



**Dr. Santanu Banik, BVSc., MVSc., Ph D. (AG&B)  
Principal Scientist (Animal Genetics and Breeding)**

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<b>Publications</b>	Total no. of Research Paper : 83 Total no. of Books/Manual : 15 No. of patent granted (G) /filed (F) : 4 (F) Copyright granted (G) /filed (F) : 2(G) Policy Document : 6
<p><b>Experience with research interest:</b>          Dr. Santanu Banik have more than 16 years of experience in the field of Animal Genetics and Breeding. Besides coordinating 15 centres of AICRP on Pig as Scientist Incharge, he is involved in evaluation, characterization and conservation of indigenous pig germplasm, development of crossbred pig varieties, image-based identification of individual/breed through IT interventions and formulation of pig breeding policies for different States. He executed several external projects funded by DBT, ICAR, MeitY and NEC.</p>	
<p><b>Top 10 Publications (in the format):</b></p> <ol style="list-style-type: none"> <li>1. <b>Banik S.</b> and Gandhi R.S. 2006. Animal model versus Conventional Methods of sire evaluation in Sahiwal cattle. <i>Asian Australasian Journal of Animal Science</i>. 19 (9):1225-1228.</li> <li>2. <b>Banik S.</b> and Gandhi R.S. 2007. Effectiveness of DFREML versus conventional methods of Sahiwal sire evaluation. <i>Indian Journal of Animal Sciences</i>. 77(11): 1143-1147.</li> <li>3. <b>Banik S.</b> and Gandhi R.S. 2010. Sire evaluation using single and multiple trait animal models in Sahiwal cattle. <i>Indian Journal of Animal Sciences</i>. 80 (3): 269 – 270.</li> <li>4. <b>Banik S.</b> and Naskar S. 2006. Effect of different non-genetic factors on replacement rate and its components in Sahiwal cattle. <i>Indian Journal of Animal Sciences</i>. 76 (4): 343 – 345.</li> <li>5. <b>Banik S.</b>, Naskar S. and Gandhi R.S. 2017. Swine Genetic Resources of India, Directorate of Knowledge Management in Agriculture Indian Council of Agricultural Research New Delhi 110012 (ISBN: 978-81-7164-171-0).</li> <li>6. <b>Banik, S.</b>, Naskar, S., Pankaj, P.K., Sahoo, N.R., Tamuli, M.K. and Das, A. 2012. Effect of different body measurement on body weight of pre-weaning Ghungroo pigs – a path analysis approach. <i>Indian Journal of Animal Sciences</i>. 82 (9):1094-1097.</li> <li>7. Chakraborty, S., Karthik, K. and <b>Banik, S.</b> 2020. Investigation on the Muzzle of a Pig as a Biometric for Breed Identification. <i>Advances in Intelligent Systems and Computing</i> 1022. 3<sup>rd</sup> International Conference on Computer Vision and Image Processing (CPIV 18), Bangalore, India, 2017, pp. 71-83. (<a href="https://doi.org/10.1007/978-981-32-9088-4_7">https://doi.org/10.1007/978-981-32-9088-4_7</a>)</li> <li>8. Chutia, T., Biswas, R.K., Tamuli, M.K., Deka, B.C., Sinha, S., Goswami, J., <b>Banik, S.</b>, and Kayastha, R.B. 2014. Effect of holding of semen and washing of seminal plasma on quality and fertility of Hampshire boar semen preserved at liquid state. <i>Animal Reproduction Science</i>. 145(3-4):141-149.</li> <li>9. Mandal, S.N., Ghosh, P., Mukherjee, K., Dan, S., Mustafi, S., Roy, K., Hajra, D.K. and Banik, S. 2020. InceptGI: a ConvNet-Based Classification Model for Identifying Goat Breeds in India. <i>Journal of The Institution of Engineers (India): Series B</i>. (<a href="https://doi.org/10.1007/s40031-020-00471-8">https://doi.org/10.1007/s40031-020-00471-8</a>).</li> </ol>	

10. Singh, A.K., Naskar, S., Saikia, B., Vashi, Y., Gupta, S., Banik, S. Tamuli, M.K., Pande, V., Sarma, D.K. and Dhara, S. K. 2016. Effect of testicular tissue lysate on developmental competence of porcine oocytes matured and fertilized in vitro *Reproduction in Domestic Animals* (<https://DOI.10.1111/rda.12875>).

#### **Technologies developed**

1. Rani Crossbred pig variety-A New Crossbred Pig for Multiplier
2. Asha Crossbred Pig Variety-A New Crossbred Pig for Finisher Producer
3. Technology of growth band for early selection of indigenous pigs
4. Technology for Individual identification of pig by auricular venation pattern
5. Technology for predicting pre-weaning body weight of pigs using heart girth
6. Technology for National/State level Pig Breeding Plan formulation
7. Technology for Individual identification of goat by iris image (applied for patent)
8. Technology for Pig/Goat Breeds Identification by Whole Body Contour Segmentation
9. A Portable Free Standing Small-Animal Restraining Tool (applied for patent)
10. Pig Restraining Tool (applied for patent)
11. Copyright software Epig and Igoat (for biometry based individual identification)
12. Mobile applications (4 nos) – SwineApp, SwineAppHindi, African Swine Fever App, African Swine fever Hindi App
13. Indigenous pig breed characterization and registration (2 nos) – Mali and Purnea
14. Integrated housing system for organized pig farm of 30 sow unit

#### **Awards**

1. **DBT's Overseas Associateship** for North Eastern Region (NER) award of DBT (2011-12)
2. **First best Oral presentation** award during Golden Jubilee celebration of Assam Agricultural University and International Seminar on 'Animal agriculture for doubling farmers' income: technology, policy and strategy options' (February 27-28<sup>th</sup>, 2019) at CVSC, AAU, Khanapara.
3. **Best poster award** for at National Conference on "Opportunities and Strategies for Sustainable Pig Production" (20-21st December, 2014), Organized by ICAR-National Research Centre on Pig, Rani, Guwahati, Assam.
4. **Best poster award** for in National Seminar on "New Dimensional Approaches for Livestock Productivity and Profitability Enhancement under Era of Climate Change" & XXI Annual Convention of Indian Society of Animal Production & Management. College of Veterinary Science & Animal Husbandry, Anand Agricultural University, Anand- 388001 (Gujarat). 28-30 January, 2014.
5. **Best poster award** In XI National Symposium on Harmonizing phonemics and genomics for sustainable management of livestock for upliftment of rural masses. Society of Domestic Animal Biodiversity. National Bureau of Animal Genetic Resources. Karnal, Haryana. February 6-7<sup>th</sup> 2014.
6. **Best poster presentation** in XI Annual Convention of Indian Society of Animal Genetics and Breeding and National Conference on New Horizon in Animal Breeding Technology for Accelerating Livestock Production and Health. January 20-21<sup>st</sup> 2011. IVRI, Bareilly, UP.

#### **Membership of professional society:**

- Indian Society of Animal Genetics and Breeding –Life member (**Executive Member**)
- Indian Science Congress Association –Life member
- Society For Conservation of Domestic Animal Biodiversity–Life member
- Indian Society of Animal Production and Management–Life member