

CURRCULUM VITE

A. GENERAL INFORMATION

1. **Name :** Dr. Urmila Pannu
2. **Father's/Husband's Name:** Dr (late) J.S. Pannu/Dr Virendra Netra
3. **Mother's Name:** Smt (late) Laxmi Devi
4. **Date of Birth:** 1st April 1966
5. **Area of Specialization:** Animal Breeding and Genetics
6. **Official address**

Department of Animal Breeding and Genetics, CVAS, Bikaner

Residential address

A-196, Karni Nagar, Near Karni Bhawan Palace, Bikaner

B. EDUCATIONAL QUALIFICATIONS

(i) 2.1

Exam*/Degree	Year	University or Board	% Marks or GPA	Division or Rank
Secondary	1981	Board of sec. Education, Ajmer	68.6%	I
Hr. Secondary	1982	Board of sec. Education, Ajmer	63%	I
B. Sc.	1986	University of Rajasthan, Jaipur	61.5%	I
B.V.Sc. & A.H	1992	RAU, Bikaner	63.6%	I
M.V.Sc.	1994	RAU, Bikaner	3.58/4	I
Ph.D.	2001	RAU, Bikaner	3.88/4	I

DISTINCTIONS DURING EDUCATIONAL CAREER:

Distinction in Physics and Biology in Secondary
Distinction in Statistics and Animal Nutrition in B. V. Sc. & A. H.

C. PROFESSIONAL EXPERIENCE

(a) POSITIONS HELD

Post with pay scale	Organization	Period	Length	Nature of duties
Veterinary Assistant Surgeon	Animal Husbandry, Rajasthan Govt.	April 1993 to 6 th May 1996	3 years	Treatment, & Extension
Assistant Professor	RAU, Bikaner	07.05.1996 to 6 th May 2005	9 years	Teaching, Research and Administration
Associate Professor	RAJUVAS, Bikaner	7 th May 2005 to 6 th May 2011	6 years	Teaching, Research, extension and Administration
Professor	RAJUVAS, Bikaner	7 th May 2011 to till date	More than 13 years	Teaching, Research, extension and Administration

(b) EXPERIENCE GAINED (DURATION)

Nature	Main (Yrs)	As subsidiary (Yrs)	Total (Yrs)
Teaching	1996 to continue	-	28 yrs
Research	1996 to continue	-	28yrs
Extension Education	1993 to continue	-	31 years
Treatment	1993 - 1996	-	3 years
Administration	1998 to continue	-	26 yrs

(ii) Research

S.No.	Project Title	Capacity in which associated	Funding Agency	Location	Duration
1.	“Genetic Evaluation of Marwari Sheep in three different selection lines”	Investigator (M.V.Sc.)	CVAS, Bikaner	CVAS, Bikaner	1992 to 1994
2.	“ Genetic Evaluation of Productivity in different breeds of Rabbit”	Investigator (Ph.D.)	CVAS, Bikaner	CVAS, Bikaner	1998 to 2001
3.	Sheep and Wool Improvement Scheme (SWIS) on Bikaneri Chokla	Co-PI Research project	CVAS, Bikaner	CVAS, Bikaner	2010 to
4.	Conservation, propagation and dissemination of Bikaneri-Chokla sheep for carpet quality and	Co-PI Research project	CVAS, Bikaner	CVAS, Bikaner	2011

	carpet manufacture				
5	Use of Space based Technology in improvement of livestock performance	PI State plan research Project		CVAS, Bikaner	2018-19
6	AICRP on Marwari Goat	PI	75% ICAR 25% state government	CVAS, Bikaner	2020 to 2023

Filed for one Copyright and one patent.

(iii) Extension

- Convener of a team for 'Mera Gaon Mera Gaurav'
- Actively take parts in various camps organized to benefits the livestock owners at college level time to time
- Actively take parts in Krishi and Vigyan Mela organized by RAJUVAS (member of judging committee of animal show)
- Three talks in '**Dhinne ri Batan**'
- Activities under AICRP on Marwari Goats – health and genetic improvement

D. PROFESSIONAL TRAINING COURSES

Title of the training/Course	Duration with dates	Sponsored/Organized by
Orientation Training Programme	15Days (3 Dec to 16 Dec 1997)	Academic Staff College, RAU, Bikaner.
Introduction to Computer Applications	21Days from 18/8/2000 to 7/9/2000	CVAS, Bikaner
Advanced MS Office and M Stat	10 Days from 20-29 Aug 2000	NIIT, Bikaner
Information Resources on Genetics and Documentation Techniques for Livestock Improvement.	21 Days from 30 th march to 19 th April 2004.	NDRI, Karnal

E. MAJOR RESEARCH CONTRIBUTIONS

M.V. Sc. Thesis
Ph. D. thesis
123 research papers published in various journals of repute or presented in different conferences.
Helps in data analysis for the projects running in the department or college and to the PG students in all department of collage.
Eighteen M.V.Sc. and seven PhD students are guided as major advisor.

F. OTHER DUTIES

- (i) Controller of Examination
- (ii) Director, DPME, RAJUVAS, Bikaner
- (iii) In charge of Women Cell in the university
- (iv) Presiding Officer, Internal Complaint Committee
- (v) Girls' Hostel warden for 16 years
- (vi) In charge Entrepreneurial training Cell in the college

- (vii) Convener of literary events organized in the college
- (viii) Assistant Convener of UG Admission Board
- (ix) Member of Central UG Admission Selection Committee
- (x) Member of sports council
- (xi) Member of anti ragging committee
- (xii) Member of disciplinary committee during various events in the college
- (xiii) Invigilation duties in various examinations at university level and also in ICAR examination
- (xiv) Setting of question paper for Ph D comprehensive examination in the college and also for other universities
- (xv) Theory and practical question paper setting for UG and PG level in the college and also for other universities.
- (xvi) Evaluation of PG thesis

G. Conferences/ Seminar Attended.

- i. Attended international seminar on Camel applied research and development on 10 -11th August, 1998, organized by National Research Centre on camel and CVAS, Bikaner. Paper accepted for oral presentation Title – “Some observations on necrotic dermatitis in camel”.
- ii. National symposium on recent trends in diagnosis and therapeutics of animal diseases and XX annual convention of ISVM , 14 -16 February, 2002 organized by NRCC and CVAS, Bikaner held at CVAS, Bikaner.
- iii. National Symposium on “Newer Concepts and Challenges in Veterinary Science and Animal Husbandary” and XIIth Annual Conference of Indian Association for the advancement of veterinary research (IAAVR) and first round table conference on ruminology, organized in IAAVR and CVAS, RAU, Bikaner , Rajasthan , India from Dec. 31st 2004 to Jan. 1st , 2005.
- iv. Seminar on challenges before veterinary profession held on 25 -26th Dec., 2005 in CVAS, Bikaner.
- v. Regional seminar on “Augmentation of Livestock production using newer technologies”. Sponsored by Rajasthan Livestock Development Board, Jaipur held at CVAS, RAU, Bikaner from March 11-12, 2005.
- vi. Regional seminar on “Sustainable livestock production in Arid Region” sponsored by Rajasthan Livestock Development Board, Jaipur held at CVAS, RAU, Bikaner from March 11-12, 2005.
- vii. International Camel Conference from 16-17 February 2007 on Recent Trends in Camelid Research and Future Strategies for Saving Camels. Organized by College of Veterinary and Animal Science Rajasthan Agricultural University Bikaner.
- viii. International symposium on “Role of biotechnology in conserving biodiversity and livestock development for food security and poverty alleviation” & Annual convention of Indian society of Veterinary immunology & Biotechnology. 29-31 December 2010 by Department of Microbiology & Biotechnology, CVAS, RAJUVAS, Bikaner.

- ix. Vagiyanik sanghoshti “ Samajik paripekshya me parmanu urja ka babuaayami karyakram” 4-5 March 2011. bhabha parmanu anusandhan Kendra, Mumbai avam Rajasthan Pashu Chikitsa Avam Pashu Vigyan Vishwavidyalay, Bikaner dwara aayojit.
- x. National Seminar on “Translational Research in Biotechnology for Improving Animal Health and Production” held during October 7-8, 2015, organized by the Department of Veterinary Microbiology & Biotechnology, College of Veterinary and Animal Science, Rajasthan University of Veterinary and Animal Sciences, Bikaner.
- xi. National Workshop on “5F and Hydroponics Toward Sustainable Development of Farmers” held at Rajasthan University of Veterinary and Animal Sciences, Bikaner 28 February , 2016 Organized by Livestock Feed Resource Management and Technology Centre, Bikaner & Ayurvet Limited , New Delhi.

List of research papers published in journals and Conferences:

1. **Pannu, U.**, Barhat, N.K., Singh, V.K. and Pant, K.P. (1998). Genetic Architecture of Marwari sheep: I Body weight. *Indian Journal of Animal Science*.68 (4): 392-394.
2. **Pannu, U.**, Barhat, N.K., Singh, V.K. and Pant, K.P. (1998). Genetic Architecture of Marwari sheep: I Growth rate. *Indian Journal of Animal Science*. 67 (12): 1082-1085.
3. Choudhary R S, Gundna A H, **PannuUrmila**, Vaishnav J and Yadav S B S (2000). Effect of Nutritional Agents on Heat Stress in Broilers in Hot-arid Rajasthan. XX Annual Conference and Symposium of Indian Poultry Science Association
4. **Pannu, U.**, Beniwal, B.K., Singh, V.K. and Gahlot, R.S. (2002). Post weaning performance in different breeds of rabbit: Body weights. *Indian Journal of Animal Production and Management*.18(3/4): 92-95.
5. **U Pannu**, K Beniwal, VK Singh, RS Gahlot ().[Reproductive performance and economic value of does in different broiler breeders of rabbit under semi arid conditions](#). *The Indian Journal of Animal Sciences* 75 (4)
6. Beniwal, B.K. and **Pannu, U.** (2002). Statistical inferences from data analysis. Lecture delivered in “Computer training on advances in information technology and database management”. Organized by National Research Centre on Camel, Bikaner, 6th Feb – 5th March, 2002.
7. **Pannu, U.**, Beniwal, B.K., Singh, V.K. and Gahlot, R.S. (2002). Pre-weaning survivability in broiler rabbit. 5th National seminar on Strength , Challenges and opportunities in small ruminants in new millennium, organized by the Indian Society for Sheep and goat Production and Utilization at Jaipur, 30-31 December, 2002.
8. Nehra, K.S., Beniwal, B.K., **Pannu, U.** and Joshi, R.K. (2002). Sources of variation of production traits and their genetic parameters in Rathi heifers. *Indian Journal of Animal Production and Management*.18(3/4): 83-86.

9. Bais, B., Purohit, G.R., Dhuria, R.K. and **Pannu, U.** (2003). Comparative nutritional values of saras and Neem leaves in Marwari Goats. *Indian Journal of Animal Nutrition*. 19 (3) : 266-268.
10. **Pannu, U.**, Beniwal, B.K., Gahlot, R.S. and Singh, V.K. (2003). Estimation of economic values of rabbit does. 90th Indian Science Congress held at Bangalore, 3-7 Jan, 2003.
11. Bais, B., Purohit, G.R., and **Pannu, U.** (2004). Comparative nutritional evaluation of Tali and Neem leaves in Marwari goats.” National seminar on Opportunities and Challenges in Nutrition and feeding Management of sheep, goat and rabbit for sustainable production” organized by ISSGPU at CSWRI, Avikanagar on Feb 10-12, 2004:312.
12. Bais, B., Purohit, G.R., and Pannu, U. (2004). Effect of completed ration based on various levels of Neem on rumen degradability in sheep. 5th Biennial conference at national Institute of Animal Nutrition and Physiology Adugodi, Bangalore, Nov. 24-26, 2004.
13. **Pannu, U.**, Beniwal, B.K., Singh, V.K. and Gahlot, R.S. (2004). Post weaning growth performance in different breeds of rabbit: Average daily gain. *Indian Journal of Small ruminants*. 10(1): 15-20.
14. **Pannu, U.**, Singh, V.K. Beniwal, B.K., and Bais, B. (2004). Response to selection in Marwari sheep. *Indian Journal of Small ruminants*. 10(2): 140-142.
15. **Pannu, U.**, Beniwal, B.K., Singh, V.K. and Gahlot, R.S. (2005). Reproductive performance and economic value of does in different broiler breeds of rabbit under semi arid conditions. *Indian Journal of Animal Science*. 75(4): 425-428.
16. Nehra, K.S., Beniwal, B.K., **Pannu, U.** and Joshi, R.K. (2005). Evaluation of Rathi sires for estimated breeding values of lifetime traits. *Indian Journal of Animal Production and Management*. 19(1/2): 25-28.
17. Nehra KS, Beniwal BK and Pannu U (2005). Genetic and phenotypic parameters of first lactation traits in Rathi cows. *Indian J. Dairy Sci*. 58(5):356-358. NAAS rating 5.26
18. Nehra KS, Beniwal BK, Pannu U and Bais B (2005). Sources of variation in reproduction traits and their genetic parameters in Rathi cattle. *J. Anim. Prod. Mgmt*. 21(1-4):14-16. NAAS rating 3.56
19. Nehra KS, Beniwal BK and Pannu U (2005). Genetic and phenotypic parameters of lifetime performance traits in Rathi cows. *Indian J. Animal genetics and Breeding*. 26(1-2):41-44. NAAS rating 6.17
20. Nehra, K.S., Beniwal, B.K., **Pannu, U.** and Singh, R.P. (2005). Evaluation of Rathi sires for their breeding values by different methods for age at first calving. Paper presented at 92nd Indian Science Congress held at Nirma University, Ahmdabad, 3-7 Jan, 2005.
21. Kukna, H.R., **Pannu, U.**, Beniwal, B.K. and Swami, P.D. (2005). Improvement in yearling weight and economic returns through use of elite Marwari bucks in farmers’ flock. Presented in 92nd Indian Science Congress held at Nirma University, Ahmdabad, 3-7 Jan, 2005.
22. Kukna, H.R., **Pannu, U.**, Beniwal, B.K. and Swami, P.D. (2005). Impact of elite Marwari bucks on birth weight of kids in farmers’ flock. Presented in National symposium on newer concept and challenges in Veterinary Science and Animal Husbandry” organized by CVAS, Bikaner from 31st Dec 2004 to 1st Jan 2005.
23. Nehra KS, Beniwal BK and **Pannu U** (2005). Estimation of breeding values of Rathi sires by different methods for three hundred days milk yield. *Veterinary Practitioner*. 8(1): 8-11. NAAS rating 5.00

24. Nehra, K.S., Beniwal, B.K. and **Pannu, U.** (2006). Evaluation of Rathi sires for their breeding values by different methods for first calving interval. Paper accepted for 93rd Indian Science Congress held at Hyderabad, 3-7 January, 2006.
25. Nehra, K.S., Beniwal, B.K. and **Pannu, U.** (2007). Evaluation of Rathi sires for their breeding values by different methods for first lactation milk yield. Paper accepted for 94th Indian Science Congress held at Hyderabad, 3-7 January, 2007.
26. Yadav, S.B.S., Bissa, U.K., Mehta, S.C., **Pannu, U.**, Murdia, C.K., Gahlot, G.C., Joshi, R.K. and Swami, P.D. (2007). Status and prospects of research on genetics and breeding aspects on Indian camels in Rajasthan. Presented in International Camel Conference held at CVAS, Bikaner from 16-17 Feb 2007
27. Yadav, S.B.S., Bissa, U.K. and **Pannu, U.** (2007). A review on body weight and draught power in *Camelus dromedarius*. Presented in International Camel Conference held at CVAS, Bikaner from 16-17 Feb 2007.
28. Gahlot G.C., Ashraf M., Sharma Vikas, Gouri Akbar Ali, **Pannu Urmila**, Joshi Rajeev, Beniwal B.K., Bhagat Singh, .Murdia C.K and Yadav S.B.S. 2010. Identification of lactoferrin gene from the Marwari goat milk. Paper presented in International symposium on "Role of biotechnology in conserving biodiversity and livestock development for food security and poverty alleviation" held from 29-31 December, 2010 at Rajasthan University of Veterinary & Animal Science, Bikaner.
29. Singh, H., Sharma, V., Vivekanand, Hetudan, **Pannu, U.** Joshi, R.K., Murdia, C. K. and Yadav, S.B.S (2010). Amplification of Beta-lactoglobulin gene by polymerase chain reaction from sheep blood. Paper presented in International symposium on "Role of biotechnology in conserving biodiversity and livestock development for food security and poverty alleviation" held from 29-31 December, 2010 at Rajasthan University of Veterinary & Animal Science, Bikaner.
30. Gohil, G., Yadav, S.B.S., Narula, H.K., Murdia, C.K., **Pannu, U.** and Kachwaha, R.N. (2010). Genetic parameters of growth traits in Marwari sheep. Paper presented in International symposium on "Role of biotechnology in conserving biodiversity and livestock development for food security and poverty alleviation" held from 29-31 December, 2010 at Rajasthan University of Veterinary & Animal Science, Bikaner.
31. Gohil, G., Yadav, S.B.S., Narula, H.K., Murdia, C.K., **Pannu, U.** and Kachwaha, R.N. (2010). Evaluation of reproduction in Marwari sheep. Paper presented in International symposium on "Role of biotechnology in conserving biodiversity and livestock development for food security and poverty alleviation" held from 29-31 December, 2010 at Rajasthan University of Veterinary & Animal Science, Bikaner.
32. Gohil, G., Yadav, S.B.S., Narula, H.K., Murdia, C.K., **Pannu, U.** and Kachwaha, R.N. (2010). Genetic evaluation of growth of Marwari sheep. Paper presented in International symposium on "Role of biotechnology in conserving biodiversity and livestock development for food security and poverty alleviation" held from 29-31 December, 2010 at Rajasthan University of Veterinary & Animal Science, Bikaner.
33. H. Singh, **U. Pannu**, B.K Beniwal, H. K. Narula, A. Chopra, R. K. Joshi, C. K. Murdia, S.B.S Yadav, and G.C. Gahlot (2011). Evaluation of growth traits in Marwari sheep.
34. Prajapati, M., Prajapati, R.S., Murdia, C.K., **Pannu, U.**, and Saini, B.S. (2012). Diabetes mellitus: A genetic disease. Presented in International Congress of

- Canine Practice on Modern Concepts in Canine Health and Diseases of Human Concern' from 9th to 11th Feb 2012 at CVAS, Bikaner.
35. Prajapati, M., Prajapati, R.S., Murdia, C.K. and **Pannu, U.** (2012). Study on wool quality attributes in BikaneriChokla sheep in arid region of Rajasthan. **Veterinary Practitioner**, **13 (2): 258-259.**
 36. **Pannu, U.**, Chahar, A. and Netra, V.S. (2012). Scooting problem in dogs. International Congress of Canine Practice on Modern Concepts in Canine Health and Diseases of Human Concern' from 9th to 11th Feb 2012 at CVAS, Bikaner.
 37. H. Singh*, **U. Pannu**, H.K. Narula, A. Chopra, Vivekanand and S.K. Bhakar (2014). Estimates of (co)variance components and genetic parameters of growth traits in Marwari sheep. *Journal of Applied Animal Research*, [http:// dx.doi.org/ 10.1080 / 09712119. 2014. 987291.](http://dx.doi.org/10.1080/09712119.2014.987291)
 38. H. Singh*, **U. Pannu**, H.K. Narula, B.K. Beniwal, A. Chopra and Vivekanand (2012). Effect of genetic and non-genetic factors on post-weaning growth traits in Marwari sheep. *Veterinary Practitioner*, **13 (2): 255-257.**
 39. H. Singh*, **U. Pannu**, H.K. Narula, A. Chopra and C.K. Murdia (2013). [Influence of genetic and non-genetic factors on pre-weaning growth in Marwari sheep.](#) *Indian Journal of Small Ruminants (The)* **19 (2), 142-145**
 40. H. Singh*, **U. Pannu**, H.K. Narula and A. Chopra (2013). Heritability estimates of growth traits in Marwari sheep in arid region of Rajasthan. *Veterinary Practitioner*, **14 (2): 340-341.**
 41. H. Singh*, **U. Pannu**, H.K. Narula, A. Chopra, Vivekanand and S.K. Bhakar (2014). Estimates of (co)variance components and genetic parameters of growth traits in Marwari sheep. *Journal of Applied Animal Research* **44(1), 27-35**, [http:// dx.doi.org/ 10.1080 / 09712119. 2014. 987291](http://dx.doi.org/10.1080/09712119.2014.987291)
 42. N Virendra and P **Urmila** (2014). Effect of various dietary regimes on body weight of sheep. *Veterinary Practitioner*. **15(1), 167-168**
 43. [S.D. Dudhe](#), [S.B.S. Yadav](#), [R.K. Nagda](#) and UrmilaPannu (2015). Non-genetic factors affecting growth traits of sirohi goats under field conditions *Indian Journal of Small Ruminants (The)* **21(2):226-229**
 44. Dudhe SD, Yadav SBS, Nagda RK, **Pannu U**, Gahlot GC (2015) Genetic and non-genetic factors affecting morphometry of Sirohi goats, *Veterinary World* **8(11): 1356-1363. doi: 10.14202/vetworld.2015.1356-1363**
 45. S K Bhakar, S B S Yadav, R K Nagda, **UrmilaPannu**, Harvinder Singh and L K Nirban (2015). Growth performance of sirohi goats in their home tract. *Indian Journal of Small Ruminants (The)* **21(2):230-233**
 46. Harvinder Singh, **Urmila Pannu**, H K Narula, Ashish Chopra and Vivekanand (2016). Comparison of Effectiveness of Animal Model versus Sire Model for different Growth traits in Marwari Sheep. *Ruminants Indian Journal of Small Ruminants* **2016, 22(2): 161-166**
 47. L.K. Nirban, R.K. Joshi, H.K. Narula, **U. Pannu** and H. Singh (2016). Genetic, phenotypic and environmental trends of growth and wool traits in Marwari sheep. *Veterinary Practitioner*, **17 (2): 268-269**
 48. L. K. Nirban, **R.K. Joshi**, H.K. Narula, **U. Pannu**, H. Singh, and Pradeep Kumar (2016). Effect of Genetic and Non- Genetic Factors on Greasy Fleece Yield of First And Second Clip In Marwari Sheep. *Veterinary Practitioner* Vol. **17 No.1 NAAS Rating 5.0**
 49. Dudhe, S.D., Dr. Yadav, S.B.S., Dr. Nagda, R.K., Dr. **Urmila Pannu** and Dr. Kadoo, R.R. (2016). "Factors affecting production performance of Sirohi goats

- under field conditions”, *International Journal of Current Research*, 8, (03), 27243-27247.
50. K Parihar, S B S Yadav, H K Narula, **Urmila Pannu** and B Bais (2016). Factors Affecting Weight Gain in Magra Sheep under Arid Condition of Rajasthan. *Journal of Animal Research* 6(6):1077-1079
 51. K Kannoja, S B S Yadav, H K Narula, **U Pannu** and H Singh (2016). Genetic Parameters of Body Weights in Marwari Sheep. *Indian Journal of Small Ruminants (The)* 22(2):222
 52. Ajay Singh Dewna, Priyanka Kumari, R. K. Joshi, C.S. Dhaka, **Urmila Pannu** and Basant Bais (2017). Evaluation of Performance of Diallel Cross of Kadaknath, RIR and Black Australop by Griffings Approach. *Animal Genetics and Breeding, Conference Held at Izatnagar -243 122 (UP) India.*
 53. S.D. Dudhe, SBS Yadav, RK Nagda, **Urmila Pannu**, RR Kadoo (2017). Factors affecting sex ratio in Sirohi Goats. *Indian Vet. J.*, January 2017, 94 (01): 11-13
 54. Amitosh Kumar, GC Gahlot, Vijay Agrawal, **Urmila Pannu** and Subha Ganguly (2017). Genetic variation of Cyp 19 (Aromatase) gene in Sahiwal cow. *Journal of entemology Zoology Studies*, 5(6):1247-1249
 55. Kumari V., **Pannu U.**, Chopra A., Buri A. and Prince L. L. L. (2017). Effect of non-genetic factors and inbreeding levels on post weaning growth traits of Chokla sheep. *Indian Journal of Small Ruminants (The)*, 23(1), 90-93.
 56. Vinita Kumari, A Chopra, **U Pannu**, LLL Prince, AK Patel and HK NarulFa (2018). Effects of environmental factors on pre-weaning growth traits in chokla sheep of rajasthan. *Ruminant Science* (2018)-7(2):203-206.
 57. Kumari V., Chopra A., **Pannu U.**, and Buri A. (2018). Effects of environmental factors on pre weaning growth traits in Chokla sheep in arid region of Rajasthan. *Veterinary Practitioner*, 19(1), 117-118
 58. Harvinder Singh, G C Gahlot, H K Narula, **Urmila Pannu** and Ashish Chopra (2018). Effect of genetic and non-genetic factors on wool traits in Magra sheep. *Veterinary Practitioner*. 19 (1), 119-122
 59. Priyank Vyas, SC Mehta, **Urmila Pannu** and Pallavi Joshi (2018). Genetic and phenotypic trends of different body parameters in Indian Dromedary camel. *Journal of Entemology Zoology Studies*, 6(3):87-91.
 60. Sunita Meena, GC Gahlot, M Ashraf, U Pannu, H Chouhan and GarimaChoudhary (2018). Study of genetic variability of chicken growth hormone gene in broiler strain (vencobb-400) by PCR_RLFP. *International Journal of Chemical Studies*,6(4):272-274.
 61. K Parihar, SBS Yadav, HK Narula, **U Pannu** and B Bais (2018).Genetic, phenotypic and environmental trends of growth and wool traits in Magra sheep. *Indian Journalof Small Ruminants*,24(1):150-151
 62. Govind Singh Dhakad, Gyanchand Gahlot, Vijay Kumar Agrawal, HK Narula and **Urmila Pannu** (2018). Genetic variation in growth regulating myostatin gene in Magra sheep of Rajasthan. *Journal of Entomology and Zoology Studies*; 6(4): 1875-1877
 63. Garima Choudhary, **Urmila Pannu**, Gyan Chand Gahlot, Manju Nehara, Narender Kumar Poonia (2018). [Estimation of Genetic, Phenotypic and Environmental Trends in Various Production and Reproduction Traits of Tharparkar Cattle at Organized Farm at Bikaner.](#) *Journal of Animal Research*. 8(6), 1027-1034

64. Prakash, S B S Yadav, **Urmila Pannu**, Ashish Chopra, H K Narula and A K Patel (2019). Selection indices for improvement in body weights and fleece yield of chokla sheep. *Indian Journal of Small Ruminants* (The)
65. Sheela Chaudhary, **Urmila Pannu** and Anju Chahar (2018). Assessment of mineral status of goat under rural conditions of bassi block of Jaipur district of Rajasthan. Presented in Asian Regional Conference on Goats from 22-26 Feb 2018 at Amity University Rajasthan, Jaipur.
66. Arnav Mehrotra, **Urmila Pannu**, Ashish Chopra, H K Narula and A K Patel (2019). Evaluation of reproductive traits of Chokla sheep under semi-arid conditions of Rajasthan. *Indian Journal of Animal Sciences* 89(9): 1017–1020
67. Arnav Mehrotra, **Urmila Pannu**, Ashish Chopra H. K. NarulaHarvinder Singh & A. K. Patel (2019). Genetic parameter estimates for reproductive traits in Chokla ewes of India. *Tropical Animal Health and Production*. <https://doi.org/10.1007/s11250-020-02253-2>
68. Manju Nehara, **Urmila Pannu**, Kuldeep Singh Nehra, Gyan Chand Gahlot (2019). Factors Affecting First Lactation Traits in Rathi Cattle in Semi-arid Region of Rajasthan. *International Journal of Livestock Research*. 9(8): 214-220.
69. Manju Nehara, **Urmila Pannu** and G C Gahlot (2019). Effectiveness of sire evaluation based on actual and predicted first lactation 305 day milk yield in Rathi Cattle. *Journal of Livestock Biodiversity*. 9(1). 1-4
70. Arnav Mehrotra, **Urmila Pannu**, Ashish Chopra, H K Narula and L LL Prince (2019). Lifetime reproductive performance of Chokla sheep at an organized farm in semi-arid conditions. *Indian Journal of Animal Sciences* 89(8): 894–897
71. Yamini, Gahlot G.C., **Pannu Urmila**, Ashraf Mohammed, Choudhary Sanjay (2019). Assessment of genetic variability in *Kappa* casein gene in Indian dromedary. *Journal of Camel Practice and Research* 26(3), 255-258
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