

Auroville Today

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The challenges of farming in Auroville



Gérard at work at the Auro-Orchard farm



Harvesting time at Annapurna



Dairy at Aurogreen

Jeff has been managing Discipline Farm for the past 23 years. He is also a coordinator of the Auroville Farm Group. Here he talks about the particularity of Auroville farming, the challenges facing our farmers and how they can be overcome.

Is farming in Auroville different from farming in the rest of the bioregion?

The obvious difference is that we are organic, which immediately sets us apart from many of our neighbours who use pesticides etc. as a matter of course.

In this area, the traditional crops were millets, peanuts and some rain-fed rice. In the early days, our farmers grew what they could. This included millets like ragi, cumbu, tennai and red rice. Few of our farmers had any previous farming experience, so they learned from the local farmers and by trial and error.

The millets are grown much less in Auroville now, partly because the rains seem less reliable and partly because there is no market for them.

Many of our farmers grow vegetables or fruit instead, although it is only in the past 10 – 15 years that our farmers have grown vegetables the whole year round. Here the local farmers could not advise us as there is no tradition in this area of vegetable or fruit growing on a commercial scale. Consequently, in our early days of vegetable and fruit growing, there were many failed experiments.

Are there limiting factors to what we can grow here?

Yes. One issue is that after April all the 'European' vegetables, like carrots, beans etc. won't grow here as it is too hot and dry. Regarding soil, the Irumbai region of Auroville is a good rice growing area, but much of the area to the north of Auroville does not have such good farming soil.

So when people say that Auroville should be self-sufficient in terms of food they are not taking into account what can be grown here?

No. Also, they don't take into account the land available. While

working on the Farm Group's Auroville Sustainable Agriculture Plan [see box] in 2011, we worked out how many acres we would need to feed our population. We discovered that even for our present population we would need a much larger area devoted to farming than we have now.

We produce something like 15% of the food required but this is a confusing statistic because much of the produce cannot be grown for 9-10 months of the year. In the summer, we can grow cucumbers, papayas, ladies fingers, aubergines, snake gourds etc. but our farmers restrain themselves from growing this kind of thing because of problems getting rid of them. At the moment, Tomas from Annapurna Farm has a large stock of rice which he cannot get rid of because it looks and tastes different from the processed rice that people in this area are used to eating nowadays.

So people's food tastes are also a factor in what we choose to grow.

What are the solutions?

One solution is to try to change people's eating habits to get them to eat more local foods. Krishna is doing a good job at his Solitude Café of presenting local foods in a fresh, tasty way and we would like to do the same in the new FoodLink café that we hope to open soon. We are also looking at food processing to give an extended life to fruit and vegetables that can only be grown a few months of the year.

Regarding the lack of good farmland in Auroville, I think we should try to grow as much as we can here but also explore tie-ups with local farmers willing to grow organic food for us. We could also have land in the hills where we grow the food that many of us like but which cannot be grown locally.

Do you think our farmers are looked upon as just providers and the Aurovillian consumers get frustrated when they can't get what they want, when they want it?

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Auroville Sustainable Agriculture Plan (2011)

Extracts:

Vision

- 1) Create and maintain a healthy and conscious farming system, integrated with and providing food for Auroville.
- 2) Produce food in a way that is sustainable for the earth, the community and the bioregion.
- 3) Promote and advance sustainable farming practices locally and globally.

Mission

- 1) Provide as much healthy, organic food for Auroville as possible.
- 2) By providing one of the basic needs of the community, Auroville's agricultural sector will be a major contributor to making Auroville a self-supporting township.
- 3) Establish and maintain a community-embraced network that guides and supports food production and distribution for Auroville.
- 4) Information systems will enable the farms to estimate demand, monitor production and set targets for production of selected item.
- 5) Certification and monitoring systems will ensure high quality organic produce and promote the sharing of best practices amongst farmers.
- 6) Increase knowledge, awareness and practice of sustainable organic farming.
- 7) In Auroville and beyond, provide education and experience for individuals, wishing to learn about sustainable farming.

Plan criteria agreed with FAMC

- 1) Food production to meet the needs of the growing AV population.
- 2) Partnerships with non AV farmers / farmer organizations.
- 3) Optimizing natural resource management.
- 4) Sharing of infrastructure, equipment and material.
- 5) Maximizing use of renewable energy.
- 6) Research, training and education to maximize ecological awareness and develop cutting edge organic farming practices.
- 7) Manpower and succession planning / human resource management.
- 8) Close connection to the bioregion.
- 9) Performance and delivery driven.
- 10) Open processes, transparent and accountable.

Strategy

- 1) Increase own production and decrease dependence on external procurement.
- 2) Optimize agricultural assets in a sustainable manner.
- 3) Use educational tools to evince interest and participation in food and agriculture.
- 4) Make food and agriculture an attractive, and creative sector to work in.
- 5) Change food habits to a more sustainable diet (more of locally grown, organic farm produce, e.g.: CSA initiative) and management.

FoodLink

Develop it into a central service for Auroville Food and Agriculture activities essential to the full realization of the 5 year plan.

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- The tensions of growing and selling

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Personal copy 11/11/15

Growing food, growing people



“All of the issues are interconnected,” says Krishna on a sultry summer afternoon, when asked about Solitude Farm’s Circle Garden Project. “The issue of water, the issue of land use, the question of why there is a stockpile of Auroville-grown rice sitting at Annapurna Farm, the question of our relationship to food and where it comes from. They are all connected and only by bringing people together in a different way will we begin work on them and allow change to manifest.”

The Circle Garden Project, initiated in 2010 by a small team at Solitude Farm, began as one fun way to bring people together. They made videos called “The Rock and Roll Circle Garden Show” and posted them on YouTube, showing the process of creating simple, abundant kitchen gardens in your own backyard with some friends. “And then,” Krishna says, “One day I realized that this is something that people really love. You could see that people are crying to rediscover the relationship with their food. And when you watch people doing the gardens together, they’re inspired to work together in an authentic way. You can go out and have a drink or go to cinema, but this is another thing, an authentic interaction that is also missing from our lives.”

It was this realization that continued to nurture the project, which expanded as more Aurovilians joined. The team would select a site, and the public was invited to plant the circle garden. At the project’s peak, thirty people showed up to plant one garden. To create a circle garden, the team would build up earth to a diameter of a three meter circle, and then plants a variety of short, medium and long duration crops within it. The crops are heavily mulched and watered preferably with wastewater. Sometimes a site is selected by choosing an existing fruit tree or hibiscus bush and creating the garden around that. When the crops are watered, the centre tree also received water. After building one circle garden, the team goes next time to the home of one of the volunteers and helps to start their garden. And around and around it goes.

The Circle Garden project has touched many lives, and transformed the outdoor spaces of numerous Aurovilians, most notably Claudine in Dana, Amir and Elumalai in Evergreen, Kalsang and Namgyal at the Tibetan Pavilion, and more. From individual homes and apartment complexes, it moved into schools, where successful projects were launched at Deepanam, Nandanam, and TLC, among others. Says Krishna, “Masanobu Fukuoka said that the society that doesn’t know where its food comes from is a society without culture, and that humanity without culture is going to die. So this is a very healing process.” It is also a process that has had several offshoots, including Riccardo and Luigi’s work Urban Farming (City Centre) project and Martin’s work at his

home garden in Surrender and his efforts on promoting urban farming through Auroville Consulting.

More recently, momentum has waned due to a lack of a more permanent team. But Krishna’s efforts to bring people together in other ways have only increased in recent years. Since 1996, he has run Solitude Organic Farm, hosting hundreds of volunteers and visitors annually. Since 2007, the Solitude team has served organic food grown on the farm at the Solitude Organic Farm Café, an eatery which is a natural extension of the farm itself. And in recent years, Solitude has also been the host for permaculture workshops as well as the Lively Up Your Earth! annual eco-music festival. Indeed, Krishna’s years of energy and effort have inspired many projects highlighted in the AV Consulting Home Garden report.

But Krishna emphasizes that urban farming and home gardening efforts aren’t just about growing food, because it can’t stop there. “First you have to ask yourself, ‘What do I eat?’ There is so much we can do when we open our eyes to what is here and now. All of our solutions for well-being, for health, for nutrition, are actually here.”

Krishna truly believes that for Aurovilians green papaya could create a social revolution. “By using something that’s almost free, that’s in absolute abundance, that has zero ecological cost (no food miles, no carbon footprint), we can begin to change people’s consciousness. If people slowly start to have green papaya once a month, then slowly we will change how we approach our food. Imagine dynamic ways for people to interact around green papaya, such as ‘Green Papaya Night’ at the Unity Pavilion. The community could come together to share food and in this spirit of creating community, we could begin to open up to each other and things might begin to change.”

“But that means the cooking aspect has to be understood,” continues Krishna. “And it’s not just about what you already know how to cook, and it’s not just about trying to recreate European recipes, it’s about opening your eyes to what is local food. That’s what Localiscious has been trying to do.” [See AV Today, June-July 2014, No 299-300]

The question then turns to examining everyday products that we use, where they come from and how they impact the environment. Solitude Farm is already producing its own non-polluting soap, using local materials such as tamarind leaves, neem leaves, citrus leaves, citrus peel, soapnut, chicha and ash. They don’t sell it, but instead want people to come to the farm and participate in the soap-making process, a project they want to do in the near future. “Soap-making is another way of bringing people together. That’s why everything is interrelated. There’s no point in just talking about urban agriculture without looking at cooking, without looking at what types of soaps we use, without looking at how we eat together.”

Ultimately, healing our relationship with food is an effort to grow people. “People have to develop an understanding. And that understanding is a relationship to nature. But that nature is us. It’s actually a deeply spiritual work. We’re actually discovering who we are.”

How do we heal this relationship with where our food comes from on a collective level?

Krishna envisions the community gravitating around a central hub that’s based around this healing: a centre with food growing, a café serving local food, a small shop selling locally-made food products, and a community space. He hopes that this is what the new FoodLink project, opposite Certitude, will look like.

“Those four things together have an enormous power of change. Imagine a place where there is a beautiful café, a café that works financially with zero ecological cost and no food miles. People come to the community space in the morning for a Laughter Yoga session, and afterwards what do they do? They come to the café for a papaya smoothie. And then they get some of their shopping done, they pick up some chickos or tapioca, or some jam or pesto, and then they check the notice board and see that on Fridays they can sign up for CSA and on Saturday there’s cooking class being held by an Italian volunteer who is going to teach how to make pesto with the excess basil from the week.”

Krishna says that some of these aspects have been modelled at Solitude Farm, such as an economically-viable and much-appreciated organic food restaurant. He talks about how the business model of a café/shop/community space is one that makes a lot of sense. But, he says, it is time for this vision to move closer to the city centre and to be run by a team, including a well-organized volunteer programme. “This vision needs creativity,” he says, “and it’s not conditional on money. It’s conditional on the heart.”

“It is every single person’s birthright to have a relationship with where their food comes from and to participate in that,” Krishna says. “But there’s a gap and people don’t know how to bridge that gap. Those bridges aren’t created just by doing a permaculture workshop. We need a central place that encourages people to grow their own food, that says, ‘Stop coming here to buy papayas, grow your own!’”

“Everyone wants good food,” Krishna says. “Even the guy who likes McDonalds, if you give him a chance, he’ll go for it. Because it’s inside of him. Real change happens when you eat good food, and then you refuse to go back to food which doesn’t have the same prana. And in the case of getting our community to eat local food, and to start to grow some of this food, if we got this centre happening in Auroville there would be a profound social change.”

Ing-Marie

To learn more, please visit Solitude Farm’s website: <http://www.aurovillepermaculture.com>

Home gardens survey

Recently, a survey was made of the various home garden projects in Auroville. The authors were Katt Grant, Segar Duraikannu, Vimal Bhojraj and Martin Scherfler. Here are the main points.

Today there are around 47 home vegetable gardens in Auroville. They are distributed over 39 communities and make up a total cultivated area of about 2.87 acres. The majority of home gardens, in terms of square metres, are currently situated in the Green Belt. Not all of the home gardens are organically cultivated.

The survey results indicate that about one third of the vegetable gardens (13 gardens) have been started in the last year. Roughly another third (16 gardens) have been set up in the last three years, whereas the other third (18 gardens) have been there for more than 3 years. The addition of 29 home gardens in the last three years (8 957m²) is a truly positive sign for the future of home gardening in Auroville.

The main five crops cultivated are tomato, long beans, lettuce, brinjal and basil.

More than 70% of gardeners said that they give away their surplus production as a gift to friends and neighbours. This indicates a vibrant gift or in-kind economy around home vegetable gardening. 10% of gardeners are selling their surplus vegetables and 13% are giving it in-kind and selling it. The selling of surplus production is primarily done through Foodlink.

The motivation for home vegetable gardening varies between an interest in trying it out and learning new things, to the fact that people always did it and that it became a lifestyle choice. Many gardeners felt inspired to take up vegetable gardening by initiatives started in the past by some of Auroville’s organic farmers and other individuals.

Home gardeners expressed that they would like to see more Aurovilians starting vegetable gardens; to have a support system of people that can help in setting up gardens; a platform to exchange experience and growing techniques; and an increased gift economy of sharing surplus, seeds, seedlings and other garden input materials. Their goal is for Auroville to have a vibrant culture of urban food production, beautifully and elegantly integrated in our built environment, supplying 25% of our fruit and vegetable demand.

The main recommendations that emerged from the survey were:

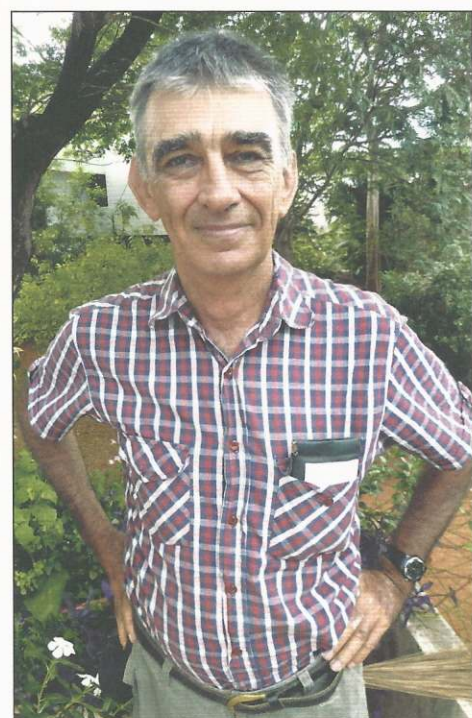
1. The need to create a platform that matches up people who don’t have land and want to garden, with people who have excess space and no desire to garden.
2. The recently released land-use plan of Auroville has indicated land within the city’s Master Plan area that is valuable land for food-production and that should be earmarked for urban agriculture initiatives. Initiating projects on some of these plots will be a good way to increase the culture of urban food production in Auroville and to make it an essential part of any future urban planning exercise. Urban agriculture presents a unique opportunity to make use of vacant land and rooftop spaces to produce healthy, pesticide-free food.
3. The need for workshops to further build urban farming capacity and skills of Aurovilians. Awareness campaigns to create a broad understanding of the benefits of urban farming may greatly help in mobilizing the community.
4. The potential seasonal surplus issue of certain vegetables and fruits needs to be addressed by new modes of management of the supply and demand chain. Farming and urban farming should not be seen as a competition but rather as complementary approaches that aim at healthy organic food production for the community and environmental well-being.
5. Community gardens, while being used as an educational space, could also be used as a place for seed exchange, providing access to local and organic seeds for people starting their own gardens.
6. Incorporating vegetable gardens and cooking classes more holistically into the Auroville school curriculums would provide children with the knowledge to be able to start their own gardens at home and provide children with a connection to their food as well as healthy eating habits.

The challenges of farming in Auroville

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Very much so. Take eggs. Recently, people complained that not enough Auroville eggs were available but this was because the Auro-Orchard chickens were sick. In fact, chicken farming is a whole scene. Chickens often get sick, you have to inoculate them and treat them for worms all the time, and there is always the danger that a mon-goose will get into the chicken coop and eat a lot of them. That's why we stopped keeping chickens at Discipline Farm.

So education is a big thing here. I think farm tours, like the ones organized by Lisbeth in the last guest season, could help Aurovilians understand better the challenges our farmers are facing.



Jeff

At the same time, could the Auroville farms be more efficient?

Yes. As we pointed out in our Sustainable Agriculture Plan, there is scope for cultivation and productivity enhancement on our farms. The kind of farming we are asking people to do in Auroville

is fairly specialized, and many of our farmers today were born in the local area and don't have a background in fruit and vegetable growing. They have learned a lot but their skills are definitely not sufficient and more training is needed.

To have a more efficient farm you need to develop things like an organized process of making compost and an effective irrigation and water catchment system. Most of our farmers use micro-sprinklers now, but other developments that we would like to see are often missing. Some of our farms remain shoestring affairs; they are not optimizing their potential because the farmers are not used to thinking in that way and they prefer to remain small.

We have discussed devoting more resources to those farms that are more geared to big production, but there is no agreement in the Farm Group on taking this direction.

To what extent are the Auroville farms held back by lack of resources?

The difficulty of getting farm labour is definitely an issue. Of course, nowadays volunteering on farms is quite popular. In Discipline Farm we have volunteers who come for 12 months and they bring a nice energy. But regarding regular farm labour, over the last 10 years fewer men want to work on the land. They prefer to work in the construction industry and many of their children are more educated and want office jobs etc. A few years ago, you couldn't get any male farm labour except the old men and the alcoholics. The cyclone pushed up the wages of farm labour so a few more men are coming forward these days, but not many.

In our farm, about half the workforce is women. It is a very good option, they do solid work, but they can't do everything and if it's still difficult to get labour in the future we will be pushed in the direction of mechanisation. At present, the Auroville farms are low on mechanisation. Mechanisation is costly.

And money is another important resource we lack. AVI-UK gave some money recently, but we have no long-term funding. The Sustainable Agriculture Plan addressed all the major challenges and laid out a phased programme for development. We thought that on the basis of this plan we could get support from the FAMC and significant funding from outside funders. However, this didn't happen. So now we have to build ourselves up from the bot-



Farm Group meeting at Windarra

tom with nothing; it's a shoestring-type of development.

For example, sometimes our local farmers struggle because they can't afford to dig decent wells. The Farm Group doesn't have the money for this, so the farmers put in cheap wells, without casing, and consequently sometimes these wells collapse. At the same time, we know that we are facing a water crisis, that there is too much over-pumping in the bioregion, so we are also pushing water efficiency. Most of our farmers with adequate water have stopped flood irrigation and are using drip irrigation now, but this also costs money.

But I think the basic points made in our Plan still hold true. We identified, among other things, the need to improve marketing, to have organic certification, to provide training, to optimize natural resource management and to invest in infrastructure.

There is this new movement in Auroville of urban farming, and there are people experimenting with hydroponics. Do you see this as complementary to traditional farm practices or as competition for our farmers?

I see it as complementary. In my view, the more people engaged in food growing the better. But some of our farmers may feel a little bit threatened by these new initiatives.

Are you optimistic about the future of farming in Auroville?

Yes, we are moving along, despite setbacks like not getting our five-year Sustainable Agriculture Plan funded. We have people fundraising now and if the funds come in, we are clear about what we want to do with them. If not, we go on building one brick at a time and, at one point, we will see the beginnings of a wall.

Actually, I think farming in Auroville is on a cusp. An Aurovillian has just joined us who has skills in writing project and funding proposals, and we have the promise of some funding for a snack bar in the new FoodLink area. If we can develop the new FoodLink project with a snack bar and food processing facilities as well as a farm shop, it could turn out to be a great way of promoting our work.

From an interview with Alan

Farming in Auroville: the tensions of growing and selling

Murthy has been running Ayarpadi Farm in Auroville for the last 15 years. He talks to Auroville Today about the challenges and rewards.

On a steamy April afternoon, I motor along a narrow sandy path behind the Tibetan Pavilion and discover Ayarpadi Farm tucked away just beyond the Inuit Inuksuk structure in the International Zone. Farm manager Murthy takes me for a tour through chilli plants and vegetable plots, past cow sheds and verdant banana trees, and tells me that he joined Auroville 27 years ago, inspired by its ideals of peace and tolerance.

As three generations of his family and some workers sit outside the house, splitting pulses that will satiate Aurovilians' appetites, Murthy says he started doing milking "on the side" whilst he worked in the Water Service for many years, and then slowly built it up. "The Water Service was a good job," he says, "but I couldn't do farming as well." He became part of the farming community at Horizon, and expanded his stock to 15 cows. When Auroville's schools said they wanted more milk, he told the Farm Group that he would like to start a big farm that could meet the demand. He waited "for a long time" while Auroville bought the land that is now Ayarpadi Farm and it was given to Murthy to manage in 2000. He invested his own funds to develop it, and he now employs six workers and his sons also pitch in when they're not studying at college.

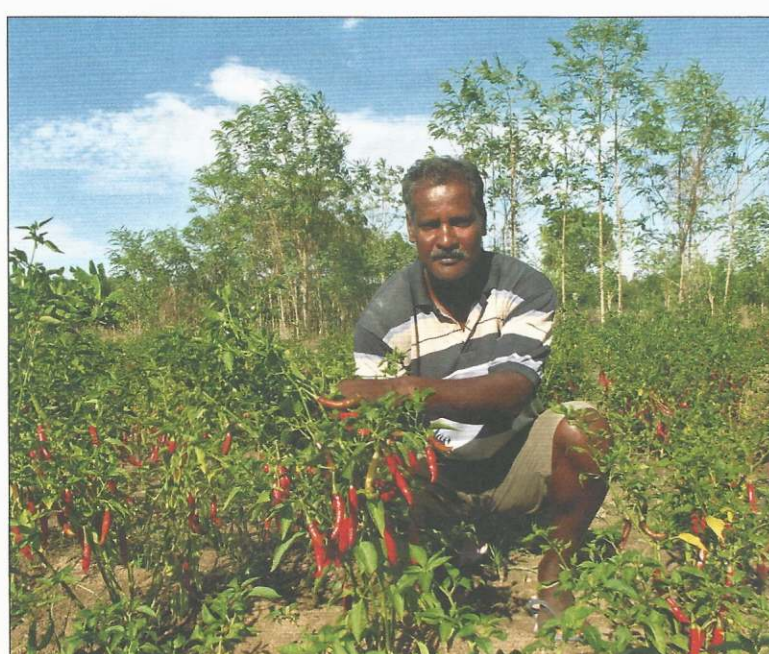
"Milk is the main success," he says. "Now I produce about 100 litres per day. I sell 75 litres every day to Solar Kitchen, and the remaining 25 litres to people in Auroville. Now I have 25 cows. I had more before, but I reduced because I couldn't find

enough labourers."

Murthy also grows vegetables, grains and pulses – all organic, of course. Vegetables include cucumber, capsicum, brinjal, beetroot, tomato, lokhi and French beans, and some salad items such as Chinese cabbage and lettuce. Grains include ragi (which is given to Annapurna), cumbu (mostly given to his cows) and white rice. Last season he produced 60 bags of organic peanuts. All of it is given to Pour Tous, Solar Kitchen and FoodLink. "I'm not selling outside," he says. "The demand for organic outside is limited and I can't get so much money. I can cover my cost here, and I also don't like to sell outside. I grow only for Auroville, because Auroville people, they think about their food."

I pose the million dollar question: What about water? "Water is a big problem here!" Murthy exclaims. "Look at my system here! I started in 2000 with a well of 50 metres, but only a little bit of water was coming. I used it for 14 years. Last year, I took a bank loan to drill another one that's 600 feet deep. In one hour, I can pump up 20,000 litres of water. I use a small irrigation system with a sprinkler. Maybe this year I can develop the farm more, because I have water. Paddy needs a lot of water for four-five months, that's why I start in the rainy season – I use some rainwater and some bore water. Ragi doesn't use so much."

Murthy lists the other challenges of farming. Hand-in-hand with water issues is the unpredictable electricity supply, which means that water can't be pumped at will and he sometimes has to do it in the middle of the night.



Murthy with Ayarpadi's red pepper harvest

More recently, there's the paperwork involved with Auroville getting organic certification in order to sell produce outside.

While Murthy is originally from Alankuppam, he also faces issues relating to the farm's proximity to Kottakarai village. "Goats from the nearby village are eating the crop," he says, "sometimes 25% of it! Last year I put in 150 capsicums, the goats completely ate it! I can throw the goats out but I can't fight with the village people. If I say something to the villagers, they say, 'Why don't you have good fencing?'" There's no big fight, I have a friendship with them now, but Auroville needs to help with these things. I need more fencing. It's 17 acres here, so it's big money to fence

it. I'm still paying off the loan for the well slowly, but it's very tight. I want to protect Auroville land. It's a big headache!"

He also cites the lack of enthusiasm within Auroville for rice grown here. "A lot of people don't buy it," he says. "Still last year's paddy is not selling. People eating in Solar Kitchen like the outside rice. Bringing in outside white rice is not good – it has chemicals and leads to heart disease. If we can't sell our own paddy in Auroville, I can't grow it next year."

Another issue is the smaller yield that comes from organic crops. Murthy points out that local village farms using chemicals will produce 85 bags of peanuts from a three acres crop, whereas Murthy produces only

60 bags from the larger area of four acres. But he notes that village farming land becomes spoiled over time by the use of chemicals, and that some village farms are now turning organic in order to preserve the land quality.

Murthy supports the notion that Auroville should be self-sustaining for its food requirements, but he raises the contradictions. "The self-sustaining idea is good. I can grow more. Growing is one tension, but selling is another tension! If Auroville will buy and can help support farmers financially, then I can grow more. The government is giving subsidies to outside farmers. Solutions are there, but they cost money. I need funds for preparation, compost, labour, bunding. If Auroville can give, whatever we grow, we can give."

Along with Auroville's other farmers, Murthy is part of the Farm Group and liaises with them and FoodLink for their data collection about crops and income, which helps them determine which crops will be grown in future. "I'm happy to be flexible," he says about planning crops. He also supports recent measures that promote Urban Farming in Auroville's more densely built-up areas, so that people can grow their own food.

And what are his predictions for the future of farming in India, given the country's rapid environmental and societal shifts? "I can't say. Mainly it's the water problem that's the biggest challenge," he concludes. As for whether his sons will continue his legacy and take over the farm, "It's their choice," says Murthy, "Farming is hard work. We can't push it."

Lesley

Experiments in Hydroponics

Climbing the steps to the roof at Maitreye through a maze of white tiles, one would not expect the lush, verdant explosion at the top. On my first visit in December, there was green everywhere: lettuce seedlings bursting from their small containers, melon plants cascading from horizontal pipes, even a small papaya proudly pushing the other plants out of the way. It was jaw-dropping, simply because on the sterile rooftop there was no soil, no earthworms, no visible ingredients to grow these plants except water, nutrient solutions, and some plant beds constructed with plywood, plastic sheets and styrofoam.

This scene is the outcome of Akash and Monica's experiments in food growing, which they dub "Rooftop Hydroponics". When asked why they're doing it, they don't wax philosophical about challenges of water or food systems in the world, both of which are under stress enough to warrant such experiments. "It's fun," they say, "and challenging".

Their goal is realistic: to show that food can be produced in the tropics, on rooftops all over Auroville, in an affordable, low-maintenance way.

Rooftop hydroponics is by no means Akash and Monica's first attempt at food growing. They have a long history of experimentation, most notably their work in Aquaponics, for which they received funding to set up a system that combined raising fish and cultivating plants in water. The system had several challenges, particularly the time and energy required to maintain it. When they wanted to move on, they looked for something simple and replicable.

That's when they discovered the 'Kratky Method', a particular method of lettuce cultivation popularized by University of Hawaii professor Dr. Kratky. It begins by seeding the lettuce in small net pots in some kind of growing medium – coco peat in this case, as it's easily available. The net pots float in a tray of nutrient-rich water, supported by a styrofoam sheet. In the absence of soil, the seedling's roots grow downwards into the water, while their upper portion gets oxygen. Above the styrofoam, the plant flourishes, and a full head of lettuce is ready to harvest within 30 days – the same time required for lettuce to grow in soil.

Apart from daily checking of the water's pH levels, little maintenance is needed while the plant grows. No weeding, no watering, no pruning. Water is not re-circulated through machines, so they are not vulnerable to electricity cuts. And although they have recently added oxygen to the water to give the plants a boost in summer, the Kratky Method doesn't call for it.

Low maintenance is a key element in this experiment, as is little space (one rooftop) and low cost. All of the materials and nutrients were purchased within India and can be purchased locally or mailed to their doorstep. Setting up the initial infrastructure is the biggest cost. But the yield has the potential to pay back this cost, they say. They estimate that the cost of the nutrient solution works out to roughly Rs 5-6 Rs per head of lettuce, whereas they have been able to sell it at FoodLink at the going rate of Rs 90/kg, but also at Rs 30/lettuce. It largely depends on demand. Hydroponics operations may feasibly be the only ones growing lettuce in the summer months, giving them an advantage on the selling market.

Although their Kratky experiment only



Akash and Monica with their rooftop hydroponics harvest

began in November 2014, Akash and Monica have been able to sell some produce to individuals and FoodLink. The response from Aurovilians has been overwhelmingly positive and they've had feedback that their produce is delicious. People are generally supportive about the process, even the most strict organic food adherents. "Concerning the chemicals," says Akash, "people are glad that we don't use pesticides on the plants. Sometimes the nutrients contained in this solution are more than you would find in a barren field." The micro-nutrients in the solution are required for healthy plant growth and include calcium, magnesium, sulfur, boron, cobalt, copper, iron, manganese. It is possible that heavily-fertilized fields, which have not been properly regenerated, could lack these trace elements.

For the present, Akash and Monica are focused on getting the system working well. They're experimenting with Seaponics, or using seawater to grow plants, which already holds a lot of the necessary trace elements. They're also experimenting with growing cherry tomatoes, Ladies Finger, basil, cucumber and melon. They have grown some of these on a homemade pipe construction, to which they have also attached a pump and a re-circulation system – demonstrating their commitment to constantly trying new things and to tweaking their systems.

Akash and Monica's biggest challenge in the coming months will be coaxing the lettuce to continue growing through the heat of summer. My more recent rooftop visit in April's heat revealed a less fertile scene. The plants had slumped over and were trying hard to survive in the heat, while others stood erect but lifeless. One could hear the silent burble of oxygen being fed to the water in the trays. Akash pulled up a plant and its roots – a key indicator in a plant's health – looked baked. Instead of the fresh, robust white that they exhibited in December, these were stringy and coffee-brown. "It's hard right now," Akash said, referring to the difficulty of producing a delicate leafy green in summer temperatures, "they're suffering".

"But you should talk with Satchy, and see Alok's place," they said, talking about with two other Aurovilians experimenting in hydroponics in the summer heat. "They're also scaling it up."

On a visit to Alok's hydroponic experiments being conducted at his workshop in Alankuppam, he and Satyavan show their work. The set up is similar to Akash and Monica's but the key difference that sets it apart is its size: they are scaling it up.

"With India's population growing by 16 million people per year," says Alok, "resources like food, water, and space are becoming increasingly tight. We're doing this to show that you can grow food in a small area using the least amount of water possible."

Their infrastructure is on the ground because they don't want to be limited to the size constraints of a rooftop in their goal of greater production. The system is newer than Monica and Akash's and is enclosed within a massive shade-net construction. They use reverse osmosis, a water purification system that ensures there are no impurities in the water that might taint the experiments. "This is not necessary for home gardens," Satchy says, "but important if you want to increase production". The drainage water from the reverse osmosis is used to water bananas.

Alok dives into the numbers to demonstrate the benefits and simplicity of mass production: "140 heads of lettuce can fit into this water bed which holds 600 litres of water. If you do the math, that's 4.2 litres of water per lettuce head. And in some places, they're even getting it down to 2.8 litres! Compare this to traditional farming that takes anywhere from 13-28 litres of water to grow one head of lettuce. This method saves a lot of water."

There's also the money question. As with Akash and Monica's set up, the biggest cost is the initial infrastructure. But once that's paid, costs for growing are relatively minimal. From two bottles of Rs 600 nutrient solution, they estimate that they can grow 420 lettuce heads – about Rs 2.86 per head. There is, of course, the cost of seeds, water and electricity, depending upon where you live. The cost of reusable net pots is negligible, as are labour costs because the system hardly needs any maintenance.

The aim is to choose a food product that they can produce consistently, year round, for the Auroville and Pondy markets. Lettuce is the easiest choice, as it is one of the simplest crops to grow and the lightest plant for the styrofoam to carry. "We might also try other dark leafy greens, which have been grown successfully in Malaysia and Taiwan," says Satchy, who has also been experimenting at his home in Certitude with hydroponics and is often referred to by the others as the "master-mind".

There have been a few challenges so far. With operations on the ground, they've had to deal with a mischievous rat that scratched its way inside and destroyed some plants. Leaking plastic tarps are another issue. They're concerned about the monsoon season, when heavy rains will dilute the nutrient-content in the water trays.

But they remain convinced that the method can work on this larger scale and in Auroville's climatic conditions. Alok's visit to various large-scale hydroponic operations in Spain in 2013 was a source of inspiration. Both have pored over studies on the nutritional quality of hydroponic leafy greens, which in some studies has shown a higher nutritional content than lettuce grown through traditional methods. They've researched how to reduce the food miles footprint even more, and how to source their supplies locally. They talk about how a healthy rela-

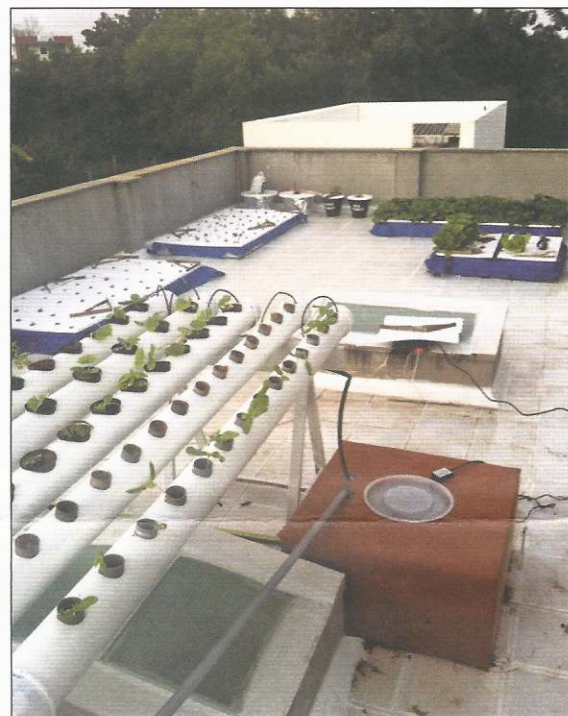
tionship with their suppliers is critical to the long-term sustainability of the project.

Their motivations for the work vary slightly. While Satchy's motivation is to ensure that more of Auroville's food is grown in Auroville, Alok is interested in growing food most efficiently. "We're not competing with farmers," said Alok. "We're just trying to show that you can produce food in this way. This experiment isn't just for Auroville, it's the kind of stuff that Auroville needs to be offering to the world."

As for how people might react to their work, they're expecting questions around the concept of 'organic.' "We need to rethink the original definition of 'organic' which is based on food only grown in soil," Alok says. "We will offer a product that hasn't been treated with any pesticides, that uses much less water than conventional lettuce, and has low food miles."

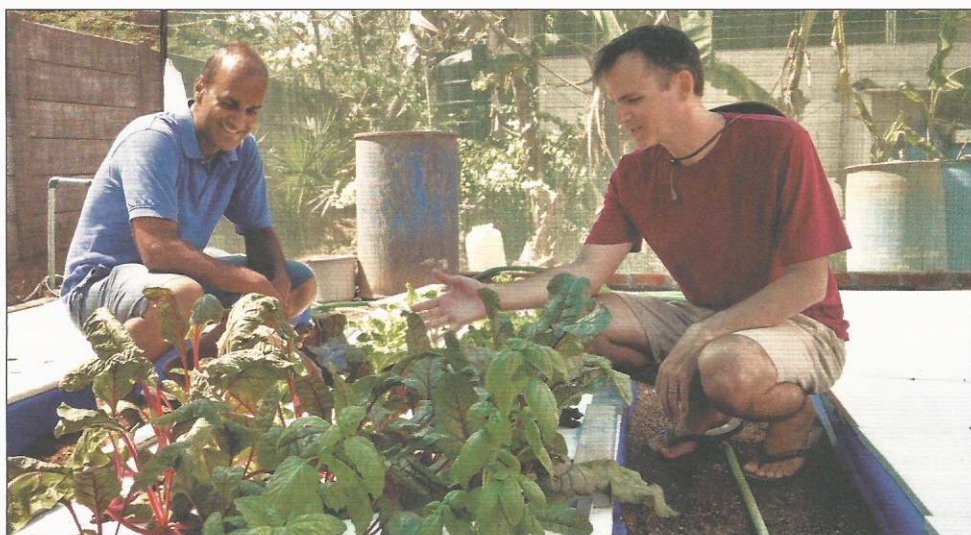
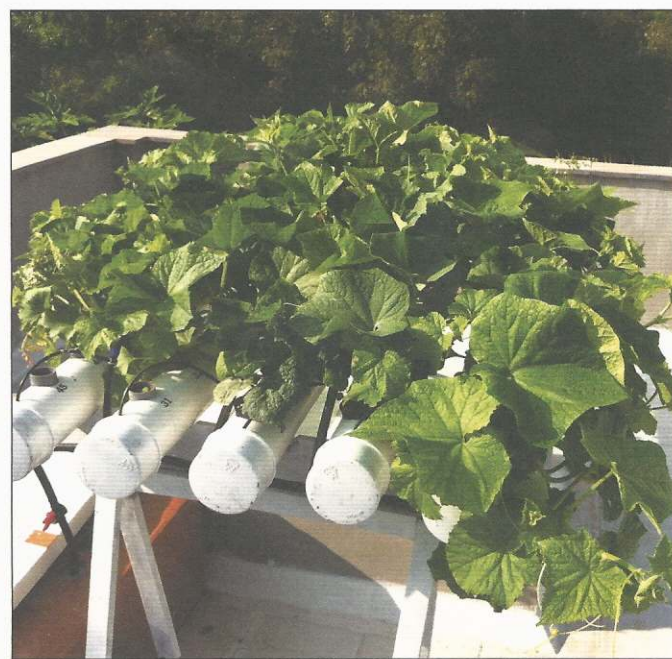
Both Alok and Satchy stress that it's too early for any real conclusions and to check back in a few months, particularly after the summer heat. Their first step is to grow, and then see if they can further enhance the yield by using different types of water. Alok is conducting other water experiments on the site, creating a symbiotic laboratory for the two projects.

In a system based on efficiency, is there anything lost in hydroponics? "There's nothing lost



The rooftop hydroponics installation

in quality," says Alok, "Some people have a sense that you are tinkering with nature when you are not growing lettuce in the usual environment of soil, but the benefits of the controlled environment of hydroponics and minimized water usage cannot be denied. There is a faster growth rate and higher yield in hydroponics. There is no need for the constant watering, weeding, and maintenance of the crops as one might have on a farm, all of which are elements



Alok's (left) and Satyavan's hydroponics experiment

of traditional farming. But given how the population of India is growing, we no longer have that time to spare."

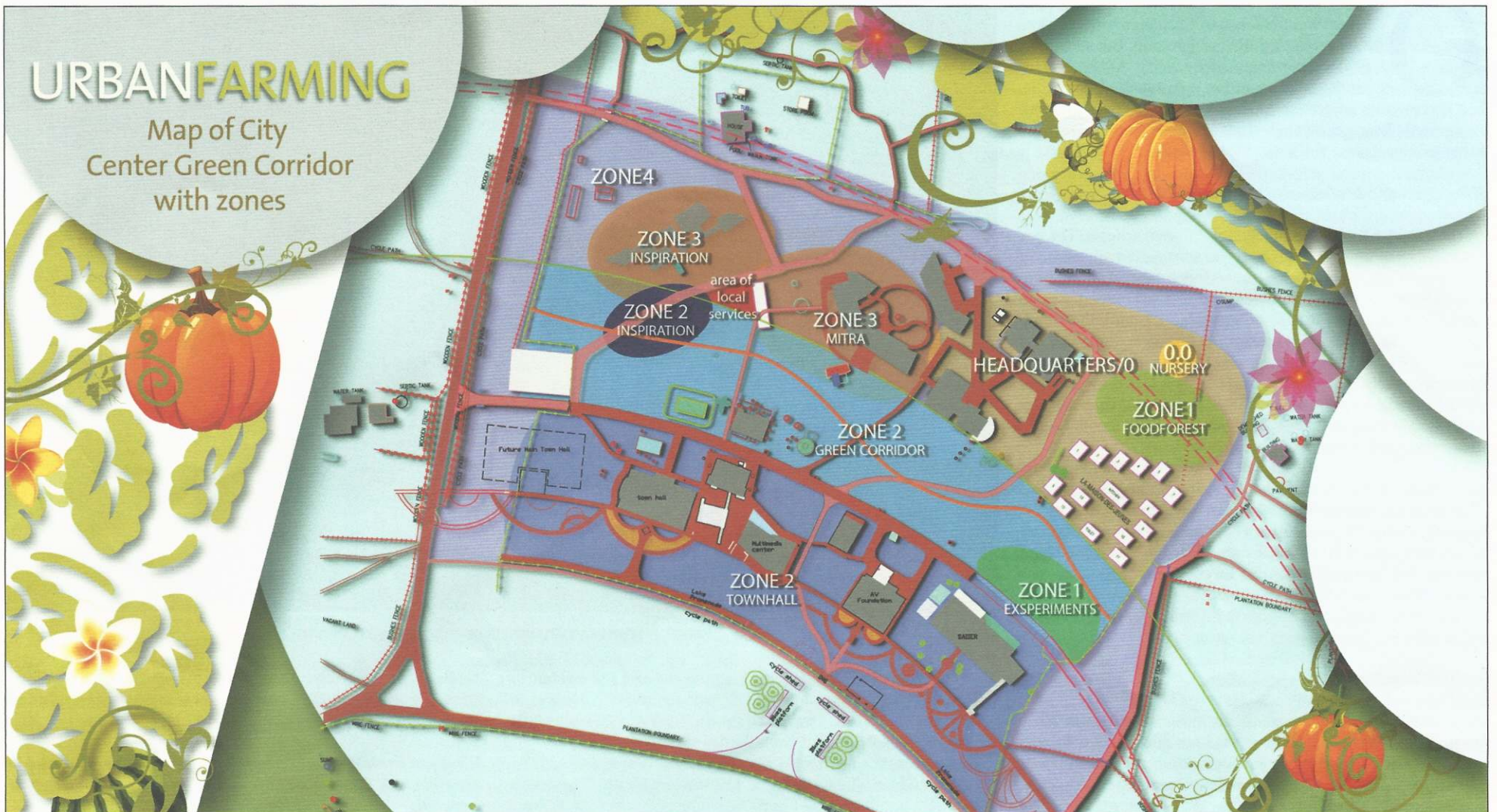
Ing-Marie

For more information, please visit Akash and Monica's blog: rooftophydroponics.blogspot.com.

Growing a green city

URBAN FARMING

Map of City
Center Green Corridor
with zones



Map of the Auroville Urban Farming project

Have you walked behind the Town Hall lately? You might be surprised by what you see. Nestled in that dense urban area, surrounded on all sides by buildings, you can find young banana plants, bountiful bougainvillea, creepers climbing up the walls of Citadines, a robust vegetable garden, and a drip irrigation system supplying water to young fruit trees. The team behind this work say that it's part of a movement to green the city and to 'grow people'. And there is no better place to launch the Auroville Urban Farming (City Centre) initiative than the city's administrative centre.

One year ago, Canadian researchers came to Auroville and conducted an assessment of the "greenness" of the city. Their perimeters for "green" expanded beyond tree or plant cover to include the human element, such as inter-cultural and inter-generational activities open to all. They determined that the area around Town Hall was the greenest area of the city. What better place to experiment with urban farming, or the process of cultivating, processing and distributing food in urban areas on a neighbourhood level. "Though urban farming is well known and a common practice around the world, we still often have to explain it to Aurovilians," says Ricky, a long-term volunteer and driver of the project.

The Auroville Urban Farming (City Centre) project, now one year old, aims to model integrated, sustainable urban landscaping with an emphasis on healthy food production, including TDEF (Tropical Dry Evergreen Forest) drought resistant ornamental plants, fruits and vegetables, medicinal plants and wall creepers. The team has identified four different areas within the administrative area of the city centre. Each area will model the growing capacities of the different areas in the city centre.

One area models the possibilities for a food forest and has already begun. Working in close collaboration with Jeremy, resident of the Existence Forest community, the group is establishing a food forest there, working within the distinct perimeters of growing food amongst the trees, such as limited sunlight. The dream is to establish a healthy food forest, and then invite foresters to the site to inspire and show them how to establish their own.

Another area will focus on growing food on rooftops, with a rooftop garden planned for Mitra Youth Hostel as a model. If a rooftop garden can be maintained in a building with a rotating population, it could hopefully be replicated in Auroville apartment buildings with longer-term residents. Citadines rooftop garden is also planned to start soon. This aspect of the work is progressing along the lines initiated by Auroville Collaborative.

Another area will emphasize education, utilizing the classroom space at Mitra Youth Hostel to host workshops, lectures, or demonstrations in urban farming. Although formal workshops haven't yet begun, there have been informal tours of the gardens and participatory events for volunteers to come and plant.

A buffer zone between the habitat and administrative area, still in its nascent stages, is a green corridor that hosts a combination of ornamental, TDEF, medicinal and food plant species. There is already a well-established garden behind the SAIER building with brinjal, beans, banana, spinach, corn, tomatoes, pineapples, hibiscus, papaya, thulasi, and more. The rest of the land is being planted in stages. This green corridor demonstrates collaboration between various groups, including the administrators of the Town Hall, Inspiration, Mitra Youth Hostel, Citadines, La Maison Des Jeunes, SAIER and Existence. It hopes to show that with smart, integrated landscaping, one of the most populated areas of the city can also hold the densest vegetation and be the most abundant.



'Supramental rain' (*Pyrostegia Venusta*) grows on the balconies of Citadines

The team behind the project consists of individuals with varying interests and backgrounds. Riccardo, a 23-year-old Italian long-term volunteer, came to Auroville nine months ago to study Auroville's food security for his Master's thesis. He discovered that when the Five Year Farm Plan did not manifest, Auroville's food security remained practically unchanged, despite efforts like Localicious that work to promote CSAs, the Farmers Market, and individualized lunch schemes. He believes that any plan for food security in Auroville must empower the individual to actively engage in their own food production. After submitting his thesis, Riccardo returned to Auroville to begin manifesting this idea, focusing for now on building coalitions, fundraising, and balancing the academic and the hands-on aspects of the project.

Also on the team is long-term developer Luigi, whose dual love for landscaping and development are now joining hands on this project. He is committed to proving the thesis that "by building a multi-layered city, we can increase the green."

Others on the team include Senthil, who keeps communication between team members smooth and flowing, and Brian, who is starting to document and build a framework that would integrate urban farming as a parameter for future urban developments. Then there's volunteer Roberto who takes care of the graphics and helps to build gardens, as well as Aurovilian Gino, who focuses on the educational aspect by giving tours of the gardens and workshops that focus on how food goes from seed to plate and back to seed. "And importantly, much of the project's hands-on work, such as the installation of all of the drip-irrigation systems," says Riccardo, "would not have been made possible without the presence of Citadines' gardener and our dear friend Jaiakash, who is keeping up very well with all of these innovative efforts".

Although the project is new, one of its biggest challenges so far is water and how to adequately maintain the plants. The team members have installed a drip irrigation system within the green corridor, and hope to only use collected rainwater or wastewater from the treatment systems. If they do use the wastewater, then they will ultimately need to work with the residents to address the issue of what is being put down the drain. Although the water would only be used for fruit trees, the team would work to raise awareness that the water we use in the kitchen and the bathroom will ultimately go into our food. And given there will be food growing in abundance just outside their doorstep, it also makes sense to teach residents how to cook local food, such as how to prepare banana stems and flowers.

Other challenges the team faces are similar to

many Auroville start-ups: lack of human resources and lack of long-term financial sustainability. For now, they offer an open invitation to anyone who wants to bring their skills and energy to the urban farming effort. As for money, they are currently reliant on fundraising efforts such as crowd-sourcing to make ends meet.

So far the response to the work has been overwhelmingly positive. The teams in charge of each of the buildings have been supportive. The relationships established at the outset were an important part of this: "Friends first, work later,"



Banana plants growing in the forest

says Riccardo. And the response from the community has also been positive, such as when 42 people showed up for a walk at the project organized by AV Green Centre. Garnering community support is not just important, it's critical. "This is a people project," says Riccardo. "Our goal is not only to produce food. Our goal is to show that we don't have to rely on outside markets. That it can be both our pleasure to grow food and, if something goes wrong outside, we have the ability to supply food to ourselves. It's about sovereignty."

All of the food produced in the green corridor will be free for anyone to come and enjoy. This will increase the feeling of abundance and general well-being in the area. "To produce food is good, but producing an environment of wellbeing is better," says Luigi. "We want to incorporate beauty, food growing, and an optimal use of water – basically a holistic system. We want to improve the quality of living in these areas. Ultimately it's about finding a harmony between nature, human beings and spirit, and urban farming is one piece of a much larger research."

Ing-Marie

To learn more about the Auroville Urban Farming (City Centre) project, please visit: <http://www.avurbanfarming.blogspot.in/>

"The flute must be played through you"

One of the highlights of the Auroville Festival in Chennai was the sound of Chandra's haunting flute which concluded the inauguration. But such mastery does not come easily. Here Auroville-born Chandra talks about her upbringing in Auroville, her three year apprenticeship with bamboo flute maestro Hariprasad Chaurasia, and her recent academic journey which led to her gaining a place at Cambridge University.

What was your school experience in Auroville?

Interesting! I went to a number of different schools. The one I enjoyed most was Mirramukhi. It was a very alternative form of education. They created their own curriculum, they didn't want to use anything that came from outside and everything was in French: I didn't learn to read or write English until after I left. Their philosophy was based upon perfection; everything that you made or did had to be an expression of beauty in its most perfect form. It was also very disciplined. In this it was different from other Auroville schools, but I saw it as a positive thing because it really taught you how to conduct your life. I still feel that some of my most important principles come from that school.

Mirramukhi closed down when I was nine. After this there was another experimental school run by parents, but this was chaotic and after one year it closed. I was frustrated. I had this urge to learn but except for a very few classes it was not satisfied. That's why, at the age of 12, I already wanted to stop school, but I was told I should keep trying. So I went to Last School for one year and then Future School.

At 15 I stopped school altogether because by then I had ran out of schools!

When did music come into your life?

I started becoming interested in music when I was six or seven. I didn't understand music but I felt music was a different world, something mysterious and interesting, and I wanted to be part of that world. I started violin and recorder classes.

Some years later, I was about 13, I gave a concert: I was playing the recorder, accompanied by a guitarist. A professional silver traverso flute player from Germany was in the audience and he came up to me afterwards and said he wanted to teach me how to play the silver flute. It took me by surprise but I was very happy. And that same night an Italian lady gave me a silver flute!

Over the years, he taught me when he visited Auroville and later I twice went to Germany to study with him. It was a kind of pre-gurukul (a place of learning where you live in close proximity to your guru eds.) experience because I lived with his family, he would take care of me and not ask money to teach me. And the sessions with him were quite intensive.

Before I went to Germany, a good friend of my mother's who was director of the Sydney Chamber Choir, invited me to stay with him. He had children my age who all played instruments. I was there for six months and it turned out to be a very good experience. It didn't really develop my flute playing; it was much more about discovering my independence because I was only 15 but I travelled all over Australia by myself.

You obviously have a good grounding in Western classical music. When did you become interested in Indian classical flute music?

At an early age I didn't like Indian music. In fact, I had an aversion to it. When my mother would put on cassettes of Hariprasad Chaurasia [the great Indian bansuri flute player eds.], at the first sound of his flute I would run out of the house. For some reason, those long meditative notes irritated me to the core.

Then a lady from Colorado came to Auroville and offered a dance workshop. I participated and afterwards she sponsored me to come to America for an international youth summer camp. It was called 'rites of passage', and for six weeks we lived together, exploring through dance and music how youth become adults. It was very much an opening up experience for me.

It was then I started appreciating Indian culture. As children growing up in Auroville we didn't appreciate it very much, but when I was in America I realised that I am partially Indian and I have this heritage that it is very beautiful and deep, and the soul of India cannot be compared to anything else in the world. I think this was the biggest change that eventually led me to Indian music.

Much later, when in Germany, I suddenly heard the sound of the Indian bamboo flute in my ears; it was calling me.

At that time I had not been doing music full-time. I had been training to be a yoga teacher in India and Europe and I had also attended a film school in Delhi for one year where I completed a course on film-making. I was always searching out something new, but none of these things were really 'it'.

When I returned to Auroville, I found someone who gave me a small bamboo flute. So there I was with this small flute and I didn't know what to do and how to learn. Then, one evening, a boy knocked into me coming down the steps of La Terrace. He had a bag on his shoulder and when I asked him if he had flutes in his bag, surprised, he said "yes".

He opened them up and showed me all these Indian bamboo flutes, and he told me he was a student of Pt. Hariprasad Chaurasia and gave me his number. I didn't even know that Pt. Chaurasia was still alive or that he taught. But the timing was right because on that very same day I had wished I could have him as a master, and a few days before I had been feeling that what I really needed was some kind of gurukul experience where students, as in ancient times, live with the master and through this absorb the whole culture. I really wanted to get in touch with these Indian roots of mine.



Pandit Hariprasad Chaurasia in concert with Chandra

So the next day I called Pt. Chaurasia and said I would like to learn flute from him and he said, "Come tomorrow." He was in Bhubaneswar, Orissa. I was taken aback. "Tomorrow? That's a little difficult." "OK," he said, "Come the day after."

So I bought a ticket and I went to Bhubaneswar and eventually, with no address, I found his place. I had no idea how to behave with him, what to call him, but I knew that in India the way you address someone is very important. I think I called him 'Sir'. Actually, it should have been 'Panditji' or 'Guruji'.

He didn't ask me to play immediately because in some cases he assesses people intuitively. He wanted to see my level of commitment. He was having his tea and I told him I would like to learn from him and he said, "O.K., minimum three years". And, right away, I don't know what possessed me, I said, "Of course". The implications only caught up with me a few days later!

What would a typical day look like in his Vrindavan Gurukul in Bhubaneswar?

It is an environment where you have to be very self-disciplined: nobody is going to come and tell you what to do. Ideally, one should wake up at five and practice the flute for two hours to warm up. Then all the students cook breakfast together. After that, there is a morning class run by Chaurasia when he is there (he has another gurukul in Mumbai and he also tours extensively). His classes can last as long as 4 hours, without breaks: they are very intense. If he is not there, a senior student conducts the class. Then there is lunch, a brief rest and more practicing until dinner. So you are normally playing 6-8 hours a day, sometimes I would practice for up to nine hours.

How would Chaurasia teach?

In this system there are no examinations, it's a lot like free progress. But he would often make comments like, "This time you were a bit weak on the rhythm." Actually, during the classes hardly any words are spoken. You have to listen and observe. Even the mood, emotion, behind each melody won't be described, you really have to catch it by observing how he plays it. So the more perceptive you are, the more you can learn.

But in Indian music the spirit behind it, the inner spirit, is very important, so how does that develop? Does Chaurasia give any kind of spiritual discourses?

Even the spiritual aspect you have to catch mainly through observation and receptivity. But sometimes during tea he would talk to us, in his own way, about life and spirituality. He reminded us, for example, that the bamboo flute is Krishna's instrument, and that it must be played through us. We must not feel we are the ones playing it.

Did you have to unlearn a lot of your Western music knowledge?

Yes, so much. During the first class I was completely lost because I had always been used to reading musical notes on paper, and suddenly I just had to listen and reproduce what I heard, and then even improvise. It took me a long time to adjust to that. To sit for four hours and to have to follow everything is like learning a completely new language.

At the same time, many of the things I learned in Western music were very helpful. I had learned very well on the Western flute how to achieve precision and clarity of tone, modulation and transitions between octaves, which are very subtle on the flute. I could see that the Indian students who didn't have a Western training were missing out a lot on the technical aspects, because these are not taught in the Indian system.

However, I got to a point where I was able to express myself through the Indian flute in a way I could not on the Western flute. There are so many nuances, so many intricate ways of presenting one note, and you improvise according to the mood you want to evoke.

This is unique, and recently it inspired me to record a meditative CD on the twelve qualities of The Mother's Symbol, interpreted with various classical Indian melodies. This will be available soon.

When you finished your three-year apprenticeship you came back to Auroville and, at the age of 25, decided to study for 'A' levels in preparation for going to university. Why?

I always had an urge to learn but I couldn't find the right space or circumstances that suited me. The gurukul experience was all intuitive; no intellect was needed. But during my last year there I started reading poetry and literature and appreciating it so much. I realized what a huge world it is. At the same time, reading Sri Aurobindo made me see how my intellect was limited. Some people can read Sri Aurobindo in an intuitive manner but I need to go through the mind first. That's what really made me want to learn more, to refine my intellect, because for 10 years I had not had any intellectual stimulation.

I knew I wanted to study literature and languages, so I chose English, French and Italian. I decided to take three A-levels in four and a half months – it was a big task because this usually takes two years. But I find that whenever I have a challenge, a deadline, it makes me work much better. I received incredible support from wonderful mentors and teachers here, for which I am immensely grateful. And I had such a thirst for this kind of intellectual challenge that I just dived into it. It was another immersion experience.

Actually I see a lot of parallelism between learning the Indian flute and learning languages. Learning languages, at least orally, is a lot about perceiving and hearing, and that's exactly how you learn Indian classical music. In Indian music there is a structure but within that structure you are free to improvise, and I see that it is the same with languages. When you write a poem you have the structure, which is grammar, but within that you are free to improvise.

You had to wind down your flute playing while studying?

Yes, and I had to stop almost altogether when I was doing the exams. But I needed that kind of pause to assimilate and to digest such an intense three years. Actually, I feel that my music has matured because of this. With my intellect waking up again, I developed not only more clarity in my speech and my writing but it helped the music as well. Now I improvise with more clarity, I am more concise, less redundant in my musical phraseology.

You achieved outstanding 'A' level results and have gained admission to read Modern Languages at Cambridge. Why Cambridge?

The dream of going to Cambridge came when I was still in Orissa. I'm inspired by this dream of a disciplined atmosphere where you can really learn intellectually, where education is top quality and learning is so well fostered that you can give all of yourself to it: another kind of gurukul. Cambridge is such a place. And the fact that Sri Aurobindo went there is also very inspiring. But a Cambridge education is expensive and I'm still trying to raise the money for the tuition fees.

Where does Auroville fit into all this? How do you experience your relation to Auroville?

It's my only home, the dearest thing to my heart. I don't think I would even exist if it was not for Auroville. Every time I go out, I appreciate Auroville more and understand better how deeply the earth needs this place.

One of my dreams is to help Auroville in whatever way I can. I don't know exactly how, but I feel that at Cambridge, with my background, I will be able to start making bridges, connections, to Auroville and introduce more people – particularly young people – to this city the earth needs. We really need this energy.

From an interview by Alan

What is really going on here?

Some time ago, a friend asked me to help in writing a history of Auroville for the 50th anniversary. I was very reluctant. At first, I put this down to the paucity of the available material and the impossibility, as I saw it, of getting people to remember what had happened many years ago with any degree of accuracy and without bias.

It was only later that I realized the real reason for my reluctance was the sheer impossibility, as I saw it, of writing the true history of a place like Auroville without something approaching the consciousness of The Mother.

All histories, of course, are heavily biased versions of reality. The fact that history is normally written by the victors or, at the least, from a biased point of view, is evident from almost every school history textbook. But Auroville presents a particular challenge. Because, as Mother explained, this is a site for an experiment in an accelerated evolution of human consciousness and, as such, it will not only face the challenges any new experiment will encounter. It will also attract huge supraphysical forces to participate in what amounts to some kind of cosmic *kurukshetra*.

In this sense, everything we do here, even the seemingly most trivial, may be weighted with huge significance. As Ruud Lohman, a pioneer Matrimandir construction worker, once put it, if we had really known what we were doing when we knocked in a nail at Matrimandir, we might never have had the courage to continue.

So how can we assess what is really going on here? The instruments we generally use, the predominant one being the mind, mainly tend to register and analyse externalities. So we get depressed because our economy is depressed or because our population is not growing fast enough. We flagellate ourselves over our failure to buy the land or to create a more egalitarian society.

But this may be not the whole story, or even

more than a tiny bit of it. To grasp a fuller picture we need to develop another way of 'seeing', a way that may lead us to completely change our assessment of what is going on here, of what is important and what is not. Mother gave clues to this other way of seeing. For example, she explained that her 'blessings' were not a support for a particular course of action – which is how people's minds interpreted it – but a means of accelerating an individual's progress. And such progress may require failure and disappointments on the material plane.

What we are talking about, of course, is the limit of our minds. The mind can understand a degree of complexity, but only superficially. It cannot really grasp that something can be simultaneously 'true' and 'not true', both 'helper' and 'bar', or that an action can influence different levels in different ways. It is much better at dividing than integrating, so it prefers people and things to remain neatly pigeon-holed, etched in black or white.

Yet my sense is that this is rarely, if ever, the case in Auroville. Our daily interactions shape and reshape us and, in turn, the larger Auroville in unpredictable ways. Or an individual who lodges up here 'by chance' and who, for many years, does not seem to be doing much for Auroville, turns out one day to be the one who can defuse a major community crisis or to have the skills required to solve a technical problem at Matrimandir. Another one joins Auroville for purely material reasons, but her son is touched in his soul. A journalist comes and writes a viciously critical article of this 'failed utopia'. It is read by someone in a government ministry who comes to investigate. He meets and is inspired by an Aurovilian and subsequently he becomes one of Auroville's main supporters.

Again, most of us consider dogma to be a bane. Dogma leads people to take extreme positions, to ignore or to attack those who do not share the same orientation, and competing dogmas have knotted up our community process for years. All this is true.

Yet what if a larger wisdom uses dogma, during a certain period of our development, to preserve a certain 'truth' from dissolution or dilution?

In fact, from one perspective nothing is wasted in this 'divine ecology'. Everything is made use of; our strengths, weaknesses, our stupidities, our unconsciousness, are all pushing us towards something we can only guess at, but which we assume, among other things, must involve greater knowledge and understanding, and a richer integration of the many facets of this extraordinary experiment.

But how can we become collaborators rather than unconscious puppets in this divine play? How can we base our governance, our planning, our entry policies etc. on a deeper understanding of what is going on here?

If our ordinary mind is a doubtful ally, what can we turn to instead?

Sri Aurobindo explained that the intuitive mind or consciousness is far better able to grasp such complexities; that it can do everything the mind can do, but also much, much more.

"Intuition sees the truth of things by a direct inner contact, not like the ordinary mental intelligence by seeking and reaching out for indirect contacts through the senses."

"Intuition has a fourfold power. A power of revelatory truth-seeing, a power of inspiration and truth-hearing, a power of truth-touch or immediate seizing of significance, which is akin to the ordinary power of its intervention in our mental intelligence, a power of true and automatic discrimination of the orderly and exact relation of truth to truth."

"...in its (the intuitive mind's) higher action it is a first bringing of the supramental truth by a nearer directness of seeing, a luminous indication or memory of the spirit's knowledge, an intuition or looking in through the gates of the being's secret universal self vision and knowledge."

Are we ready to explore this next step?

The recent Retreat may have provided some straws in the wind. The governance group, for example, included some fairly hard-headed individuals, yet one of the main goals that emerged from their discussions was "to bring about a transparent, accountable and effective organization by 2018, increasingly determined by intuitive intelligence".

Of course, this chimed with what Mother had said about "the government of a few... who have an INTUITIVE(sic) intelligence." But the fact that this came through strongly in the Retreat process – and not only from the governance group – was perhaps an indication that, at last, we are 'getting' it; that we have tried, tried so hard, to organize ourselves with our minds – witness our profusion of groups, mandates and bureaucratic procedures – and we have largely failed. At one stage in our development, the mind had its utility in controlling some of the sub-rational elements, but now it is squeezing out the life-force, blocking spontaneity and creativity, and something else is required.

Of course, there is no easy drop-down menu to click on for the intuitive consciousness. "In fact," writes Sri Aurobindo, "the change is only possible if there is first a spiritual development on our present level of consciousness and it can only be undertaken securely when the mind has become aware of the greater self within, enamoured of the Infinite and confident of the presence and guidance of the Divine and his Shakti".

But he also points out that intuition is constantly working within us. It is simply that our minds drown out or distort its guidance and our vital ego pressures it "to work in the service of its own claims and desires".

If we can get rid of our preferences and go deep within to contact that being "vast, free and knowing", we can amplify that note.

Alan

NEW BOOKS

The English of Savitri

"I have tried to explain the meaning of some words and phrases and images that might be difficult to understand ... to assist those who aspire to take some first steps towards experiencing the inexhaustible magic and richness and power of Sri Aurobindo's incomparable poetry", writes Shraddhavan in *The English of Savitri*. I would say that she has succeeded remarkably well in this difficult endeavour.

The contents of *The English of Savitri* are based on the transcripts of classes given by Shraddhavan, a native English speaker, from August 2009 to October 2010 at Savitri Bhavan in Auroville. She had first started teaching English through readings of Savitri in 1980, and resumed this in 1998 in the thatched hut which was the first construction on the Savitri Bhavan site. The classes were completed more than 10 years later in May 2009, when the group reached the end of the poem. After a few months a new start was made, this time recorded. Edited transcripts of these classes were published serially in Savitri Bhavan's magazine *Invocation*. Now the first five cantos of *Book One, The Book of Beginnings*, have been published in this first volume of *The English of Savitri*.

It is common knowledge that *Savitri* is difficult to understand. "The Mother has said that the lines of *Savitri* are mantras which have the power to communicate the experience from which they have originated," writes Shraddhavan. She then explains that for a proper understanding, first one needs to get the sound right – the right rhythm, the correct pronunciation and the right sound-vibrations. Then one has to gain more understanding of the literal meaning of the lines – understand what each of the words and the images used mean and how the words in each sentence and the sentences themselves are linked together; and then only

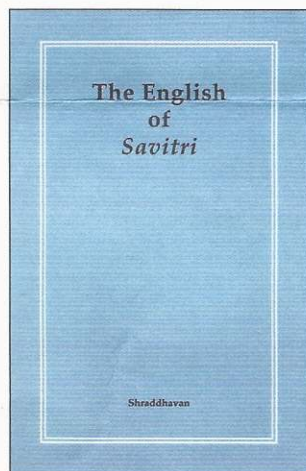
can the mind concentrate on the lines "until an explosion of deeper mental understanding is experienced." The final step is when the mind falls silent and "may be blessed to receive a revelation of the origin of the mantra, which is beyond words and thought and comes as a living experience."

The focus of the English of Savitri classes is on the first two of these four steps, but as Shraddhavan writes, "we have found that even without much understanding, the mantric vibration of the words and lines can touch us deeply and sometimes wake up an inner knowledge or experience in a quite unexpected way. This is the action of Savitri's atmosphere, of Savitri's grace."

Sri Aurobindo wrote that for his poem to become widely appreciated and understood, "there must be a new extension of consciousness and aesthetic to appreciate a new kind of mystic poetry." This book is a welcome and highly recommended contribution to help that extension of consciousness. We look forward to the next volume of *The English of Savitri*.

Carel

'The English of Savitri' is produced by and available from Savitri Bhavan, Auroville. Price in India Rs 500. For information contact: savitribhavan@auroville.org.in



PASSING

Klaus Groujean

On April 16th, long-term Aurovilian Klaus (Groujean) of Nine Palms passed away after a year-long struggle with complications of liver cancer. He was 68 years old. Klaus was well-known, driving the Auroville roads in colourful attire, long hair flying in the wind and radiating his flamboyant easy-rider image.

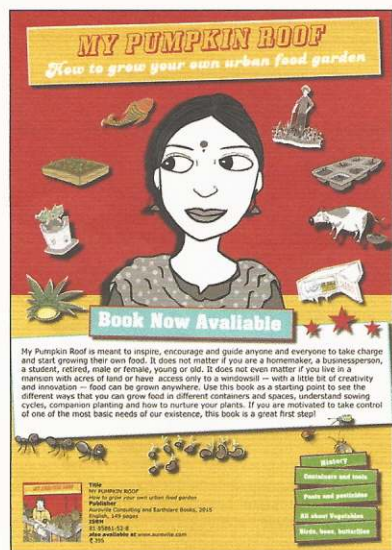


Klaus was born in East Germany in 1947, from where, as a 17-year old, he managed to escape to the West through a minefield in the north of the country. After years of staying in Germany as a refugee, he teamed up with his long-to-be partner Ingrid and they made their way to India, landing in Forecomers in 1972.

After The Mother accepted them for living in Auroville in 1973, they moved to the place that would become the Nine Palms settlement, which Klaus started by building a first major dam. During the next 42 years, he did important water conservation and afforestation work on some 80 acres of land and grew red rice and a variety of vegetables in order to raise and sustain his large family of seven children. In later years he did some serious writing on the side.

Klaus' body was buried at Nine Palms on April 19th in a touching ceremony.

My Pumpkin Roof



As part of its efforts to highlight alternative and sustainable solutions for an urban future, Auroville Green Practices has launched the colourful publication *My Pumpkin Roof*. This highly accessible paperback aims to inspire and guide urban dwellers to start growing their own food, whether they have access to a mere windowsill or to a whole plot of land. The idea is that food can be grown in different spaces and in different ways: all it takes is creativity and innovation. The book guides people through the basics, such as soils, seeds, water, pesticides and containers. It addresses the issues posed by different spaces – from rooftops and backyards to vertical walls and guerilla gardens – including naysaying neighbours, sunlight and drainage. Interspersed throughout the book are inspiring 'best practice' examples of urban agriculture from around the world, as well as interesting tit-bits, such as French architect Le Corbusier including roof gardens as part of his designs for buildings in India.

The benefits of urban food growing (for individuals, the community, the environment) are clearly spelled out in the book's opening, along with the book's overarching value system of seeking to connect urban lives more closely to the production of food. The funky design and the informal tone of the content make this book very appealing and easily digestible. Made possible by generous support of Stichting de Zaaier and Auroville Consulting, *My Pumpkin Roof* is available from Auroville Green Practices, Auroville shops and Amazon. Price in India Rs 395. For information contact martins@auroville.org.in.

Lesley

Johan Defour

Johan Defour, a former Aurovilian who lived in Auroville during the 1990s, left his body on April 21st at the age of 60. He was living in Ibiza,



Spain, and had been ill with lymphatic cancer. His Aurovilian friends met together during a silent gathering at the Banyan tree in the late evening of Wednesday 22nd. April, remembering this artistic and passionate man whose inner search was the main thread of his life.

Village youth reach high

Auroville's college scholarship initiative for village students, *Reach for the Stars*, is now in its fifth year and has supported 56 students to date.

"I'm the first graduate in my family, and they feel proud of me," says Vaidegi confidently. As the applicants for the June 2015 scholarship intake mingle in the background at Thamarai community centre in Edaiyanchavady, anxiously waiting for their interviews with the *Reach for the Stars* team, Vaidegi is happy to be a role model now she's graduated and working: "We can encourage by our actions," she says about the example set by the programme's first graduates.

Vaidegi, from Sanjeevinagar village, completed her Bachelor of Technology in Electronics and Communications last year. She is now working in AuraAuro Design, an electronics company in Auroville, and is determined to climb the career ladder. "Presently I'm concentrating on my work, because I want to grow in that field. I want to do more than what I can do now. I'm in the learning process, so I'm focusing on that." She is also doing volunteer teaching in programming and electronics in two Auroville schools, and paying back 20% of her college fees – a requirement of the *Reach for the Stars* initiative. "I want to support *Reach for the Stars* throughout my life," she says. She offers her advice to village students aspiring to go to college. "If you love what you're doing, don't be distracted!"

Reach for the Stars is an Auroville initiative that finances the higher education of young people from poor backgrounds from the villages surrounding Auroville. Talented students are chosen through a competitive selection process, and are funded to achieve their educational potential through college degrees. Students generally receive funding from one sponsor, who commits to covering the entire expense of a student's three- or four-year degree. Once they start studying, the students are mentored throughout their degree by *Reach for the Stars* team members, who monitor their progress and provide advice.

As the background noise rises from students relieved at having completed their interviews, founder Stephanie says that this year the programme will only be able to accept a maximum of ten students out of 50 applicants, whereas it



Reach for the Stars scholarship students (from left) Savithri and Suchithra, with graduate Vaidegi

accepted 16 last year. More funds are needed to deal with the rising costs of degrees, which go hand-in-hand with the rising ambitions of village students. "Engineering costs one lakh [approximately US \$ 1600, eds.] per year," she says. "We have one student who wants to study Aeronautical Engineering, which costs 1200 Euros per year. It's hard to find sponsors for these expensive degrees. We interviewed six applicants who want to study nursing, and we can only choose one or two."

Thirteen students funded by the programme have now graduated, and are working or undertaking further study, and the 20% repayment scheme is going well.

Many more students are in their final year, such as Savithri from Edaiyanchavady who confesses to having been afraid in her first year at college. Now in the third year of her Bachelor of Civil Engineering, she reflects on her early college days. "Mum gave me some advice: 'Have courage. Don't depend on others. Be yourself'."

Savithri's trepidation about starting college was connected to the gender imbalance in her class: 32 boys to 7 girls. "It's difficult but now I feel comfortable. In the village, students are either in school or watching TV. In college, I entered the city and learnt about society and the outside world. My friends are coming from many cities. I feel proud, happy. It's my dream. I never expected it would happen." Savithri graduates next year, and wants to work in Auroville, inspired by the way in which Auroville housing project *Sacred Groves* avoids using concrete. Her advice to other students: "Go step by step. It gives confidence. Don't be afraid! Every day we learn a lot."

Suchitra, also from Edaiyanchavady, is in her fourth and final year of engineering in computer science. Her first year was the hardest, until she "learnt how to write a test". She also notes her own personal growth during her studies: "I learnt my boldness," she says. "Nowadays, we should have boldness and good

knowledge." She also concedes her major project last year was difficult, as it involved complicated data-mining about brain disease. After graduation, she wants to go to Bangalore or Chennai for work. Her mother is happy for her achievements, but also sad that Suchitra will move to another city for work, as her mother will be left alone in the house – Suchitra's two older sisters are already married and living elsewhere. Suchitra's advice: "Find your field, study, do your best. Don't get married too soon!"

Over the five years of the programme's existence, Stephanie has seen the need for the programme to provide greater support, starting with English classes on Sundays. "We also felt there was a need for a social worker, so a Tamil social worker from Auroville looks after them," she says. "We discovered that bad results were often the outcome of problems at home, such as an alcoholic father, or parents that want to push them into work instead of studies. There are also lots of health problems, especially for the girls. We decided to conduct a workshop on women's health, and other workshops are held for the students whenever a need comes up, for example, a two-day workshop on job application and interviews."

At the time of this article going to publication, the *Reach for the Stars* team announced that they had initially selected 14 students they wished to fund this year, but that due to insufficient funds only seven students can be helped. This leaves the remaining students to reconsider their options or to ask their families to go into significant debt to fund their studies. "We are very upset that we can't help those other ones to go ahead and follow their dreams," says Stephanie.

While the selection process is difficult for the *Reach for the Stars* team, the success of the graduates spurs them on. "I'm happy they grow so well," says Stephanie. "They turn into different people, very grown up!"

Lesley

For more information visit:

<http://www.reach-for-the-stars.org>

OUTREACH

The ADCERRA Dental Team goes to Gujarat

Each day in a different school in a rural, semi-tribal area of Gujarat, village children lined up for their first ever dental checkup. There were tears for a few, but in the end new smiles for all, thanks to a dedicated team of Aurovilians. In a remote part of India, the Auroville Dental Centre Education Research Rural Action (ADCERRA), known for its innovative rural treatment, conducted a dental camp in Baruch, Gujarat from the February 20th to March 3.

Along with Jacques Verré, founder of ADCERRA, were team members Banumathi, Harikrishnan, Palani, Rakhal, Sengeni, Suriyagandhi, Tamilselvi and Tapas Bhatt (whose native town is in the area and who served as a translator). The camp was arranged by Aurovarata, of Syllogic Consultants through CSR (Corporate Social Responsibility) and funded by Century Enka Limited.

The team travelled by train for 30 hours to reach the destination and were accommodated in the same compound as the plant. Accompanied by the constant helpful presence of Priyank Nahar and Mayanka Padriya of Rajashree



Jacques (right) overseeing the training of village youth

Polyfil, they then embarked on a daily odyssey through the local villages. They provided oral health education, advice on nutrition, dental check-up and basic treatments within 17 Government primary and middle schools and the affiliated CBSE school of Rajashree Polyfil. Toothpaste and brushes were distributed to all the students. They carried out an astounding 1417 check-ups of which 80% revealed problems. Treatments were done on the urgent cases.

As for the landscape: "It was like going back 40 years," says Suriyagandhi, "to a time of bullock carts, mud houses, a few motorbikes and mainly agriculture, watered by the Narmada River canals".

The trip included a visit to Baroda and the house where Sri Aurobindo lived during his time of working as Principal of the school and the Maharaja's secretary. They also visited Tapas' ancestral home in the nearby town of Rajpipla.

ADCERRA hopes to continue their work in the region of Baruch, providing a more durable and economically sustainable solution, in collaboration with Rajashree Polyfil, to the problems of oral health care highlighted by this camp.

Gordon

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Editorial team:

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