

Vigyan Ashram Status Report

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March 2021



ART day celebration on 18th March:

18th March was 4th anniversary of our beloved Amma (Mrs.Mira Kalbag). Vigyan Ashram observed Art Day in her memory. Due to COVID 19 pandemic restrictions, the program was limited to campus residents. This year's learning theme was 1) 'Food plating decoration' and 2) 'Mural from waste'.

Team of staff & students enjoyed learning new art-skills like wall-painting, stencil making of warli art, cake & healthy snacks making & plate decoration etc. In the morning, a day started with *vipassana* meditation & short program to remember & pay tribute to Amma's. You can visit more photo of the program @

<https://photos.app.goo.gl/DivCH2RjrwDDYESM6>

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B] Inauguration of new toilet block & recreation center:

i) On 18th March, we have inaugurated new toilet block (ladies & Gents) near dormitory and Agri dept. It was inaugurated at hands of DBRT students Jaydeo and Siddharth. They were involved in construction activities as a part of their practical's.

ii) On the same day, we have inaugurated ladies hostel's recreation center. It is on the roof top of ladies' hostel. It has facility like washing machine, incineration machine, cooking station and place for seating and relaxing. Saloni inaugurated the facility.

iii) We are thankful to Asha for Education and Dr.Kishan and Kiran Bhatia for their support.

Asha for education volunteers Ms Jyoti Gawade and Ms Namarata and others joined the function via video conference call.

iv) We have also carried out ground (Coconut) breaking ceremony of boys hostel recreation center work.



New Toilet block



Ladies hostel recreation facility

C] Online Entrepreneurship Development Program (EDP):

TEDP & FDP training: Department of Science & Technology (DST) supported online training of Technology Based Entrepreneurship Development (TEDP) and Faculty Development Program (FDP) was concluded with valedictory function on 26th March 2021.

Dr.Vijay Talele (CEO,BHAU Institute, COEP) & Mr.Vinayak Kelkar (Praj Foundation) were chief guest of the program. We had a very good response for both training with 55 youths in TEDP and 31 faculties for FDP from various engineering and science colleges. We had 56 sessions by 14 subject experts in TEDP and 31 sessions by 12 subject experts in the FDP program in 2 months training. All participants actively participated in the training while completing assignments, group activity tasks and business plan submissions.



We will be providing technical assistance and hand-holding support to these budding enterprises. We are thankful to Mr. B.R.Vyanktesh (Udyojakta Kushal Vikas Sanstha, Mumbai), Mr.Kiran Inamdar (Pune) for their

valuable training sessions. We are also thankful to the Department of Science & Technology (DST), Praj Foundation for technical & financial support for this training program.

Hero of the month:

Mr. Amar Rasal: Amar is our DBRT alumni. He has started his pest control service enterprise in the name of 'Amar Pest Control Services' in Pune city. He has also provided employment to 2 more persons. He is getting mentoring and hand-holding support in the EDP program.

Mr. Abhay Narhe: Abhay has started his goat farming at Pabal, Tal- Shirur, Pune in the name of 'Reshma Goat Farming'. This unit consists of 14 goats. He has taken training and now is getting hand-holding support in the EDP program.



Amar Rasal

D] DBRT skill training update:

i) Regenerative Agriculture: A training program on 'regenerative agriculture' supported by Mahindra Pride Classrooms-Naandi Foundation was organized for DBRT students. A 3 days training covered various aspects of scientific approach on organic farming techniques like soil improvement, agro residue recycling, organic fertilizer & pest management practices etc through theoretical & hand-on field demonstration sessions. Training was conducted by VA alumni Mr.Sidharth Sakore & Mr. Akshay Sawant on behalf of Naandi foundation.



Regenerative Agriculture



Fabrication of stair case

ii) Engineering: Abhishek, Shaheen and Vritak fabricated a staircase for the newly constructed 'toilet block' unit. It was a quite big task for these new learners but they took it as a challenge and completed the task in 130 man-hrs. They learnt skills of metal fabrication like designing, cutting, welding (arc & mig welding), painting etc through this work. Total cost was Rs.29970.00 including labor charge of Rs.6917.00. Students also fabricated 3 units of welding-table of 4*8 ft each with a cost of Rs.7785.00.

iii) Energy & Environment: Jaydeo & Siddharth completed electrical fitting work of the new toilet block unit. They earned Rs.1200.00 while learning electrical house-wiring skills. Students are also working on re-wiring of single-phase distribution line on campus. Present electrical distribution lines on campus have deteriorated & fetching a lot of maintenance issues. Students are replacing it with armoured cable, busbar junctions etc. Students learnt wire selection, load calculation & distribution, industrial safety standard fittings etc through this work.

iv) Home & Health section: Students prepared 5 Kg instant pooran mix using solar dryer. They also made 20 Kg bread in the bakery, prepared 2.5 dried methi leaves, tamarind sauce & Amla candy.

v) Agriculture section: Students harvested 118 kg of tomato and 58 kg of capsicum. They also learned to prepare silage from green maize. They filled 50 Kg of silage bag.

vi) Students from YMC campus, Panvel and Narmadalaya campus are attending online classes and carrying out practical's with local instructors.

E] Technology Development & Design Innovation Centre (DIC) update:

i) Dhanya Sanrakshak' (Grain disinfectant or protector) unit: Sanket has completed all modification in the grain disinfection unit. Modifications were based on lab trials (700 Kg wheat) in November last year. In the modified version we have changed positions of air circulation fan and heater elements, each tray has given microcontroller-based temperature sensors (DS18 with K type MAX6675 thermocouple). We are planning to conduct lab & on-field trials on Rabbi wheat crop.

ii) Sunny has started field testing trials of solar 'dome dryer' and 'convection dryer'. Trials were aimed to study loading capacity, drying time with respect to solar heat. It's found that dome dryer can dry 2 Kg 'pooran mix' (42% moisture reduction) in 24 Hrs of drying (3 days). Whereas convection dryer can dry 12 Kg fresh methi leaves (88% moisture reduction) in 48 Hrs (6 days) of drying. He will continue these dryers to optimize drying time & loading capacity of dryers.

iii) Kalyani is getting a good response to her marketing drive of 'healthy fortified ladoo's'. She has designed a marketing campaign 'Pabalkar Aji' (Pabal Grandmother) under her start-up Sahrudaya. Due to COVID pandemic sales are still not picking up as expected but she is trying to build a dealer-distributor network & increase the product basket to reach more customers.

iv) Akash, has restarted his 'spinach hydroponics' trial with a new set of plantations and nitric acid-based fertilizer dosing. He is also testing different grow-media in an independent trial for hydroponics spinach crop.

v) As a part of WOS-B project, Sonal and Akash, worked at Botany department of Savitribai Phule Pune University (SPPU) (22- 24th March) to isolate & identify microbial (fungal) consortium through DNA sequencing method. They successfully purified 4 sequences and sent for DNA identification.



Dhanya Sanrakshak



vi) Fab Academy update: Students worked on their assignments of electronic design, embedded programming , computer controlled machining and machine design skills. They also visited COEP, Pune lab on 26th March to learn CNC machining operations. More on <http://fabacademy.org/2021/labs/vigyanashram/>

vii) Hrushab Zunjunker (BE, Mech) joined the DIC fellowship program from 18th March. He will be working on a ‘modification plastic waste pyrolysis’ unit along with Prasad for his project assignment.

viii) Chetan Jadhav (from cleanergy Tech Solution Pvt Ltd) attended 2 days training on ‘hydroponics fodder cultivation & sprouting unit’ at Pabal campus on 10th & 11th March. We are providing technical support to ‘cleanergy’ for commercial using of hydroponics fodder technology.

F] Fab schools update Mukhai school :

- Prasad & Pooja completed design of ‘Polyhouse Fan-Pad System’. It was a bit complicated design with 1200 individual components & different layers of CAD designing. Design file available on : [Spreading Rural Innovations through D-I-Y Open Source Designs\(La Foundation\)](#)

- Mukhai school completed installation of mini-fab-lab with 3D printer, soldering station, inventory with electronic components etc. School has also completed installation of a grey water system.



DIY Polyhouse design using Solidworks

G] IBT schools online training & classes:

i) Online sessions: In this month, 3 online training sessions including two sessions on SSC board exam preparation were conducted. Sessions were attended by 350 students from 18 Schools.

Following are some of the highlighted activities of IBT schools as -

- The IBT students from Punaruthan Samrasta Gurukulam School, Chinchwad (Pune) fabricated a grain sprouting unit with capacity of 6 Kg / cycle. Students will be using this unit in their school kitchen to make fresh sprouts.

- Amboli IBT school students prepared 20 lit ‘jivamrut’ in their agriculture section.

- Dhamari IBT school students raised a nursery of 500 bags of tamarind seeds. They have also planted brinjal in their school as a demonstration plot for learning basic farming practices.

- Mrs. Madhuri Deshpande & Mrs. Reshma Sambare from JHEP foundation ([JHEP Foundation](#)) visited to Hiware School on 5th March. Meeting was attended by Head Master of Narayangaon and Bori school. Visit was aimed to understand IBT program its impact on education & community and possible funding support.

- Mahendra visit to Balnandanvan Nisharg Shala, Dahanu on 11th March to check requirement to start IBT program.



Sprouter made by Chindhwad school

H] DIY lab @ Pune update :

● Vigyan Ashram participated in the Indian Toy Fair on 2nd March and conducted activities of making musical instruments: <https://www.youtube.com/watch?v=ir990WoZnM>

And on 'Make your own toys on cinematic theme'
<https://www.youtube.com/watch?v=UTY33C4XQk0>

● We have opened DIY Lab. Now we have 7 regular students in a DIY lab. They are regularly visiting labs to learn basics of Arduino, tinker CAD skills through learning projects.

● We have conducted session on Making Toys from Balloon for schools in Chattisgarh on 4th March. More than 2765 views on you tube for this session.

● Wikipedia work: Total 8 Marathi books comprising 861 pages of scanning work was

completed . (तिच्या डायरीची पाने शोध अकराव्या दिशेचा, रुग्णझुणत्या पाखरा, मनतरंग, कथाली, कविता गजाआडच्या, इता-इता-पाणी, भूमी आणि स्त्री)



Indian Toy Fair (Online)

I] Other tit-bit :

i) FCRA account issue: Due to technical software issue at Bank of Maharashtra, online donations made by our foreign donors are getting rejected repeatedly. We have made extensive follow-up but still not able to overcome the issue. Meanwhile new amendment to FCRA act requires opening up of new bank account with SBI, New Delhi. We have submitted documents with SBI and now waiting for details of new bank accounts.

ii) Weather record – Rainfall of the month -00 mm (Total – 681.13 mm) ,Max temp-39.00 °C, Min Temp – 14.00 °C , Humidity – 59 % , Water height in well – 7.00 Mtr.

iii) Energy consumption record- Electricity unit – III Phase - 889 units , I Phase Export- 1137 units, Import- 236 units. DG used – 01.00 Hrs. Quality of power : Number of interruption- 74 , Normal voltage : 69.44 % , No supply : 4.39 % , low voltage :26.12 % , No data: 0%

iv) Animal Husbandry section update – Milk production – 265 Kg , Goat- 1 new goat kid added (total flock: male buck-2 , Female- 7 , Kid -4) , Poultry Egg production – 120.41 dozens (FCR – 1.74)

v) Biogas consumption – Dung used- 910 Kg , Gas produced- 30.81 M³

vi) Online visitors: www.dsttara.org –996 (New visitor – 860 Repeated-136) , www.vigyanashram.com – 1280 (New visitor –1067 Repeated- 213)

Meet our Student on Campus :

Abhishek Maroti Jagade, At.Post.Fulkalas, Tal. Purna Dist.Parbhani, Maharashtra

He is from drought prone area having max farmer's suicide. His parents are doing agriculture on 2 acres of land. Abhishek has studied upto 10th std and started raising poultry birds while in school. He had started with 10 birds and increased them upto 150 birds. But he lost 120 birds to bird flu diseases. Therefore, he decided to gain more knowledge and skills in poultry farming. Therefore, he joined DBRT course. He wants to do agriculture and native poultry farming in future.



K] Data Report: https://drive.google.com/file/d/1qm9V4GzCEdPA_f8ninAApKw-kzsGvgBy/view?usp=sharing

Our Partners : Work of VA is supported by Asha for Education, Praj foundation, EATON Foundation, L & T infotech, SPA Education Foundation, La foundation, INDUSA Endowment, Govt of Chhattisgarh, Savitribai Phule Pune University, Suzlon foundation, Dept of Science & Technology, and many individuals and foundations.

Photo Gallery:



Feeding milk to young Goat



Silage preparation



Electric cable laying on campus



Azolla experiments



Inauguration of new toilet block



Ground breaking ceremony of boys recreation center

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