



**Instructional Livestock Farm Complex**  
**Vanbandhu College of Veterinary Science and Animal**  
**Husbandry**  
**Navsari Agricultural University, Navsari.**



**Activities / Achievements:**

Instructional Livestock Farm Complex is functioning to give hands on training to the students on the overall farm practices of livestock management including breeding, cleaning, feeding, watering, grooming, milking, routine health care, record keeping, sanitation, housing and fodder production. The facilities are also utilized to impart training on poultry, goat and dairy farming to the livestock keepers.

**1. Teaching**

According to the discipline course teachers participates in teaching of under graduate and post graduate courses to the students. Faculty members were also associated in preparation of lecture notes and practical manuals for various concern under graduate courses.

| <b>Sr. No.</b>                                 | <b>Course No.</b> | <b>Courses title</b>                                  | <b>Course Credit</b> |
|--|-------------------|---|----------------------|
| <b>Veterinary College (VCI 2008)</b>           |                   |   |                      |
| 1.   | AGB 111           | Biostatistics and Computer Application                | 2 + 1                |
| 2.   | AGB 121           | Principles of Animal Genetics and Population Genetics | 2 + 1                |
| 3.   | AGB 211           | Livestock and Poultry Breeding                        | 2 + 1                |
| 4.   | LPM 122           | Introductory Animal Management - II                   | 2 + 1                |
| 5.   | LFP 211 & 221     | Livestock Farm Practices                              | 0 + 1                |
| 6.   | LPM 222           | Commercial Dairy Farming & Bioenergy                  | 2 + 1                |
| <b>Veterinary College (VCI 2016)</b>           |                   |   |                      |
| 7.   | AGB               | Animal Genetics and Breeding                          | 3 + 1                |
| 8.   | LPM               | Livestock Production and Management                   | 3 + 1                |
| <b>Fisheries College</b>                       |                   |   |                      |
| 8.   | BSH 107           | Statistical Methods                                   | 2 + 1                |
| <b>Polytechnic in Animal husbandry College</b> |                   |   |                      |
| 9.   | CA 111            | Computer Application                                  | 1 + 2                |
| 10.  | STAT 121          | Elementary Statistic                                  | 1 + 2                |
| 11.  | AB 121            | Introductory Animal Breeding                          | 1 + 1                |

## 2. Research

The facilities are utilized to carry out area specific research on poultry, goat and dairy animals for their health, nutritional and management related topic by concern departments PG student.

| Sr. No.                     | Title of Research project   | Funding Agency | Status    |
|-----------------------------|---|----------------|-----------|
| <b>ICAR/Plan Project</b>    |   |                |           |
| 1.                          | Experiential learning unit for the Broiler and Layer production                   | ICAR           | Completed |
| 2.                          | Establishment of Poultry unit   | Plan Project   | On going  |
| 3.                          | Experiential Learning Unit On Goat Production                                     | ICAR           | On going  |
| <b>Departmental Project</b> |   |                |           |
| 1.                          | A study on congenital abnormalities found in dairy animal of South Gujarat Region | Cytogenetics   | Completed |
| 2.                          | Cytogenetic study of HF crossbreed cattle   | Cytogenetics   | On going  |
| 3.                          | Effect of different bedding material on broiler performance                       | Managemental   | On going  |

## 3. Extension

- The faculty members of the department are actively involved in the extension activities organized by Department of A. H., Govt. of Gujarat, like Krushimahotsav and Pashupalan Shibirs as well as training programs organized by Dept. of A. H., cooperative dairies, NGOs etc.
- Prepared leaflet for Krushimahotsav on “Poultry Production” and “Goat Production” by faculty members of this department.
- Publication of local language articles time by time for the benefits and welfare of animal owner.

### Publications:

#### A) Lead Papers in National Seminar /Conference/Symposium:

1. **Nikhil Dangar** (2014). The Impact of Selection for High Milk Yield on the Health and Welfare of Dairy Cattle. Indian Society of Animal Production and Management. Pp 675-678.
2. Vataliya, P. H., Dongre, V. B., Ahlawat, A. R. and **Dangar, N. S.** (2014). Climate Change and Domestic Animal Biodiversity: Gujarat Prospective. Indian Society of Animal Production and Management. Pp 161-168.
3. Mamta Janmeda , Pandya, G. M., Ramani, U. V., **Dangar, N. S.**, Kharadi, V. B. and Brahmkshtri, B. P. (2014). Dairy Animal Breeding Policy and Programme. National conference of Indian Association of Women Veterinarians. pp 35-39.
4. Singh M., **Verma K.K.**, Patel B.H.M., Dutt T. and Gaur G.K. (2014). Modern approaches in slaughterhouse waste management. Sustainable meat

production for nutritional security and consumer well being: Challenges and strategies, IMSACON-VI, Nov. 28-30, 2014.

5. **Verma, K.K., Padheriya, Y.D.**, Rao, T.K.S., Singh, R.R. and Patel, N.B. (2016). Precision livestock farming: the next technological marvel for sustainable livestock production. National symposium on “Role of veterinarian in safe, sufficient and sustainable animal health and production”. pp. 47-53.

### **B) Research Publications in National / International Journals:**

1. R.C. Parikh, N.A. Patel, **Y.D. Padheriya**, K.N. Wadhvani and D.N. Rank (2012). Molecular Characterisation of Kachchhi Camel (Camelus Dromedarius) Using Microsatellite Markers. 19(2) : 1 – 5.
2. **Y.D. Padheriya** and K.N. Wadhvani (2013). Blood Profile of Kachchhi Camel During Exercise. 20(2) : 1 - 5
3. G.M. Pandya, C.G. Joshi, D.N. Rank, V.B. Kharadi, **B.P. Bramkshtri**, P.H. Vataliya, P.M. Desai and J.V. Solanki (2013). Genetic analysis of Production and Reproduction Traits in Surti Buffalo on an Organised Farm. Indian J. Dairy Sci. 66(3): 235-242.
4. Pandya, G. M., Ramani, U. V., Janmeda, M., **Dangar, N. S.**, Tyagi, K., **Brahmkshtri, B. P.** and Kharadi, V. B. (2014). piRNA: Basics and their Association with PIWI proteins. *Current Trends in Biotechnology and Pharmacy*. 8 (3): 303-308.
5. **Dangar, N. S.** and Vataliya, P. H. (2014). Factors Affecting Age at First Calving in Gir Cattle. *International Journal of Livestock Research*. 4(2):86-91.
6. **Verma, K.K.**, Prasad, S., Mohanty, T.K., Kumaresan, A., Layek, S.S., Patbandha, T.K. and Kantwa, S.C. (2014). Behavioural signs of estrus in different parity of Murrah buffaloes (*Bubalus bubalis*): A comparative study. Indian Journal of Animal Research, 48 (6): 620-624.
7. **Verma, K.K.**, Prasad, S., Kumaresan, A., Mohanty, T. K., Layek, S.S., Patbandha, T.K. and Chand S. (2014). Improving conception rate in buffaloes (*Bubalus bubalis*): management tools to improve estrus detection efficiency and accuracy. Indian Journal of Dairy Science, 67 (2): 154-57.
8. **Verma, K.K.**, Patel, B.H.M., Sahu, S., Singh, M., Singh, M., Verma, A.K., Bindal, S., Bhushan, B. and Ali, M.M. (2014). Mortality pattern in Muzaffarnagari sheep at organized farm. Journal of Bio Innovation, 3 (4):182-188.
9. **Dangar, N. S.** and Vataliya, P. H. (2015). Factors Affecting Lactation Milk Yield in Gir Cattle. *Indian Vet. J.* 92(7):71-73.
10. **Dangar, N. S.** and Vataliya, P. H. (2015). Genetic Correlation of Standard Lactation Milk Yield with Other Production and Reproduction Traits in Gir Cattle. *Indian Vet. J.* 92(12):86-88.
11. **Dangar, N. S.** and Vataliya, P. H. (2015). Genetic and Environmental Correlation of Age at First Calving with Various Production Traits in Gir Cattle. *International Journal of Livestock Research*. 5(4):29-33.
12. **Y.D. Padheriya**, Manisha Patel, K.N. Wadhvani and C.G. Joshi. (2015). Status of Oxidative Stress Biomarkers of Kachchhi Camel During Exercise. *Journal of camel practice and research*. **22(2)**:1-5
13. G.M. Pandya, C.G. Joshi, D.N. Rank, V.B. Kharadi, **B.P. Bramkshtri**, P.H. Vataliya, P.M. Desai and J.V. Solanki (2015). Genetic analysis of Body weight traits of Surti buffalo Buffalo Bulletin 34(2): 189 – 195.

14. Yadav, B.L.; Ramani U.; Pandya G. and **Brahmkshtri, B.** (2015) Study of Leptin Gene Polymorphism In Surti and Jaffarabadi Buffaloes by PCR-RFLP. *Current Trends in Biotechnology and Pharmacy* 9 (2): 151-156.
15. Narwaria U.S., Mehla R.K., **Verma K.K.**, Lathwal S.S., Yadav R., Verma A.K. (2015). Study of short lactation in Sahiwal cattle at organized farm. *Veterinary World*, 8 (5): 690-694.
16. Narwaria U.S., Mehla R.K., **Verma K.K.**, Prasad, S., Gupta, A. K., Lathwal S. S. and Verma A.K. (2015). Non-genetic factors affecting economic traits in Sahiwal cattle at organized farm. *Indian Journal of Dairy Science*, 68 (4): 379-383.
17. **Verma, K.K.**, Singh, M., Gaur, G.K., Patel, B.H.M., Verma, M.R., Maurya, V.P. and Singh, G. (2015). Effect of different heat ameliorating measures on micro-climatic variables in loose houses during hot humid season in Murrah buffalo heifers. *Journal of Animal Research*, 5 (4): 779-783.
18. J. M. Patel, M. C. Prasad, P. D. Vihol, N. B. Patel, K. M. Patel and **B. P. Brahmkshtri** (2015). Leptospirosis in Bovines: Haematological and Urine analysis studies. *J. Animal Research*. **5 (3)**:449- 454
19. Pandya, G. M., **Dangar, N. S.**, Janmeda, M., Gadhvi, Y.S., **Brahmkshtri, B. P.** and Kharadi, V. B. (2016). Standard Karyotype of Surti Buffalo from an Organized Farm. *International Journal of Science, Environment and Technology*. 5(3):1108-1115.
20. G. P. Sabapara1, **Y. D. Padheriya** and V. B. Kharadi. (2016). A Field Survey of Feeding and Breeding Practices at Peri Urban Buffalo Farms of Surat City of Gujarat. *Journal of Animal Research*. **6 (5)**: 933-939.
21. V.R. Desai, **Y.D. Padheriya** and S. Parnerkar (2016). Effect of Feeding Bypass Fat on Milk Production and Economics of Feeding from Buffaloes of Tribal Areas in Panchmahal and Vadodara. *Indian Vet. J.*, March 2016, **93 (03)** : 66 - 68
22. Mamta Janmeda, Pandya, G. M., Ramani, U. V., Kharadi, V. B., Tyagi, K. K. and **Brahmkshtri, B. P.** (2016). Copy Number Variations in Livestock: An Overview. *International Journal of Science, Environment and Technology* 5(5):3494-3505.
23. Tyagi, K., **Brahmkshtri, B. P.**, Ramani, U. V., Kharadi, V. B., Pandya, G. M., Janmeda, Mamta., Ankuya , K. J., Patel, M. D. and Sorathiya, L.M. (2016). Test day variability in yield and composition of surti and mehsani buffaloes milk at 15 and 60 postpartum. *Veterinary world* 9: 595:600.
24. Narwaria, U.S., Mehla, R.K., Lathwal, S.S., Gupta, A.K., Shivahre S. and **Verma K.K.** (2016). Optimization of Economic Traits of Sahiwal Cattle. *Journal of Animal Research*, 6(2): 77-82.
25. B. J. Trangadia, M. C. Prasad, and **B. P. Brahmkshtri** (2016). Squamous cell carcinoma in horses. *The Indian Veterinary Journal*.
26. **Dangar, N. S.** and Vataliya, P. H. (2017). Heritability of Production and Reproduction Traits in Gir Cattle. *Indian Vet. J.* 94(7):46-48.
27. **Dangar, N. S.** and Vataliya, P. H. (2017). Genetic, Phenotypic and Environmental Trend for Milk Yield and Production Efficiency Traits in Gir Cattle. *International Journal of Livestock Research*. 7(9):36-42.
28. Mamta Janmeda, Ramani, U.V., Pandya, G.M., Tyagi, K., Kharadi, V.B., **Brahmkshtri, B.P.**, Jyotishree Bayan and Pawar, V.D. (2017). Epigenetics: Regulation of Gene expression. *International Journal of Science, Environment and Technology* 6(2): 1390 – 1396.

29. Janmeda M, Kharadi V, Pandya G, **Brahmkshtri B**, Ramani U, Tyagi K (2017) Relative gene expression of fatty acid synthesis genes at 60 days postpartum in bovine mammary epithelial cells of Surti and Jafarabadi buffaloes *Veterinary World* 10(5): 467-476.
30. Mamta Janmeda, Vishnu Kharadi, Gaurav Pandya, **Balkrushna Brahmkshtri**, Umed Ramani and Kuldeep Tyagi (2017). Variation in Test Day Milk Yield and Composition at Day 15 and 60 Postpartum in Surti and Jafarabadi Buffaloes. *Journal of Animal Research* 7(3): 451-458.
31. Dubey, P., Singh, R. R., Choudhary, S.S., **Verma, K. K.** Kumar, A., Gamit, P. M., Dubey S. & Prajapati K. (2017): Post parturient neonatal behaviour and their relationship with maternal behaviour score, parity and sex in Surti buffaloes, *Journal of Applied Animal Research*, DOI: 10.1080/09712119.2017.1306533.

### **C) Popular Article:**

1. Mamta Janmeda. **Dangar N.S.**, Pandya G.M., and Kharadi V. B. (2013). Effect of summer and its management in Dairy Animals. *The Indian Cow* 38: 19 - 22.
2. Mamta Janmeda., Pandya G.M., and **Dangar N.S.** (2013). Dangi Cattle – A Boon for Hilly Tract Farmers. *The Indian Cow* 38: 19 - 22.
3. **Dangar N.S.**, Pandya G.M., Mamta Janmeda and Padheriya Y. (2014). Management of livestock during flood. *Indian Farmer* 1(2): 85-87.
4. Mamta Janmeda. Pandya G.M., **Dangar N.S** and Kharadi V. B. (2014). Congenital Defects in Cattle. *Indian Farmer* 1(1): 15-18.
5. **Verma, K.K.**, Singh, M., Kaushal,S., Verma, A. K. . Narwaria, U. S. and Singh, V. (2014). Azolla: A Potential Unconventional Feed for Livestock. *Pashudhan*.
6. Singh, M., **Verma, K.K.** and Gaur, G. K. (2014). Pashupalan me Krishi Yantro ka Pryog evam Prabandhan. *Krishak Doot*. pp. 10-11.
7. Kaushal, S., Palod,J., **Verma, K.K.**, Akram,W., Patoo,R.A. and Verma, A.K. (2014). Chicken semen diluents. *Poultry Technology*, pp: 88.
8. **Verma, K.K.**, Singh, M., Kaushal S., Verma, A. K., Narwaria U. S., Singh, V. and Singh, A.K. (2014). Vermicomposting: An Eco-Friendly Technique for Recycling the Organic Wastes. *Livestock Technology*, 4 (4): 16-17.
9. **Verma, K.K.**, Singh, M., Kaushal, S., Narwaria,U. S., Singh A. K. and Singh, V. (2014). Prevention and Control of Hatchery Born Infections. *Poultry punch*, 31 (2): 57-59.
10. Verma, A.K., Lal, N., Pandey, M.K., **Verma, K.K.** and Kumar, A. (2014). Prospects of demand and its forecasting. *Livestock line*, 8 (5): 14-19.
11. Singh, M., **Verma,K.K.**, Gaur, G. K. and Dutt, T. (2015). Pashupalan Avashist Padartho ka prabandhan. *Krishak Doot*. pp. 10.
12. Godara, A.S., **Verma, K.K.** Singh, M. and Gaur, G.K. (2015). Adhunic Parivesh me Swadeshi Gauvanshon ka Sanrakshan evam Mahatva. *Livestock Technology*, 5 (2): 44- 45. (In Hindi).
13. Kaushal, S., Sharma,R.K., Palod, J., **Verma, K.K.**, Fonia, N., Akram,V. and Khan A.S. (2015). Non-starch polysaccharide enzyme on poultry. *Poultry Punch*, 31(5): 38- 40.
14. Rao, T. K. S., Chaurasia, S., **Verma, K. K.**, Singh, A. and Gamit C.K. (2016). Ethostasis” and behavioural anomalies in dairy animals. *Indian Farmer*, 3(10):705-710.

15. **Nikhil Dangar** and Gaurav Pandya (2017). Herd and Feeding Management of Livestock during Drought. Pashu Sandesh (Online New Paper).
16. **Nikhil Dangar** and Gaurav Pandya (2017). Care and Management of Animals during Heavy Rain. Pashu Sandesh (Online New Paper).

### **Achievements:**

- **Dr. K. K. Verma**, Received ICAR-JRF (PGS) for master degree in 2010.
- **Dr. K. K. Verma**, Received Institutional fellowship of IVRI, for Ph.D. degree in 2012.
- **Dr. Y. D. Padheriya** awarded 2<sup>nd</sup> prize in oral presentation and Co-Author in **Young Scientist** awarded in national seminar on “New Dimensional Approaches for Livestock Productivity and Profitability Enhancement under Era of Climate Change” & xxi annual convention of Indian Society of Animal Production and Management January during 28 - 30, 2014 at AAU, Anand, Gujarat.
- **Dr. N. S. Dangar** awarded **best poster presentation award** in XI national symposium on “Harmonizing Phenomics and Genomics for Sustainable Management of Livestock for Upliftment of Rural Masses” during February 6 - 7, 2014 at NDRI, Karnal, Haryana
- **Best poster award** for the research paper “Study of Leptin Gene Polymorphism in Surti and Jaffarabadi Buffaloes by PCR-RFLP” by Yadav, B.L., Ramani U., Pandya G. and **Brahmkshtri, B.P.** in National Seminar during October 09-11, 2014 at Navsari, Gujarat.
- **Best poster award** for the research paper “Relative gene expression of fatty acid synthesis genes at 60 day postpartum in bovine mammary epithelial cells of Surti and Jafarabadi buffaloes” by Mamta Janmeda, Vishnu Kharadi, Gaurav Pandya, **Balkrishna Brahmkshtri**, Umed Ramani and Kuldeep Tyagi in National Symposium during February, 08-10, 2017 at College of Veterinary and Animal Sciences, Mannuthy, Thrissur, Kerala.
- **Best Oral Presentation Award** for the research paper “Relative Gene Expression Analysis of  $\beta$ -casein milk protein gene and its transcription regulatory genes at two stages of lactation in Jafrabadi buffaloes” by Gaurav Pandya, Umed Ramani, Mamta Janmeda, Vishnu Kharadi, **Balkrushna Brahmkshtri, Nikhil Dangar**, Kuldeep Tyagi and P. U. Gajbhiye in National Seminar and Vth Annual Convention of Society for Veterinary Sciences and Biotechnology (SVSBT) during September 22 – 23, 2017 held at College of Veterinary Science and Animal Husbandry of Orissa University of Agriculture and Technology, Bhubaneshwar, Orissa.
- **Best Oral Presentation Award** for the research paper “Growth Hormone Polymorphism in Surti and Mehsani Goats by PCR-RFLP” by Jyotishree Bayan, Vishnu Kharadi, Umed Ramani, Mamta Janmeda, Gaurav Pandya, **Balkrushna Brahmkshtri, Nikhil Dangar**, and Kuldeep Tyagi in National Seminar and Vth Annual Convention of Society for Veterinary Sciences and Biotechnology (SVSBT) during September 22 – 23, 2017 held at College of Veterinary Science and Animal Husbandry of Orissa University of Agriculture and Technology, Bhubaneshwar, Orissa.