

A. Background:

The Department of Agricultural Statistics has been established as a separate and independent Department in Uttar Banga Krishi Viswavidyalaya since the inception of the Viswavidyalaya on 1st February, 2001 with a view to giving agricultural – cum – horticultural – cum – social science students and the future researchers of our University a statistical background so that they can correctly choose and apply themselves independently the most appropriate statistical technique to setting up their own research programmes and the subsequent analysis as well as drawing valid inferences of the research data to be accrued there-from in future in a much more meaningfully and pertinently correct way.

B. Functions:

The main functions of the Department are as follows:

- To teach different courses on Agricultural Statistics to UG and PG students (within and from the outside Departments) of the Viswavidyalaya
- To carry on research works in different branches of Statistics
- To guide efficiently the students of advance courses offered by the Department for ICAR-conducted All India JRF entrance examination for admission to M.Sc in Agricultural Statistics course each year at IASRI, an Institute of international repute since the creation of the Department in the year 2003
- To act as Chairman of the Advisory Committee of M.Sc students and Ph.D students of the Department
- To act as Member of the Advisory Committee of M.Sc students and Ph.D students of the Department as well as the outside Departments of the Viswavidyalaya
- To assist M.Sc students/ PhD scholars, research Fellows and teachers of various Departments in setting up their own research programmes, subsequent analysis as well as in the inferential interpretation of the research data to be accrued there from in future from the statistical point of view .
- To carry on with the 5- year duration DST-FIST Infrastructural Development Project (DST-FIST, Govt. Of India sponsored) having been run by the Department from the year 2003 onwards as well as to submit the Annual Reports along with Fund Utilization Certificate to the Department of Science & Technology, Govt. of India.

- To take part actively in the implementation of the Student Programme of the Viswavidyalaya every year.
- To take part actively in various developmental programmes of the University.

C. Teaching:PG Level:

Ph.D teaching and research programmes have been going on in the Department from the academic session 2012-13 and the Department has started Master's teaching and research programmes from the academic session 2014-15.

a) Field of specialization for M.Sc. and Ph.D.:

- i) Sample Survey
- ii) Forecasting and Statistical Modelling
- iii) Design of Experiments
- iv) Remote sensing
- v) Econometrics

b) **Post- graduate courses:**

(i) For the students of M. Sc.(Ag.) in Agricultural Statistics only			
Course No.	Course-Title	Credit Hour	Remarks
STAT 551	MATHEMATICAL METHODS-I	3+0	
STAT 552	MATHEMATICAL METHODS-II	2+0	
STAT 560	PROBABILITY THEORY	2+0	
STAT 561	STATISTICAL METHODS	2+1	
STAT 562	STATISTICAL INFERENCE	2+1	
STAT 563	MULTIVARIATE ANALYSIS	2+1	
STAT 564	DESIGN OF EXPERIMENTS	2+1	
STAT 565	SAMPLING TECHNIQUES	2+1	
STAT 566	STATISTICAL GENETICS	2+1	
STAT 567	REGRESSION ANALYSIS	1+1	
STAT 568	STATISTICAL COMPUTING	1+1	
STAT 569	TIME SERIES ANALYSIS	1+1	
STAT 572	ECONOMETRICS	2+0	
STAT 575	DEMOGRAPHY	2+0	
STAT 591	MASTER'S SEMINAR	1+0	
STAT 599	MASTER'S RESEARCH	20+0	

ii) For the students of M. Sc. and Ph.D programmes of other disciplines under Faculty of Agriculture and Faculty of Horticulture both			
Course No.	Course-Title	Credit Hour	Remarks
STAT 501	STATISTICAL METHODS FOR RESEARCH WORKERS	2+1	
FOR-513	GENERAL STATISTICAL METHODS AND RESEARCH METHODOLOGY	1+1	Offered by Department of Forestry
FOR-511	COMPUTER APPLICATION AND INFORMATION TECHNOLOGY	0+1	Offered by Department of Forestry
iii) For the students of Doctoral Degree programmes in Agricultural Statistics only			
Course No.	Course-Title	Credit Hour	Remarks
STAT 601	ADVANCED STATISTICAL COMPUTING	2+1	
STAT 602	SIMULATION TECHNIQUES	1+1	
STAT 611	ADVANCED STATISTICAL METHODS	2+0	
STAT 612	ADVANCED STATISTICAL INFERENCE	3+0	
STAT 613	ADVANCED DESIGN OF EXPERIMENTS	2+0	
STAT 614	ADVANCED SAMPLING TECHNIQUES	2+0	
STAT 615	ADVANCED STATISTICAL GENETICS	2+0	
STAT 616	STATISTICAL MODELING	1+1	
STAT 617	ADVANCED TIME SERIES ANALYSIS	2+0	
STAT 618	STOCHASTIC PROCESSES	2+0	
STAT 621	ADVANCED ECONOMETRICS	2+0	
STAT 691	DOCTORAL SEMINAR I	1+0	
STAT 692	DOCTORAL SEMINAR II	1+0	
STAT 699	DOCTORAL RESEARCH	45+0	

c) **UG Level:** The different UG Courses as per IVth and Vth Deans' committee recommendation are listed below:

(i) Compulsory courses			
Course No.	Title	Credit Hours	Semester
AST-151	Fundamentals of Statistics-I	1+1	2 nd
AST-152	Elements of Computer Application	1+1	2 nd
AST-201	Fundamentals of Statistics-II	1+1	3 rd
(ii) Elective Courses: Social Science Module			
AST-401	Mathematics	2+0	7 th
AST-403	Designing Field Experiments	2+1	7 th
AST-404	Sample Survey Techniques in Agriculture	2+1	7 th
(iii) UG course as per Vth Deans' committee recommendation			
AST-101	Elementary Statistics	1+1	1 st
AST-102	Elementary Mathematics	2+0	1 st
AST-201	Agri-Informatics and Computer Application.	1+1	3 rd
AST-202	Fundamentals of Statistical Methods.	2+1	3 rd

D. Research Activity:

- Areas of research:** Applied fields of Econometrics, Statistical Modeling and Forecasting, sample survey, remote sensing and GIS, Design of Experiment.
- On-going research projects

Sl.No	Name of the Project	Faculty associated	Capacity
1.	Modelling Area, Production and Productivity of Rice at Cooch Behar District	Dr.S. Basak	PI
2.	Sustainable Resilient Farming System Intensification in Eastern IGP.	Dr.A. Ghosh	Co-PI
3.	Building of data base on Agriculture and	Dr.A. Ghosh	PI

	allied activities for policy formulation: A study on Terai Districts of West Bengal		
4.	Development of DUS standards using morphometrics and molecular markers in local cultivars of potato collected from different districts of West Bengal	Dr. M.K.Debnath	Co-PI
5.	Identification of suitable cropping system for Terai and Old Alluvial Zone of West Bengal under up and medium upland situation	Dr. M.K.Debnath	Co-PI
6.	FORECASTING AGRICULTURAL OUTPUTS USING SPACE, AGROMETEOROLOGY AND LAND BASED OBSERVATIONS (FASAL)".	Dr. D. S. Gupta	Co-PI

E. Extension activities:

a) Teachers are attached with several multidisciplinary research and extension mode projects running in the University and funded by different sponsoring agencies. Under the mandate of those projects teachers are extensively involved in farmer's training, on farm trial, data collection, Socio Economic Survey, Focus Group Discussion (FGD), Farmer's Training/Meeting and statistical analysis and interpretation of the data acquired from the village level farmers' fields.

F. Infrastructural and Support Facilities available:

- a) PG Computer Lab and LAN connectivity in the Department (DST-FIST sponsored)
- b) For advanced level statistical data analysis to benefit the teachers and scientists within and outside the Department of Agril. Statistics at UBKV, Statistical Software like SAS, SPSS and R have been installed in the computers housed in the PG computer laboratory.
- c) UG computer Lab
- d) Seminar –cum-PG classroom
- e) UG Class room

G. Faculty and staffs:

a) Head of the Department: Dr. DEB SANKAR GUPTA

b) Faculty

Sl. No	Name	Specialisation	Contact address
1	Dr. Deb Sankar Gupta (Professor and Head)	Design and Sample survey, Reliability and Survival function Analysis.	Mob.09434685759 Email: dsguptaubkv@gmail.com
2	Dr. Manoj Kanti Debnath (Assistant Professor)	Probability Theory, Design of experiment and Remote Sensing and GIS, Biometrics.	Mob.08670937121 Email: mkanti1984@gmail.com
3	Dr. Sankalpa Ojha (Assistant Professor)	Design of Experiments, Statistical Modeling	Mob:9662107466 Email: sankalpa.stat@gmail.com
4	Dr. Satyananda Basak (Professor)	Design of Experiments	Mob.09474572393 Email: satyabasak@rediffmail.com
5	Dr. Arunava Ghosh (Professor)	Forecasting and Modelling	Mob.09433318102 Email: arunava_ubkv@yahoo.co.in

c) Staffs

Sl.No	Name	Designation	Contact address
1	Sri Mrinal Kanti Sen	Superintendent(Tech.)	Mob. 09434102954
2	Sri Ratan Sarkar	Cash Sarkar	Mob. 09734136212
3	Moumita Saha	Jr. Peon	Mob. 09735007954

H. Publications:

Sl. No	Title	Author's Name	Journal	NAAS Rating/ impact factor
1.	Fuzzy time series forecasting of oil seeds production in India.	G. S. Shiva, D. S. Gupta , M. K. Debnath and S. S. Das	RASHI	----
2.	On partial rank set sampling in parameter estimation of lognormal distribution.	Girish Chandra, N. Tiwari, R. Nautiyal and D. S. Gupta	International Journal of Agricultural and Statistical Sciences.	5.13
3.	Ecological Impact of MGNREGA: An assessment through villagers' perception in Cooch Behar district of West Bengal.	Guha A, A. Hanglem, P.K. Pal, Dr. D.S. Gupta and G. Mazumder	Journal of Agriculture and Technology	----
4.	Microbial Biomass and Activity in relation to Accessibility of Organic Carbon in Saline Soils of Coastal Agro-ecosystem,.	Shovik Deb, Biswapati Mandal, P. B. S. Bhadoria, Elke Schulz, Subhadip Ghosh, Manoj Kanti Debnath(2016) .	Proceedings of the National Academy of Sciences, India Section B: Biological Sciences.88(2) :633-643	-
5.	Dynamics of organic carbon in deep soils under rice and non-ricecropping systems.	Shovik Deb, Somsubhra Chakraborty, David C. Weindorf, Arjun Murmu, PabitraBanik,	Geoderma Regional.7 (2016) 388–394.	-

		Manoj Kanti Debnath, Ashok Choudhury. (2016).		
6.	Nonlinear modelling of rice leaf folder infestation on Boro rice in Pundibari (A part of Cooch Behar district)	Satyananda Basak, Soumitra Sankar Das and Satyabrata Pal	Journal of Entomology and Zoology studies	5.53
7.	Modelling annual average global temperature incorporating 2015 Datum	Satyabrata Pal , Arunava Ghosh, Goutam Mandal, Asim Kumar Chakraborty and Satyananda Basak	Ecology, Environment and Conservation	ISSN 0971–765X
8.	An expository review on optimum shape and size of plots and Blocks	Satyabrata Pal; Ayanendranath Basu; Asim Kumar Chakraborty; Goutam Mandal; Satyananda Basak; Subhabaha Pal; Arunava Ghosh	Asian Academic Research Journal of Multidisciplinary	ISSN : 2319 - 2801
9.	Characterization of Research Nodes : An Integrative Approach Through Indexing	Das, K.K., Bhattacharya, P.M., Ghosh, A. , Dhar, T., Pradhan, K., Chowdhury, A.K., Joshi, P.K. and Ghathala, M	International Journal of Bio-resource and Stress Management. 7(5):1083-1092	4.65
10.	Effect of edible coatings for enhancing shelf-life and quality in Ber (<i>Zizyphus mauritiana</i> Lam k.) fruits	Dutta, P., Dey, K., Ghosh, A., Bhowmik, N. and Ghosh, A	Journal of Applied and Natural Science. 8 (3): 1421 – 1426	4.84

11.	Effect of sulphur fertilization on different forms of sulphur under mustard cultivation in an acid soil of terai region of West Bengal.	Rakesh,K., Banik,G.C., Ghosh, A. and Sarkar, D	Research on Crops,17 (2) : 248-252.	4.75
12.	Women Participation in Small Sector Tea Cultivation in North Bengal Areas in India.	Ghosh, A., Pal, P.K., Ghosh,A. Mondal, S. and Saha, B.	International Journal of Humanities and Social Sciences, 5(4): 115-122.	3.17
13.	Influence measures in blocked designs of experiments with correlated errors	L. Bhar and S. Ojha	Communications in Statistics-Theory and Methods	6.31
Book Chapter				
1.	Livelihood diversity in family farming: An exploration from the sub-Himalayan district of West Bengal, India. (In) <i>Family Farming: Challenges and Opportunities</i> edited by B. Mondal, B. Sarkar, S.D. Mukhopadhyay, S. Ghosh, B. C. Roy and S. Chowdhury (ed). PP-414-420.	Guha A, A. Hanglem, P.K. Pal and D.S. Gupta	Renu Publishers, New Delhi.	-

I. National/International symposium/Training/Seminar attended and organized:

Sl. No.	Seminar, Symposium, Conference, Training and Winter/ Summer/ Refresher course/ short course	Faculty associated	Date	Venue	Attended/ Organized
1.	CAFT on Application of Advanced Statistical Tools in Agricultural Research (ASTRA). Sponsored by ICAR	Dr. D. S. Gupta	8-28 th Nov' 2016	University of Agricultural Science, Dharwad	Attended
2.	CAFT on Advances in Statistical Modeling and Forecasting in Agriculture	Dr.M. K. Debnath	23 rd Dec, 2016-12 th Jan, 2017	Indian Agricultural Statistics Research Institute (IASRI), New Delhi	Attended
3.	Designing and Analysis of Cropping System Experiments	Prof. S. Basak	7-27 th Sept., 2016	Indian Agricultural Statistics Research Institute (IASRI), New Delhi-12	Attended

J. Doctoral Thesis completed

Sl.No.	Title	Year	Author	Chairman Name
1.	Dynamic modular representation of pest and disease growth of potato and rice in <i>Terai</i> region of West Bengal	2016	Soumitra Sankar Das	Prof. Satyananda Basak
2.	Modelling of biomass of some dominant forest species and estimation of carbon storage in a semi-arid region of India	2017	Dibyendu Deb (A-2012-17-D)	Prof. (Dr.) Arunava Ghosh

K. Master Degree thesis completed

Sl.No.	Title	Year	Author	Chairman Name
1	A comparative study on the pattern of rainfall distribution using some competing probability distribution in Coochbehar district of West Bengal	2016	Rakesh Kumar Meena	Prof. Satyananda Basak

L. Member of different academic societies:**a) Dr. D.S. Gupta**

- i) Life time member of “Indian Society of Agricultural Statistics” IASRI, Pusa, NewDelhi.
- ii) Life time member of “Crop and Weed Science Society” B.C.K.V. Mohanpur, Nadia, West Bengal.
- iii) Life time member of “COBACAS, UBKV, Pundibari, West Bengal.
- iv) Founder Member of Society for Application of Statistics in Agriculture and Allied Sciences (SASAA).

b) Dr. Manoj Kanti Debnath

- i) Life Member of Indian society of Remote Sensing, Dehradun.
- ii) Founder Member of Society for Application of Statistics in Agriculture and Allied Sciences (SASAA).

c) Dr. Arunava Ghosh

- i) Life time member of “Crop and Weed Science Society” B.C.K.V., Mohanpur, Nadia, West Bengal.
- ii) Founder Member of Society for Application of Statistics in Agriculture and Allied Sciences (SASAA).

M. Any other activities:**i) Activities of Dr. D.S. Gupta**

- a) Member of Administrative body: Have been acting as Member of Faculty Council (F/Ag) and Member of Academic Council,UBKV
- b) Member of Advisory Committee for both at PG and PhD level students: Have been acting as member of Advisory Committee for both at PG and PhD level students of different departments
- d) Research reports submitted: Under the Project entitled “FORECASTING AGRICULTURAL OUTPUTS USING SPACE, AGROMETEOROLOGY AND LAND BASED OBSERVATIONS (FASAL)”.

ii) Activities of Dr. M.K. Debnath

a)Member of Administrative body:

- Member of Faculty Council (F/Ag)
- Nodal officer for all purpose of scholarship

b) Member of Advisory Committee for both at PG and PhD level students: Have been acting as member of Advisory Committee for both at PG and PhD level students of different departments.

iv)Activities of Dr. Arunava Ghosh

a) Member of Advisory Committee for both at PG and PhD level students: Have been acting as member of Advisory Committee for both at PG and PhD level students of different departments.

v) Activities of Dr. S. Basak

a) Research reports submitted: A Study on some important rainfall characteristics of RRS, Pundibari.

.....