Creating Awareness of Azolla Production among Adolescents and Promoting Azolla Cultivation by Farmers in the Auroville Bioregion

Abstract:
Most cattle farmers in Tamil Nadu depend on traditional and seasonal fodder for feeding their animals. However, they are extremely vulnerable to climatic extremes, in particular drought. Last year low rainfall in Tamil Nadu led to a decline in grassland and cultivable land for growing fodder. This leads to a two-fold challenge: farmers are faced with declining incomes due to poor agricultural yields, and they are forced to buy livestock feed which is expensive. Therefore many are unable to feed their cattle, leading to illness and reduced milk production. Through this project we will help address this problem by promoting awareness and production training of azolla for adolescents and farmers. Azolla is an alternative cattle fodder crop that is organic, sustainable and locally produced. In comparison to purchasing a conventional feed such as groundnut oil cake, azolla can be produced 40 times cheaper whilst yielding the same amount of protein. Through encouraging update of azolla production we will improve cattle health, reduce farmer’s expenditure, improve milk production yields and reduce stress on land and water resources.

Q2 report (July – September 2017):

This quarter we conducted eight trainings in azolla production and reached many beneficiaries. We also held some events and strengthened the support network for farmers and potential farmers. Our activities included:

- Azolla production trainings at Pitchandikulam Forest and Nadukuppam (August and September): Farmers received practical training on how to produce azolla and use it as feed for cows, and visited azolla production units. 41 farmers got practical training and are now able to start their own azolla unit in their villages.
- Azolla exhibition at the Seed Festival held by the Sustainable Livelihood Institute (26 July): We set up a live model of azolla at the exhibition. Many farmers saw azolla for the first time and expressed interest to start production in their own villages. About 150 students from four schools and 200 others including local village farmers, teachers and headmasters saw the exhibition.
- Awareness trainings for students: At Vandipalayam Middle School and Edayanchavadi School, students were given information about azolla through presentations, videos and hands-on activities. Two students at the Vandipalayam school set up a model azolla unit and demonstrated it to the other kids. A total of 40 students participated in these programmes.
- Peer-to-peer learning at Vivekananda Kendra, Kanyakumari (11-12 August 2017): Eleven azolla farmers engaged together on problem resolution, such as how to manage the azolla in heavy rains.
- Setting up azolla units in 6 villages and Auroville (August and September): Now a total of 9 azolla units have been set up in different farmers’ fields. The farmers have started producing the azolla and giving it as food for their cows.

Reflections:
• One lesson we learned through this project is that while some farmers are very interested to
use azolla for their cows, they want to see real-time examples of using azolla as a primary feed for cattle. During the training programme, we realized the importance of live demonstrations: we took the farmers to our cow feeding area and farmers really believed only after seeing practically the azolla being used as a cattle food.

- Another learning has been about the influence of children on their parents. The children we reached through the schools and festival informed their parents about the azolla, and the parents are now calling us wanting to know more about it.

- A wonderful emergence has been that of an organic farmer in Vandipalayam, named Vijaya Ragavan, who started an azolla unit after getting training from us. The local farmers have been visiting his azolla unit to know more about azolla, and now this farmer has become a teacher in his village. He was the first person in his region to use azolla for his rice field.

**Q3 report (October – December 2017):**

We conducted 12 training sessions for school groups in this reporting period. About 135 students received azolla awareness training through presentations and practical training at azolla production units. The students also had interactions with farmers about azolla and its uses as a cattle food. Students followed up with what they learned through drawing and storytelling.

Two trainings on azolla production were conducted for farmers. About 18 farmers from Omiper, Vandipalayam and Nadukuppam participated. All of these farmers were impressed by the potential of azolla and are interested in starting production in their villages. Now that the heavy rains have finished, the farmers are ready to set up their units.

The existing azolla units were washed out by the heavy rain and storm in November. The farmers were very upset with this situation as they now have to restart the production unit, but they are very confident that it can be restarted.

One farmer from Vandipalayam village, Baskar, has been using azolla as a biofertiliser in his rice field. (Biofertilisers promote growth by increasing the supply or availability of primary nutrients to host plants.) He gave us good feedback about his experience, such as good yield and improved soil quality. The other farmers in the village have approached Baskar to know more about using azolla for sustainable rice cultivation.

**Q4 report (January – March 2018):**

**Learning Festival at Pondicherry:**

A Learning Festival was conducted by Azim Premji Foundation in coordination with Pondicherry Education Department at Indira Nagar Government School from 22nd to 24th January 2018. Pitchandikulam was invited to be part of the environmental education activities. Lourdes and his Education team were part of the resource team in this festival and offered hands-on environmental education.

The Pitchandikulam team displayed several posters and banners about butterflies, birds, ponds, wetlands, Tropical Dry Evergreen Forest (TDEF) ecosystem, etc. Further, Pitchandikulam displayed a big “Azolla” banner and conducted a live presentation of azolla farming. Vidjea, the assistant trainer of the azolla project was fully involved in these four days.

Around 340 students and 24 teachers from 15 schools visited the azolla exhibition and took part in the azolla awareness programme training during the 4 days of the festival. Each session took about 60 min. Students were informed on the importance of azolla the details of its production. We gave simple information through stories and flash cards.
The director of School Education, Pondicherry and staff of the education department also visited the exhibition and showed a lot of interest in our work with farmers. We connected with many people who are working in the field of alternative school education.

Azolla training and exhibition at Thuruai (Vanur):
Lourdes and Vidjea were invited by the Agriculture Department to be part of the Farmers Festival and give hands on training on azolla cultivation to the local farmers of Vanur Block on 28th of December 2017.
Vilupuram District Collector Dr.L.Subramaniyam, I.A.S. inaugurated the festival. We displayed the azolla materials such as banners and posters and demonstrated azolla production. About 60 farmers from nearby the villages came to the stall and got the informal training about azolla production and usage of azolla for cows and chicken.
The Deputy Collector of Villupuram District also visited the azolla stall and showed his interest. He encourages us to promote azolla in this region for the benefit of farmers.
Apart from the farmers, many members of women’s groups, as well as youths from the neighbouring villages were informed about azolla.
This festival helped us to explore the needs and realities of farmers who want to start cultivating azolla. Many farmers approached us with the wish to start the azolla cultivation in their field.
Azolla Exhibition for Auroville’s 50th Anniversary – Sangamam Festival:

As part of the Auroville 50th Anniversary Celebration, the Sangamam team organised a mega festival on March 4th close to the Auroville Visitor’s Centre. This celebration was held in honour of all those who have come together in Auroville in the spirit of community building over the last 50 years. All the Auroville outreach works and businesses had their stall to share their experiences and expertise with the community members. Pitchandikulam displayed some of its environmental education materials including the azolla education materials and live azolla display.

About 350 to 400 people from the villages, including workers of Auroville units, youth from the neighbouring villages and students of Auroville schools visited the Pitchandikulam stall. Many people were curious about azolla and its usages. Especially workers of Auroville units who own cows and chicken showed their interest in azolla, and got detailed information through demonstrations. Many Auroville community members visited the Pitchandikulam stall and explored Pitchandikulam’s work in the bioregion.

This festival helped us to identify the local beneficiaries who want to start azolla cultivation in their field.
Women farmers training on Azolla:

Two azolla production trainings were conducted for the female farmers on the first week of February and last week of March at Pitchandikulam Forest. 40 women from 5 different districts of Tamil Nadu participated in the training. These programmes were organised and funded by the Sustainable Livelihood Institute (SLI), Auroville. The women took part in a practical training of azolla cultivation and learned about the use of azolla for cattle and fish. We used a slide show, video show, live demonstration, and also visited the azolla unit during the workshop. At the end of the workshop everyone received azolla seeds for their own unit.
Tarpaulin Distribution to the Farmers:

40 tarpaulins (9 ft x 12 ft) have been distributed freely to the farmers as part of the azolla project. The farmers will use these tarpaulins to create small ponds for azolla production. Free tarpaulin distribution plays a vital role in the project.
40 local farmers from Vanur and Marakkanam Block received an azolla training, as well as free tarpaulins during the reporting period. In 7 different villages, farmers started azolla units in their field from January to March. 28 farmers are already using azolla as cow food, while 5 farmers are using azolla as a food for their chickens. Each farmer harvest about Rs. 1,500 worth of azolla. Consequently, the farmers started reducing the purchase of cattle food, and azolla replaced about 30% of the usual cow food.

Two farmers cooked bonda mixed with azolla as evening snacks, which they distributed to their friends and family members.

The farmers have been reporting their azolla production details every week by phone. We get good feedbacks from the farmers. Their cows and chicken are very healthy and they increased their milk production.