Proforma for faculty Profile

1			
2	Name	**Prof. S. K. Biswas, M.Sc & Ph. D. in Plant Pathology (IARI, New Delhi), DSMM (Chennai), AKI (OSU, USA)**	
3	Date of birth	17/01/1972	
4	Designation	Professor, Joint Director Research & Dean Co-ordinator	
5	College Department	**Department of Plant Pathology,** College of Agriculture C. S. Azad University of Agriculture & Technology Kanpur - 208 002, Uttar Pradesh, India E-mail: samirkrbiswas@rediffmail.com Ph.: 09452522504 (M) Fax: 0512-2533808	
6	Contact Info.	Office Details Department of Plant Pathology, College of Agriculture C.S.A.University of Agriculture & Technology, Kanpur - 208 002, Uttar Pradesh, FAX : 0512-2533808	Personal Details Flat No. T-1, Siddharth Villa (Phase II), 7/17 Tilak Nagar, Kanpur 208002 Ph. 0512-2557641 M. 09452522504 E-mail: samirkrbiswas@rediffmail.com
7	Year of joining at CSAUA&T	Date: 05	Month: 03 / Year: 2002
8	Date of last promotion	Date Month Year From: 1st July, 2013 to continuing	
9	Responsibilities Assigned	Teaching: Since 2002 to till date.	Classes: B. Sc. (Ag) — No. of course: 02 M. Sc. (Ag) — 05 Ph. D. — 05
		Student Guided :	M.Sc.(Ag) : 31 Ph.D : 09 completed, 08 continuing
		Research : Since 2002	i.Externally Funded Project : As PI : 05, As Co-PI : 04

		to till date	ii.Departmental Project	: 10
		Extension : Since 2002 to till date	Time to time providing Training to farmers on Mushroom Cultivation.	33
			Radio Talk on "Major diseases of rice and their management" (15th July, 2009)	01
			Participated in Kishan Mela and Kishan Ghosti from 2002 to till time	06
			Advisory to Farmers/students/others regarding mushroom and mushroom farming	10
			Advisory to Farmers regarding crop protection	15
		Others (specify)	In-charge Mushroom Research & Development Centre	02.07. 2014 to con tinuing
			Dean Co-coordinator	27.01.2015 to Continuing
			Joint Director Research	17.03.2020 to continuing
			Game President	2015 to2016
			Hostel Warden	11.08.2004 to 2017
			Game councillor	2008 to 2016
			Nodal Officer (Technical)	(4 months)

10	Awards received			
		Name	**Agency**	**Year**
		Young Scientist Award – 2003"	Uttar Pradesh Council of Agricultural Research, Lucknow	2003
		P. R. Verma Award for best Ph. D. Thesis (Commendation certificate).	Indian Society of Mycology and Plant Pathology, Udaipur, Rajasthan	2003
		Received M. K. Patel Memorial Award – 2011	Indian Phytopathological Society, New Delhi	2011
		"Excellence in Teaching Award 2014"	Astha Foundation, Meerut , India	2014

"Young Scientist Associate Award – 2016"	Bioved Research Institute of Agriculture, Technology & Sciences, Allahabad.	2016
"Distinguished Scientist Award -- 2016"	Astha Foundation, Meerut , India	2016
SPPS Meritorious Scientist Award 2017	Society of Plant Protection Sciences, ICAR-NCIPM, LBS Centre, Pusa Campus, New Delhi	2017
Outstanding Achievment Award -- 2017"	Astha Foundation, Meerut	2017
Outstanding Achievement Award -- 2018" **in Plant Pathology**	Society for Scientific De velopment in Agriculture & Technology.	2018
Award of Excellence 2018	CS Azad University of Agriculture & Technology, Kanpur	2018
Dr. Akhtar Husain Distinguished Agricultural Scientist Award (PP) 2016-17"	**UPAAS, (UPCAR) Lucknow (Received on 14.06.2019).**	2019
Best Teacher Award"	**National Education Empowerment & Development Foundation (NEEDEF) (Received on**	2019
"Outstanding Scientist Award 2019" **in the 2nd International Scientist Award**	**VDGOOD at Visakhapatnam (Received on 16.11.2019).**	2019
CSAU Certificate of Appreciation 2019 " in the area of Research Publication .	*71th Republic Day, 2020* CS Azad University of Agriculture & Technology, Kanpur 208002.	2020
Bharat Ratna Rajiv Gandhi Gold Medal Award -2021"	**Global Economic Progress and Research Association at Bangalore on 27.02.2021.**	2021
Excellence Award in Plant Pathology-2021"	**National Education Brillant Award at Jaipur on 20.03.2021.**	2021
Poster Award		

		Best Poster Award- 1st	Indian Phytopathological Society, New Delhi - MEZ held at CSAUA&T, Kanpur	2011
		Best Poster Award 1st	Society for Scientific Development in Agriculture & Technology, Meerut - National Conference, Prof. Jayashankar Telangana State Agricultural University, Rajendranager, Hyderabad (Telangana).	2016
		Best Poster Award- 1st	***National Conference at*** CSAUA&T, Kanpur	2017
		Best Poster Award- 1st	International Conference at Rajasthan Agricultural Research Institute, Durgapura, Jaipur	2018
		Best Poster Award- 1st	National Seminar at Bihar Agricultural University, Sabour, Bhagalpur, Bihar.	2018
		Best Poster Award 3rd Prize	*National Conference at* CSAUA&T, Kanpur	2017
		International Award		
		Name	Agency	Year
		Agriculture Knowledge Initiatives (AKI) Scholar	Indo-US Agriculture Knowledge Initiatives work-plan	2008
11	Publications since joining CSAUA&T	Items		Number
		Books:		04
	(give numbers only)	Technical Bulletins:		00
		Review Articles:		00
		Research Papers:		135
		National:		111
		International:		14
		Popular articles:		10
		Others (specify):		
		Practical manual		02
		Book Chapter		19
12	Books published	Title	Authors	Publisher / Year of Publication

		Sustainable disease management of agricultural crops. (pp 1 – 405.	Biswas, S. K. and Singh, S. R.	Daya Publishing House, New Delhi ,	2010
		Organic Farming and management of Biotic stresses" Pp 1 – 662.	Biswas, S. K. and Samir Pal	Biotech. Book Publishers, New Delhi,	2014
		Important diseases of pulse crop and their sustainable management. Pp 1 -551.	S. K. Biswas, Santosh Kumar and Girish Chandra (2015).	Biotech. Book Publishers, New Delhi.	2015
		Objectives Master Blaster of Plant Pathology (For JRF, SRF, NET, ARS etc.) . Pp 1 - 511.	Prof. S. K. Biswas, Arshad Husain, Shivam Kumar and Dr. Kishan Lal (2021).	Biotech. Book Publishers, New Delhi. (ISBN : 978-81-7622-489-5)	2021

13	Technical bulletins published	Title Authors Publisher Year of Publication	Nil			
14	List of ten best papers published in National Journals (>5 NAAS rating Journals) during last	Title	Year	Author(s)	Journal with volume & page number	NAAS Journal ID/Rating
		Biochemical changes in wheat induced by Chaetomium globosum against spot blotch pathogen.	2003	Biswas, S. K., Srivastava, K. D., Aggarwal, R., Praveen, S. and Singh, D. V.	Indian Phytopathology, 56(4):374 – 379.	5.90

Characterization of antifungal metabolites of Chaetomium globosum Kunze and their antagonism against fungal plant pathogens.	2012	Biswas, S. K., Aggarwal, Rashmi, Srivastava, K. D., Sangeeta Gupta and Prem Dureja	Journal of Biological Control, 26(1) : 70-74	5.34
Influence of date of sowing on occurrence of spot blotch and yield of wheat varieties in eastern Uttar Pradesh.	2010	Biswas, S.K. and Srivastava, S. S. L.	Indian Phytopathology 63(2):203 – 206.	5.90
Evaluation of Chaetomium globosum as an inducer of resistance against spot blotch pathogen of wheat	2002	Biswas, S. K., Srivastava, K. D., Aggarwal, R. and Singh, D.V. (2002).	Indian Phytopath. 55(4): 510-512.	5.90
Induced Resistance in Potato against Late Blight Caused by *Phytophthora infestans* (Mont.) De Bary, Through Calcium Chloride.	2017	Surjeet Kumar, **S. K. Biswas,** Virendra Kumar, Kishan Lal, Anuj Bansal and V. Tilak Chowdary	*Int.J.Curr. Microbiol. App.Sci* . *6*(8): 410-417	5.38
Induced Resistance in Potato against Early Blight Caused By *Alternaria solani* (Sorauer) Through Plant Extracts as Inducer.	2017	Virendra Kumar, S. K. Biswas, Kishan Lal, Devash Nagar and V. Tilak Chowdary	*Int.J.Curr. Microbiol. App.Sci* (2017) *6*(8): 1888-1898	5.38

		Biochemical evidence of defence response in plant induced by bio-agents against brown leaf spot pathogen.	2008	Kumawat, G. L., Biswas, S. K. and Srivastava, S. S. L.	Indian Phytopathology, 61(2): 197-203.	5.90
		Effect of biotics, abiotic and botanicals inducers on crop growth and severity of brown spot in rice.	2010	Biswas, C., Srivastava, S. S. L. and Biswas, S. K. (2010).	Indian Phytopathology, 63(2): 187 – 191.	5.90
		Evaluation of antibiotics in combination with chemicals for management of bacterial blight of paddy [Xanthomonas oryzae pv oryzae(Ishiyama) Dye]	2009	Biswas, S. K., Rai, M. and Srivasatva, S. S. L.	Indian Phytopathology, 62(1): 126-128.	5.90
		Evidences of variable response to spot blotch in different wheat varieties.	2015	S. K. Biswas, P. K. Sahu, Javed Bahar, Amarendra Kumar, Santosh Kumar and Charul Kanchan (2015).	The BioScan, 10(4): 1695-1699.	5.26
		Impact of Bio-Fertilizers for the Management of Spot Blotch Disease and Growth and Yield Contributing Parameters of Wheat.	2015	Biswas, S. K., Uma Shankar, Santosh Kumar, Amarendra Kumar, Virendra Kumar and Kishan Lal	Journal of Pure and Applied Microbiology, 9(4) : 3025-3030	5.00

	List of ten best papers published in National Journals (>3 NAAS rating	Title	Year	Author(s)	Journal with volume & page number	NAAS Journal ID/Rating

	Journals) during last 10		Biochemical changes associated with induction of resistance by Trichoderma spp. in paddy against brown spot disease.	2010	Biswas, C., Srivastava, S. S. L. and Biswas, S. K. (2010).	Indian Phytopath. 63(3) : 269 - 272.	5.90
			Influence of seed treatment with biocides and foliar spray of fungicides for management of brown leaf spot (Drechslera oryzae) and sheath blight (Rhizoctonia solani) of paddy.	2008	Biswas, S. K., Ratan, V., Yadav, R. and Srivastava, S. S. L. (2008).	Indian Phytopathology, 61(1): 55-59.	5.90
			Effect of organic amendment on population of soil micro flora and soil borne diseases.	2011	Mohd. Rajik, Pathak, S.P., Biswas, S.K. and Naresh, P. (2011).	Indian Phytopathology, 64 (3): 280-285	5.90
			Sustainable integrated approach for management of early blight and their effect on crop growth parameters in tomato.	2016	Yogesh Mishra, S. K. Biswas, Kishan Lal, Prem Naresh, Amlan Sushree and Narendra Kumar (2016).	The Bio Scan.11 (1): 133-139	5.26
			Agro-ecologically disease management approach of late blight of potato with plant extracts.	2015	Devesh Nagar, S.K. Biswas, Ravindra Singh, Morajdhwaj Singh, Jaskaran Singh, Virendra Kumar and Kishan Lal	The BioScan, 10 (4): 1849-1854.	5.26

		Development of suitable package using bio-fertilizers for management of late blight of potato under climate change.	2016	Morajdhwaj Singh, Biswas, S.K., Kishan Lal, Devesh Nagar, Jaskaran Singh and Prem Naresh (2016).	Journal of Pure and Applied Microbiology, 10(1) : 761 – 768.	5.00
		Epidemiological studies of late blight of potato [Phytophthora infestans (Mont.) be Berry] and its correlation with disease severity.	2013	S. K. Biswas, Ajay Rawat and Praveen Kumar (2013).	J. Mycopathol. Res. 51(2):235-242.	4.90
		Resistance to wheat spot blotch induced by crude extract of Chaetomium globosum and mildly virulent strain of Drechslera sorokiniana.	2011	Biswas, S. K., Srivastava, K. D. and Biswas, C. (2011).	J. Mycopathol. Res. 50(2): 267-271	4.90
		Integrated disease management approaches for control of late blight of potato and enhancing the growth of potato.	2018	Sumit Kumar, S. K. Biswas and H. G. Prakesh (2018).	*Journal of Biological Control*, 32(4): 264-269, DOI: 10.18311/jbc/2018/17890	5.34
		Integrated effect of oil cakes, bio-agents and nematicide on root knot nematode and root nodulation in lentil..	2016	Prem Shankar, Prem Naresh, S.K. Biswas Santosh Kumar, Amarendra Kumar, and Erayya (2016).	Journal of Pure and Applied Microbiology, 10(4) : 2949-2955.	5.00

			Molecular and antagonistic variability of Trichoderma atroviride against legume crop pathogen in Uttar Pradesh.	2013	Anuradha Singh , Mohd Shahid, Mukesh Srivastava and S. K Biswas (2013).	Internatio nal Journal of Bio-resource and Stress Managem ent. 4(4):582-587.	4.65
16	List of ten best publication in International Journals during last 10 years (ISI impact factor)		Title	Year	Author(s)	Journal with volume & page number	NAAS Journal ID/Rati ng
			Slow wilting component in pigeonpea (Cajanus cajan (L.) Millsp.)	2010	Sinha, Parimal and Biswas, S. K. (2010).	European Journal of Plant Pathology, 128 (4) : 503-509.	7.49
			Biochemical evidences of defence response in tomato against Fusarium wilt induced by plant extracts.	2012	Kahkashan Arzoo, Samir Kumar Biswas and Mohd. Rajik (2012).	Plant Pathology Journal 11 (2) 42-50.	7.29
			Variable disease response to spot blotch in different wheat varieties and it assessment at biochemical and genetics level.	2016	Biswas, S. K., Md. Rajik, Muneeshwa r Sharma, Prem Naresh, Upesh Kumar, Kishan Lal and Ravindra Singh (2016).	Plant Pathology Journal, 15 (2): 57-64.	7.29
			Synthesis of Defense Enzymes in Potato in Induced Resistance against Late Blight using Inorganic Chemicals as Inducer.	2017	Rakesh Kumar, Samir Kumar Biswas, Virendra Kumar, Kishan Lal, Upesh Kumar and Vallabhaneni Tilak Chowdary	*Plant Pathology Journal*, 16 (3-4): 130-137.	7.29

Inductions of defense response in tomato against Fusarium wilt through inorganic chemicals as inducers.	2012	Biswas, S. K., Pandey, N. K. and Mohd. Rajik (2012).	Journal of Plant Pathology & Microbiology, 3 (4): 1-7	0.42 (impact factors) 4.68 (Index Copernic us value)
Biochemical basis of defense response in plant against Fusarium wilt through bio- agents as an inducers.	2012	Mohd. Rajik and S.K. Biswas (2012).	African J. of Agril. Research, Vol. 7(43), pp. 5849-5857,13	0.263 (impact factors as per internatio nal Journal
Variability in morphology and biochemical constituents in Wheat germplasm with special reference to spot blotch.	**2018**	Surdeep K Verma, S K Biswas, Virendra Kumar, Kishan Lal, Santosh Kumar, Javed Bahar and Charul Kanchan	*Bangladesh J. Bot.* 47(4): 855-862,	**6.21**
Induced synthesis of defense molecules in tomato (*solamum lycopercicum* l.) Against fusarium wilt through plant extracts.	**2019**	**Samir Kr Biswas,** H.G. Prakesh, Ram Palat and Javed Bahar (2019).	*Bangladesh J. Bot.* **48**(1): 169 - 175.	**6.21**
Evaluation of inducers in systemic acquired resistance for management of brinjal Phomopsis blight.	**2020**	Surender Kumar, ***Samir Kumar Biswas**, Har Gyan Prakesh and Devendra Pratap Singh (2020).	*Plant Pathology Journal*, **19** (1):54-65	**7.29**
Biochemical mechanism of resistance to Alternaria blight in different varieties of wheat.	2011	Mishra, V. K., Biswas, S. K. and Mohd. Rajik (2011).	Internatio nal Journal of Plant Pathology, 2 (2): 72-80.	

		Sustainable Integrated Approach for Management of Fusarium Wilt of Tomato Caused by Fusarium oxysporum f. sp. lycopersici (Sacc.) Synder and Hansen.	2015	Ravindra Singh, S. K. Biswas, Devesh Nagar, Jaskaran Singh, Morajdhwaj Singh & Yogesh Kumar Mishra (2015).	Sustainable Agriculture Research, 4 (1) : 138 – 147.	
		Biochemical changes in relation to brown leaf spot (Drechslera oryzae) resistance in different rice genotypes.	2015	K. Bisen, S. K. Biswas, Virendra Kumar, Kishan Lal, Rakesh Kumar and Nand Kumar	Journal of Plant Studies. 4 (2) : 81-91	
		Induced Synthesis of Defense Enzymes during Induced Resistance against Early Blight of Potato Using Plant Extracts as Inducer.	***2017***	Virendra Kumar, **S. K. Biswas,** V. Tilak Chowdary, Kishan Lal and Prem Naresh (2017).	*Journal of Scientific Research & Reports. 16(1): 1-11*	***4.44 ISSN: 2320-0227***

17	Membership of the Professional Societies	1. Life Member of Indian Phytopathological Society, New Delhi-110012 2. Life Member of Society of Plant Protection Sciences, New Delhi-110012 3. Life Member of Indian Mycological Society, University of Calcutta, Kolkata 4. Life member of Indian Society of Mycology and Plant Pathology, Udaipur. 5. Life member of Indian Society for Scientific Development in Agriculture & Technology, Meerut. 6. Life Member of Uttar Pradesh Academy of Agricultural Sciences, Lucknow, U.P. 7. Life Member of Bioved Research Institute of Agriculture, Technologies & Sciences, Allahabad.
18	Conference/Seminar/ Symposium attended in the last 10 years (Name/Place/Year)	

Name	Place	Year	Work
2nd International Conference	Prof. Jayashankar Telangana State Agricultural University, Hyderabad	2015	Lead Lecture Presentation

		National Conference	Rajmata Vijayaraje Scindia Krishi Viswa Vidyalaya, Gwalior	2015	Lead Lecture Presentation
		National Conference	Prof. Jayashankar Telangana State Agricultural University, Rajendranager, Hyderabad (Telangana)	2016	Lead Lecture Presentation
		International Conference	Rajasthan Agricultural Research Institute, Durgapura, Jaipur, Rajasthan.	2018	Lead Lecture Presentation
		National Conclave	CSA University of Agriculture & Technology, Kanpur 208002.	2019	Lead Lecture Presentation
		59th Annual Meeting and National Symposium of Indian Phytopathological Society	Department of Biological Science, Rani Durgavati University, Jabalpur – 482001	2007	Invited Lecture
		National Conference	Institute of Agricultural Sciences, Banaras Hindu University, Varanasi	2010	Invited Lecture
		Mid-eastern Zonal symposium	C.S.A.U.A.& T. Kanpur	2011	Invited Lecture
		18th Indian Agricultural Scientists & Farmers'	Bioved Research Institute of Agriculture, Technology and Sciences, Allahabad,	2016	Invited Lecture
		12th National symposium	Uttar Pradesh Krishi Viswa Vidyalaya, Pundibari, Cooch Behar	2017	Invited Lecture
		Invited lecture in College	S.N.Sen Balika Vidyalaya P. G. College, Kanpur	2017	Invited Lecture
		12th National Symposium	Uttar Banga Krishi Viswa Vidyalaya, Pundibari, Coach Bihar, West Bengal	2017	Invited Lecture

		KVK Scientist training programme	Directorate of Extension, CSA University of Agriculture & Technology, Kanpur 208002.	2018	Invited Lecture
		Student training programme under CAAST project	CSA University of Agriculture & Technology, Kanpur 208002.		Invited Lecture
		Training programme under CAAST project	Home Science Department, CSA University of Agriculture & Technology,		Invited Lecture
		National Conference	Directorate of Rice Research, Rajendranagar, Hyderabad	2014	Poster presentation

19	Conference/Seminar/ Symposium organized as President/Co-ordinator/Secretary (Name/Place/Year)	Name	Place	Year
		Organized Mid-eastern Zonal symposium on "Sustainable crop protection in changing agriculture Scenario" as Zonal Councillor of Indian Phytopathological Society.	C.S.A. University of Agriculture and Technology, Kanpur.	2011

20	Foreign Countries visited	Country	Year	Purpose
		Ohio State University, Columbus, USA	2008	Indo-US Agriculture Knowledge Initiatives work-plan entitled "Teaching and Learning Excellence: A Capacity Building Model".

21 Training Organized in the last 5 years

A. Summer School /Winter School

1. Training on "The role of secondary metabolites produced by Trichoderma spp. in the management of diseases" was conducted at Department of Plant Pathology, CSA University of Agriculture & Technology, Kanpur from 23rd February to 22nd April, 2010.
2. Training on "Isolation of antifungal metabolites from bio-agent & its role in diseases management" held at Department of Plant Pathology CSA University of Agriculture & Technology, Kanpur from 19th August to 18th October, 2010.
3. Training on "Extraction of secondary metabolites from bio-agent & its role in diseases management" held at Department of Plant Pathology CSA University of Agriculture & Technology, Kanpur from 12th August to 11st November, 2011.

		Topic	**Duration & Date**
		Cultivation of Mushroom	08 - 13 September, 2014
		Cultivation of Mushroom	10 -15, November, 2014
		Cultivation of Mushroom	12 – 17 January, 2015
		Cultivation of Mushroom	09 – 14 February, 2015
		Cultivation of Mushroom	27th July - 01st August,
		Cultivation of Mushroom	24th – 29th August, 2015
		Cultivation of Mushroom	05th –10th October, 2015
		Cultivation of Mushroom	04-09 January, 2016
		Cultivation of Mushroom	08-13 February, 2016
		Cultivation of Mushroom	25 July -30 July, 2016
		Cultivation of Mushroom	26 – 31 August, 2016
		Cultivation of Mushroom	23–28 September, 2016
		Cultivation of Mushroom	15–20 November, 2016
		Cultivation of Mushroom	01–06 December, 2016
		Cultivation of Mushroom	26–31 January, 2017
		Cultivation of Mushroom	13–18 February, 2017
		Cultivation of Mushroom	24- 29th July, 2017
		Cultivation of Mushroom	21- 26th August, 2017
		Cultivation of Mushroom	11–16thSeptember, 2017
		Cultivation of Mushroom	06–11thNovember, 2017
		Cultivation of Mushroom	04–09thDecember, 2017
		Cultivation of Mushroom	29.01.18–3.2.18, 2018
		Cultivation of Mushroom	27.8.18–1.9.2018
		Cultivation of Mushroom	24.9.18 - 29.9.18
		Cultivation of Mushroom	12.11.18 - 17.11.18
		Cultivation of Mushroom	03.12.18 - 8.12.18
		Cultivation of Mushroom	28.1.19 – 2.2.19
		Cultivation of Mushroom	26.8.19 - 31.8.19
		Cultivation of Mushroom	16.9.19 – 21.9.19
		Cultivation of Mushroom	4.11.19 – 9.11.2019
		Cultivation of Mushroom	2.12.19 - 7.12.19
		Cultivation of Mushroom	20.01.20-25.01.20
		Cultivation of Mushroom	15.02.21 – 20.02.21
		Cultivation of Mushroom	22.03.21 – 27.03.21
22	Training attended in the last 5 years	Training on Formulation of Winning Competitive Grants Proposal" conducted by U.P. Council of Agricultural Research, Lucknow during December, 09 – 13, 2013.	

23	Externally funded projects handled (Title/Agency/Duration/Amount)	Title	Funding agency	Year	Amount (Lakh)
		Establishment of bio-control Laboratory (As Co-PI)	National Horticulture Mission & UPCAR	2009-11	80.00
		Plant disease Clinic. (As Co-PI)	National Horticulture Mission & UPCAR	2009-11	19.0

		Evaluation of different fungicides on bio-efficacy and phytotoxicity against major diseases of chilli and tomato (Early Blight and Late Blight) (As PI)	Indofil Chemical Company, Mumbai	2011-12	6.00 Lakhs
		Design and development of Autonomous Robot for Crop Monitoring and Localised Pest Neutralisation	DST Sponsored (In collaboration with IIT, Kanpur)	2020-21	Rs. 196 lakh

24	List of Current research projects	Name Funding Agency	Amount Sanctioned
		DST Sponsored (In collaboration with IIT, Kanpur)	Rs. 196 lakh
25	Patents held	Title/Year- Nil	
26	Varieties/Technologies developed in the last 10 years	1. Five IPM modules developed, base on occurrence of diseases, crop rotation, cropping system, soil types, socio-economic status etc. for management of chickpea wilt at different places of Uttar Pradesh. 2. Applications of inorganic chemicals, secondary metabolites, plant extract and bio-agents as inducer in induced resistance against Fusarium wilt of tomato, brown leaf spot of paddy and spot blotch of wheat. 3. 15th November is the optimum sowing date of sonalika, WH 147, HD 2329, K9107 and HUW 234 in respect to higher yield and low foliar disease incidence in Uttar Pradesh. 4. Seed treatment with biocides and foliar spray with fungicide (Bavistin) against sheath blight and Zineb against brown leaf spot are the best management strategies. 5. Integrated management practices of pigeon pea wilt using disease tolerant variety ICP 8858 and ST with Kalisena SD. 6. Optimum time of sowing of lentil is 3rd week of October to reduced higher yield and low wilt incidence at Kanpur region of Uttar Pradesh. 7. Developed suitable package using bio-fertilizers (soil application of mustard cake + tuber treatment and foliar	

		spray with T. viride) for management of late blight of potato and increased crop yield Under Climate Change. 8. Developed IDM practices using seed treatment with T. harzianum + soil application of neem cake powder + foliar spray of carbendazim for sustainable management of Fusarium wilt of tomato. 9. Seed treatment and soil application with Azotobacter chroococum was found best out of seven bio-fertilizers viz., , PGPR, Trichoderma harzianum, Trichoderma viride, PSB, Rhizobium, Carbandazim, in management of spot blotch of wheat and increasing growth parameters and yield of wheat. 10. Integration of ¾ wheat straw + ¼ mustard straw + 100gm wheat bran reduced the spawn running, pin head formation and harvesting days of *Pleurotus florida* and also stimulate the growth, growth parameters and yield of *Pleurotus sajor caju* . 11. Application of GA_3 @ 15 ppm and IAA @10ppm reduced the spawn running, pin head formation and harvesting days of *Pleurotus florida* and also stimulate the growth, growth parameters and yield of *Pleurotus florida.* The highest amount of phenolic and flavenoid content is found due to GA_3 @ 15ppm application. 12. Integration of FYM + Soil + Sand (2:1:1) and FYM +SOIL+ASH (2:1:1) increase water holding capacity, bulk density and reduce the number of days for spawn running, pin head initiation and harvesting days and also increase the yield and yield parameters and net returns. 13. Provided the concept of Income generation through Mushroom Training to Farmers, youths, business man, housewife etc. from Nepal and different states of India of around 998 (from 2014 –December, 2019). **Resource generation** (Rs. **11,45,788.00 from 2014-2019**) through training, selling of spawn and fresh mushroom as Nodal Officer, Mushroom Research & Development Centre. 14. Prepared a Casin mixture using FYM, Soil and Sand (2:1:1) which resulted reduced pin head initiation days, increase fruiting ability and yield of white button mushroom. 15. **Innovation in teaching methods developed through** Integration of Student Centre Learning and Teacher Centre Learning. 16. Soil application of FYM + Poultry manure + Tuber treatment with *T. harzianum*+ three foliar spray with Equation Pro enhanced plant growth, increased crop yield and reduced disease severity of late blight of potato. 17. Seed treatment with bioformulation of *T. viride* @ 4 % + soil application with vermicompost (1:4) + foliar spray of propiconazole @ 0.1 %) provided protection of spot blotch and increased crop growth and yield of wheat. 18. Integration of Wheat straw + NPK 5mg+ $CaCO_3$ 6mg minimized spawn running, pin head formation and harvesting days of *Pleurotus sajor caju* and also increased

27	Significant contributions in the area of specialization (not more than 5)	i. Assessed Chaetomium globosum as an antagonist for control of spot blotch pathogen (Drechslera sorokiniana) in wheat and also have growth promoting activity in plant. Scanning Electron Microscope (SEM) showed that the conidia of D. sorokiniana are distorted and mycelium is lysed by foliar spray of crude extract. In addition to biocontrol property, C. globosum also proved to be an inducer of induced resistance in wheat against D. sorokiniana. SDS-PAGE analysis revealed the involvement of new proteins i.e. 110, 105, 38, 35 and 32 kDa in the induction of host resistance. The crude extract was isolated, purified and characterised as Chaetomin, BHT, Mollicelin G, Cochliodinol, Chaetoglobosin A and one isomer of Mollicelin G from culture filtrate of C. globosum. ii. Studies on induced resistance using inorganic chemical (IAA, salicylic acid, calcium chloride, di-ammonium potassium hydrophosphate, hydrogen peroxide, ferric chloride), secondary metabolites, avirulent races, bio-agents, plant extract, etc. as inducers against Fusarium wilt of tomato, brown leaf spot of paddy and late blight of potato are in well progress. Biochemical basis of resistance response has been identified and confirmed by co-relation with disease severity. iii. Morphological, pathogenic, biochemical and molecular variability with reference to spot blotch and Alternaria blight have been observed in popular varieties of wheat viz. K 65, K 9107, K 8027, PBW 343, HUW 234, Sonalika, PBW 443, etc. Hard dough stage was found most susceptible to Alternaria

<table>
<tr><td></td><td></td><td>blight among different growth stages of wheat which was confirmed by co-relation between disease severity with changing biomolecules in plant. The optimum time of sowing of Sonalika, WH 147, HD 2329, K9107 and HUW 234 is found 15th November to get higher yield and low foliar disease incidence in Uttar Pradesh.

iv. Three components of resistance in pigeonpea against wilt were determined. The mechanism of resistance in the genotypes appeared as having a longer incubation period, minimum wilt index and minimum pathogen colonization.

v. Molecular variability of isolates of Trichoderma sp. and Fusarium oxysporum f.sp. pisi based on RAPD analysis has been done. Bioformulation of effective bio-agent has been developed and disease management activities were confirmed through field trials in farmer's field at different places of Uttar Pradesh. Shelf life of bioformulation has also been done.

Integrated disease management approaches using bio-agents, bio-fertilizers, inorganic chemicals, mushroom compost, plant extracts and fungicides have also developed for brown spot in rice, Fusarium wilt in tomato, spot blotch in wheat, early & late blight of potato, wilt in pigeon pea.</td></tr>
<tr><td>28</td><td>Participation in the college/university building activities</td><td>1. CSJM University, Kanpur
2. NDUA&T, Faizabad
3. Bada Agricultural University, Bada
4. Bundelkhand University, Jhansi
5. Siddharth University, Siddharthnagar
6. Bihar Agricultural University, Sabar</td></tr>
<tr><td>29</td><td>Resource generated during last 5 years</td><td>
<table>
<tr><th>Year</th><th>Amount</th><th>Scheme</th></tr>
<tr><td>2014-15</td><td>1,81,262.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
<tr><td>2015-16</td><td>1,76,129.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
<tr><td>2016-17</td><td>1,88,972.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
<tr><td>2017-18</td><td>3,48,370.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
<tr><td>2018-19</td><td>2,50,830.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
<tr><td>2019-2020</td><td>2,50,500.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
<tr><td>2020-21</td><td>1,62,000.00</td><td>Mushroom Training, Spawn & Mushroom selling</td></tr>
</table>
</td></tr>
<tr><td>30</td><td>Any other significant academic/research achievement</td><td>1. Distinction in Educational Career
a. Merit Scholarship in Higher Secondary Course (1988 – 90)
b. Junior Research Fellowship by Indian Agricultural</td></tr>
</table>

Research Institute in M. Sc. (Plant Pathology) (1995 – 97)

c. Senior Research Fellowship by Indian Council of Agricultural Research (ICAR) in Ph. D. (Plant Pathology) (1997 - 2001)

d. Qualified National Eligibility Test (NET) conducted by Indian Council of Agricultural Research (ICAR) (1997, 1998, 1999).

2. Member of selection committee

Member of Selection Committee of U. P. Seed Certification Agency, Alambagh, Lucknow (2013 & 2014).

Member of selection committee of Research Establishment Officer 2016 at IIT, Kanpur

- Member of selection Committee of Medical Consultant (CSAUA&T) (Male & Female)-2013.
- Member of selection Committee of Technical Person (CSAUA&T).
- Member of selection Committee of Field investigator/ Data entry operator/demonstrator (CSAUA&T). 2010 & 2013.
- Member of selection Committee of SRF under NICRA project(CSAUA&T).
- Member of selection Committee of SRF/JRF/Skilled labour under adhoc project(CSAUA&T).

3. Newspaper articles of current importance

- Hindustan Times : "These biocides are 100 pc seed friendly" 12th August, 2010
- Hindustan Times : "Scientists to foretell Crop diseases" and sub heading "Protect potato prior information about early and late blight diseases would help farmers in saving crop and money" 13th August, 2010.
- Hindustan Times: "Now plant to be immunized against diseases" and sub heading "New find CSA Experts develop the "Induced Resistance Method" that alters plant metabolism" 23th August, 2010.
- Hindustan Times : "Miracle date for Wheat Crop! November 15" Friday, April 08, 2011.
- Hindustan Times : "CSA Prof. gets Honour for Bio-treatment of Plants, Saturday, March 19, 2011.
- Hindustan "Tika Bachayaga Fasolko" Friday, 01 April, 2011.
- Hindusthan Times, Lucknow : "Rain Spells death for

potatoes" page No. 04, January 08, 2012.

- Times of India, Kanpur "Prevailing weather harming potato crop" page no. 03, January 08, 2012.
- Times of India, Lucknow, CSA recommends Ways to protect potato, 5th January, 2014.

4. Special assignment

Sub-editor of Farm Science Journal, Published from CSA University of Agriculture & Technology, Kanpur-208002 from 2002 to 2005.

Zonal Councillor of Indian Phytopathological Society (Elected)

- Referee of Indian Phytopathological, New Delhi 110012
- Member of Editorial Board of Indian Phytopathological Society, New Delhi -12 (2010)
- Member of Editorial Board of International Journal of Bio-resource and Stress management, Kolkata.
- Associate Editor of University at a Glance-2002, Chandra Shekar Azad University of Agriculture & Technology, Kanpur.
- Participated in 13th All India Agri Sports Meet–2012 as Team Manager held at Dr. Panjab Rao Deshmukh Krishi Vidyapeeth, Akola, Maharastra from 16 -19th February, 2011 and student received Gold Medal in High Jump.
- Participated in 14th All India Agri Sports Meet–2012-13 as Team Manager held at Karnataka Vetenary, Animal & Fisheries Sciences University, Bidar, Nandi Nagar, Karnataka (From March 06 to 10, 2013) and students received 01 silver and 01 bronze Medal in Javllin & 800m race, respectively.

5. Extra Curricular Activities: (Having 59 certificates from different games & sports)

a. Sports :

Best Athlete (Men) of IARI, New Delhi – 1996

- Annual Sports Meet of IARI, New Delhi (Long Jump) – 1997

Annual Sports Meet of IARI, New Delhi (100 m race) – 1997

- Annual Sports Meet of IARI, New Delhi (200 m race) –

		1997 Annual Sports Meet of IARI, New Delhi (400 m race) – 1997 Annual Sports Meet of IARI, New Delhi (800 m race) – 1997 - District School Championship (400 m race) – 1987 - Zonal School Championship (800 m race) – 1987 - Zonal School Championship (100 m race) – 1987 - Annual Athletic Meet of BCKV, WB (Triple Jump) – 1994 Annual Athletic Meet of BCKV, WB (Long Jump) – 1994 Annual Athletic Meet of BCKV, WB (100 m race) – 1994 - Annual Athletic Meet of BCKV, WB (4x100 m relay race) – 1994 - Annual Athletic Sports Meet (Broad Jump) – 1987. b. Football : Highest Scorer in Intra Faculty Football Tournament– 1994-95 - Inter University Football Tournament held at Banaras Hindu University during the year 1993 – 94. - Inter University Football Tournament held at L.N. Mithela University during the year 1994 – 95. - Annual Sports Meet of IARI, New Delhi (Football, Winner) – 1997.

Signature with date