



since 2008



This document must be read carefully from end to end please

INDIA'S FIRST AND ONLY AUTHENTIC THREE MONTH RESIDENTIAL PRACTICAL HANDS ON TRAINING COURSE IN SIMPLIFIED HYDROPONICS @ Dharwad, Karnataka by the Pioneers in Indian Hydroponics

COURSE OBJECTIVE

This long term practical residential training program has the prime objective of teaching potential Soilless Cultivation/Hydroponics aspirants the very basics of this science through step by baby step practical hands-on training. This Course aims to remove all myths and cobwebs that are associated with this technology and teach students right from scratch the technique of growing plants. The idea is to give perspective and an ideal starting point for beginners and entrants to this way of cultivation.

At Aggragannya Skill we firmly believe that it is important that one **'start's small, learns hard and then scales up'**. Any attempt to dive straight into Commercial cultivation without skill can be an unmitigated disaster. There are several cases of financial losses in India where such entrants have burnt big holes in their pockets. Success in this method is 90 percent horticultural skill. Technology contributes the rest. This is where the 3-month practical training comes in handy.

THE IMPERATIVE

Hydroponic/Soilless cultivation is fast mushrooming all over India and there is a dire need for horticultural skills. Some of the students looking at a career can highly benefit from this training and a training certificate from our reputed institution is a sure shot passport to your first job and a great career within India and abroad.

Venue	#18, Bendre Nagar, DN Koppa, Dharwad 580008
Trainer	Lt Cdr CV Prakash, Veteran, IN, Chief Instructor
Organization	Aggragannya Skills India Private Limited
Start Date	You may join any week in the year beginning on a Monday
Start time	0600 hours daily
End time	Till completion of daily tasks
Food	Meals are not provided. Students can make arrangements with outside caterers direct.
Lunch break	See Promulgated Routine in Appendix A
Training materials	Provided, except magnifying glass, pH/EC probes, hand sanitizers, note book and pens.

Take away	Practical knowledge growing leafy, shoot and root vegetables/herbs
Dress	Comfortable attire
Admin Contact	Mr Shivanand Halasagi
Contact No	7829883358
WhatsApp No	7829883358
Housekeeping	Vijwal Vas
Contact No	9901015353

Registration: Registrations must be done strictly 2 weeks in advance of joining the workshop. Students can opt to join in at any time of the year as per their convenience.

Seats are on **availability basis**.

There will strictly be no 'on-the-spot' registrations.

Payment and Confirmation Mode:

Payment must be made in advance min 2 weeks before student begins the course by Bank Transfer **only** through NEFT/IMPS favouring the following account;

Account Name : **AGGRAGANNYA SKILLS PRIVATE LIMITED**
Bank : **CANARA BANK**
ACCOUNT NO : **0509201011668**
RTGS/NEFT : **CNRB0000509**

Amount : Rs 30000/- plus 18 pc GST

Caution Deposit : Rs 2000 refundable upon completion of the course.

- No Cash deposits into our company account at any cost.
- Please bring along your proof of payments when you come for the Course.
- Venue Location: Please check with our Admin before you leave home.
- Course fees once paid is not refundable under any circumstances.

What is HYDROPONICS?

Hydroponics is the practice of growing plants without soil. Most commonly, hydroponics cultivates plants in nutrient-rich water, although hydroponics can also be considered to be the practice of growing plants in other aggregates, such as a soil-less bark-based/Perlite or Coir Peat mix. Hydroponics is an advantageous method of cultivation for domestic and commercial use. There are no weeds to deal with, and hydroponic plants are typically more healthy, mature earlier, and use less space.

Benefits of Hydroponic Technology

- Minimum Land Use
- High Yields in small land footprint
- No Genetically Modified seeds used
- Multiple and Mixed crops per year
- Many varieties of FFV's can be cultivated
- Low downtime between crops
- Easy to maintain systems
- Pesticide Free
- Minimal use of water
- Used Water can be recycled and used
- No water run-off, avoids pollution
- Minimum Carbon Footprint
- Soil-Less Cultivation
- Absolutely Hygienic, No Chemical Trace
- Can Grow Vegetables, Fruits and Herbs
- Is non-messy, clean agriculture and appeals to the modern generation
- Post-harvest waste can be composted.

Mission

Our mission is to help by training people in rural and urban areas to set up Hydroponic Vegetable and Herb gardens on their rooftops, balconies, backyards and even on window sills. We wish to make Urban farming a norm in the years to come. This technique will help common people to learn the methods of growing their own pesticide free food within the resources of their own homes. This has great relevance at a time when food security crisis is slowly becoming a reality in the world.

The Syllabus

Students attending this course will be taken through both theory and practical classes in Soilless cultivation. The practical component will be 80 percent. Many renowned resource people from the horticulture industry will be delivering guest lectures during the training program. The syllabus is designed in such a way that every student understands the inherent details of growing vegetable and herb crops and give him full confidence to set up his or her own pilot projects or take up jobs with Hydroponic Projects going on in India. They may after a bit of further practice also decide to go commercial when confident.

Your Instructor

Please refer to the attached resume of your Lead Instructor Lt Cdr CV Prakash (ret'd) IN, to know more about him. Website for reference is www.petbharoproject.co.in

Theory will cover the following topics and a whole lot more.

- Parts of a plant
- Life cycle of flowering plant
- Climate and plant growth
- Ecology of plant environment
- Health benefits of green and clean surrounding
- Soilless Substrates–
- Soil less culture – why?
- Hydroponics
- Genesis
- Advantages
- Plant culture in hydroponics
- Containers/Growers
- Substrates
- Water quality (TDS) for hydroponics
- pH and EC of water and substrates
- Seedling production
- Shallow tubs
- Seedling trays
- Coir pith an useful substrate
- Hydration of coir pith-How
- Filling the growers
- Solarization of used substrate
- Reuse of substrates
- Hydroponic Nutrients
- Essential nutrients
- Plant nutrition in ions
- Water soluble salts
- Mixing of nutrients
- Recycling the excess nutrient solution
- Flushing the excess nutrients
- Plant protection
- Pests, weeds and diseases
- Integrated non-chemical pest management
- Day to day care of the garden (Why and How)
- Harvesting techniques/Post Harvesting/Packing
- Recording day to day operations
- Seeding into seedling trays
- Transplanting of seedlings
- Precautions while doing transplants

Practical training will cover the following broad topics as applicable.

- Location, Siting & Layout of Growhouse Systems
- Growhouse Structures
- Environmental Management of Growhouse
- Water Quality, EC & pH
- Basic Hydroponic Systems & Components
- Crop Varieties
- Seed selection
- Media Types & Characteristics
- Plant Structure, Nutrition & Nutrient Management
- Common Growhouse Pests & Diseases & IPM
- Quality Assurance, OH&S, I.T. & Production Plan
- Light and PAR adjustments
- Irrigation, Growing media Management
- Plant Management, physical and cultural requirements
- CO₂ enrichment of Grow houses
- Practical EC & pH Measurements in Crops
- Implement a Hydroponic Maintenance Program
- Implement a Plant Establishment Program
- Implement a Pest & Disease Control Program
- Implement an IPM Program
- New Growhouse Investment & Technology Considerations
- Implement a Plant Monitoring Program
- Introduction to Plant Physiology, Monitoring and Management
- Nutrient Uptake Influences
- Seedling Propagation Management
- Acid & Chlorine Sterilisation Worksheet
- Dripper timing Calculations
- Growhouse Management Program
- Growhouse Crop Protection Principles
- Growhouse Climate Management
- Growhouse Environment Management
- Identifying Plant & Fruit Problems
- Influence of Growhouse Temperature
- Initial Growhouse Crop Targets
- Maximising Growhouse Efficiency & Energy Conservation
- Nutrient Deficiency Chart
- Plant Photosynthesis & Temperature Relationships
- Plant Transpiration Principles
- Plant Vigour & Balance Chart
- Spray System for Growhouse Crops
- Treatment Spray Chart for Growhouse Crops
- Nutrient Feed Solutions for Growhouse Vegetables
- Irrigation in Protected Cropping & Soilless Culture
- Growhouse Ventilation Techniques
- Managing Plant Balance
- Radiation Transmission through Growhouse Claddings
- Maintenance Program for Closed Hydroponic Systems
- Operating Pressurised Irrigation Systems
- Production Scheduling
- Growhouse Admin and Reporting Systems
- Packing methodologies
- Grading and Sorting Methods
- Setting up of Farm management review plan
- Auditing of Farm Operations on regular basis

Examination and Testing

Students will be subjected to both Oral and Written tests on regular basis and pass grades are extremely high. Students must come with an open mind dedicated to just learning all that they possibly can as Aggragannya is a hard task master and brooks no complacence or lackadaisical approach. Every student therefore is expected to give his very best towards achieving and completing the course successfully. Certificates of Completion will only be awarded to those passing the exams. Others will only be given a Certificate of Attendance. Aggragannya reserves the right to ask a student to leave the organisation at any time if he/she shows poor progress, disinterest in work or indiscipline which may affect the other students. His fees will not be refunded in such case also. Students will also be taken to the Centre of Excellence for Vegetables to see actual protected cropping. Visit to the University of Agricultural Sciences will also be a part of this course.

Facilities provided

All students are provided accommodation in a very spacious way and will be accommodated in halls or rooms. If there are female students then rooms will be earmarked separately for them at the hostel. Washing machines are provided for turn by turn use and a roster will be maintained. The accommodation is in very well lit and airy surroundings and will make the students very comfortable at all times. Students are provided with single cots and mattresses and are advised to bring minimum of two pairs of bedsheets, pillow covers. Pillows will be provided if needed on cash payment. They are not provided due to reasons of Hygiene.

Students are expected to keep their hostel in ship-shape at all times. Upon waking up each student must make their beds and hang their towels outside on the cloth wires provided in the Veranda. All students are expected to follow strict routine as promulgated. Since this is a common hostel each one is expected to be mindful of his colleagues' comfort at all times. All music may be heard only through headphones so as not to disturb the others. All footwear used outside must be kept outside and slippers used inside the hostel hall/rooms may be kept neatly under each of the cots. Bathrooms must be kept absolutely clean and all fittings treated with care in the interest of other students and the organisation. Individual students will be provided with basic cutlery and all students are expected to wash and clean their plates at the end of their meals. All students must keep their area clean. Students must dispose their waste in a responsible manner and use dedicated waste bins provided.

Training Materials and Training

Soft copies of several important documents will be provided and in addition there will be several reading materials for students to improve and educate themselves. All material for practical learning is provided. Students will be designated gardens in small groups where they will be asked to grow various plants with application of hydroponics knowledge and applied science and they will be given responsibility and ownership for bringing plants to their intended genetic potential. Daily reports and feedbacks will be presented to the Chief Instructor. Best Project Awards will be given at the end of the course.

Some Words of Caution

- **Environment:** It is our collective responsibility as the Organizers and yourselves as students at the course to treat the surrounding with responsibility and keep the premises clean. Your cooperation is highly solicited and thanked for in advance.
- **Punctuality:** In the interest of the greater good of all we request you to arrive on time to avoid losing precious time for fully achieving the objective of this Course. This is an intensive Course and we wish to complete the same without having to make any compromises. Your cooperation is requested and thanked for in advance.
- **Mobile Phones:** Kindly keep your mobiles in silent mode during training hours to avoid any disturbance to the trainer and others. We solicit your kind cooperation.
- **Questions:** Ask as many questions during the course so that you learn as much as possible.
- **Chivalry:** There will be students of both the genders and chivalry and respect for the lady participants is paramount at all times.
- **Respect :** As most students come from different backgrounds of education, cultures and traditions for this course it is very important that each one respects the sensibilities of the other and learns more about one another and create great bonds of friendships and thus good networks. Students are expected to behave and speak politely with the staff at all times.
- **Smoking:** Smoking is not allowed in residential areas as well as in working areas at any time.
- **Alcohol:** Alcohol consumption is also not allowed inside the residential premises.

Our Value Proposition:

During this Course, if any student has not understood something, they will be allowed to stay an extra week after the course so that they have no doubts left at the end of the course. The relationship between Aggragannya does not end with the last date of the completion of the course, it continues further wherein there will always be contact between the students and us through a special whatsapp group to share any concerns, findings etc.

Note: The **Dates and Venues are subject to changes at any time** and we will not be held responsible for the same as it depends upon the circumstances. The topics taught need not necessarily follow exact sequence as mentioned in this document although every endeavour will be made to adhere to the daily schedules. Kindly note that we are not responsible for any of your belongings and request you to take care of the same yourselves. We are not responsible for safety of man and materials and remain indemnified against any public liability in case of any untoward happenings like fire, flooding, personal injuries etc at the venue.

Indemnity Clause: Aggragannya Skills assumes 100 percent that every participant has read the terms in this document thoroughly before registering for the Course. Ignorance of rules will not be allowed as an excuse for any transgressions. Once a student has paid the fees and got confirmation of his seat it means that he has read the document and accepted the terms in toto.