

Curriculum Vitae

1. General Information

Name: Dr. MAHAK SINGH

Designation: Scientist (Senior Scale)

Discipline: Animal Reproduction and Gynaecology

Email: mahaksinghivri@gmail.com, smileymahak@gmail.com.



2. Research Article

SI No.	Article	NAAS
1.	Singh M , Ghosh S K, Prasad J K, Kumar A, Ramteke S S, and Bhure S K. (2013). Heparin binding proteins of buffalo bull seminal plasma and their relationship with semen freezability. <i>Indian Journal of Animal Sciences</i> . 83(7): 700-704. http://krishi.icar.gov.in/jspui/handle/123456789/64760	6.23
2.	Singh M , Ghosh S K, Prasad J K, Kumar A, Tripathi R P, Bhure S K and Srivastava N. (2014). Seminal PDC-109 protein vis-a vis cholesterol content and freezability of buffalo Spermatozoa. <i>Animal Reproduction Science</i> . 144: 22-29. DOI: 10.1016/j.anireprosci.2013.10.016 ; http://krishi.icar.gov.in/jspui/handle/123456789/64803	7.82
3.	Singh M , Ghosh S K, Prasad J K, Kumar A, Ramteke S S, Srivastava N, Rajoriya J and Bhure S K. (2014). Isolation, characterization and quantitation of heparin binding protein and PDC-109 protein from buffalo bull semen. <i>The Indian Veterinary Journal</i> . 91(02): 27-29. http://krishi.icar.gov.in/jspui/handle/123456789/64761	6.0
4.	Singh M , Ramteke S S, Ghosh S K, Prasad J K and Rajoriya J. (2013). Efficacy of egg yolk from three avian species on semen freezability of Tharparkar bull. <i>The Indian Journal of Animal Reproduction</i> . 34(02): 25-28. http://krishi.icar.gov.in/jspui/handle/123456789/64762	3.23
5.	Singh M , Barik N C, Ghosh S K, Prasad J K, Rajoriya J S, Kumar Y, Kumar A, Chaudhary J K and Srivastava N. (2015). Egg yolk powder an alternative to fresh-egg yolk for buffalo (<i>Bubalus bubalis</i>) semen cryopreservation. <i>Indian Journal of Animal Sciences</i> . 85(1): 40-42. http://krishi.icar.gov.in/jspui/handle/123456789/64870	6.23
6.	Ghosh S K, Singh M , Prasad J K, Kumar A and Rajoriya J S. (2013). Uterine torsion in bovines-a review. <i>Intas Polivet</i> . 14(I): 16-20. http://krishi.icar.gov.in/jspui/handle/123456789/64763	4.23
7.	Kumar A, Mehrotra S, Singh G, Dangi S S, Singh M , Kumar Y and	5.39

	Mahla A S. (2012).Amylase activity in cervical mucus and serum during estrus in normal and repeat breeder cattle. <i>Veterinary World</i> . 5(8) : 486-488. doi: 10.5455/vetworld.2012.486-488	
8.	Rajoriya J S, Prasad J K, Ghosh S K, Perumal P, Kumar A, Kaushal S and Singh M . (2013). Effects of seasons on enzymatic changes and cholesterol efflux in relation to freezability in Tharparkar bull semen. <i>Asian Pacific Journal of Reproduction</i> . 2(4): 280-288. https://doi.org/10.1016/S2305-0500(13)60163-3 ; http://krishi.icar.gov.in/jspui/handle/123456789/64765	
9.	Kumar A, Mehrotra S, Singh G, Dangi S S, Kumar H, Singh M , Kumar Y and Binsila B K. (2013). Faecal estrogen as an indicator of pregnancy and viability of conceptus in buffaloes. <i>The Indian Veterinary Journal</i> . 90 (3) : 32-34. http://krishi.icar.gov.in/jspui/handle/123456789/64766	6.0
10.	Srivastava N, Srivastava S K, Ghosh S K, Kumar A, Jerome A, Singh M , Kumar A and Ramteke S. (2015).Cryoinjury in relation to cholesterol content of bull spermatozoa. <i>Indian Journal of Animal Research</i> . 49(3) : 308-312. DOI: 10.5958/0976-0555.2015.00140.5 ; http://krishi.icar.gov.in/jspui/handle/123456789/64767	6.44
11.	Rajoriya J S, Prasad J K., Ghosh S K, Ramteke S S, Barik N C, Singh M , Kumar A, Das G K and Kumar K. (2018) Effect of cholesterol loaded cyclodextrin (CLC) on post-thaw semen quality of buffaloes. <i>The Indian Journal of Veterinary Research</i> .27 (2): 39-44. http://krishi.icar.gov.in/jspui/handle/123456789/64812	
12.	Rajoriya J S, Prasad J K, Ghosh S K, Kumar A, Ramteke S S, Singh M and Sandeep (2015).Effect of peak winter and summer season on quality and freezability of Tharparkar bull semen. <i>Indian Journal of Animal Research</i> . 49(2) : 265-268. DOI: 10.5958/0976-0555.2015.00073.4 ; http://krishi.icar.gov.in/jspui/handle/123456789/64768	6.44
13.	Kumar A, Mehrotra S, Singh G, Narayanan K, Das GK, Soni YK, Singh M , Mahla AS, and Srivastava N. 2015. Sustained delivery of exogenous melatonin influences biomarkers of oxidative stress and total antioxidant capacity in summer stressed anoestrous water buffalo (<i>Bubalus bubalis</i>). <i>Theriogenology</i> . 83(9): 1402-1407. DOI: 10.1016/j.theriogenology.2014.12.023 ; http://krishi.icar.gov.in/jspui/handle/123456789/64804	8.30
14.	Kumar A, Mehrotra S, Singh G, Maurya V P, Narayanan K, Mahla A S, Chaudhari R K, Singh M , Soni YK, Kumawat B L, Dabas S K and Srivastava N. 2016. Supplementation of slow release melatonin improves recovery of ovarian cyclicity and conception in summer anoestrous buffalo (<i>Bubalus bubalis</i>). <i>Reproduction in domestic animals</i> . 51 (1): 10-17. DOI: 10.1111/rda.12639 ; http://krishi.icar.gov.in/jspui/handle/123456789/64805	7.64
15.	Rajoriya J S, Prasad J.K., Ramteke S.S., Perumal P., Ghosh S.K., Singh M , Pande M and Srivastava N. 2016. Enriching membrane cholesterol improves stability and cryosurvival of buffalo spermatozoa. <i>Animal</i>	7.82

	<i>Reproduction Science</i> . 164: 72-81. DOI: 10.1016/j.anireprosci.2015.11.014; http://krishi.icar.gov.in/jspui/handle/123456789/64806	
16.	Singh M. , Ghosh S.K., Prasad J.K., Das G.K., Kadirvel G., Avasthe R.K. and Kumar A. 2017. Effect of Melatonin on reproductive efficiency in goat during non breeding season. <i>Ruminant Science</i> . 5(2) : 247-251. http://krishi.icar.gov.in/jspui/handle/123456789/64769	5.01
17.	Singh M. , Islam R. and Avasthe R.K. 2017. Production performance of Vanaraja Birds under traditional tribal production system of Sikkim Himalayan Region. <i>International Journal of Livestock Research</i> . 7 (7) : 153-157. DOI- http://dx.doi.org/10.5455/ijlr.20170527064556; http://krishi.icar.gov.in/jspui/handle/123456789/64770	5.39
18.	Kumar A, Dewry RK, Singh R, Jat PC, Singh M and Kadirvel G. 2017. Pregnancy diagnosis in pigs using seed germination inhibition test: An evaluation study in Meghalaya. <i>Indian Journal of Animal Sciences</i> . 87(8) : 956-959. http://krishi.icar.gov.in/jspui/handle/123456789/64776	6.23
19.	Singh M. , Islam R. and Avasthe R.K. 2018. Factors affecting fertility, hatchability and chick survivability of Vanaraja birds under intensive rearing in sub-temperate condition. <i>Indian Journal of Animal Science</i> . 88(3) : 331-334. http://krishi.icar.gov.in/jspui/handle/123456789/64778	6.23
20.	Singh M. , Rajoriya J.S., Kumar A., Ghosh S.K. and Prasad J.K. 2018. Cryopreservation of buffalo (<i>Bubalus bubalis</i>) semen: Current status and future prospective. <i>Buffalo bulletin</i> . 37(2): 109-128. https://kuojs.lib.ku.ac.th/index.php/BufBu/article/view/42; http://krishi.icar.gov.in/jspui/handle/123456789/64783	6.28
21.	Baishya SK, Biswas RK, Kadirvel G, Deka BC, Sinha S and Singh M. 2018. Effect of reduced glutathione, water soluble vitamine E analogue and butylated hydroxytoluene on the post thaw characteristics of boar spermatozoa. <i>CryoLetters</i> . 39(4): 227-234. https://pubmed.ncbi.nlm.nih.gov/30963167/ ; http://krishi.icar.gov.in/jspui/handle/123456789/64784	6.69
22.	Baishya SK, Biswas RK, Kadirvel G, Deka BC, Sinha S and Singh M. 2018. Pre-freezing treatment with butylated hydroxytoluene and cholesterol-loaded methyl- β -cyclodextrin improves quality of cryopreserved boar semen. <i>CryoLetters</i> . 39(5): 336-344. https://pubmed.ncbi.nlm.nih.gov/30963166/ ; http://krishi.icar.gov.in/jspui/handle/123456789/64785	6.69
23.	Singh M. , Islam R. and Avasthe R.K. 2019. Socioeconomic Impact of Vanaraja Backyard Poultry Farming in Sikkim Himalayas. <i>International Journal of Livestock Research</i> . 9 (03) : 243-248. DOI- http://dx.doi.org/10.5455/ijlr.20181029045005; http://krishi.icar.gov.in/jspui/handle/123456789/64786	5.39
24.	Singh M , Sharma Ph R, Mollier R T, Ngullie E, Baisyha S K and Rajkhowa D J. 2019. Tribal farmers' traditional knowledge and practices of pig farming in Nagaland. <i>Indian Journal of Animal Science</i> . 89 (3):	6.23

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25.	Rajoriya J.S., Prasad J. K., Ramteke S. S., Perumal P., De A.K., Ghosh S. K., Bag S., Raje A., Singh M , Kumar A. and Kumaresan A. 2020. Exogenous cholesterol prevents cryocapacitation like changes, membrane fluidity and enhances in-vitro fertility in bubaline spermatozoa. <i>Reproduction in Domestic Animal</i> . 55: 726-736. DOI: 10.1111/rda.13674; http://krishi.icar.gov.in/jspui/handle/123456789/64811	7.64
26.	Kumar A., Prasad J. K., Singh M , and Rajoriya J.S. 2019. Addition of Cholesterol-Loaded Cyclodextrin Improves Cryosurvival of Buffalo Spermatozoa. <i>Veterinary Clinical Science</i> . 7 (4): 59-63. http://krishi.icar.gov.in/jspui/handle/123456789/64795	
27.	Singh M , Mollier R T, Sharma Ph. R. and Chaudhary J.K. 2020. Reproductive performance in cervical and postcervical artificial insemination (PCAI) with liquid boar semen in Gunghroo X Hampshire crossbreed pig in Nagaland. <i>Indian Journal of Animal Science</i> . 90 (5): 708-711. http://krishi.icar.gov.in/jspui/handle/123456789/64794	6.23
28.	Singh M , Mollier R T, and Sharma R. 2020. Reproductive attributes of Hampshire, Gunghroo, Large Black and Tenyi Vo (local Naga Pig) under intensive management system in subtropical condition of Nagaland. <i>Indian Journal of Animal Science</i> . 90 (6): 934-936. http://krishi.icar.gov.in/jspui/handle/123456789/64793	6.23
29.	Singh M , Ghosh S.K., Prasad J.K., Katiyar R, Das G.K., Dhara S.K., Islam R, Kadirvel G., Kumar A, Rajoriya J.S., and Verma M R. 2020. Single melatonin treatment improves reproductive performance of Singharey goats during non-breeding season under sub-tropical condition of North East India. <i>Small Ruminant Research</i> . 192, 106232. https://doi.org/10.1016/j.smallrumres.2020.106232 ; http://krishi.icar.gov.in/jspui/handle/123456789/64810	7.21
30.	Sharma Ph R, Singh M , Kumar P, Mollier R T and Rajkhowa DJ. 2020. Factors for adoption of artificial insemination technology in pig: Evidence from small-scale pig production system. <i>Tropical Animal Health and Production</i> .52: 3545-3553. https://doi.org/10.1007/s11250-020-02391-7 ; http://krishi.icar.gov.in/jspui/handle/123456789/64809	7.01
31.	Singh M , Mollier R T, Sharma Ph R, Kadirvel G, Doley S, Sanjukta R K, Rajkhowa D J, Kandpal B K, Kumar D, Khan M H and Mitra A. 2021. Dietary flaxseed oil improve boar semen quality, antioxidant status and in-vivo fertility in humid sub-tropical region of North East India. <i>Theriogenology</i> . 159: 123-131. https://doi.org/10.1016/j.theriogenology.2020.10.023 ; http://krishi.icar.gov.in/jspui/handle/123456789/64808	8.30
32.	Singh M and Mollier R T. 2020. Artificial insemination in pig, its status and future perspective in India: A review. <i>Indian Journal of Animal Science</i> . 90 (9): 1207-1212.	6.23

	http://krishi.icar.gov.in/jspui/handle/123456789/64792	
33.	Singh M , Mollier R T, Sharma Ph R, Baishya S K, Sangtam M and Rajkhowa D J. 2020. Growth and reproductive performance of Rani breed of pig in various agro-climatic condition of Nagaland. <i>Indian Journal of Animal Science</i> . 90 (12): 1644-1648. http://krishi.icar.gov.in/jspui/handle/123456789/64791	6.23
34.	Singh M , Mollier R T, Rajkhowa D J and Kandpal BK. 2021. Performance evaluation of the parents of the improved backyard poultry germplasm in sub-tropical condition of North Eastern Hill Region of India. <i>Tropical Animal Health and Production</i> . 53: 228. https://doi.org/10.1007/s11250-021-02681-8 ; http://krishi.icar.gov.in/jspui/handle/123456789/64807	7.23
35.	Singh M , Nungshitula Pongener, R.Talimoa Mollier, G.Kadirvel, M. Bhattacharjee, D.J.Rajkhowa and V.K.Mishra. 2021. Balance sheet of pork production and consumption in Nagaland: Implications for strengthening of pork value chain. <i>Indian Journal of Animal Science</i> . 91(4): 313-317. http://krishi.icar.gov.in/jspui/handle/123456789/64790	6.28
36.	Ph.Romen Sharma, Singh M , Pankaj Kumar Sinha, Bagish Kumar, R.Talimoa Mollier, and D.J.Rajkhowa. 2021. Understanding the intention to adopt artificial insemination technology in pig by tribal farmers. <i>Indian Journal of Animal Science</i> . 91(6):449-454. http://krishi.icar.gov.in/jspui/handle/123456789/64789	6.28
37.	Singh M , Nungshitula Pongener, R.Talimoa Mollier, G.Kadirvel, M. Bhattacharjee, D.J.Rajkhowa and V.K.Mishra. 2021. Livestock production in Nagaland: Nature and pattern of rising demand for livestock products. <i>Indian Journal of Animal Sciences</i> . <i>Accepted</i>	6.28
38.	Ramteke S S, Rajoriya J S, Shende A M, Ghosh S K, Prasad J K, Perumal P and Singh M . 2020. Effect of buffalo PDC-109 on caudal epididymal spermatozoa of bubaline species. <i>Indian Journal of Animal Sciences</i> . 90(12): 1584-1588. http://krishi.icar.gov.in/jspui/handle/123456789/64788	6.28
39.	Singh M , R.Talimoa Mollier, Nungshitula Pongener, J,K,Choudhary, Rakesh Kumar, D.J.Rajkhowa and V.K.Mishra. 2021. Effect of sow's parity and semen storage time on reproductive performance of pig after artificial insemination with liquid boar semen. <i>Indian Journal of Animal Sciences</i> . 91 (12):1027-1030. http://krishi.icar.gov.in/jspui/handle/123456789/64787	6.28
40.	R. Kumar , G. Kadirvel, G. Khargharia , S. Deori , S. Doley, M. Das , N. Uttam Singh , M. Singh and K.K. Baruah. 2022. Novel polymorphisms in GPX5 gene and their association with reproductive and productive traits in Lumsniang (Hampshire x Niang Megha) pigs under subtropical hilly region of Meghalaya. <i>Journal of Environmental Biology</i> . 43(3):	

3. Abstract :40

4. Book Chapter:25

5. Technical bulletins/Training Manual:7

1. Ashok Kumar, G.Kadirvel, **Mahak Singh**, P.K.Bharti, Suresh Kumar D.S., Gautam Khagaryia, A.S.Panwar, A.K.Mohanty, Arnab Sen and S.V.Nagachan. 2016. Assam Hill Goat-Pride of North Eastern Indai. Technical bulletin published by ICAR-ICAR Research Complex for NEH Region, Umroi Road, Umiam, Meghalaya-793103.P1-35.
2. Baishya LK, Rajkhowa DJ, Prakash N, Barman J, Sharma Ph.R,Walling I, Seyie A, **Singh M**, Rajesha G, Yanthan AW, Verma H and Bordoloi LJ. 2018. Recent achievements of ICAR Nagaland Centre. Published by Joint Director, ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema, Nagaland. 1-52.
3. P.L.Lalringsanga, Rajesha G, **Mahak singh**, Azeze Seyie, A.W.Yanthan, J.Barman, P.R.Sharma and P.Mawthoh. 2016. Stakeholder meet on agriculture development and agromet advisory services in Nagaland. 21st November, 2016.
4. **Mahak Singh**, Rajesha G. and D.J.Rajkhowa. 2018. Training Compendium on Development of Agri-entrepreneurship in NEH Region: A way for doubling the farmer's Income published by Joint Director, ICAR Research Complex for NEH Region, Nagaland centre, Medziphema-797106, Nagaland during ICAR sponsored 10 days short course from 27th November 2018 to 06th December 2018, p 1-203.
5. **Singh M**, Rajesha G, Azeze Seyie, Hazrika S, Rajkhowa DJ and Kandpal BK. 2021. Alternate Livelihood development for food and nutritional security of tribal farmers of Thanamir village of Kiphire district in Nagaland:A success story of TSP project n aspirational district of Nagaland. Published by Joint Director, ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema, Nagaland. P1-20.
6. **Singh M**, R.Talimoa Mollier, Nungshitula Pongener, Rakesh Kumar, D.J.Rajkhowa and V.K.Mishra. 2021. Modern Livestock Production Technologies for Doubling the Farmer's Income in North Eastern Hill Region of India. Published by Joint Director, ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema-797106, Nagaland, India, pp1-44.
7. **Singh M**, R.Talimoa Mollier, D.J.Rajkhowa and V.K.Mishra. 2021. Livestock Entrepreneur: Success Stories of Modern Livestock Production Technologies in Nagaland. Published by Joint Director, ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema-797106, Nagaland, India, pp1-60.

6. Extension Folders:12

1. **Singh M**, Avasthe R K, Babu S and Kumar B. 2014. Vanaraja: Meat and egg type colored bird for backyard poultry farming. SKM/EF/2014/15 by ICAR Research Complex for NEH Region, Sikkim Centre, Tadong, Gangtok-737102, Sikkim.
2. Kumar B, **Singh M**, Singh N and Verma S. 2014. Mastitis-causes, symptoms, management and treatment. SKM/EF/2014/15 by ICAR Research Complex for NEH Region, Sikkim Centre, Tadong, Gangtok-737102, Sikkim.

3. Kumar B, **Singh M**, Singh N, and Verma S. 2014. Retention of fetal membranes.SKM/EF/2014/15 by ICAR Research Complex for NEH Region, Sikkim Centre, Tadong, Gangtok-737102, Sikkim.
4. **Singh M**, Avasthe R K, and Kumar B. 2015. Scientific Goat Husbandry: A sustainable livelihood option in Sikkim. SKM/EF/2015/11 by ICAR Research Complex for NEH Region, Sikkim Centre, Tadong, Gangtok-737102, Sikkim
5. Kumar B., Avasthe R K, **Singh M**, Handique S., Singh N. and S.Verma. 2015. Profitable dairy farming in Sikkim. SKM/EF/2015/10 by ICAR Research Complex for NEH Region, Sikkim Centre, Tadong, Gangtok-737102, Sikkim
6. **Singh M**, Mollier R T, Sharma P R and Rajkhowa D J. 2017. Artificial insemination in pig: a way to quality piglet production in Nagaland. RCN/EF/2017/01 by ICAR Nagaland Centre.
7. **Singh M**, Limasenla and Rajkhowa D J. 2017. Srinidhi: Egg type colored bird for rural poultry farming. RCN/EF/2017/02 by ICAR Nagaland Centre.
8. **Singh M**, R.Talimoa Molier, Velilu Epao and D.J.Rajkhowa. 2018. Naga Lima Nung Ak Mela Zuntsu Asoshi Yimya Tasen ka (Artificial Insemination in pigs: a new way for rapid scaling-up of pig production in Nagaland- in Ao tribe dialect).RCN/EF/AS/2018/01 by ICAR Nagaland Centre.
9. **Singh M**, R.Talimoa Molier, Velilu Epao and D.J.Rajkhowa. 2018. Srinidhi: Naga Lima Asoshi Entsu Aika Akuba An Tapet Ka (Srinidhi: A well suited versatile layer bird for Nagaland- in Ao tribe dialect).RCN/EF/AS/2018/02 by ICAR Nagaland Centre.
- 10.**Singh M**, Velilu Epao, R.Talimoa Molier and D.J.Rajkhowa. 2018. Srinidhi: Thevu-u Kimheidi Perileta (Srinidhi: Dual purpose poultry for backyard farming- in Angami tribe dialect).RCN/EF/AS/2018/03 by ICAR Nagaland Centre.
- 11.**Singh M**, Velilu Epao, R.Talimoa Molier and D.J.Rajkhowa. 2018. Artificial Insemination: Nagaland Nu Thevo Yie Chu Pekra Ketuo (in Angami tribe dialect).RCN/EF/AS/2018/04 by ICAR Nagaland Centre.
- 12.**Singh M**, Ph.Romen Sharma, R.Talimoa Molier, I.Walling, Nungshitula Pongener and D.J.Rajkhowa. 2020. Murgi Palia Srinidhi aru Vanaraja jat (in Nagameese). RCN/Pub./Ext.Lit/2020/20 by ICAR Nagaland Centre.

9. Popular Article/ Success Story:22

1. Bhutia K L, **Singh M**, Kumar B, Singh N, and Avasthe R K. (2015). Yak husbandry: An animal of natural choice for the highlanders. *CAU Farm Magazine*. **5(1)**: 37-39.
2. **Singh M**, Mollier R T and Rajkhowa D J. 2017. Artificial insemination in pig: a way to bridge the supply demand gap of superior quality pig in Nagaland. MORUNG EXPRESS. 3rd March 2017.
3. **Singh M**, Mollier R T, Sharma Ph.R. and Rajkhowa D J. 2018. Artificial insemination of pig for farmers in Nagaland. MORUNG EXPRESS. 5th January 2018.

4. Ngullie E, **Singh M**, and Limasenla. 2018. Brooding management in chicks. MORUNG EXPRESS. 02th February 2018.
5. **Singh M**, Mollier R T, Rajesha G, Ngullie A M, Rajkhowa D J, Rajkumar U, Paswan C and Chatterjee R N. 2018. Backyard poultry with Vanaraja and Srinidhi: proven technology for doubling the tribal farmers' income in Nagaland. *Indian Farming*. **68(01)**: 80-82. <http://krishi.icar.gov.in/jspui/handle/123456789/68066>.
6. **Singh M**. 2017. Backyard Poultry farming with Vanaraja and Srinidhi brings food and nutritional security to tibal's of Nagaland. Published on ICAR website. <https://icar.org.in/content/backyard-poultry-farming-vanaraja-and-srinidhi-brings-food-and-nutritional-security-tribal%E2%80%99s>
7. **Singh M**. 2018. Artificial Insemination in pig: Boosting the quality piglets production in Nagaland. Published on ICAR website. <https://icar.org.in/content/artificial-insemination-pig-boosting-quality-piglets-production-nagaland>
8. **Singh M**, Mollier R.T, Ngullie E, Sharma Ph.R and Rajkhowa D.J. 2018. Artificial Insemination technology in pig empowered the tribal farmer of Nagaland. Published on KIRAN website. http://www.kiran.nic.in/AI-Pig_Nagaland.html
9. **Singh M**, Mollier R.T, Ngullie E, Sharma Ph.R and Rajkhowa D.J. 2018. Artificial insemination in pig: Technology for boosting pig production in Nagaland. Published in The Morung Express on 06.07.2018.
10. Short video film on Artificial Insemination in Pig produced by ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema, October 11, 2018. <https://www.youtube.com/watch?v=CFiUIMWGaNA&t=33s>
11. **Singh M**, Mollier R.T, Ngullie E, and Rajkhowa D.J. 2019. African swine fever: Looming threat to Indian pig industry Published in The Morung Express on 05.07.2019.
12. **Singh M**, Patra M.K., Mollier R.T, Ngullie E, and Rajkhowa D.J. 2019. Artificial Insemination in Pig: Technology for producing quality piglets in Nagaland. *Indian farming*. **69 (07)**: 31-32. <http://krishi.icar.gov.in/jspui/handle/123456789/68067>
13. **Singh M**, Sharma Ph.R, Barman J., Mollier R.T and Rajkhowa D.J. 2019. Short video film on Artificial Insemination in pig: A farmer's perspective (Nagamese) produced by ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema, April 9, 2019. https://www.youtube.com/watch?v=mN_NSg9nqHc&t=123s
14. **Singh M**, Mollier R.T and Rajkhowa D.J. 2020. A way forward for revitalizing pig farming in Nagaland. *Indian Farming*. 70(6): 23-26. <http://krishi.icar.gov.in/jspui/handle/123456789/68065>
15. **Singh M**, Pongener N, Mollier R.T, and Rajkhowa D.J. 2020. Pork processing and marketing: A sunrise enterprise in Nagaland. *Indian Farming*. 70(7): 29-30. <http://krishi.icar.gov.in/jspui/handle/123456789/68068>
16. **Singh M**, Mollier R.T, Pongener N, and Rajkhowa D.J. 2021. Artificial insemination in pigs: An entrepreneurial success in Nagaland. Morung Express. Friday 05.03.2021.

17. Kumar R, Sinha PK, Doley S, Deori S, Kadirvel G, Das M, Puro K, Singh V, **Singh M**, Vankher JBM, Barua KK and Kandpal B. 2021. Adivasi kisano ke liye upyogi murgipalan (in Hindi). *Kheti*. 74(02): 23-25.
18. Singh M, R.Talimoa Molliert, Nungshitula Pongener and Ph. Romen Sharma. 2021. Artificial insemination in pig for enhancing the pig productivity in North Eastern Hill region. *Indian Farming*. 71(02):20-22. <http://krishi.icar.gov.in/jspui/handle/123456789/68069>
19. **Singh M**, Nungshitula Pongener, R Talimoa Mollier and D J Rajkhowa. 2021. Dairy Farming in Nagaland An Emerging Enterprise. *Indian Farming*: 71(2): 23-24. <http://krishi.icar.gov.in/jspui/handle/123456789/68070>
20. Rekha Yadav and **Mahak Singh**. 2021. Zabo farming: a traditional wisdom of tribal farmers for natural resource management in Phek district of Nagaland. *Indian Farming*. 71 (08): 09-10. <http://krishi.icar.gov.in/jspui/handle/123456789/68071>
21. Video on Backyard poultry farming with improved germplasm (Vanaraja and Srinidhi) by ICAR Nagaland centre <https://www.youtube.com/watch?v=UV2H5LzMqEE>
22. Mahak Singh, R.Talimoa Mollier, Nungshitula Pongener, R.N.Patton. 2022. Improving pig productivity in Nagaland: Technology of Fixed Time Artificial Insemination in Pig. *Morung Express*, 7th January 2022.

10.Conferences/Seminar/ Symposia/ Annual Review Meeting:19

1. International Livestock and Dairy Expo 2008, 22-24 August 2008, ITPO, Pragati Maidan, New Delhi.
2. International symposium on Biotechnologies for optimization of reproductive efficiency of farm and companion animals to improve global food security and human health and XXVI annula convention of ISSAR, November 10-12, 2010, GBPUA&T, Pantnagar-263145, Utrakhand (India).
3. National symposium on reproductive biotechnologies for augmenting fertility and conservation of animal species with special reference to North Eastern hilly region and XXVII Annual convention of ISSAR held on September 27-29, 2011 at COVS & AH, CAU, Selesih, Aizawl, Mizoram.
4. National symposium on addressing animal reproductive stresses through biotechnological tools and XXVIII annual convention of the ISSAR, November 21-23, 2012, COVS, AAU, Khanapara Guwahati-22, Assam.
5. National symposium on emerging trends in biotechnology research for sustainable animal health and productivity and XIX annual convention of Indian society for Veterinary Immunology and Biotechnology, 8-10 April, 2013 at IVRI, Izatnagar, Bareilly.
6. Workshop on Organic Animal Husbandry. Organized by department of animal husbandry livestock, fisheries, and veterinary services, Sikkim on 27th to 28th September, 2014.

7. Brain storming session on animal genetic resources of Sikkim. Organized by department of animal husbandry, Sikkim in collaboration with NBGAR, Karnal on 19th November, 2014.
8. International symposium on current challenges and translational research to augment animal reproduction, 4-5 December, 2014, Madras Veterinary College, Chennai.
9. Attended one day workshop on preparation of roadmap for Organic Animal Husbandry on 31-10-2015 organised by Sikkim Organic Mission (SOM) at SAMETI Bhavan, Govt. of Sikkim.
10. National symposium on reproductive biotechnologies for augmenting fertility and conservation of animal species with special reference to North Eastern hilly region and XXXI Annual convention of ISSAR held on December 3-5, 2015 at Veterinary College, Bengaluru.
11. Attended Brainstorming Workshop on “Rearing of Mithun under Free-Range Forest Ecosystem: Present Scenario and Way Forward” on 18th March 2017.
12. Attended meeting on “**Development of piggery value chain ecosystem for cooperative sector in the North East Region**” at Shillong on 22-11-2018 organised by National Cooperative Development Corporation and ICAR-NRC-Pig.
13. Attended **International Conference on Climate Change, Biodiversity and Sustainable Agriculture (ICCBSA-2018)** held at Assam Agricultural University, Jorhat, Assam from 13th to 16th December 2018.
14. Attended and presented poster in **XIV Agricultural Science Congress** held at NASC, Puar New Delhi from 20th to 23rd February 2019.
15. Attended **National workshop on Biosecurity for Effective Management of Emerging Infectious Diseases of Pigs in NER** organized by ICAR-National Research Centre on Pig, Rani, Guwahati on 23rd March, 2019.
16. Presented paper in XXXV Annual Convention of The Indian Society for Study of Animal Reproduction and International Symposium on Global perspectives to enhance livestock fertility through modern reproductive techniques for doubling farmer’s income organized by department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Namakkal, TANUVAS, from 18 to 20 December 2019.
17. Participated in Preconference Workshop in XXXV Annual Convention of The Indian Society for Study of Animal Reproduction and International Symposium on Global perspectives to enhance livestock fertility through modern reproductive techniques for doubling farmer’s income organized by department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Namakkal, TANUVAS, from 18 to 20 December 2019.
18. Attended 1st Interface launching workshop – meeting under National Agriculture Science Fund Project titled “Pork Marketing chains in North East India for

Sustainable Livelihood of Tribal Women (Assam, Meghalaya and Nagaland)” on 16-03-2020 at ICAR Research Complex for NEH Rgion, Umiam Meghalaya.

19. Participated in two days **National Workshop** on Scope and opportunities of crop diversification in rice fallow in NEH Region during 5-6 October organized by ICAR Research Complex for NEH Region, Nagaland Centre.

11.Awards/ Honours:16

1. Merit scholarship during 5th year of B.V.Sc. and A.H. by CoVSC, CCSHAU, Hisar during 2009-10.
2. IVRI Institutional fellowship during M.V.Sc. 2010-2012.
3. **Young Scientist award-2012** for best oral paper presentation by ISSAR at Khanapara, Guwahati, Assam, 2012.
4. **S.N. Luktuke Gold Medal-2012** for extempore by ISSAR at Khanapara, Guwahati, Assam, 2012.
5. 1st rank in Ph.D. entrance examination of IVRI-2012 in division of animal reproduction.
6. ICAR-SRF with fellowship for Ph.D 2013.
7. CSIR-UGC NET-2012 (23rd Rank)
8. ICAR NET -2012 with 75% marks.
9. 1st rank in ARS-2012 in the discipline of Animal Reproduction and Gynaecology.
10. **Young Scientist Award-2014** by ISSAR-2014 at Mathura (Co-author).
11. **G.B. Singh Memorial award-2015** by The Indian Society for Study of Animal Reproduction (ISSAR) for best research paper entitled “ Seminal PDC-109 protein vis-à-vis cholesterol content and freezability of buffalo spermatozoa” published in Animal Reproduction Science (144); 22-29, 2014.
12. **Certificate of excellence** in Reviewing by International Journal of Livestock Research for the year 2015.
13. **Certificate of Appreciation** by Director, ICAR-Directorate of Poultry Research, Hyderabad for outstanding performance made by the Poultry Seed Project during the year 2017-18.
14. **Fist position** in oral presentation at International Conference on Climate Change, Biodiversity and Sustainable Agriculture (ICCBSA-2018) held at Assam Agricultural University, Jorhat, Assam from 13th to 16th December 2018
15. **Rapporteur in the scientific session of XXXV** Annual Convention of The Indian Society for Study of Animal Reproduction and International Symposium on Global perspectives to enhance livestock fertility through modern reproductive techniques for doubling farmer’s income organized by department of Veterinary Gynaecology and Obstetrics, Veterinary College and Research Institute, Namakkal, TANUVAS, from 18 to 20 December 2019.
16. **Best Scientist Award-2021** of ICAR Research Complex for NEH Region, Umiam, Meghalaya.

12.Member of the Scientific Society:5

1. Indian Society for the study of Animal Reproduction, 2011.
2. Indian Society for the Advancement of Canine Practices, 2011.
3. Haryana Veterinary Council, 2010.
4. Veterinary Council of India, 2014.
5. Indian Association of Hill Farming, 2017

13. Member of the Board/ Council/ Institute Committee

1. **Member** of Board of Management of Division of Animal Reproduction, IVRI, for 2013-2014.
2. **Vice President** of Student Council of IVRI in the year 2013-2014.
3. Member of the **Farm Advisory Committee** for the development of experimental farm of the centre including Krishi Vigyan Kendra of ICAR RC for NEH Region, Sikkim Centre from 18th March 2015 onwards wide office order No. SKM/Estt8/2015/1564.
4. Member of the **Standing Construction Works Committee** for the construction/repairing works of the centre including Krishi Vigyan Kendra of ICAR RC for NEH Region, Sikkim Centre from 1st April 2015 onwards wide office order No. SKM/Estt-8/2015-16/08.
5. Member of the **Research Farm Committee** of ICAR RC for NEH Region, Sikkim Centre from 5th June 2015 onwards.
6. Chairman **Price Fixation Committee** ICAR Nagaland Centre from 15th June 2016.
7. Member of **Scientific Expert Committee** of the GKMS project of ICAR Nagaland Centre from 18-01-2017.
8. In-charge Scientist home, ICAR Nagaland Centre from 26th August 2016 to 14th February 2018.
9. Editor, Newsletter of ICAR Research Complex for NEH Region, Nagaland Centre, Medziphema, Nagaland from 28th October 2018.
10. Member of Technical Advisory Committee for Operationalization of Artificial Insemination (AI) Project and Pig Breeding Policy in Nagaland. Department of Animal Husbandry and Veterinary Services. Government of Nagaland. Dated 26th July 2017.
11. Member of the Expert Committee on Animals and Fisheries, **Nagaland State Biodiversity Board**, Nagaland, Kohima for the year 2020-2021.