

## Research:

### 1. List of Research Projects: Completed& Ongoing

Sr. No.	Title of the Project	Name of PI/ Major Advisor/ Research Worker	Funding Agency	Total Cost of the project (Rs in Lakh)	Extra-mural (Funding agency)/ Intra-mural	Status (Completed/On going)	Duration
1	RKVY Scheme-Strengthening and Modernization of veterinary Clinical Complex, diagnostic laboratories and establishment of training centre at COVAS, Parbhani	<b>PI: Dr. N. M. Markandeya</b>	Rashtriya Krishi Vikas Yojana (RKVY), GOI	<b>Rs. 459.45 Lakhs</b>	Extra-mural	Completed	2018-2021
2	Star College Scheme for Strengthening of Life Science and Biotechnology Education and Training at Undergraduate Level at COVAS, Parbhani	<b>Dr. B. L. Kumawat as Co-PI</b>	Deptt. of Biotechnology (DBT), Ministry of Science & Technology, GOI	<b>Rs. 58 Lakhs</b>	Extra-mural	Completed	2016-2018
3	Improving reproductive efficiency of cattle and Buffaloes	<b>PI : Dr. R. L. Dhoble</b>	NATP	<b>Rs.56.00 lakhs</b>	Extra-mural	Completed	1999-2002
4	Buffalo development through community based approach for enhancement of milk production in Parbhani District	<b>Co. PI.: Dr. A.G. Sawale</b>	RKVY	<b>Rs.42.29 lakhs</b>	Extra-mural	Completed	2010-2013
5	Sustainable goat rearing for women empowerment in Parbhani district	<b>Co. PI.: Dr. A.G. Sawale</b>	DBT	<b>Rs.22.00 lakh</b>	Extra-mural	Completed	2010-2013

## 2. List of Private Agency Projects:

Sr. No.	Title of the Project	Name of PI/ Major Advisor/ Research Worker	Funding Agency	Total Cost of the project (Rs in Lakh)	Extra-mural (Funding agency)/ Intra-mural	Status (Completed/Ongoing)	Duration
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## 3. Research Priorities:

Sr. No.	Research Area	Aim	Objective	Benefits of Farmers
1.	Optimization of fertility in farm animals	Targeting cent percent conception rate and uplifting breeding standards	To stream line the factors governing fertilization and conception	Optimizing reproduction will definitely enhance the production and render profit to farmers.

## 4. Thesis:

Master:

Name of Department :				
Sr. No.	Name of the Student	Title of Thesis	Year of Completion	Name of the Advisor
1	D.R. Pargaonkar	Studies on certain aspects of reproduction in Nagpuri Buffaloes	1969	
2	M.S. Kadu	Studies on parturition, involution of uterus and post partum oestrus in Sahiwal cows	1971	
3	D.R. Pargaonkar	Studies on bovine gynaecology fertility and problems of reproduction in native and crossbred cows	1978	
4	A. J. Kulkarni	Involution of uterus and appearance of post -partum estrus in red gonadotrophin and their crossbred cows.	1983	
5	D.R. Parandekar	Studies on semen characteristics and preservation of Osmanabadi bucks and heir crosses	1987	
6	N.M. Markandeya	Studies on biochemistry of buck semen	1987	
7	S.A. Joshi	Induction and synchronization of oestrus in cattle	1988	
8	S.V. Puranik	Studies on preservation of Osmanabadi and crossbred buck semen at refrigeration and ultra-low temperature	1988	
9	S.R. Deshmukh	Studies on preservation of semen of Red	1989	

		Kandhari bull at refrigeration and ultra-low temperature		
10	M.S. Phulsure	Studies on use of electronic probe estrone to detect estrus in cows and to monitor optimum time for insemination	1989	
11	S.G. Kulkarni	Studies on efficacy of different therapies for treatment of anoestrus in cows and buffaloes.	1990	
12	E.B. Chakurkar	Studies on pregnancy diagnosis in goats	1990	
13	W.S. Deshpande	Studies on immuno fertility in red Kandhari cows and their crosses	1991	
14	K.S. Mane	Studies on efficacy of PGF2 alpha analogue to induce oestrus in post-partum anoestrus cows	1991	
15	M.K. Tandle	Studies on embryo transfer in rabbits	1992	
16	R.M. Navatake	Studies on recovery and preservation of sheep embryos	1993	
17	S.D. Sonawane	Studies on efficacy of gonadotrophin hormone Receptal analogue to induce the oestrus in anoestrus cows	1993	
18	N.V. Thakarey	Studies on recovery characterization and morphological invitro maturation of goat follicular oocytes in different culture media.	1993	
19	G.D. Goswami	Studies on induction oestrus in anoestrus cattle by using herbal preparations.	1993	
20	M.U. Malode	Studies on recovery and preservation of rabbit embryos at incubation temperature, refrigeration temperature and ultra-low temperature	1994	
21	V.B. Deshmukh	Studies on recovery invitro maturation and preservation of goat follicular oocytes.	1994	
22	K.P. Khillare	Studies on invitro maturation and preservation in goat follicular oocytes.	1994	
23	A.M. Kankal	Induction of oestrus in anoestrus buffaloes and cows by using non hormonal preparations	1996	
24	H. K. Kulkarni	Studies son recovery characterization and Morphological invitro maturation of buffalo follicular oocytes in different cultural media.	1996	
25	A.N. Kitukale	Induction of oestrus in true anoestrus red Kandhari cows by using herbal preparations	1996	
26	R.G. Bijurkar	Induction of oestrus in true anoestrus crossbred Deoni cows by using herbal prepertaions	1996	
27	C.G. Dande	Studies on efficacy of some indigenous drugs for induction of oestrus in anoestrus cows.	1997	
28	P.K. Dhavale	Studies on efficacy of some indigenous drugs For induction of oestrus in anoestrus buffaloes.	1997	
29	S.P. Parde	Antibiogram of bacterial flora from repeat breed	1998	
30	R.S. Adhau	Antibiogram of bacterial flora from repeat breeding buffaloes.	1998	
31	P.V. Babar	Studies on clinical efficacy of indigenous drug in induction of oestrus and ovulation in Deoni and crossbred cows.	1998	
32	R.S. Deshpande	Studies on clinical evaluation of indigenous drug in treatment of post partum anoestrus buffaloes.	1998	

33	S.M. Mukane	Clinical gynaecological evaluation of indigenous drugs in induction of oestrus and ovulation in post partum buffaloes.	1998	
34	A.G. Sawale	Studies on clinical efficacy of some indigenous drug in treatment of post partum anoestrus in cows.	1998	
35	K.R. Phalak	Synchronization of oestrus using PGF2 alpha by intravulvo sub mucus route in Osmanabadi goats.	1999	
36	B.P. Kurhe	Synchronization of oestrus using PGF2 alpha in Osmanabadi goats	1999	
37	A.D. Patil	Synchronization of oestrus using Progesterone and PMSG in Osmanabadi goats	1999	
38	V.R. Wale	Therapeutic application of progesterone for control breeding in post partum anoestrus cows.	2000	
39	N.P. Dherange	Effect of PGF2 alpha in treatment of post partum suboestrus red Kandhari cows.	2000	
36	N.S. Sonawane	Effect of Gonadotrophin releasing hormone Analogue on improvement of conception rate in crossbred cows.	2000	
40	S.T. Suryawanshi	Fertility improvement by using PGF2 alpha in post partum suboestrus buffaloes.	2000	
41	J.M. Jadhav	Fertility improvement by using prostaglandin F2 alpha in post partum suboestrus crossbred cows.	2001	
42	M.V. Ingawale	Fertility improvement by using prostaglandin F2 alpha and Gonadotrophin releasing hormone in post partum suboestrus cows.	2001	
43	M.G. Gacche	Fertility improvement by using prostaglandin F2 alpha in post partum nondescript cows.	2001	
44	M.N. Rangnekar	Effect of Gonadotrophin releasing hormone (GnRH) administration on conception rate in repeat breeding cows.	2001	
45	S.S. Phulari	Fertility improvement by using Lutenising hormone at the time of insemination in post partum cows.	2002	
46	S.S. Palve	Fertility improvement by using GnRH analogue in post partum cows.	2002	
47	S.D. Mane	Fertility improvement by using prostaglandin F2 alpha in post partum cows.	2002	
48	V.B. Kale	Clinical efficacy of herbal ecboli for expulsion of placenta followed by involution of uterus and subsequent fertility in cattle.	2003	
49	K.P. Bhalerao	Studies on semen evaluation in different bovine	2003	
50	U.B. Kumbhar	Use of PGF2 alpha and GnRH for fertility improvement in post partum suboestrus buffaloes.	2004	
51	D.P. Bhoite	Fertility improvement using progesterone and lutenising hormone in post partum anoestrus cows.	2004	
52	S.M. Gaikwad	Therapeutic applications of progesterone and GnRH for fertility improvement in post partum buffaloes.	2004	

53	S.G. Chavan	Ultrasonographic diagnosis of early pregnancy in Red Kandhari cows	2005	
54	K.R. Deokate	Ultrasonographic diagnosis of early pregnancy in	2005	
55	V.K. Munde	Ultrasonographic diagnosis of early pregnancy in buffalo.	2006	
56	J.C. Juvekar	Ultrasonographic diagnosis of early pregnancy in sheep.	2006	
57	G.D.Totewad	Induction of oestrus using PGF2 alpha by intra vulvo submucosal route in buffaloes.	2007	
58	P.M. Naik	Effect of progesterone, PMSG and HCG treatment for oestrus induction and twinning in Osmanabadi goats.	2007	
59	M.N. Ambore	Induction of oestrus using PGF2 alpha by intravulvo submucosal route in cows.	2007	
60	S.C.Dawane	Studies on involution of uterus and post partum Ovarian activity with mineral feed supplement Kandhari cows.	2008	
61	P.M. Mane	Studies on stages of Parturition, involution and post partum ovarian activity with Mineral supplementation in Marathwadi Buffaloes.	2008	
62	P.R.Suryawanshi	Studies on stages of Parturition and post partum reproduction in Red Kandhari cows.	2008	
63	Y.D. Deshmukh	Induction of oestrus in post partum Red Kandhari cows with targeted breeding program.	2009	
64	S.C. Khandalikar	Improvement of conception rate in cows after AI with various approaches at field level.	2009	
65	M.B. Lakde	Effect of different hormonal additives on invitro maturation of buffalo follicular oocytes.	2010	
66	N.A. Sanap	Effect of different concentrations of sera and follicular fluid on invitro maturation of buffalo oocytes.	2010	
67	S.C. Patharkar	Diagnosis of early pregnancy in bitches with various approaches.	2010	
68	J.K. Katkade	Effect of different concentrations of sera and follicular fluid on invitro maturation of buffalo oocytes	2011	
69	S. A. Pawar	Induction of ovarian cyclicity & assessment of conception rate with select synch and modified protocol in postpartum anoestrus local cows.	2012	
70	R.D. Kasbe	Induction of ovarian cyclicity & assessment of conception rate with co-synch and modified co-synch protocol in postpartum anoestrus local cows.	2012	
71	M.S. Shiral	Induction of ovarian cyclicity & assessment of conception rate with ov-synch and modified ov synch protocol in postpartum anoestrus local cows.	2012	
72	P. A. Netke	Induction of ovarian cyclicity and assessment of conception rate with different protocols in anoestrus crossbred cows	2013	
73	R. J. Yempure	Induction of ovarian cyclicity and assessment of conception rate with different protocols in	2013	

		anoestrus local buffaloes		
74	D. P. Bhalerao,	Diagnosis and treatment of repeat breeder buffaloes with modified approach	2014	
75	A. U. Zarekar	Diagnosis and treatment of repeat breeder crossbred cows with modified approach	2014	
76	T. D. Bhutia	Oestrus induction in delayed pubertal heifers treated with different protocols	2014	
77	G. B. Kumbhar	Physio-pathological studies and efficacy of different therapeutic approaches for cervical dilatation in large ruminants	2015	
78	K. P. Bhutia	Physio-Biochemical aspects and efficacy of different therapeutic protocols for cervical dilatation in small ruminants	2015	
79	N. A. Puro	Efficacy of E.coli LPS and lugol's iodine in endometritis treatment of dairy animals	2016	
80	C. Pujar	Efficacy of controlled breeding protocols to induce fertility and ultrasonographic pregnancy evaluation in Osmanabadi goats	2016	
81	S. G. Swami	Reproductive parameters related with oestrus and parturition in Marathawadi buffaloes	2017	
82	R.S. Anbhule	Luteal support through various therapies for improvement of conception rate in non-infectious repeat breeder dairy animals	2018	
83	S.R. Lawange	Efficacy of garlic extract, lugol's iodine and <i>e.coli</i> LPS therapies in cases of infectious repeat breeder cows	2018	
84	P.D. Kadam	Efficacy of herbal antimicrobial, chemical and immuno-modulator therapies for the treatment of endometritis in buffaloes	2018	
85	Raut S.S.	Induction of ovarian cyclicity in post-partum anoestrus indigenous cows using CIDR based hormonal protocol	2019	
86	Narote K.V.	Comparative efficacy of different CIDR protocol for the treatment of anoestrus buffaloes	2019	
87	Chauhan G.U.	Comparative efficacy of herbal ecboic tablets along with different intrauterine therapies in infectious repeat breeder cows	2021	
88	Pupalwad S. P.	Studies on herbal ecboic tablets along with garlic extract, Neem oil, Lugols iodine and E Coli LPS for intrauterine therapies in infectious repeat breeder buffaloes	2021	
89	Thejsavi. B.M.	Efficacy of different methods of estrus induction protocol with artificial insemination in Osmanabadi goats	2021	
90	Aitalwad R.S.	Efficacy of Ozone and other alternative intrauterine therapies in infectious repeat breeder cows	2022	
91	Bibekar S.A.	Efficacy of Ozone, Neem oil, Autologous plasma, E. coli LPS and Lugol's iodine therapies in infectious repeat breeder buffaloes	2022	

92	Miss. Vyawahare S.S.	Therapeutic efficacy of different drugs in non-infectious repeat breeder cows	2023	
93	Choutmal V.V.	Comparative efficacy of different drugs promoted to increase Conception rate in non-infectious repeat breeder buffaloes.	2023	
94	Misalwar L. V.		2024	

### Doctoral:

Name of Department:				
Sr. No.	Name of the Student	Title of Thesis	Year of Completion	Name of the Advisor
1	Dr. S. A. Bakshi	Studies on seminal attributes and fertility rates following ultralow temperature preservation of semen from Osmanabadi and crossbred buck	1991	
2	A.G. Sawale.	Effect of PGF2 alpha and GnRH for augmenting fertility in, postb partum anoestrus cows	2013	

### 5. Research Papers Published:

#### List of Research Publications:

Sr. No.	Authors	Year	Title of the Research Paper	Name of the Journal	Volume; Page Nos.	NAAS Rating, if any
1.	<b>Manjusha Patil</b> and P.B. Hase	2006	Therapeutic efficacy of ceftriaxone on a mastitic buffalo – A case report.	Veterinary World	5(2), 56 -57	<b>7.6</b>
2.	<b>Manjusha Patil</b> , K.P.Khillare, S.K.Sahatpure and M.D. Meshram	2007	Ultrasonic ovarian status in cyclic crossbred cows	Veterinary World	6(4), 105-106	<b>7.6</b>
3.	<b>Manjusha Patil</b> , K.P.Khillare, S.K.Sahatpure and M.D. Meshram	2008	Comparative study of follicular dynamics in regular estrus and induced estrus	Veterinary World	1 (2), 42-44	<b>7.6</b>
4.	<b>Manjusha Patil</b> , K.P. khillare, S.K. Sahatpure	2008	Follicular dynamcis in crossbred cows undergoing	Veterinary World	1 (2), 42-44	<b>7.6</b>

	and M.D. Meshram		prostaglandin induced luteolysis			
5.	Hadaoo, M.N., K.P. Khillare, M.D. Meshram, S.K. Sahatpure and <b>Manjusha Patil</b>	2008	Incidence of anoestrus in Surati buffaloes	Veterinary World	1(2), 46	<b>7.6</b>
6.	Hadaoo, M.N., K.P. Khillare, M.D. Meshram, S.K. Sahatpure and <b>Manjusha Patil</b>	2008	Study of some serum trace minerals in cyclic and non-cyclic Surati buffaloes	Veterinary World	1(3), 71-72	<b>7.6</b>
7.	Hadaoo, M.N., K.P. Khillare, M.D. Meshram, S.K. Sahatpure and <b>Manjusha Patil</b>	2008	Comparative studies and certain biochemical constituents of normal cyclic and anoestrus Surti buffaloes	Veterinary World	1 (4), 105 – 106	<b>7.6</b>
8.	V.R. Wale, R.L. Dhoble, <b>A.G. Sawale</b> , S.T. Suryawanshi and N.P. Dherange	1999	Effect of progesterone treatment on induction of oestrus in post-partum anoestrus cows	Indian J. Anim. Sci.	Indian J. Anim. Sci	<b>6.40</b>
9.	N.P. Dherange, R.L. Dhoble, <b>A.G. Sawale</b> , V.R. Wale and S.T. Suryawanshi	2000	Effect of prostaglandin F <sub>2</sub> alpha on induction of oestrus and fertility in post-partum suboestrus Red Kandhari cows	Indian J. Anim. Sci	Indian J. Anim. Sci	<b>6.40</b>
10.	M.G. Gacche, R.L. Dhoble, M.V. Ingawale, M.N. Rangnekar, <b>A.G. Sawale</b> and J.M. Jadhav	2002	Effect of prostaglandin F <sub>2</sub> alpha (Lutalyse) on fertility improvement in post-partum suboestrus cows	Indian J. Anim. Sci	72 (9): 781-782. 2002	<b>6.40</b>
11.	S.T. Suryawanshi, R.L. Dhoble, <b>A.G. Sawale</b> and N.P. Dherange	2001	Effect of dinoprost Tromethamine on fertility in post partum suboestrus buffaloes	Indian. J. of Anim. Sci.	71(8): 777-779	<b>6.40</b>



12.	R.L.Dhoble, S.D. Mane, <b>A.G. Sawale</b> & M.V. Ingawale	2002	Studies on efficacy of Prostaglandin F2 alpha for fertility improvement in post partum cows	Ind. J. Anim. Sciences	Ind. J. Anim. Sciences. 2002.	<b>6.40</b>
13.	M.N.Rangnekar, R .L.Dhoble, M.V.Ingawale, M.G. Gacche, <b>A.G. Sawale</b> and J.M. Jadhav.	2002	Physical properties of oestral cervical mucus in repeat breeding crossbred (HF) cows with reference to fertility	Indian Journal of Animal sciences	Indian Journal of Animal sciences.72 (12): 1122-1124.	<b>6.40</b>
14.	R.L.Dhoble, S.D. Mane, <b>A.G. Sawale</b> & M.V. Ingawale	2002	Studies on efficacy of Prostaglandine F2 alpha for fertility improvement in post partum cows	Indian Journal of Ani. Sci	Indian Journal of Ani. Sci-2002.	<b>6.40</b>
15.	V. B. Kale, R.L. Dhoble, A.G. Sawale & D.P. Bhoite.	2005	Efficacy of Partutone in expulsion of fetal membranes and subsequent Reproductive performance in cows.	Indian Journal of Animal Sciences.	Vol 75(3): 276.	<b>6.40</b>
16.	K.R. Deokate R.L. Dhoble S M Gaikwad A.G. sawale J.C. Juvekar	2007	B mode real time ultrasonography for early pregnancy diagnosis in Osmanabadi goats	Ind. J. Ani Sci	Ind. J. Ani Sci 77(7) pp 580	<b>6.40</b>
17.	P.M. Mane, S. M. gaikwad, R.L. Dhoble, R.J. Chaudhari A.G. Sawale	2016	Effect of mineral supplementation on involution, post partum ovarian activity and conception rate in Marathwadi buffaloes	Buffalo Bulletin	Vol.35 No.02	<b>6.2</b>
18.	Vaibhav Vijay Choutmal, Manjusha Ganeshrao Patil, Nitin Manmohan Markandeya and Pankaj Bhanudas Hase	2023	Therapeutic Management of Non-infectious Repeat Breeder Buffaloes by using phytomedicine	Buffalo Bulletin	Vol 42, No 3, 449-454	<b>6.2</b>
19.	<b>Babu Lal Kumawat,</b> Pramod Kumar,	2023	A novel action of insulin sensitizing drug as a potential	Veterinary Research Communications	doi: 10.1007/s1125	<b>8.20</b>

	Ajit Singh Mahla*, Ashok Kumar, Amit Kumar, Raghvendar Singh, Arun Kumar		promotor of preovulatory follicles, ovulation rate and prolificacy in sheep: the first exploratory study	by <b>Springer Nature Group</b>	9-023-10259-y	
20.	Ajit Singh Mahla*, Suresh Kumar Bunkar, <b>Babu Lal Kumawat</b> , Vijay Kumar Saxena, Sellappan Selvaraju, Randhir Singh Bhatt, Raghvendar Singh, Arun Kumar	2023	Dietary n-3 PUFA augments pre-ovulatory follicle turnover and prolificacy in well-fed ewes	<i>Animal Reproduction Science</i>	<b>252:</b> 107231.	<b>8.20</b>
21.	A.K. Wankar*, G.N. Bhangale, S.N. Rindhe, <b>B.L. Kumawat</b> and T.A. Shafi	2024	Heat stress in beef cattle: climate change and the global scenario – a review	Annals of Animal Science	Doi: <a href="https://doi.org/10.2478/aoas-2024-0026">https://doi.org/10.2478/aoas-2024-0026</a>	<b>7.90</b>
22.	Brijesh Kumar*, <b>B.L. Kumawat</b> , F.A. Khan, G.K. Das, S.K. Maurya, Vandana, Jai Singh, Vikas Sachan, M.H. Jan and K. Narayanan	2023	Comparative analysis of biochemical, hormonal, and mineral compositions of preovulatory and cystic ovarian follicles in buffalo during the non-breeding season	<i>Zygote</i>	<b>31 (3):</b> 246 – 252	<b>7.70</b>
23.	A Kumar, S Mehrotra, G Singh, VP Maurya, K Narayanan, AS Mahla, RK Chaudhari, M Singh, YK Soni, <b>BL Kumawat</b> , SK Dabas and N Srivastava*	2016	Supplementation of Slow-Release Melatonin improves Recovery of Ovarian cyclicity and Conception in Summer Anoestrous Buffaloes ( <i>Bubalus bubalis</i> )	<i>Reproduction in Domestic Animals</i>	<b>51 (1):</b> 10-7	<b>7.70</b>

