DEPARTMENT OF ANIMAL NUTRITION

College of Veterinary Science & Animal Husbandry

Navsari Centre (Kamdhenu University), Gandhinagar

Eru Char Rasta, Vijalpore, Ta: Jalalpore, Dist. Navsari - 396450

Teaching Faculty in Department

Sr. No.	Name	Designation	Contact Details	Joining Year in NAU	Qualification	Total Experience	Publications Research Papers
1	**Dr. Vipul R. Patel,**	Assistant Professor& Head	9601278053 vrpatel@kamdhenuuni.edu.in	2010	Ph.D.	11 Years	Research papers: 31
2	**Dr. Ajay P. Raval**	Assistant Professor	9924874477 dr.ajayraval@kamdhenuuni.edu.in	2013	Ph.D.	7 Years	Research papers: 30

About The Department:

Animal nutrition discipline focuses on the nutritional needs of domesticated and wild animals, primarily those in agriculture and food production. Department of Animal Nutrition of this college has been continuously working for the betterment of animal population through its various activities, including teaching, research and extension. The Department is well equipped with all the modern facilities and instruments to carry out quality research and teaching.

Thrust Area of research

- By Pass Nutrient
- Plant secondary metabolites
- Methane mitigation
- Herbal feed additives
- Non Conventional feeds
- Total Mixed Ration
- Clinical Nutrition

Research Area and Projects Brief (Title, Funding Agency, Grant (in. Rs.), Principal Investigator/CoPI, Completed/On-going

Sr. No.	Title of Research Project / Experiment	Funding / Sponsoring Agency	Year & Duration	Name of Leader / Associate	Completed / On-going
1.	Evaluation of feeding	AGRESCO,	2011-14	PI: Dr. V. R. Patel	Completed

	and managemental practices of pet dogs in the parts of South Gujarat region	NAU		CO PIs: Dr. M. Choubey Dr. A. B. Fulsoundar Dr. R. R. Singh Dr. Kore K.B.	
2.	Effect of dietary supplementation of bypass protein on growth and reproductive performance in buffalo heifers	AGRESCO, NAU	2012-13	PI: Dr. S. G. Vahora CO PIs: Dr. A. B. Fulsoundar Dr. D. D. Garg Dr. Vipul R. Patel	Completed
3.	Studies on supplementation of herbal feed additives on growth performance and gut microbial health of broilers	AGRESCO, NAU	2012-13	PI: Dr. S. G. Vahora CO PIs: Dr. I. H. Kalyani Dr. D. D. Garg Dr. Vipul R. Patel	Completed
4.	Feeding of Sugar beet (*Beta vulgaris L.*) as a replacer of green fodder in lactating buffaloes.	AGRESCO, NAU	2013-14	PI: Dr. L.M. Sorathiya CO PIs: Dr. A. B. Fulsoundar Dr. V. R. Patel Dr. K.K. Tyagi Dr. M. D. Patel	Completed
5.	Effect of cutting management and nitrogen levels on seed production and nutritional value of Lucerne (*Medicago sativa L.*)	AGRESCO, NAU	2013-16	PI: Dr. R. M. Pankhaniya, Associate Professor, (Agronomy) Co-PIs: Dr. J.D. Thanki, Prof. B.B. Tandel, Dr. P.K. Malik, Dr. M.K. Arvadia, Dr. V.R. Patel, Dr. M. Choubey	Completed
6.	Nutrient management in guinea grass (*Panicum maximum* Jacq) under south Gujarat condition.	AGRESCO, NAU	2013-16	PI: Prof. B.B. Tandel, Assistant Professor (Agronomy) CO PIs: Dr.R.M.Pankhaniya Dr. J.D. Thanki Dr. V. R. Patel	Completed
7.	Evaluation of phytogenic feed additive supplementation on growth performance, nutrient utilization, anti-oxidants and health	AGRESCO, NAU	2014-15	PI: Dr. M. Choubey CO PIs: Dr. V. R. Patel Dr. S. Pradhan Dr. A.P. Raval Dr. K. K. Tyagi	Completed

	status of Surti goat kids.			Dr. R. R. Singh	
8.	*In vitro* evaluation of sugarcane bagasse treated with different level of urea and moisture	AGRESCO, NAU	2014-15	PI: Dr. V. R. Patel CO PIs: Dr. M. Choubey Dr. A.P. Raval Dr. S. Pradhan	Completed
9.	Establishment of Poultry Unit	Plan Project-GoG	2014-15	PI: Dr. N. B. Patel CO PIs: Dr. V. R. Patel Dr. Y. D. Padheriya Dr. N. S. Dangar	Completed
10.	Effect of supplementation of bypass fat to lactating Surti buffaloes	AGRESCO, NAU	2015-16	PI: Dr. A.P. Raval CO PIs: Dr. L.M. Sorathiya Dr. K. K. Tyagi Dr. M. D. Patel Dr. M. Choubey Dr. V. R. Patel Dr. V. B. Kharadi	Completed
11.	To study the effect of yeast (*Saccharomyces cerevisiae*) on growth, feed conversion efficiency and cost of feeding in Surti kids	AGRESCO, NAU	2015-16	PI: Dr. S. Pradhan CO PIs: Dr. M. Choubey Dr. V. R. Patel Dr. A.P. Raval	Completed
12.	Effect of fenugreek (*Trigonella foenum-graecum L.*) supplementation on milk yield and quality in lactating Surti buffaloes.	AGRESCO, NAU	2015-16	PI: Dr. M. Choubey CO PIs: Dr. V. R. Patel Dr. V. B. Khardi Dr. R. R Singh Dr. A. P. Raval Dr. Swati Gupta Dr. S .K. Pradhan Dr. L.M.Sorathiya	Completed
13.	Economics of growth performance due to dietary inclusion of tanniferous leaves in kids infested with gastrointestinal helminths	AGRESCO, NAU	2015-16	PI: Dr. M. Choubey CO PIs: Dr. V. R. Patel Dr. V. B. Khardi Dr. R. R Singh Dr. A. P. Raval Dr. K. K. Tyagi Dr. S .K. Pradhan Dr. L.M.Sorathiya	Completed

14.	Effect of feeding processed maize on fattening of male Surti kids	AGRESCO, NAU	2015-17	PI: Dr. M. Choubey CO PIs: Dr. V. R. Patel Dr. V. B. Khardi Dr. R. R Singh Dr. A. P. Raval Dr. K. K. Tyagi Dr. L. M. Sorathiya	Completed
15.	Effect of dietary protein levels on growth performance of Surti buffalo calves.	AGRESCO, NAU	2016-17	PI: Dr. A. P. Raval CO PIs: Dr. V. B. Kharadi Dr. L.M.Sorathiya Dr M. D. Patel Dr. K. K. Tyagi Dr. V. R. Patel Dr. M. Choubey	Completed
16.	Effect of Challenge feeding on production and reproduction of Surti Buffalo heifer	AGRESCO, NAU	2017-18	PI:Dr. A. P. Raval CO PIs: Dr. V. B. Kharadi Dr. V. R. Patel Dr. K. K. Tyagi Dr. L.M.Sorathiya	Completed
17.	Development of fodder purpose sugarcane genotype.	AGRESCO, NAU	2017-18	PI: Dr. S. C. Mali CO PIs: Dr. V. L. Parmar Dr. Jagdish Udutha Dr. V. R. Patel	Completed
18.	Effect of supplementation of neem leaf meal and citric acid on meat quality of broiler chicken.	AGRESCO, NAU	2018-19	PI: Dr. Swati Gupta CO PIs: Dr. K. K. Verma Dr. V. R. Patel	Completed
19.	Nutrient composition, *in vitro* feed degradation and microbial biomass yield estimation of unconventional feed resources for ruminants in south Gujarat.	AGRESCO, NAU	2019-20	PI: Dr. V. R. Patel Co-PI: Dr B. Kumar Dr A. P. Raval Dr. S. Pradhan Dr V. M. Prajapati	Completed
20.	Assessment of feeding practices, nutritional status and gap for lactating buffaloes in Tapi district.	AGRESCO, NAU	2019-20	PI: Dr. V. R. Patel Co-PI: Dr. J. K. Movaliya Dr. B. Kumar Dr. S. T. Parmar Dr. N. S. Dangar	Completed
21.	Evaluation of nutritive value of leaves of different bamboo species	AGRESCO, NAU	2019-20	PI: Jayesh Pathak Co-PI: Dr. V. R. Patel Dr. Shushilsingh	Completed

				Dr. V. B. Parekh	
22.	Effect of soybean and sunflower oil supplementation on production performance and rumen metabolites in Surti does	AGRESCO, NAU	2020-21	PI: Dr. A. P. Raval CO PIs: Dr. V. R. Patel Dr. N. B. Patel Dr. U. V. Ramani Dr. G. M. Pandya	On-going
23.	Effect of different sources of rumen protected fat supplementation to Dangi cattle during peripartum phase.	AGRESCO, NAU	2020-21	PI: Dr. V. R. Patel Co-PI: Dr. Sagar Patel Dr. A. P. Raval Dr. J. K. Movaliya	On-going

Research achievements/Recommendations:

S. No.	Recommendations for Scientific community
1.	Supplementation of garlic powder @0.5% alone or in combination with fenugreek seed powder @0.5% in ration of broilers for 6 weeks results in 8.5 and 7.5% more body weight, 9.5 and 7.5% less feed conversion ratio (FCR), 41.50 and 31.0% more nitrogen retention, respectively.
2.	Replacement of 50% regular concentrate mixture with concentrate mixture containing formaldehyde treated protein (bypass protein) in the ration of growing Surti buffalo heifers (15-17 months old) for 6 months results in 13% more average daily gain, 15% better Feed Conversion Ratio and animal shows first estrus earlier as compared to animals kept on 100% regular concentrate mixture.
3.	The Surti goat keepers are recommended to supplement garlic bulb (12 gram or 8-10 cloves/day) to the growing kids (5-6 month) for two months to achieve better growth rate and profit.
4.	During fodder scarcity, farmers are recommended to treat 100 kg sugarcane bagasse with 3.5 kg urea in 40 liter of water and ensile it for three weeks to improve its crude protein content and digestibility.
5.	The farmers of South Gujarat are recommended to include daily the fresh leaves of Banyan tree (120g/d) in the diet of Surti kids to control gastrointestinal worm load for better growth rate and income.
6.	Dietary supplementation of bypass fat (calcium salt of palm fatty acid) @ 0.75 % of dry matter intake from 15 days pre-partum to 90 days post-partum to lactating Surti buffaloes (2-4 lactations) improves milk fat percentage (13%), feed efficiency in terms of FCM (29.24%) and serum triglyceride and cholesterol levels without affecting body condition score.
7.	Dietary inclusion of fresh tree leaves of *Ficus benagalensis* (Banyan tree) to supply 1.5% condensed tannin to the diet of non dewormed Surti kids (5-6 moth) helps to alleviate the gastro-intestinal helminthes load and improves growth rate.
8.	Based on average dry and organic matter digestibility (70.60% and 79.99%), total volatile fatty acid (12.13 mMol/dl) and microbial biomass production (292.47 mg/200 mg DM) of tree leaves, Gliricidia sepium (Gliricidia), Gmelina arborea (Sevan), Dalbergia latifolia (Sisam) and Dalbergia sissoo (Sisu), show better fermentation characteristics and having potential to fulfil the maintenance

	requirement of small ruminants as promising alternative feed resources.
9.	Beyond 6% of total tannin content of tree leaves decreases in vitro dry matter and organic matter digestibility as well as total volatile fatty acid with negative correlation coefficients of -0.866, -0.811 and -0.679 respectively, therefore the total tannin content of the diet should not exceed 6 % while selecting Gliricidia, Gmelina (Sevan), Dalbergia (Sisu) and Terminalia spp. (Harade and Baheda) tree leaves for ration formulation of Goats.
	Recommendations for Farmer's community
1.	બ્રોઈલર્સના ખોરાકમાં ૦.૫% લસણનો પાવડર ઉમેરવાથી ૬ અઠવાડિયાની ઉંમરે તેમના વજનમાં (૮.૫%) નોંધપાત્ર વધારો થવાથ વધુ વળતર મળે છે
2.	દક્ષિણ ગુજરાતના પશુપાલકોને ભલામણ કરવામાં આવે છે કે ફકત કપાસિયા ખોળને બદલે ૫૦% સાદુ સમતોલ દાણ અને ૫૦% બાયપાસ પ્રોટીન (ફોર્મલ્ડીહાઈડ ઉપચારીત) વાળુ સમતોલ દાણ (૧૫ થી ૧૭ મહિનાની) ઉછરતી સુરતી પાડીયોને ૬ માસ સુધી આપવાથી સરેરાશ રોજીંદા વજનમાં ૧૭% જેટલો વધારો થાય છે અને ૧૩% જેટલો ખર્ચ પ્રતિ કિ.ગ્રા. શારિરીક વજન વધારા દીઠ ઘટે છે.
3.	આથી પશુપાલકોને ભલામણ કરવામાં આવે છે કે સૂરતી ભેંસોના આહારમાં દાણ (૨૫%),કપાસ ખોળ (૭%),હાઈબ્રીડ નેપીયર (૨૮%) અને ડાંગર પરાળ (૪૦%) જેવા ઘટકો ધરાવતો આહાર લીલાચારાની તંગીના સમયે ૧૯% દાણ૧૩% કપાસ ખોળ,૧૪% હાઈબ્રીડ નેપીયર, ૩૭% ડાંગર પરાળ અને ૧૭% સુગરબીટ કંદ ના આહાર વડે દુધ ઉત્પાદન,બંધારણ અને ખોરાકીય ખર્ચમાં નુકસાની વિના ફેરબદલ કરી શકાય છે
4.	સુરતી બકરાપાલકોને ભલામણ કરવામાં આવે છે કે પાંચ થી છ મહીનાનાં લવારાઓને પુરક આહાર તરીકે લસણ (૧૨ ગ્રામ અથવા ૮ થી ૧૦ કળી/દિન) બે મહીના સુધી ખવડાવવાથી શારિરીક વૃધ્ધિદરમાં અને આવકમાં વધારો થાય છે
5.	પ™તિ ૧૦૦ કીગ્રાશેરડીની બગાસને ૩.૫ કીગ્રાયુરીયા અને ૪૦ લિટર પાણી દ્વારા પ™ક્રિ™યા આપીને ત્રણ અઠવાડીયા સુધી ચુસ્ત રીતે બંધ રાખવાથી તેના નત્રીલ પદાર્થોમાં અને પાચ્યતામાં વધારો થાય છે. આથી ઘાસચારાની અછતના સમયમાં પશુપાલકોને તેની ભલામણ કરવામાં આવે છે.
6.	દક્ષિણ ગુજરાતના પશુપાલકોને ભલામણ કરવામાં આવે છે કે સૂરતી ભેંસને વિયાણના આશરે ૧૫ દિવસ પહેલાથી અને વિયાણ બાદના ૯૦ દિવસ સુધી પૂરક આહાર તરીકે બાયપાસ ફેટ ૧૦૦ ગા™મ/દિવસ ખવરાવવાથી દુધમાં ફેટની ટકાવારી અને કુલ દુધ ઉત્પાદનમાં વધારો થાય છે.
7.	સૂરતી જાતના બકરા રાખતા બકરાપાલકોને ભલામણ કરવામાં આવે છે કે ૪ થી ૬ મહિનાની ઉંમરના લવારાઓ ને પૂરક આહાર તરીકે ૪ થી ૫ ગા™મ યીસ્ટ (સેક્રોમાઈસીસ સવર્સી) બે મહિના સુધી આપવાથી તેના વૃધ્ધિદરમાં વધારો થાય છે અને આહારનો ખર્ચ ઘટે છે.
8.	દક્ષિણ ગુજરાતના બકરાપાલકોને ભલામણ કરવામાં આવે છે કે લવારાઓને વડના વૃક્ષાના તાજા પાન (૧૨૦ ગા™મ/દિવસ) ખવરાવવાથી પાચનતંત્રના કૃમિ નુ ભારણ નિયંત્રિત થાય છે અને વૃધ્ધિતેમજ આવક વધે છે.
9.	દક્ષિણ ગુજરાતના પશુપાલકોને ભલામણ કરવામાં આવે છે કે, સુરતી ભેંસોને વિયાણ બાદ ૪૦ થી ૧૧૫ દિવસ દરમિયાન પૂરક આહાર તરીકે ૧૨૫-૧૫૦ ગા™મમેથીદાણાને રાતભર પલાળીને ખવડાવવાથી દૂધ

	ઉત્પાદન ખર્ચ (રૂ./લિટર) ને અસર કર્યાવિના કુલ ઉત્પાદનમાં વધારો થાય છે.
10.	દક્ષિણ ગુજરાતમાં ગીની ઘાસનું વધુ ઉત્પાદન તેમજ અસરકારક અને વધુ નફો મેળવવા માટે હેકટરે ૧૦.૦ ટન છાણીયુ ખાતર અને ૧૨૫% રાસાયણીક ખાતર (૬૨.૫:૩૭.૫:૩૭.૫) ના:ફો:પો પ્રતિ હેકટર આપવાની સલાહ આપવામાં આવે છે.
11.	દક્ષિણ ગુજરાતના વધુ વરસાદની કૃષિઆબોહવાકીય પરિસ્થિતિ-૩ માં ખેડુતોને રજકાની ત્રણ કાપણી (૬૦,૧૦૦ અને ૧૩૦ દિવસે) બાદ બીજ ઉત્પાદન કરવાની સલાહ આપવામાં આવે છે. આ ઉપરાંત આ ત્રણ કાપણી પધ્ધતિમાં ૩૦ કિલો નાઈટ્રોજન,૫૦ કિ.ગ્રા. ફોસ્ફરસ અને ૫૦ કિલો પોટાશ આપવાની પણ સલાહ આપવામાં આવે છે.
12.	દક્ષિણ ગુજરાતના પશુપાલકોને ભલામણ કરવામાં આવે છે કેસુરતી ભેંસની પાડીઓને વિયાણના બે મહીના પહેલાથી વિયાણના બે મહીના બાદ સુધી કુલ વજનના ૧% પ્રમાણે સમતોલ દાણ ખવરાવવાથી તેના બચ્ચાના વજન અને દુધ ઉત્પાદનમાં વધારો થાય છે.
13.	તાપી જીલ્લાના પશુપાલકોને ભલામણ કરવામાં આવે છે કે ૫-૮ અને ૮-૧૨ કી.ગ્રા. દૈનિક દૂધ આપતી ભેંસોની પોષક તત્વોની જરૂરીયાત પૂરી કરવા માટે અનુક્રમે વધારાનું ૦.૮ અને ૨.૩ કી.ગ્રા. સમતોલ દાણ (૧૬% પાચ્ય પ્રોટીન) પ્રતિદિન આપવું જોઈએ.

Publications

1.	Patel, V. R., Gupta, R.S. and Jani, V. R. (2012). Effect of Feeding Bypass Protein on Growth, Body Measurements and Nutrient Utilization in Growing Buffalo Heifers: A Field Trial. *The Indian Journal of Animal Nutrition*,29 (2): 152-156.
2.	Patel, V. R., Gupta, R. S., Parnerkar, S., Jani, V. R. and Garg, D.D. (2012). Performance of Buffalo Heifers fed on Bypass Protein: An On-farm Appraisal. *Animal Nutrition and Feed Technology*, 1(2), 57-60.
3.	Patel, S. K., Raval, A. P., Sadrasaniya, D.A., Patel, V. R. and Bhagawat, S. R. (2014). Nutritional status of buffaloes in Banalsantha District of North Gujarat. *Journal of Animal Feed Science & Technology*.2: 39-41.
4.	Patel, V. R., Choubey, M., Garg, D. D. and Vahora S. (2014). Comparative *in vitro* evaluation of three strains of rice straw for ruminant feeding. *Indian Veterinary Journal.*91: 81-85.
5.	Patel, R. M., Garg, D. D., Patel, V. R, Vahora, S. G., Katariya, M. A. Choubey M. (2014). Effect of dietary supplementation of garlic (*Allium sativum*) and fenugreek (*Trigonella foenum-graecum* L.) seed powder on growth performance and blood biochemical parameters in broilers. *Indian Journal of Poultry Science.*49: 17-20.
6.	K. K. Sorathiya, M. Choubey, V.R. Patel, Safi G. Vahora, D.D. Garg, M.D. Jadhav And P.M. Tabhani (2015) Effect of feeding formaldehyde treated protein on nutrient utilization and economics in Surti buffalo heifers. *Indian Journal of Animal Sciences*. 85: 1393-1395
7.	R.M. Patel, D.D. Garg, V.R. Patel, S.G. Vahora, A.P. Raval and M. Choubey. (2017). Effect of Dietary Supplementation of Garlic (*Allium sativum*) and Fenugreek(*Trigonella foenum-graecum* L.) Seed Powder on Growth Performance, Carcass Characteristics and Economics of Feeding in Broilers. *Journal of Animal Research*. 7 (2): 313-318.

8.	Patel V.R., Choubey M. and Raval A.P. (2017). *In vitro* evaluation of sugarcane bagasse treated with different level of urea and moisture. *International Journal of Agriculture Sciences*. 9 (1): 4198-4200
9.	A P Raval, L M Sorathiya, V B Kharad3, M D Patel, K K Tyagi, V R Patel and M Choubey. (2017). Effects of calcium salt of palm fatty acid supplementation on production performance, nutrient utilization and blood metabolites in Surti buffaloes *(Bubalus bubalis*). *Indian Journal of Animal Sciences* 87 (9): 1124–1129.
10.	V.R. Patel, M. Choubey, K.K. Tyagi, L.M. Sorathiya, V.B. Kharadi and M.C. Desai. (2017). Performance of Surti Goats Fed with*Albizia lebbeck* and *Terminalia arjuna* Tree Leaves. *The Indian Veterinary Journal* 94 (12) : 20 - 23
11.	Patel R. V., Khasatiya C. T., Parmar S. C., Chaudhary S. S., and Patel V. R. (2017). Comparative evaluation of different therapies on post-partum fertility and blood bio chemical profile in Hostein friesian crossbred cows. *Intas Polyvet.*18 (1). 22-28
12.	M Choubey, V R Patel, A P Raval and R R Singh. (2018). Effect of fenugreek seed supplementation on lactation performance of Surti buffaloes. *Indian Journal of Animal Sciences* 88 (3): 322–325.
13.	Patel V. R., Choubey, M, Raval A. P. and Desai M. C. (2018). Influence of feeding *Albizia lebbeck* and *Terminalia arjuna* leaves on growth performance and nutrient utilization in Surti kids. *Indian Journal of Animal Nutrition.* 35 (1): 76-81
14.	M.D. Jadhav, M. Choubey, K. K. Sorthiya, V. R. Patel and S. G. Vohra. (2018). Effect of formaldehyde treated protein on blood hematology in Surti buffalo heifers. *Journal of Pharmacognosy and Photochemistry.* 7 (4):3404-3406.
15.	M.D. Jadhav, M. Choubey, K. K. Sorthiya, V. R. Patel and S. G. Vohra. (2018). Effect of bypass protein on reproductive performance of Surti buffalo heifers. *International Journal of Chemical studies.* 6 (4): 2423-2424.
16.	S. K. Pradhan. M. Choubey, V. R. Patel, V. B. Kharadi and V. S. Dabas. (2019). Effect of dietary supplementation of yeast on growth, feed conversion efficiency and cost of feeding in Surti goat kids. *International Journal of Microbiology and Applied Science.* 7 (9): 2032-2035
17.	Abhishek B. Parmar, Vipul R. Patel, Sajani V. Usadadia, Lala M. Chaudhary, Dhruvil R. Prajapati and Arvind S. Londhe (2019). Influence of dietary inclusion of oil and quercetin supplementation on carcass characters and meat quality attributes of broiler chickens. *International Journal of Livestock Research*, 9(9):93-103
18.	Abhishek Parmar, Vipul Patel, Jignesh Patel, Sajani Usadadia, Sawan Rathwa, Dhruvil Prajapati and Akshesh Rathva (2019) Quercetin, a health promising phytoadditive for poultry production: Trends & advances. *The Pharma Innovation Journal*, 8(9):68-74.
19.	Kunvar S.V., Patel V.R., Parmar A.B., Padheriya Y.D. and Choubey M. (2019). Impact of heat stress on feed intake, nutrient utilization and growth performance of broiler chicken and its amelioration through supplementation of ascorbic acid. *International Journal of Agriculture Sciences,*11(06):8103-8105
20.	M. L. Sukhadiya, N. S. Thakur, R. P. Gunaga, V. R. Patel, D. C. Bhuva and Susheel Singh (2019). *Melia dubia* Cav. drupe pulp: a new alternate livestock feed resource. *Range Management and Agroforestry*, 40(2):299-302
21.	P.M. Tabhani, M. Choubey, V.R. Patel, K.K. Sorathiya, A.B. Sorathiya and M.D. Jadhav (2019). Effect of Condensed Tannin Supplementation through a *Ficus benghalensis* Tree Leaves on Erythrocytic Antioxidant Status and Gastrointestinal Nematodes in Kids. *International Journal of Current Microbiology and Applied Sciences*, 8(04): 646-658.
22.	Parmar A.B., Patel V.R., Usadadia S.V., Rathwa S.D. and Prajapati D.R. (2019) A solid

	state fermentation, its role in animal nutrition: A review. *International Journal of Chemical Studies*, 7(3): 4626-4633.
23.	Praveen Ratre, Rana Ranjeet Singh, Sandhya S. Chaudhary, A.K. Chaturvedani, Vipul R Patel and Devkant Hanumant (2019). Effect of prebiotic and probiotic supplementation on growth performance and body measurement in preruminant Surti buffalo calve, *The Pharma Innovation Journal*, 8(3):265-269.
24.	Raval,A. P., Sorathiya, L. M., Katariya, M. A., Kharadi, V. B., Patel, V. R., Patel, N. B. and ParmarA. B. (2019). Effect of challenge feeding on production performance of Surti buffaloes. *International Journal of Livestock Research*, 9(7):164-170.
25.	A.L. Rathva, L.M. Sorathiya, G.P. Sabapara, V.R. Patel and N.B. Patel (2020). Study of calf rearing and welfare management practices in urban and periurban dairy farms. *The Pharma Innovation Journal*, 9(3):758-761.
26.	D. R. Prajapati, N. S. Thakur, R. P. Gunaga, V. R. Patel, R. J. Mevada and D. C. Bhuva (2020) Growth Performance of *Melia dubia* in Sole and *Melia dubia* Sorghum Sudan Grass Silvi-Pasture Systems: Sorghum Sudan Grass Intercropping Implications, *International Journal of Current Microbiology and Applied Sciences*, 9(4):726-732.
27.	D.R. Prajapati, N.S. Thakur, Narendra Singh, R. P. Gunaga and V.R. Patel (2020). Economic feasibility of sorgham sudan grass *melia dubia* based silvi-pasture systems, *Indian Journal of Ecology*, 47(02):502-506.
28.	DN Gadhavi, LM Sorathiya, AL Rathva, VR Patel and NM Patel (2020). Study of prevailing healthcare management practices in specialized dairy farms. *The Pharma Innovation Journal*9(4):18-22
29.	M. L. Sukhadiya, N. S. Thakur, V. R. Patel, R. P. Gunaga, V. B. Kharadi, K. K. Tyagi & Susheel Singh (2020). Provenance variations in proximate principles, mineral matter, total phenols and phytochemicals of *Melia dubia* drupes: an unexplored alternate livestock feed stock. *Journal of Forestry Research*, 32: 119-131.
30.	S.K. Pradhan, B. Kumar, K.B. Banakara, V.R. Patel, H.R. Pandya1 and R.R. Singh (2020) Effect of Boron Supplementation on the Performance and Metabolism of Minerals in Broiler Chicken. *Animal Nutrition and Feed Technology*, 20(01):39-49.
31.	V. R. Patel, M. Choubey, V.M. Prajapati, N.S. Dangar, M.A. Kataria and M.C. Desai (2020) Effects of feeding siris (*Albizia lebbeck*) and arjun (*Terminalia arjuna*) tree leaves on nutrient intake, utilization and milk yield in surti goats. *The Indian Journal of Small Ruminants*, 26(02):183-188.

Courses offered by the Department (Theory and Practical)

Undergraduate Programme

Sr. No.	Name of Course	Credit
1	UNIT: 1 PRINCIPLES OF ANIMAL NUTRITION AND FEED TECHNOLOGY	3+1
2	UNIT-2 APPLIED RUMINANT NUTRITION-I	
3	UNIT-3 APPLIED RUMINANT NUTRITION-II	
4	UNIT-4 APPLIED NON-RUMINANT NUTRITION	

Master Degree Programme

Sr. No.	CODE	COURSE TITLE	CREDITS
1.	ANN 601	ANIMAL NUTRITION ENERGY AND PROTEIN	3+0
2.	ANN 602	ANIMAL NUTRITION MINERALS, VITAMINS AND FEED ADDITIVES	3+1
3.	ANN 603	FEED TECHNOLOGY	1+1
4.	ANN 604	FEED CONSERVATION ,STORAGE AND QUALITY CONTROL	2+2
5.	ANN 605	RUMINANT NUTRITION	2+1
6.	ANN 606	NON RUMINANT NUTRITION	1+1
7.	ANN 607	NUTRITION OF COMPANION/LABORATORY, WILD AND ZOO ANIMALS	2+1
8.	ANN 608	RESEARCH TECHNIQUES IN ANIMAL NUTRITION	1+3
9.	ANN 609	NON CONVENTIONAL FEED STUFF AND TOXIC CONSTITUENTS/ANTIMETABOLITES IN ANIMAL FEEDSTUFF	2+1
10.	ANN 691	MASTER'S SEMINAR	1+0
11.	ANN 699	MASTER'S RESEARCH	20

Ph.D. Programme

Sr. No.	CODE	COURSE TITLE	CREDITS
1.	ANN 701	MODERN CONCEPTS OF FEEDING RUMINANTS AND FORAGE UTILIZATION	3+0
2.	ANN 702	MODERN CONCEPTS OF FEEDING MONOGASTRIC ANIMALS	2+0
3.	ANN 703	NUTRITION AND RUMEN FERMENTATION	1+1
4.	ANN 704	ADVANCES IN MICRONUTRIENTS	1+0
5.	ANN 705	ADVANCED TECHNIQUES IN NUTRITION AND RESEARCH	1+2
6.	ANN 706	ADVANCES IN FEED TECHNOLOGY	1+1
7.	ANN 707	CLINICAL NUTRITION	1+1
8.	ANN 708	NUTRIENT AND DRUG INTERACTION	2+0
9.	ANN 709	NEW FEED RESOURCES AND TOXICANTS IN ANIMAL FEEDING	2+0
10.	ANN 791	DOCTORAL SEMINAR I	1+0
11.	ANN 792	DOCTORAL SEMINAR II	1+0
12.	ANN 799	DOCTORAL RESEARCH	45

::CONTACT US ::

I/CAssistant Professor & Head
Department of Animal Nutrition
College of Veterinary Science & A.H.
Navsari Centre (Kamdhenu University),
Eru Cross Road, Vijalpore, Ta: Jalalpore
Dist. Navsari – 396450.
Email: hodannnvs@kamdhenuuni.edu.in

Photo Gallery:

Album 1: Hon'ble Minister Shri Kunwarjibhai Bavaliya (Ministry of Water Supply, Animal Husbandry and Rural Housing, GoG) and Hon'ble Vice-chancellor, Kamdhenu UniversityDr. N. H. Kelawala visited Department of Animal Nutrition on November 27, 2020.

Album- 2: The glimpses of training on "Precision feeding and management for sustainable dairy farming" organized for Para-Vets during 10th -14th February, 2020by Department of Animal Nutrition, College of Veterinary Science & A.H., Navsari.