

# Vigyan Ashram Status Report

Volume 33 Issue 2

Feb 2015

## In this issue....

- New Chulha's for Vigyan Ashram kitchen
- PSSVICE conference in Bhopal
- 130 IBT projects displayed on Science Day.
- Update : - Technology development project

### New appliances for kitchen

I) Mr. Shirish Patel has gifted eco-friendly cooker and briquette stove to VA. It was installed on 3<sup>rd</sup> Feb. It is manufactured by M/S Ecosense Pvt Ltd (<http://www.ecosense.asia/>). It claimed to reduce LPG requirement by 70%. We have started using both the units. Kitchen staff is happy with briquette stove for making chappati.

II) We have purchased smokeless chulha developed by Phonix Industries, Belguam. It was installed on 9<sup>th</sup> February. This chulla is with three cooking/heating pan capacity. The manufactured claimed fuel efficiency of 38 % and there is absolutely no smoke.

III) We have installed Atta kneader, Mixer-grinder, Pulverizer in the kitchen.



iv) Water purifier in kitchen- We need @ 100 lits drinking water per day. We explored various option of water filter. Most of the water filters in the market comes as complete purification solution with RO + UV and membrane candles. But it requires high maintains cost, need replacement of membrane of RO and also waste water during filtration. Therefore we have decided to design filter from available material in market and assemble it as per our requirement. We have made following modifications in the assembly :-

- a) 2 Regular membrane and 1 carbon candles placed in series before UV tubes to remove physical impurities.
- b) As our primary requirement is to remove physical and biological impurities and not reducing TDS, 2 UV tube candles were added in place of RO membrane candles. This saved initial as well operating cost and to large extends dependency on power supply. (As water get filter just by gravity force).

- c) Single solenoid valve fixed to control water flow (aprox 50 lit /hr) through UV tubes.

Cost of this modified filter is Rs.9650/-. We have tested water and it is suitable for drinking. First filter was installed on 17<sup>th</sup> Feb and after its successful testing another filter was installed on 8<sup>th</sup> March.

### **PSSCIVE conference in Bhopal**

Yogesh and Ranjeet attended International conference on 'Emerging trends in Vocational Education and Training' organized by PSS Central Institute of vocational education, Bhopal from 18<sup>th</sup> – 20<sup>th</sup> Feb. We had presented following papers in the conference.

I) Yogesh Kulkarni :Keys to success of skills training in schools :

Multi-skill Training and Community Services (Vigyan Ashram Experience)

:<https://vigyanashram.files.wordpress.com/2015/03/paper-tvet-in-schools-yogesh-kulkarni.pdf>

II) Ranajeet Shanbag : “Open Education Resources (OERs) for improving quality of skills training in secondary schools” <https://vigyanashram.files.wordpress.com/2015/03/paper-oe-for-skill-training-in-secondary-schools.pdf>

### **Testing of Rice de-husking machine:**

We have tested De-husking machine for various Indigenous and Hybrid rice varieties like – Indrayani, Basmati, Kala bhaat, Mahadi, Kalisaal, Kamal bhaat etc with 65 to 90 % percentage de-husking efficiency. We have also made comparison between our machine with other commercially available rice huller. Detailed report is available on –



<https://vigyanashram.wordpress.com/2015/02/25/rice-de-husking-machine-lab-trial-report/>

### **Low cost Terrace Dryer –**

A project is undertaken to find out solution for vegetable drying. Commercial electric and solar dryer are too costly to make drying affordable. Objective of the project is to work for affordable solution for drying onion leaf, leafy vegetables etc available around Pabal.

- Our Idea is to use UV ray stabilize film/sheets fixed to elevated platform cover to protect drying material from direct sunlight and dirt. This will help to achieve uniform drying and retention of colour/flavour.
- This will combine advantages of natural (sun) drying and solar drying.
- Initial trials conducted with Polyhouse cover paper showed potential on large scale implementation.



### High density fish farming (RAS) experiment-

Recirculation Aquaculture System (RAS) of HD fish farming is progressing as per schedules time-line. So far we were using commercially available readymade kit for monitoring DO level in tank, but this testing required more time and more cost/test. Moreover the results are not accurate. We have started working on developing Ammonia testing kit under guidance of Dr.Arun Dixit. By studying various references, we have purchased chemicals and started work on developing standard testing procedure and color scale (chart) for testing fish tank Ammonia.

### DBRT Activities

#### 1) Participation in Exhibition:



DBRT students put up stall of their products in Pabal Yatra on 2<sup>nd</sup>Feb. A product includes chana, Sarbat, amla pickle, candy etc. Total sale Rs.1400/-



Different project of DBRT was put on display at science exhibition organized on 28<sup>th</sup>Feb at G.M.R.T, Khodad.

#### 2) Field visits :



Agri students visited Naravade goat farm and Sudarshan dairy at Savindane village on 8<sup>th</sup>Feb



Agri students visited Vighnaharta hitech nursery on 22<sup>nd</sup> and completed their practical's

3) Training camp : DBRT students worked as an instructors to teach various activities during one day introduction camp at Pabal.



25<sup>th</sup>Feb : D.Y Patil College, 48 students



14<sup>th</sup>Feb : ATSS College of business studies & computer applications, chinchwad, 30 students

4) DBRT students fabricated 18 grill for sliding window of new kitchen.

5) Animal husbandry → Dairy : Gauri cow (Rs.(-) 922/-), Soni (Rs.250/-), Sonam (Rs.325/-), Total operational loss of this month = Rs.349/- , Loss in goat farming : Rs.3561/-

6) Origami training was conducted by Mr.Ashok Mathur on 10<sup>th</sup> Feb in Fab camp.

7) Training on workshop and electrical safety precautions was conducted on 23<sup>rd</sup> Feb by Mr.Gunjal and Mr.Bhoyare of Lokmanya Hasya Sangh.

8) DBRT students did Shramdaan on 27<sup>th</sup> Feb.

They carried out cleanliness of the area behind hostel toilets and made small agri plot in the area.

9) Balarampur collector conveyed their sanction for 12 students for DBRT course and course on leather bag making for SHG group.



## G] IBT Update

i) Yogesh visited Bhubaneshwar(Odisha) and gave presentation to Secretary- Tribal development. Proposal is to introduce IBT program in all 'Ekalavya Model Residential School (EMRS)'. The meeting was organized by Odisha Girl Incentive Program.

ii) Ranajeet visited Belgaum and Jamboti school in Karnataka on 4<sup>th</sup> February. IBT program is inaugurated in a function held at Jnyanprabodhan Mandir School, (Tarun Bharat Trust supported school). <http://www.owlreads.com/c/4438478>



iii) A 'Shaleya Arogya Mitra' camp was organised at Dharami high school. On 18<sup>th</sup> Feb, students of 9<sup>th</sup> class students did survey of approx 200 families. A "Shaleya Arogya Mitra" camp organised on 23<sup>rd</sup> Feb and 150 people (approx.70 villagers+50 Primary school students+ 30 teachers & students of NES). 8<sup>th</sup> class students carried out following tests 1) BMI, 2) BP, 3) Pulse rate, 4) Blood group, 5) Hemoglobin, 6) Sugar.

iv) IBT course and its recognition under NSQF : PSS Central Institute of Vocational Education gave approval to IBT course as L1 and L2 under National skills qualification framework (NSQF). It is a welcome step! This enables Govt schools to get funding from central Govt scheme. The problem with the PSSCIVE order that they suggested to change the name of the course from 'Introduction to Basic Technology' to 'Multi skill foundation course (MFSC)'. When asked about reasons, we could not get any logical answer for the change. The issue was discussed with PSSCIVE and RMSA Govt of Maharashtra officials on the sidelines of the International conference at Bhopal. The official agreed that title of the course should reflect the content and objective of the course. It seems the decision was taken due to misrepresentation and limited understanding of the content of some enthusiastic people. We have raised our strong objection on changing the name of IBT program. Problem for the Officials is that they have already issued an order with the name 'Multi skill foundation course'. They have promised that they will take suitable action to modify as 'MFSC-Basic Technology' course.



v) On the occasion of 'Science Day' exhibition of all IBT projects done by the IBT schools in Dantewada was organized. Total 130 models were exhibited in the exhibition. 60 instructors and 180 students participated in the exhibition. CEO and collector of Dantewada visited the exhibition. They appealed all Govt officers to purchase products of students and all stock was sold during the exhibition.

### Entrepreneurship Accelerator:

- i) Rajesh Padavi started bakery construction work. Rajesh Padavi – Started bakery construction work with seed money of Rs.20000, he learned during his fellowship. Michael visited Narmadanagar on 17<sup>th</sup> and 18<sup>th</sup> to guide and help him in his purchases.
- ii) Michael attended I-Create Training of 'Entrepreneurship Trainer' in Bangalore from 23<sup>rd</sup> – 26<sup>th</sup> Feb.
- iii) He also attended Rang De's Confluence meeting of its partner in Mysore from 27<sup>th</sup>Feb– 1<sup>st</sup>Mar.
- iv) Anil Darekar started borrowed poultry and started farming with 5000 birds.
- v) Ganesh Powar is undergoing TIED fellowship training. He has completed prototype development work of Rice De-husking machine and working on fabricating marketable model.



**Technology Development:** i) A 'Bal hirada' cutter is developed against the requirement of MPCCT Trust, Pune. It is needed to collect hirada from forest. First cutter was delivered on 18<sup>th</sup> Feb for testing. It is 10ft in height. We got advance payment for three more cutters.

ii) 1000 Egg incubator is delivered to Mr.Imran Adam Dalavi, Ratnagiri on 24<sup>th</sup> Feb. We gave training on machine operation before delivery of machine.

iii) College Professor of college aa iculture ofgr Engg

.tech andDapoli (Dr Mohad,Dr.Nandgude,Mr.Shirsat) visited VA on 12<sup>th</sup> Feb and stayed on the campus to review progress of project of their 5 students.

### Other tit-bits-

- Visitors to Vigyan Ashram in Jan : 1340
- Thanks to our donor for Donation received this month : Sahyradri Industries, Mr.Vishwas Damle, Mrs.Sunitee Marathey
- Yogesh and Ranjeet visited Madhya Pradesh Vigyan Sabha, Bhopal and discussed various technologies developed by them.
- Yogesh write article on Fab Lab in Marathi in the Magazine Palakneeti.  
[http://data.axmag.com/data/201502/20150220/U43659\\_F325679/FLASH/index.html](http://data.axmag.com/data/201502/20150220/U43659_F325679/FLASH/index.html)
- Toilet renovation of Amma's room is completed as a contract.

- Weather record – rainfall of the month - 31mm ,Max temp-33°C, Min Temp – 14°C, Humidity – 54% , Water height in well – 6.5 M (We have 31mm unseasonable rainfall on 28<sup>th</sup> Feb)
- Energy consumption record- Electricity unit – Three Phase - 1066 KWH, Single Phase - 304 KWH , 89 electricity interruptions, No electricity hrs : 67.43hrs, Diesel consumption for generator- 0 Lit. 2 wheeler use – 474kms
- Quality of Electricity : Total data available 672 Hrs. → Number of interruptions : 101, No power : 25 hrs.  
Normal voltage : 81.66%, High Voltage : 7.84%, No supply : 10%, Low voltage : 0.47%
- Biogas consumption – Dung used- 541 Kg, Gas produced- **XX** M3.

### Data Report Link-

<https://drive.google.com/file/d/0B3-4RfsZ2K2OS3puV3hCbGdpZGs/view>

(Work of Vigyan ashram is also supported by Asha for Education, INDUSA, UNICEF, Govt. Of Chhattisgarh, Lend-a-hand-India, Suzlon foundation, Wildlife Conservation Trust, Dept of S & T , RGSTC, Praj Foundation and Many Individuals and foundations)

### Photo Gallery:



Electrical wiring in new kitchen



Gray water recycling of staff quarters



Workshop on Origami



Installing IBT board in Patharai high school



ARTI solar dryer – Kasegaon school



Construction practical :- Anavali school



Electrical Wiring – Jamgaon



Dr.Kiran Bhatia (INDUSA Endowment) visited ashram on 5<sup>th</sup> Feb

For regular update : facebook : [www.facebook.com/vigyan.ashram.pabal](http://www.facebook.com/vigyan.ashram.pabal)  
Whatsapp: 9975752916 Wordpress : [www.vigyanashram.wordpress.com](http://www.vigyanashram.wordpress.com)