

In partnership with
Abhitech Agro Private Limited

FIRST
TIME IN
INDIA



Emesh Farms Technik with their indepth **high tech agriculture experience** and **Abhitech Agro** with their exclusive tie up with Pharmaceutical companies have joined hands to offer super exciting investment opportunity.

We set up the farm and we are the operations partner. The customer is a direct beneficiary of **government subsidy**. Profit sharing is on a month to month basis.





LANDSCAPING SOLUTIONS

In partnership with
"Plant an Idea"



“

We have a new ornamental and edible plant division that focused on the design of urban and farm needs. Plant an idea focused on the landscape design, aesthetic and synergy of design with the interiors or the actual structure.

Recently in the process of designing a 15 floor tower full covered in 50% edible and 50% ornamental the project will yield **India's first urban farm growing 200 varieties of plants** and 40 tons of farm to table flora.

”



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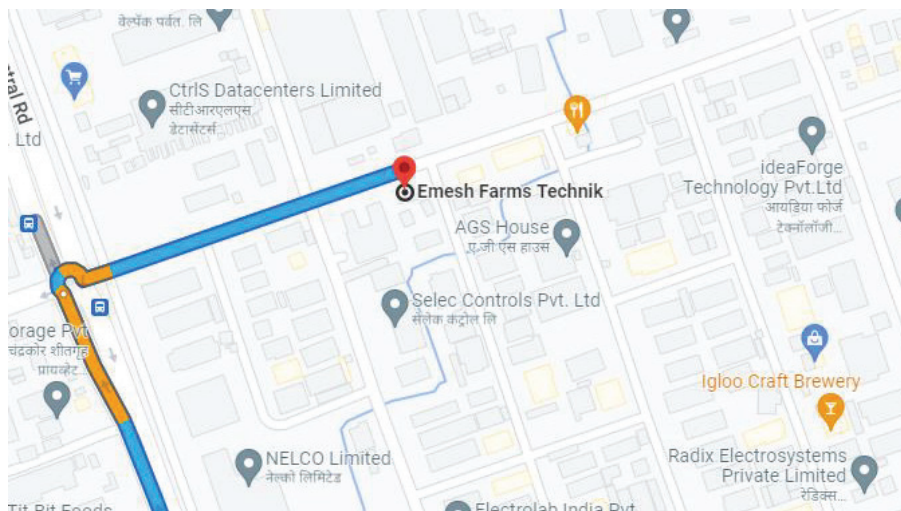
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