

BEST PRACTICE: 2

1. Title of the Practice: Hands on Training and Experiential Learning (HTEL)

Hands on Training and Experiential Learning (HTEL) is a new initiative of Indian Council of Agricultural Research as flagship programme of Hon'ble Prime Minister Shri Narendra Modi garu to reorient graduates of Agriculture and allied subjects including Veterinary and Dairy for ensuring and assuring employability and develop entrepreneurs in their field. This programme adopted by the University includes five components i.e. Experiential Learning, Rural Awareness Works Experience (RAWE), In-Plant Training / Industrial attachment, Hands-on training (HOT) / Skill development training and Students Projects. All these components are interactive and are conceptualized for building skills in project development and execution, decision-making, individual and team coordination, approach to problem solving, accounting, quality control, marketing and resolving conflicts, etc.

2. Objectives of the Practice :

The objectives of the Hands on Training and Experiential Learning (HTEL) to impart practical knowledge and to provide Hands on Training to the students. The major objectives are:

1. Market survey and Business plan
2. Procuring raw materials
3. Manufacture of milk products
4. Quality check of milk products
5. Cost analysis of the products
6. Packaging of milk products
7. Storage and Transportation of milk products
8. Marketing of milk products
9. Accountability

3. The Context: Hands on Training and Experiential Learning (HTEL)

The curriculum for the B.Tech (Dairy Technology) in the Faculty of Dairy Science is being implemented as per the IV Deans Committee recommendations of ICAR from 2008 onwards. Accordingly, Hands on Training and Experiential Training with one semester duration was introduced for the fourth year B.Tech (Dairy Technology) students admitted from the academic year 2008-09. As such the SV Veterinary University has initiated the HTEL program by sanctioning a revolving fund of Rs. 50,000/- with certain modalities.

4. The Practice: The students registering for HTEL during the semester will be equally divided into batches, for the following identified HTEL units like market milk, khoa based sweets, heat and acid coagulated products, frozen desserts, value added dairy products, RTS fruit and dairy beverages and new products Development. The students in all batches will be assigned activities in all sections on rotational basis. All the batches are provided with advisors while implementing the HTEL programme. The Nodal Officer/Course In-charge of the HTEL Unit will be regularly monitoring the financial and operational activities. There will be minimum 6 HTEL units per batch. A refundable security deposit of Rs: 1000/- each will be collected from the students registering for the HTEL course. The above amount will be used to compensate any financial losses incurred by the students during the HTEL operation. The procedure for preparation of various milk products was standardized. The log books for each product, stock book, bill book, QC book and cash book for the HTEL accounts will be maintained by students. The profit generated during the HTEL course will be equally distributed among the participating students and any losses incurred will be recovered from the students.

5. Evidence of Success: The students gained practical experience in preparation /making the products and marketing. The profit generated by the students through sale of above products from the year 2011-12 to 2020-21 is as follows:

Academic Year	No. of Students	Profits (Rs.)	Profit / Student (Rs.)
2011-2012	26	71,980	2,764
2012-2013	27	1,70,883	6,329
2013-2014	19	1,44,632	7,612
2014-2015	25	1,65,896	6,636
2015-2016	22	2,30,763	10,489
2016-2017	27	4,13,484	15,314
2017-2018	28	3,29,526	11,769
2018-2019	26	5,53,358	21,283
2019-2020	11	44,179	4,016
2020-2021	20	-	Due to Covid-19 not prepared
Total		21,24,701	



Dairy Products prepared by the Students of College of Dairy Technology, Tirupati under Hands on Training and Experiential Learning (HTEL)

6. Problems Encountered and Resources Required

- Marketing of products is a one of the major challenges
- Preservation of products till marketing
- Lack of awareness on dairy products in the public

7. Notes: Hands on Training and Experiential Learning (HTEL) is a one of the activities of ICAR implemented in all Agricultural and Veterinary Universities. Through this program students are getting practical experience and they are developing as a good entrepreneurs in their field.

ACTIVITIES OF EXPERIENTIAL LEARNING:



Preparation of Flavored Milk and Storage in Cooling Unit by Students of College of Dairy Technology, Tirupati under Hands on Training and Experiential Learning (HTEL).



Experiential Learning (EL) module: Students participation in Quality control



8



Experiential Learning (EL) module: Students participation in Marketing



9





Experiential Learning (EL) module: Equipment purchased



13

Name of the Equipment	Quantity	ELU Funds
Shrink wrap machine	1No	59,678
Kulfi filler molds steel	4 No's	18,900
Kulfi moulds plastic - re	65 No's	9,896
Dahi Incubators	2 No's	60,000
Servo Controlled voltage stabilizer	1No	9,200
Dahi cup filling and sealing machine	1No	1,76,333
Horizontal type bottle sterilizer	1No	2,79,731
Mini Form fill seal machine	1No	1,50,000
Ice cream making unit	1No	23,10,050
Walk in cold room	1No	3,95,000
Eco Milk Analyser	1	95,000
Water Activity Meter	1	3,20,625
BOD Incubator	1	44,900



Experiential Learning (EL) module: Equipment purchased



14

Name of the Equipment	Quantity	ELU Funds
BOD Incubator	1	44,900
Spectrophotometer	1	96,600
Bacteriological Incubator	1	87,675
Water bath (Equitron)	2	80,000
Erection of steam pipe line and fittings		47,000
Boiler accessories	01 no	99,225
Steam water mixing battery	01 no	47,000
Steam pipe line and fittings for ice cream plant		96,390
Water chilling plant for 100LPH HTST Pasteurizer	01 no	1,84,018
Green Power Generator	01 no	2,99,245
Diesel fired steam boiler including water softening unit and Chimney	01 no	4,08,450



Equipment purchased under ELP



15



DAHI CUP FILLING AND SEALING MACHINE



KHOA MACHINE



BABY PULPER



STEAM OPERATED KHOA PAN



Equipment purchased under ELP



16



SEMI AUTOMATIC BOTTLE FILLING MACHINE



MINI FORM FILL SEAL MACHINE



Equipment purchased under ELP



18



Continuous Ice-cream making unit(400 cups per Hour)
Cost : Rs. 24 lakhs



Equipment purchased under ELP



17





Experiential Learning (EL) module: Dairy Foods Festival



21



Experiential Learning (EL) module: Milk and milk products awareness program



22



THANK YOU

