# Vigyan Ashram Technologies Foundation (VATF)

*Monthly Status Report*

**Volume: 2** **Issue: August 2026**

***Key highlights:***

- **Training of STEM master-trainers @ Uttar-Pradesh**
- **Entrepreneurship Development Program (EDP)**
- **Update on Waste-Management @ Savardari village**
- **Technology development & field-testing updates**

## I. Training of STEM master-trainers @ Uttar-Pradesh:

VATF is working for capacity building of the STEM (Science, Technology, Engineering & Mathematics) program in Uttar-Pradesh state in collaboration with UNICEF & Samgra Shiksha Abhiyaan (SSA). The program aims at strengthening of DIETs at district level. VATF is also providing technical support to State Education dept to implement the Learning by Doing (LBD) program in the state and straighten the Atal Tinkering Lab (ATL) program (class IX & X). Following are some of the important highlights of program activities for August as –






- On 23rd August 2026, Hon'ble Chief Minister Shri Yogi Adityanath ji, along with Hon'ble Deputy Chief Minister Shri Brajesh Pathak ji and Shri Sandeep Singh, Hon'ble Minister of State for Basic Education, visited the Learning By Doing (LBD) stall at Indira Gandhi Pratishthan, Lucknow.
- The two-day's Master Trainers' Refresher Training Programme was organised at SIRD, Lucknow, from 31st August to 8th Sept 2026. First training in the series with 100 DIET trainers was conducted on 31st Aug – 1st Sept. It is expected that these master trainers will conduct training at district level to train teachers on Learning by doing program for STEM teaching. Training on on Digital Pedagogy was conducted during the training. We have invited experts from NCERT's text book development team Dr. Tarun (Science) and Dr. Shravan (Mathematics) from IIS. Other resource persons were Dr. Yogesh Kulkarni. Mrs Supriya khorate..and Mrs Bhakti Talwelkar.

- VATF team has started work in ATL labs. We have selected 10 schools for direct implementation. We are working with the schools to make the ATL operational. We have started hand-on training sessions for students.

## II. Entrepreneurship Development Program (EDP) updates:

The EDP section provides skills training workshop, on-field need assessment and technical support to budding rural entrepreneurs and grassroot organizations. Following are some of the highlights of the training & support activities as-

Hero of the month: **Saurabh Kokare**
Saurabh started SK Fabrication enterprise at Bhugaon (Pune). After completing DBRT program in 2025 from Vigyan Ashram, Saurabh worked as intern for 2-3 months. He has employed 2 skilled labours in his new venture.

**Skills training workshops:**

- Poultry Farming Training: A training workshop on 'poultry-farming enterprise opportunities' was conducted during 22nd & 23rd August at Pabal campus. Training was attended by 21 participants. Training includes hands-on sessions on selection of appropriate breed, egg incubation & brooding management, feed & housing management, vaccination etc. Mr. Bhanudas Daundkar and Dr. Tanaji Kolapkar conducted training sessions & guided participants.
- **A Black Soldier Fly (BSF) waste management:** BSF insect farming is a new-innovative approach to urban bio-waste management. On 22nd & 23rd August, a training workshop on BSF farming was conducted at Pabal campus in collaboration with Pratheen Eco Solutions (PES) LLP. Training was attended by 5 participants, The session covers basics of BSF farming (breeding, larvae raring, yield & processing of larvae). As a field visit participants visited 'BSF processing plant at Savardari village (Chakan industrial area).
- **Eco-Friendly Rakhi-Making:** On the occasion of 'Raksha-Bandhan' EDP conducted a 'entrepreneurship opportunity awareness' workshop for students of NSS department at Annasaheb Awate College, Manchar (Pune). A total of 50-55 girls participated in the workshop & learnt 'making of eco-friendly Rakhi' from re-usable material.





**On field support:**

- On 11th & 12th August, Ganesh conducted an on-field training need assessment survey in the tribal belt of Palghar district. He visited local organizations and community members associated with Arohan, BAIF, Keshav Srushti and RAH foundation. During the visit a need for training & post-training support

requirements for post-harvest processing of local NTFP, goat & poultry farming and non-farming rural enterprises (sliding windows, motor pump repair, metal-fabrication) are identified.

- On 22nd August, Ganesh conducted a base-line survey at 4-hamlets of Dhakne village (Shahapur Dist-Thane). The survey was conducted in collaboration with Vivekanand Seva Mandal (VSM) to assess need for technology intervention through local Women Self-Help Group (WSHG). At present WSHG members are regularly saving money but are not able to use it for income generation by way of any self-sustaining enterprise. Opportunities in making vermi-compost, backyard poultry, cottage scaled NTFP processing centre etc technologies were discussed with WSHG.
- Licenses & Registration Support: FSSAI registration support was provided for total 4 registrations, including 1 new registration and 3 renewals.

## III. Waste management @ Savardari Village:

VATF is working on an integrated waste management program in Savardari village (Tal-Khed, Dist-Pune) in collaboration with social-enterprise Pratheen Eco Solutions (PES). The project aims to create awareness in villages for waste segregation & sustainable processing, plastic waste recycling & wet-waste processing through Black Soldier Fly (BSF) technology. During August month, following key-activities were conducted under this project as –

- Total 12.36 tonnes of wet waste was processed through BSF technology, yielding 675 kg of BSF larvae. In addition, 7.80 tonnes of wet waste was processed through windrow composting. Furthermore, 3.165 tonnes of pellets were produced from plastic and other non-degradable waste.
- As part of infrastructure development at the wet-waste processing unit, 8-new BSF rearing beds were constructed. These beds will improve rearing efficiency by enabling effective leachate removal and easy larval harvesting. In addition, land levelling was completed for windrow composting.



- On the occasion of Independence Day, 15th August, an awareness rally was organised with the support of the Zilla Parishad school. Students participated in the rally with attractive slogans and posters. Archana Kulkarni and her team conducted an eco-friendly Rakhi-making workshop for around 80 school students. Participants made Rakhis using seeds and learned about reusing materials and the importance of natural, eco-friendly alternatives.



## IV. Technology development & field-testing updates:

**Chapati making machine**

Anil Gade carried out several technical improvements to the chapati machine. The gear shaft was replaced and the pulley size was modified to set the required RPM. A fulka stove was installed for chapati baking. A stand wa s fabricated to enable safe, comfortable operation while standing. The machine was also modified to allow it to be easily rotated and repositioned as required.

**Grain Disinfection Unit (VTD)**

During August, the VTD development strategy shifted from optimising the existing vibration and heating mechanism to identifying the actual temperature and exposure time required for effective grain disinfection. Earlier trials achieved grain temperatures of approximately 45–50°C with a residence time of around 8 minutes. However, subsequent biological testing of treated grain showed insect infestation, indicating that these treatment conditions were insufficient for reliable disinfection.

Accordingly, microwave and oven trials were initiated to determine the optimum temperature and exposure time required to eliminate both insects and their eggs. Nikhil also initiated heat-balance calculations, while ceramic material trials were started to support the development and optimisation of the revised system.



**PBAT biodegradation**

While working on PBAT biodegradation, Samruddhi isolated and purified two bacterial strains, Rhodococcus sp. and Bacillus sp., from a soil sample. The previously procured fungal cultures have also been multiplied and maintained. Five plating combinations of these bacterial and fungal cultures have been set up on Mineral Salt Medium (MSM) with PBAT-related chemicals, and the plates are under observation to assess their impact on PBAT degradation.

## v. Updates on: Skills training & DIY / PMRDA

VATF implements Diploma in Basic Rural Technology (DBRT), Fab Organization Academy (FAO), Do-It-Yourself (DIY) and STEM training program in 10 schools of PMRDA region schools. Following are some of the key activities for August month as follows.

**DBRT Training updates:**

Agriculture and Animal Husbandry: In the farming section students planted 100 cucumber saplings behind the seminar hall. They have sowed 1 kg of Rajma seeds behind the plot near the EDIC hostel. In goat & poultry farming, students learnt estimation of body weight & feed conversion ratio (FCR). They recorded FCR 3.3 for 150 chicks, we have lost 84 chicks due to cat attack in the poultry shed on 26th Aug .

Energy & Environment section: Students in this section, learnt repair & maintenance of solar-invertor systems while installing 2 units of 5 kV lead-acid batteries. As a part of regular campus maintenance work students repaired ceiling fans & mixer-grinder in the Food Lab, and fixed a new MCB board & wiring at Bhairavnath Temple. The total value of their community service was Rs. 61,953.00/-. (Students earnings: Rs. 6150.00/-)

Engineering Section: The workshop section students completed wall painting work for STARS Forum office at deccan. As a team they completed work of 4700 Sq.ft area while learning skills in surface preparation, use of painting tools, estimation of paint quantity based on area and paint coverage etc. Students also fabricated 40

sets of school tables, a storage-rack to earn a community service of Rs. 62,818.00 (Students earnings of Rs. 12086.00)

Home & Health Section: In the Home & Health section, a health check-up camp was conducted with help of the local Public Health Centre (PHC). Students participated in collecting vital parameters like, haemoglobin, blood group, BMI and blood pressure of 51 students. In food processing skills, students prepared chikki, solar dried ready-mixes and bakery items. were checked for the attendees. The total value of their community service was Rs. 9,722.00. (Students earning: Rs. 2,678.00)





**Fab Organization Academy (FAO) update:**

During August, regular technical training sessions were conducted for the 9 FAO students. Students learned about networking and communication, including wired and wireless communication and protocols such as UART, I²C, SPI, One-Wire, Bluetooth and Wi-Fi. They also explored different tools and platforms such as Processing, Web Server, PictoBlox, p5.js, MIT App Inventor and Blynk IoT to understand how hardware can interact with software, mobile applications and IoT systems. Students also apply their learning in 'individual innovative projects'. Students learning outcomes can be found on their blogs - https://vadic.vigyanashram.blog/watershed-management/

**Do-it-Yourself (DIY) and STEM updates:**

Children participated in hands-on DIY Lab activities, learning to operate the Cricut machine and understand the difference between cutting and scoring. As part of the Rakshabandhan activity, they created and decorated Rakhis using pre-cut shapes and made gift boxes to practice the scoring technique. The Level 3 batch also made Newton's Boats and explored the scientific principles behind their working through practical experimentation.

## Other tit & bits:

- Prashant, Harshid and Premlata (UP staff team members) participated in 'Digital Pedagogy Workshop' organized by UNICEF during 17th to 20th August at Hotel Damson Plum, Lucknow. Training aimed to introduce new digital teaching-learning tools for STEM education.
- In the women-led tailoring unit (ASMITA), the team completed an order of 1200 head caps for and 15 T-shirts. The value of total community service earned by them was Rs. 52,284.00
- As a part of regular testing service, 3 soil and 6 water samples were tested in the lab. The lab also prepared 600 H2S bottles Through this community service activity, Rs.12,600/- was generated.
- On 15th August, the 79th Independence Day was celebrated enthusiastically at the Pabal campus with flag hoisting, cultural performances, and volleyball matches. The ladies Staff Team and Agriculture

students presented special dance performance. On 14th August, students participated in Shramdaan as a community service activity. They did various electrical, cleaning, and plumbing work at various community locations. The activity helped students to apply practical skills while promoting social responsibility.

**(Work at VATF is supported by: EATON Foundation, UNICEF, Schaeffler India, Texol Engineering Pvt Ltd, K R Shroff Foundation, the STARS Forum, and many individuals and foundations).**

## Photo Gallery:



Painting work



Independence Day Celebration



Health check-up



FAO Project



Rakhi-Making Workshop



West Management PMRDA Meeting

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