

## Personal Profile

1. **Name** Baldev Singh Sohal
2. **Father's name** S. Amar Singh
3. **Date of Birth** Dec 1, 1954
4. **Designation and address** Ex-Controller of Examinations & Ex-Additional Director Communication (Addl. Charge)  
Ex-Professor of Biochemistry  
Punjab Agricultural University, Ludhiana.



3169 Phase-2, Urban Estate, Dugri, Ludhiana.  
[baldev.sohal@gmail.com](mailto:baldev.sohal@gmail.com)  
 (m) 094176-02076, 7317101304

### 5 Academic qualifications

Sr.No	Examination	Class/ Division	OCPA / %age marks	Univ / Board	Year of Passing
1.	Ph.D (Biochemistry)	First	3.92 / 4.00 (78.4%)	Punjab Agril. Univ. Ludhiana	1982
2.	M.Sc (Hons.) (Biochemistry)	First	3.82 / 4.00 (76.4%)	Punjab Agril. Univ. Ludhiana	1978
3	B.Sc (Hons.) (Biochemistry)	First	3.15 / 4.00 (68.15%)	Punjab Agril. Univ. Ludhiana	1976

### 6. Title of Thesis

- M.Sc** Studies on Alkaline Phosphatases in Relation to the Quality of Proteins
- Ph.D** Studies on the Effect of Pulses as Dietary Source on the Lipid Metabolism in Albino Rats

**Name of the guide** Dr. Rattan Singh Sr. Biochemist, Department of Biochemistry, PAU, during M.Sc. as well as Ph.D

### 7. Additional qualifications / trainings acquired

- i **Industrial Pollutants and their Management:** Dec 4-18, 1986 Department of Chemistry, IIT New Delhi
- ii **Computer Course** (EE-421 Sem-II) 1993-94 Department of Electrical Engineering, PAU, Ludhiana.
- iii **Cell Technology and Genetic Engineering for Crop Improvement** June 15 - July 5, 1994 Advanced Centre for Cell Biology and Biotechnology, Tamil Naidu Agricultural University, Coimbatore.
- iv **Modern Techniques in Plant Biochemistry and Molecular Biology** July 1-

- 15, 1998 Department of Biochemistry, IARI, New Delhi.
- v **Gene Cloning and Sequencing** March 19 – April 11, 2004 Department of Biochemistry, IARI, New Delhi
- vi **Eu-India grid workshop on Computational Biology** May 5-9, 2008 MANIT, Bhopal

## 8. Details of the Teaching / Research / Extension positions held

Post	Pay Scale(Rs)	From	To	Institution
Post Doctorate Fellow	900 (fixed)	24.6.82	14.8.1982	Dept. of Biochemistry, PAU, Ludhiana
Sr. Biochemist (Clinical)	1370 (fixed)	15.8.82	16.7.1983	DMC & Hospital, Ludhiana
Asstt Scientist (Biogas)	700-1600	17.7.83	14.7.1989	Dept of Civil Engineering, PAU, Ludhiana
Scientist (Biogas)	1200-1800	15.7.89	16.3.1991	Dept of Civil Engineering, PAU, Ludhiana
Biochemist	3700-5700	16.3.91	5.2.1995	Dept of Biochemistry, PAU, Ludhiana.
Assoc. Prof	3700-5700	6.2.95	26.7.1998	Dept of Biochemistry, PAU, Ludhiana.
<b>Professor of Biochemistry</b>	37400-67000	27.7.98	30.11.2014	Dept of Biochemistry, PAU, Ludhiana
<b>Additional Director</b>	37400-67000	17.2.14	17.8.2014	Centre for Communication and International Linkages, PAU, Ludhiana
<b>Communication Controller of Examinations</b>	37400-67000	17.2.11	30.11.2014	PAU, Ludhiana
<b>Dean, Akal College of Basic Science &amp; Additional Charge of COE, Dean PGS</b>		22.7.15	Till date	Eternal University, Baru Sahib, Himachal Pradesh.

## 9. DUTIES PERFORMED AS PROFESSOR OF BIOCHEMISTRY TEACHING

### Awards and Honours received

- Meritorious Teacher Award of PAU, Ludhiana for the year 2002-03.
- ICAR Junior Research Fellowship for the year 1976-78 through open All India Competition.
- CSIR (Junior and Senior) fellowship (1978-82)
- Fellow of the Indian Society of Agricultural Biochemists
- Subject Matter Expert (Life Sciences) of GNDU i.e. 2006-2008, 2012-14
- National Commassaire certificate in cycling

### Students Advisory

- M.Sc students guided as major advisor =10
  - Mamta Dua (L-92-BS-27-M): Effect of mungbean yellow mosaic virus (MYMV) on polyphenol metabolism in resistant and susceptible Mungbean(*Vigna radiata*)

- Hena Beri (L-95-BS-104-M): Effect of cotton leaf curl virus (CLCuV) on polyphenol metabolism in cotton (*Gossypium* Sp)
- Navita Khajuria (L-96-BS-140-M): Effect of imidazole on polyphenol metabolism in cotton infected with leaf curl virus.
- Meenakshi (L-98-BS-175-M): Studies in whitefly *Bemesia tabaci* (Gennadius) in relation to insecticide resistance.
- Mehar Singh Sidhu (L-200-BS-137-M): Studies on esterases in relation to insecticide resistance in *Helicoverpa armigera* (Hubner) in Punjab.
- Nidhi (L-2003-BS-BS-153-M): Studies on esterases in relation to sublethal doses of insecticide in *H.armigera* (Hubner)
- Neerja Sood (L-2k5-BS-138-M) : Effect of elicitors on phenolics and related enzymes in *Brassica juncea* against Alternaria blight.
- Hemant Gujjar (L-2k7-BS-123-M): Biochemical aspects of insecticide resistance in *Plutell xylostella* (Diamondback moth) in Punjab (India)
- Dilpreet Kaur Rattan (L-2009-BS-156-M): Effect of bacterial blight on polyphenol metabolism in rice (*Oryza sativa* L)
- Sheetal Bhadwal (L-2010-BS-179-M): Studies on the use of elicitors in combating alternaria blight in *Brassica juncea* (L)

Ph.D students guided as major advisor = 7

- Navdeep (L-2002-BS-34-D): Studies on enzymes involved in insecticide resistance in *Helicoverpa armigera* (Hubner)
- Mani Sharma (L-2003-BS-43-D): Induction of resistance against alternaria blight in *Brassica juncea* by ecofriendly elicitors
- Harman Kaur (L-2004-BS-32-D): Influence of insecticides on defense related enzymes and carbohydrates metabolism in American cotton (*Gossypium hirsutum* L.)
- Navreet (L-2005-BS-20-D): Effect of insecticides on the metabolism of Bt and Non Bt Cotton
- Sanjula Sharma (L-2006-BS-33-D): Role of elicitors in inducing plant defense system in Indian mustard (*Brasica juncea*) against Alternaria blight
- Neerja Sood (L-2007-BS-18-D): Elicitors as non-conventional mode of plant protection against sheath blight in rice (*Oryza sativa* L.)
- Meenakshi Thakur (L-2K10-BS-52-D): Biochemical and physiological inferences of elicitors in *Brassica* in inducing resistance against Alternaria blight

Minor Advisor =104 students from various departments

#### Teaching aids developed

**Pioneer to develop an “e-lecture” series in biochemistry for the students of agriculture.** This lecture series on CD has been revised twice with the addition of questionnaires and structural formulae using chemsketch software

**Developed three practical manuals for undergraduate and M.Sc students (Biochem-201, Biochem-424 and Biochem-524).**

#### Courses designed

Biochem- 201 (Elementary Biochemistry)  
Biochem- 421 (General Biochemistry)  
Biochem- 423 (Fundamentals of Mol. Biochemistry)  
Biochem -523 (Molecular biochemistry)  
Biochem -601 (Advanced molecular biochemistry)

### **Courses taught**

I have taught a total of 89 different Biochemistry courses since 1991

### **Special assignments**

#### **Invited lectures**

A total of 26 invited lecture were delivered by me at various Institution

#### **Paper evaluator**

- M.Sc food and Microbial Technology. Punjabi University Patiala. 1995
- M.Sc Part-I Molecular Biology and Biotechnology and B.Sc part III Food and Microbial Technology GNDU Amritsar. 1996.
- M.Sc part I Food and nutrition. Punjabi University. 21.4.1999
- B.Sc part I (Agriculture VI organic Biochemistry Punjabi University. 18.5.99)
- Evaluator for MET Chemistry-2002
- Deputy Supdt. For December 2003 examinations of Institution of Mechanical Engineers (India)
- Asst. Coordinator (Evaluations) MET-Basic Sciences 2003, 2004, 2006
- Management aptitude test (MAT) 2005 at PAU
- Member of weeding out committee for records of CET-2005
- Special observer for Examination centers at Ludhiana by GNDU. 2006
- Centre supdt. for conduct of written test for recruitment to the posts of Clerks- 2008
- Asst. Coordinator (Evaluations) MET-Basic Sciences 2008
- Coordinator MET Journalism- 2008
- Appointed as an observer for CBSE exams 2009 at Ludhiana
- Appointed as an observer for CBSE exams 2010 at Ludhiana
- Coordinatror for Entrance test for admission to UG and Masters programme session 2009-10.
- Paper setter for Plant Biochemistry for ASRB (Agricultural Scientist Recruitment Board, ICAR, New Delhi). 2010
- Paper setter for questions for Ph.D (Biochemistry) entrance examination conducted at IARI, New Delhi

#### **Paper setter**

- Molecular biochemistry for M.Sc-I GNDU Amritsar (1999-2000)
- Elementary biochemistry for B.Sc Home Sciences, Molecular Biochemistry for M.Sc-I (Biochemistry) GNDU, Amritsar (2000-2001)
- General biochemistry for B.Sc Home Science and clinical nutrition for B.Sc-II GNDU (2001-2002)
- Molecular Biochemistry for M.Sc Part-I and II. Biochemistry for B,Sc Home science, Clinical nutrition and dietetics for B.Sc-II and Biochemistry for B.Sc (Biotechnology) students GNDU Amritsar (2002-2003)
- Biochemistry for B.Sc (Biotechnology–II and Applied molecular biology for

M.Sc Biotechnology –II in 2004.

- Biochemistry for M.Sc Molecular biology and Biochemistry GNDU, 2005
- General biochemistry for M.Sc Food and Nutrition, Pbi Univ. Patiala (1999-2000)

### Thesis evaluation

- Thesis examination of Shri JJ Drhruve Ph.D Junagadh Agricultural University Junagadh 2006
- Thesis examination of Amardeep Kaur M.Sc Panjab University, Chandigarh 2007.
- Thesis examination of P.J Rathod Ph.D Junagadh Agricultural University, Junagadh 2008.
- Thesis examination of Sunita Meena M.Sc. in dairy (Animal Biochemistry) NDRI, Karnal 2008
- Thesis examination of M.Sc student N. Shiva Shankar reddy, Regn No-3050702 from NDRI, Karnal entitled “Effect of additives on capacitation like changes in cryopreserved buffalo spermatozoa” majoring in Animal Biochemistry for Master of Science in Dairying, 2008.
- Thesis examination of G.S.Suresha Ph.D IARI, New Delhi, 2009.
- Thesis examination of Om Prakash Gupta M.Sc. IARI, New Delhi, 2010.
- Thesis examination of Mr Marviya Gopal Ph.D Junagadh Agricultural University, Junagarh Agricultural University, Junagarh, 2011.
- Thesis examination of Mr Damane Shivaji Vasant Ph.D Junagadh Agricultural University, Junagarh Agricultural University, Junagarh, 2012.

### RESEARCH

I have 32 years of experience in teaching, research and extension activities at PAU. My work covered area of nutritional biochemistry, biogasification, disease resistance in plants and insects resistance to insecticides,

#### Projects completed

- Renewable Energy Sources for Agriculture and Agro-based Industries (1983-91) ICAR) **Co-Investigator**.
- Evaluation of Deep Poultry Litter as Feed Stock for Biogas Production (1989-91) (DNES Govt of India) **Co-principal Investigator**.
- Qualitative and quantitative analysis of paddy husk ash available in Punjab (1989-91) (PSCST Chandigarh) **Co-Investigator**.
- Institutional Biogas Plants at PAU (1986-87), Funded by DNES, New Delhi **Co-investigator**.
- Insecticide Resistance and Resurgence Risk Assessment in Cotton white fly *Bemisia tabaci* (Gennadius) (2005-2008), Funded by ICAR, New Delhi **Co-Investigator**.

#### Implemenable technology generated

- Low cost biogas plants (both drum type and dome type)
- 100 g urea addition / 100 cft /week in biogas plants in winters to enhance biogas production.

- Poultry litter as an alternate feed stock for biogas production -technology used in fields by farmers.
- Imidacloprid a pesticide used as a dressing agent in cottonseed should be avoided in cotton belt prone to CLCuV as it weakens the plant against viral attack.

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## PUBLICATIONS

Manuals/ e-lecture series	: 10
Research Papers (Refereed Journals)	: 50
Book review	: 01
Research paper contributed for Books	: 03
Research Papers ( <i>Proceeding</i> )	: 11
Research Papers ( <i>Extension</i> )	: 09
Paper present in Seminar/Symposia ( <i>Annual Meetings of SBC</i> )	:
09 Paper present in Seminar/Symposia ( <i>National Symposiums</i> )	: 07
Paper present in Seminar/Symposia ( <i>Science Congress</i> )	:
12	
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	Total
:112	

## Manuals/ e-lecture series/ book chapter

1. **Sohal BS** and Mann APS (1999) Laboratory manual in Biochemistry (for undergraduates)
2. **Sohal BS** and Mann APS (2001) Laboratory manual in Biochemistry (for undergraduates) (Revised and reprinted)
3. **Sohal BS** (2004) A Manual of Experiments in Biochemistry (Biochem-424) for PG students of the University
4. **Sohal BS** (2004) A Manual of Experiments in Biochemistry (Biochem-424) for PG students of the University. (Revised and reprinted)
5. **Sohal BS** and Mann APS (2005) Laboratory manual in Biochemistry (for undergraduates) (Revised and reprinted).
6. **Sohal BS** (2003) e-lecture series (Biochem-201) Elementary Biochemistry for undergraduates
7. **Sohal BS** (2004) e-lecture series (Biochem-201) Elementary Biochemistry for undergraduates (Revised).
8. **Sohal BS** (2005) e-lecture series (Biochem-201) Elementary Biochemistry for undergraduates (Revised).
9. **Sohal BS** (2005) e-lecture series (Biochem-202) Introductory Biochemistry for undergraduates (Home Science).
10. Kaur N; AK Gupta; **BS Sohal** and S Sharma (2007) Laboratory Manual for Practicals in Biochemistry (Biochem-524)

## Research Papers (Refereed Journals)

1. **Sohal BS**; GL Soni and Rattan Singh. 1978. Studies on acid and alkaline phosphatases in relation to pulses on dietary proteins sources *J Nutr Dietet* 16: 447. (0368-3257)
2. Soni GL; **BS Sohal** and Rattan Singh. 1979. Comparative effect of pulses on tissue and plasma cholesterol levels of Albino rats. *Ind J Biochem & Biophys* 16(6): 444.

- (0301-1208)
3. Taneja DS; SK Sondhi and **BS Sohal** (1989) Investigation of gas problem in tube well pits. **Water Resource Management** 15: 110-116. (0920-4741)
  4. **Sohal BS**; Malvinder Singh and NS Grewal (1991) Survey of family size biogas plants installed in Punjab **SESI Journal** 1(1) 67-72. (0970-2466)
  5. **Sohal BS**; NS Grewal and Malvinder Singh (1991) Poultry feed and alternate feed stock for Biogas plants **Consortium Rural Technology** (1) 17-27. (103-064-618)
  6. Soni GL; **BS Sohal** and Rattan Singh (1991) Role of Pulses as hypocholesterolemic agents **Recent advances in Nutrology** (3) 38-42.
  7. **Sohal BS** and KL Bajaj (1992) Effect of Yellow mosaic virus on polyphenol metabolism in resistant and susceptible mungbean (*vigna radiata* L.WILZEK) **Biochem Physiol Pflnzen** 188 (6) 419-423. (I9875572)
  8. Kaur G, **BS Sohal**, Joginder singh and KL Bajaj (1998) Influence of leaf curl virus (CLCuV) on polyphenol metabolism of resistant and susceptible cotton leaves **PI Dis Res** 13(1) 23-27. (0970-4914)
  9. Jindal P, **BS Sohal** and KL Bajaj (1998) Effect of Uniconazole on the polyphenol metabolism in leaves of Mungbean (*Vigna radiata* L.WILZEK) infected with Mungbean yellow mosaic virus **PI Physiol and Biochem** 25 (1) 62-66. (0981-9428)
  10. Guleria S, **BS Sohal**, KL Bajaj and APS Mann (2001) Peroxidases Superoxide dismutase isoforms and pisatin in *Erysiphe pisi* resistant and susceptible pea cultivar **PI Dis Res** 16(1) 34-39. (0970-4914)
  11. Guleria S; **BS Sohal**; KL Bajaj and APS Mann (2001) Elicitation of enzymes activity and phenols by salicylic acid and  $\gamma$ -aminobutyric acid in pea leaves **PI Dis res** 16(2) 158-165. (0970-4914)
  12. Aujla IS; Sandhu; **BS Sohal** and PP Singh (2001) Biochemical basis of efficacy of soil amendments in managing stalk rot of cauliflower **PI Dis Res** 16(2) 220-224. (0970-4914)
  13. Guleria S; **BS Sohal**; KL Bajaj and APS Mann (2001) Accumulation of pathogenesis-related proteins in pea leaves in response to treatment with salicylic acid **PI Dis Res** 16(2) 235-236. (0970-4914)
  14. Sood A; D Jain; APS Naran; S Kaur; N Malhotra and **BS Sohal** (2001) Gastric alcohol dehydrogenase (ADH) activity in alcoholics with and without liver disease **Indian Medical Gazette** Nov-372. (0019-5863)
  15. Katoch R; APS Mann and **BS Sohal** (2002) Enzymic activity and isozymic profile of peroxidase induced by Elicitors and *Erysiphe polygoni* in pea (*Pisum sativum* L.) **J Veg Crop Prod** 8(1): 11-18. (1548-1689)
  16. Katoch R; APS Mann and **BS Sohal** (2002) Elicitor watering influences the activity of defense related enzymes in pea (*Pisum sativum* L.) **Ind J PI Physiol** 7(4): 388-391. (0974-0252)
  17. Katoch R; APS Mann and **BS Sohal** (2003) Salicylic acid as an elicitor for the induction of systemic acquired resistance in pea (*Pisum sativum* L.) **J PI Biol** 30(3): 365-369. (1226-9239)
  18. Katoch R; APS Mann; **BS Sohal** and GD Munshi (2004) Effect of elicitor spray and *Erysiphe polygoni* inoculation on -1,3-glucanase activity in pea cultivars resistant and susceptible to powdery mildew **Ind J PI Physiol** 9(3): 316-319. (0974-0252)
  19. Guleria S; **BS Sohal** and APS Mann (2005) Salicylic acid treatment and / or *E.Polygoni* inoculation on activities of phenylalanine ammonia lyase, peroxidase and accumulations of phenolics in leaves of pea (*Pisum sativum* L.) **J Veg Crop Prod** 11(2) 71-79. (1548-1689)
  20. Katoch R; APS Mann and **BS Sohal** (2005) Enhanced enzyme activities and

- induction of acquired resistance in pea (*Pisum sativum*) elicitors **J Veg Crop Prod** 11(1) 67-84. (1548-1689)
21. Sidhu MS and **BS Sohal** (2005) Characterization of carboxyl esterases from American bollworm in Punjab **J Res (PAU)** 42(4) 454-62. (0048-6019)
  22. Katoch R; APS Mann; **BS Sohal** and GD Munshi (2005) Induction of pisatin synthesis in pea with salicylic acid or inoculation with powdery mildew **J Veg Sci** 11(1) 85-96. (1548-1689)
  23. Abdullah NMM; Joginder Singh and **BS Sohal** (2006) Behavioral hormoligosis in oviposition preference of *Bemisia tabaci* on cotton **Pesticide Biochemistry and Physiology** 84, 10-16. (0048-3575)
  24. Sidhu MS and **BS Sohal** (2007) Esterase activity and I<sub>50</sub> variation in *Helicoverpa armigera* (Hubner) from different locations in Punjab **J Insect Science** 20 (1) 15-20. (0970-3837)
  25. Sangha NK; **BS Sohal** and G Singh (2007) Relationship between Esterases I<sub>50</sub> and toxicity of different organophosphates insecticides to *Helicoverpa armigera* (Hubner) collected from two different regions of Punjab **J Res Punjab Agric Univ** 44(3) 222-225. (0048-6019)
  26. Sangha NK; **BS Sohal** and G Singh (2007) Inhibitions study by organophosphate insecticides on general esterases in *Helicoverpa armigera* (Hubner) **J Res. Punjab Agric Univ** 44(2) 151-153. (0048-6019)
  27. Randhawa M; KS Sandhu; PP Singh and **BS Sohal** (2007) Biological control of *Fusarium oxysporum* f. sp melonis causing muskmelon wilt **PI Dis Res** 22 (1) 18-22. (0970-4914)
  28. Sharma M; **BS Sohal** and PS Sandhu (2008) Induction of defense enzymes and reduction in *Alternaria* blight by foliar spray of BTH in *Brassica juncea* **Crop Improvement** 35 (2) (0256-. 0933)
  29. Sharma M; **BS Sohal** and PP Singh (2008) Study of phenolics and related enzymes in the leaves of *Brassica juncea* (Var.RLM619) sprayed with salicylic acid under field conditions **PI Dis Res** 23 (1) 11-15. (0970-4914)
  30. Sidhu M.S; **BS Sohal**; APS Mann and P Bhatia (2008) Mode of action of different insecticides as inhibitor of general esterases in *Helicoverpa armigera* (Lepidoptera:Noctuidae) in Punjab **Crop Research** 35 (3) 323-30. (0974-4884)
  31. Mangat M; PK Khanna; S Kapoor and **BS Sohal** (2008) Biomass and Extracellular lignocellulolytic Enzymes production by *Calocybe indica* strains. **Global Journal of Biotechnology and Biochemistry** 3 (2) 98-104. (1995-9001)
  32. Gujar H and **BS Sohal** (2010) Susceptibility status of the diamond backmoth *Plutella xylostella* to some insecticides and role of general esterases and acetylcholine esterase in imparting resistance **Pesticide Research Journal** 22(1) 55-54
  33. Sharma S and **BS Sohal** (2010) Foliar spray of Benothiadizole and salicylic acid in different combinations on *Brassica juncea* RLM-619 to combat *Alternaria* blight in field trial. **Crop Improvement** 37(1): 87-92 (0256-. 0933)
  34. Sharma S and **BS Sohal** (2010) Defense related enzymes, phenolics and qualitative profile of phenolics in relation to Benzothiadiazole application during germination studies against *Alternaria* blight in *Brassica juncea* RLM 619 **PI Dis Res** 25(2): 126-132.
  35. Navreet Kaur, **B.S.Sohal**, K.Singh (2011) Biochemical and physiological changes on *Bacillus thuringiensis* cotton after imidacloprid foliar spray **Pestic Biochem Phys** 99: 280–2846
  36. Sood N and **BS Sohal** (2012) Induced resistance in *Brassica juncea* L. against



- Alternaria blight by foliar application of arachidonic acid *PI Dis Res.* 27(2): 153-57.
37. Sood N and **BS Sohal** (2012) Studies in relation to chitosan and its potential to enhance defense in *Brassica juncea* L against Alternaria blight *PI Dis Res.* 27(2): 144-48.
  38. Sharma S and **BS Sohal** (2012) Induction of resistance in *Brassica juncea* (var. RLM619) using elicitors and inoculation with *Alternaria brassicae*. **Crop Improvement**. Special Issue. Theme B. Pg no. 1047-48 (Short communication). ISSN 0256-0933. (NAAS Rating-3.7)
  39. Sood N; **BS Sohal**; SS Gosal; JS Sandhu and JS Lore (2012) Evaluation of Benzothiadiazole elicitation and *Rhizoctonia solani* influence on defense related enzymes in cell suspension cultures of *Oryza sativa* L. International Conference on “ Sustainable Agriculture for Food and Livelihood Security” held on Nov. 27-29, 2012 at PAU, Ludhiana. **Crop Improvement** (special issue) C-P61.
  40. Sharma S and **BS Sohal** (2013) Effect of salicylic acid on biochemical (Disease resistant) compounds in *Brassica juncea* RLM619. **Applied Biological Research** (Short communication) **15(1)**:78-82. (NAAS Rating-3.6)
  41. Sood N; **BS Sohal** and JS Lore (2013) Foliar application of benzothiadiazole and salicylic acid to combat sheath blight disease of rice. **Rice Science** **20(5)**: 349-355. (NAAS Rating 5.2)
  42. Thakur M; **BS Sohal** and PS Sandhu (2014) Effect of salicylic acid and benzothiadiazole on antioxidative enzymes and phenolic contents in Indian mustard (*Brassica juncea*) and rapeseed (*B. napus*). **Applied Biological Research** **16(1)**: 1-9. (NAAS Rating-3.6)
  43. Thakur M and **BS Sohal** (2013) Role of elicitors in inducing resistance in plants against pathogen infection- A Review. **ISRN Biochemistry** **2013**: 1-10.
  44. Thakur M and **BS Sohal** (2014) Effect of elicitors on physiomorphological and biochemical parameters of Indian mustard (*Brassica juncea*) and rapeseed (*B. napus*). **Journal of Applied and Natural Science** **6 (1)**: 41-46 (NAAS Rating 5.8)
  45. Thakur M; **BS Sohal** and PS Sandhu (2014) Impact of elicitor spray on Alternaria blight disease severity and yield of *Brassica juncea* and *B. napus* varieties. **Journal of Oilseed Brassica** **5(1)** : 78-82
  46. Sharma S and **B.S.Sohal** (2014) Resistance to Alternaria blight in *Brassica juncea* (var. RLM619) induced by combination of elicitors and inoculation with *Alternaria brassicae* under controlled environment. **Indian J of Agric Biochem** **27(2)**: 180-187.
  47. Thakur M; **BS Sohal** and S Sharma (2014) Biochemical attributes of Indian mustard (*Brassica juncea*) and rapeseed (*B. napus*) as influenced by salicylic acid and benzothiadiazole. **Journal of Applied and Natural Science** **6 (2)**: 725-728
  48. Navreet Kaur and **B.S. Sohal** (2015) Effect of imidacloprid seed treatment on the defense system of Bacillus thuringiensis cotton. **International Journal of Recent Scientific Research.** **6(2)** 2684-2689 (0976-3031)
  49. Sharma S and **B.S.Sohal** (2015) Insight into the biochemical changes induced in *Brassica juncea* (var. RLM619) on application of elicitors alone and in combinations **Ind J Biochem & Biophys** (accepted for publication)
  50. Thakur M and **BS Sohal** (2015) Biochemical defense induction in Indian mustard (*Brassica juncea*) and rapeseed (*B. napus*) by salicylic acid and benzothiadiazole. **Proceedings of the National Academy of Sciences India Section B: Biological Sciences**(submitted)

#### Book review

1. **Sohal BS (2009)** Biochemical Constituents. “Okra Handbook: Global Production, Processing and Crop Improvement” edited by BS Dhankhar and Ram Singh pp 61-

### Research paper contributed for Books

1. **Sohal BS**; Malvinder Singh and NS Grewal (1990) Survey of family size biogas plants installed in Punjab. Solar Energy Society of India **Renewable Energy and Environment**, Himanshu Publications, Udaipur p 185.( 818516732X)
2. Katoch R; **BS Sohal** and APS Mann (2001) Influence of Elicitors (Salicylic acid and 4-amino butyric acid) on biochemical status of pea plant. *In Biochemistry-Environment and Agriculture*. Kalyani Publishers, New Delhi, India pp 310-315. (81-272-0029-8)
3. Khajuria N; **BS Sohal**, Joginder Singh and APS Mann (2001) Effect of Imidacloprid as seed dresser on polyphenol metabolism in cotton after challenging with cotton leaf curl virus. *In Biochemistry-Environment and Agriculture*. Kalyani Publishers, New Delhi, India pp 149-153. (81-272-0029-8)

### Research Papers (Proceeding)

1. **Sohal BS**; GL Soni and Rattan Singh. (1984) Role of globular proteins of common Indian pulses as hypocholesterolemic agents in the role of proteins in foods and feeds- "*Proceedings of National Symposium of Proteins Foods and Feeds*" (Eds. A.Srinivasan and S. Gopalan), Proteins Research Unit, Loyala college, Madras.
2. Grewal NS; **BS Sohal** and KN Duggal. (1986) New PAU Biogas Plant "*Proceedings Bio-Energy Society Third convention & Symposium 86*" held at Pune, Nov, 30, p. 240-44.( 102-681-834)
3. **Sohal BS**; NS Grewal and KN. Duggal (1986) Handling of Slurry waste obtained from biogas plants. *Proceedings of the 3<sup>rd</sup> convention and Symposium of Bioenergy Society of India* held at Pune, Nov, 30, p.251. (102-681-834)
4. **Sohal BS**; NS Grewal; KN Duggal and Malvinder Singh (1988) Different methods used for handling biogas plant spent slurry in Punjab. *Proceedings of National Seminar on Management and Utilization of Biogas Plant Spent Slurry* held at Sukhadia University of Agriculture, Udaipur, p.61
5. Grewal NS, **BS Sohal** and Malvinder Singh (1990) Ground water pollution in Ludhiana city. **Environment Management** Ed GS Dhaliwal and VK Dilawari 34-35
6. Grewal NS; KN Duggal and **BS Sohal** (1984) Biogas development in Punjab. Problem and Remedies. Indian Soc. Engg; Punjab Chapter, Feb, 10 p.44
7. Grewal NS; **BS Sohal** and KN Duggal (1987) New inexpensive biogas plant. Indian Soc. Agril. Engg. Punjab Chapter, Feb, 7 p.5
8. Duggal KN; NS Grewal and **BS Sohal** (1987) The PAU Biogas plant –Its Development and Prospects. *Proceedings of the National workshop on Biogas Technology* held at PAU, Ludhiana, July, p.17
9. Singh M; NS Grewal and **BS Sohal** (1989) Waste water characteristics of Markfed canneries plant. *Proceeding of National Seminar on "Environment pollution"* held at PAU, Ludhiana. Feb 18 p B-29-43
10. Singh JP, KN Duggal and **BS Sohal** (1989) Nature and effect of water pollution from Budha Nallah in Ludhiana. *Proceeding of National Seminar on "Environment pollution"* held at PAU, Ludhiana. Feb 18 p-B-60-70
11. Kaur G; **BS Sohal** and Joginder Singh (1996) Systemic response in leaves of cotton to cotton leaf curl virus infection. *Proceeding of the Third Agriculture Science Congress* pp 265-66. LCCN- 2001361303

### Research Papers (Extension)

1. Grewal NS; KN Duggal and **BS Sohal** (1984) Janta Biogas Plant. Progressive farming, PAU, Ludhiana Feb, p-6.

2. Grewal NS; **BS Sohal** and KN Duggal (1985) Gas distribution pipe for biogas. Progressive Farming, PAU, Ludhiana Feb, p-13.
3. Grewal NS; Malvinder Singh; **BS Sohal** and KN Duggal (1985) Stopping gas leakage in janta Biogas plants. Progressive Farming, PAU, Ludhiana Nov, p-15.
4. Malvinder singh; **BS sohal**; Grewal NS and KN Duggal (1986). Economics of Biogas plants. Progressive Farming,PAU, Ludhiana. Jan, p-14.
5. **Sohal BS** (1986) Sardian witch jiada gas kewan lia? Saket patar volume 9.
6. **Sohal B S**, NS Grewal, Malvinder Singh and KN Duggal (1987) Biogas plant. How to dispose of slurry. Progressive Farming, PAU, Ludhiana, Jan, p-18.
7. Gupta RK, NS Sandhar and **BS Sohal** (1991) How to increase storage capacity of your Janta biogas plant. Progressive Farming, PAU, Ludhiana, April.
8. Grewal NS and **BS Sohal** (1992) Water pollution: case study of Village in Punjab. Progressive Farming, PAU, Ludhiana, Sept, p-18-19.
9. Grewal NS and **BS Sohal** (1992) Punjab de pindan witch pind walla panu dusat kyon. Changi Kheti Sep. p-6-7.

#### **Paper present in Seminar/Symposia (Annual Meetings of SBC)**

1. **Sohal BS** and GL Soni (1991) Effect of pulses and its isolates on hepatic dehydrogenases when fed hypocholesterolemic diets in albino rats. Presented at the Annual meeting of SBC(I) held at Calcutta.
2. **Sohal BS** and KL Bajaj (1993) Effect of Yellow mosaic virus on polyphenol metabolism in resistant and susceptible mungbean leaves. Presented at the 62nd annual meeting of SBC(I) Dec 19-22 held at Madurai
3. **Sohal BS**; M Dua and KL Bajaj (1995) Reaction of certain mungbean genotypes towards mungbean yellow mosaic virus (MYMV) Presented at the 64th Annual meeting of SBC(I) Oct 6-8 held at Lucknow.
4. Kaur G; **BS Sohal**; Joginder Singh and KL Bajaj (1996) Effect of cotton leaf curl virus (CLCuV) inoculation on the different biochemical parameters in resistant and susceptible cotton. Presented at the 65th annual meeting SBC(I) held at IIS Bangalore Nov 20-23
5. Jindal P; **BS Sohal** and KL Bajaj (1996) Polyphenol metabolism in mungbean influenced by Uniconazole. Presented at the 65th annual meeting of SBC(I) held at IIS Bangalore Nov 20-23
6. **Sohal BS**; Minakshi; G Singh and Mann APS (2001) Studies on Esterases in whitefly *Bemisia tabaci* (Gennadius) in relation to insecticide resistance. Presented at the 70th Annual Meeting of Society of Biological Chemists (India) held at Hyderabad,( 27-29 Dec).
7. Sidhu MS; **BS Sohal** and SK Kapoor (2002). In vitro inhibition of general esterases by various insecticides in *Helicoverpa armigera* collected from different regions of Punjab. Presented at the 71st Annual Meeting of Society of Biological chemists (India) held at PAU, Ludhiana.(Nov 14-16).
8. Abdullah ;, Joginder Singh and **BS Sohal** (2002) Effect of repeated application of insecticides on the biochemical components of cotton plants. Presented at the 71st Annual Meeting of Society of Biological chemists (India) held at PAU, Ludhiana (Nov 14-16).
9. **Sohal BS** and MS Sidhu (2004) Percent inhibition and effect of insecticides on isozymic pattern of general esterases in *Helicoverpa armigera* from different regions of Punjab. Paper presented at the 73rd Annual Meeting of

SBC9I) from Nov 21-23 at GB Pant Agricultural University, Uttaranchal.

**Paper present in Seminar/Symposia (National Symposiums)**

1. **Sohal BS**, NS Grewal, MI Kaur and Malvinder Singh (1991) Anaerobic Semi-Continuous digestion of deep poultry rice husk litter for methane production. Presented at the 7th Annual symposium of BESI held at New Delhi, 12-13 July.
2. **Sohal BS**, M Dua and KL Bajaj (1995) Polyphenol metabolism in resistant and susceptible varieties of Mungbean (*Vigna radiata* L. WILZEK) inoculated with mungbean yellow mosaic virus. Presented at the symposium on Biochemistry in relation to crop productivity May 3-4 held at PAU Ludhiana.
3. Kaur G, **BS Sohal** and KL Bajaj (1996) The influence of cotton leaf curl virus (CLCuV) on polyphenol metabolism of resistant and susceptible cotton leaves. Paper presented at the National Symposium on Modern prospective in Biochemistry and Biotechnology and recent developments in green vegetation. And other photosynthetic organisms held at Lucknow Oct 25-27.
4. Guleria S; **BS Sohal** and KL Bajaj (1998) Induced resistance against *Erysiphe polygoni* DC in Pea (*Pisum sativum*). Presented at the National Symposium on "research and Education in Agricultural Biochemistry in next century and Advances in green vegetation and leaf protein research at GAU Junagarh Nov 11-13
5. Guleria S; **BS Sohal** and KL Bajaj (1998) Several pathogenesis related proteins accumulate in *Erysiphe polygoni* DC infected or elicitor treated leaves. Presented at the International Symposium on sustainable Agriculture in Hill Areas Oct 29-31
6. Katoch R; **BS Sohal** and APS Mann (2002) Influence of elicitors (Salicylic acid and 4-aminobutyric acid ) on the enzymes implicated in the defense response for pea plant. Presented at the National Symposium "Biochemistry –Environment and Agriculture" held at PAU, Ludhiana (Feb 17-18).
7. Khanuria N; **BS Sohal**, Joginder Singh and APS Mann (2002) Effect of imidacloprid as seed dresser on polyphenol metabolism in cotton after challenging with cotton leaf curl virus. Presented at the National Symposia "Biochemistry –Environment and Agriculture" held at PAU, Ludhiana (Feb 17-18).

**Paper present in Seminar/Symposia (Science Congress)**

1. Singh D; G Singh and **BS Sohal** (2001) Host and location related Esterases polymorphism in cotton whitefly *Bemisia tabaci* (Gennadius) from Punjab. Presented at the 4th Punjab Science Congress held at PAU.
2. Katoch R; APS Mann and **BS Sohal** (2001) Elicitors (Salicylic acid and 4-amino butyric acid) as a vaccine for the induction of defense response in the pea plant (*Pisum sativum* L) Presented at the 4th Punjab Science Congress held at PAU.
3. Sidhu MS; **BS Sohal** and APS Mann (2004) Studies on esterases in relation to insecticide resistance in *Helicoverpa armigera* (Hubner) from varied regions of Punjab. Paper presented in young Scientist Award category at 7th Punjab Science Congress held at GNDU, Amritsar from Feb 7-9.
4. Sidhu MS and **BS Sohal** (2005) Types of inhibition by different insecticides on general esterases from *Helicoverpa armigera* (Hubner). Paper presented at the 8th Punjab Science Congress held at Punjabi University, Patiala from Feb 7-9.
5. Singh G; A Brar; M Sachdeva and **BS Sohal** (2005) Insecticide induced resurgence in cotton whitefly *Bemisia tabaci* (Gennadius) Paper presented at the 8th Punjab Science Congress held at Punjabi University, Patiala from Feb 7-9.
6. Sangha NK; **Sohal BS** and Singh G (2005) Effect of Triazophos on the esterases  $I_{50}$  and  $LD_{50}$  values in *Helicoverpa armigera* (Hubner). *Proceeding of 1st Congress of Insect Science* held at Punjab Agricultural University, Ludhiana, India, on Dec.15-17, 2005.p.170-71.

7. Kaur N and **Sohal BS** (2009) Effect of foliar spray of insecticides on Bt toxin level in the leaves of different Bt cotton varieties. Presented at the 12th Punjab Science Congress held at PAU. Feb 7-9.
8. Sood N and **Sohal BS** (2009) Effect of chitosan as an elicitor on phenolics and related enzymes in *Brassica juncea* L. against *Alternaria* blight. Presented at the 12th Punjab Science Congress held at PAU. Feb 7-9.
9. Gujar H and **BS Sohal** (2010) Esterases as a tool to monitor insecticide resistance in insect *Plutella xylostella* (DBM). Presented at the 13<sup>th</sup> Punjab Science Congress held at Panjab University, Chandigarh. Feb 7-9.
10. Sharma S and **BS Sohal** (2010) Defense related enzymes and phenolics in relation to elicitor application alone and in combination during germination studies against *Alternaria* blight in *Brassica juncea* (RLM-619) Presented at the 13<sup>th</sup> Punjab Science Congress held at Panjab University, Chandigarh. Feb 7-9.
11. Sharma S and **BS Sohal** (2010) Foliar spray of Benothiadiazole and salicylic acid on different concentration on *Brassica juncea* RLM-619 to combat *Alternaria* blight in field trials. Presented at the 13<sup>th</sup> Punjab Science Congress held at Panjab University, Chandigarh. Feb 7-9.

#### *Conventions*

12. Ahluwalia S; **BS Sohal** and NS Grewal (1992) Psychrophilic anaerobic digestion of cattle dung. Effect of Urea as an additive in Proceeding of National Solar Energy Convention-92 held at New Delhi 26-30.

#### **Conferences / Seminar / Workshops in which participated**

1. National Seminar ‘ Environmental pollution” held at PAU, Ludhiana (Feb 18, 1989)
2. The 7<sup>th</sup> Annual Symposia of BESI held at New Delhi, (July 12-13, 1991).
3. The Annual Meeting of SBC(I) held at Calcutta, 1991.
4. National Solar Energy Convention-92 held at New Delhi (Dec 26-30, 1992)
5. The 62<sup>nd</sup> annual Meeting of SBC(I) held at Madurai (Dec 19-22, 1993)
6. The Symposium on “Biochemistry in relation to crop productivity” held at PAU, Ludhiana (May 3-3, 1995).
7. The 64<sup>th</sup> Annual meeting of SBC(I) held at Lucknow (Oct, 6-8 1995).
8. National Symposia on “Modern perspectives in biochemistry and biotechnology and recent developments in green vegetation and other photosynthetic organisms held at Lucknow. (Oct 25-27, 1996).
9. The 65<sup>th</sup> Annual Meeting of SBC(I) held at IIS, Bangalore. (Nov 20-23, 1996).
10. National Symposia on “Research and education in agricultural biochemistry in next century and advances in green vegetation and leaf protein research at GAU, Junagadh.( Nov 11-13, 1998).
11. International Symposia on “Sustainable agriculture in hill areas. (Oct 29-31, 1998).
12. The 4<sup>th</sup> Punjab Science Congress, 2001.
13. The 70<sup>th</sup> Annual Meeting of the Society of Biological Chemists (India) held at Hyderabad. (Dec 27-29, 2001).
14. National Symposium “Biochemistry-environment and agriculture” held at PAU, Ludhiana. (Feb 17-18, 2001).
15. The 71<sup>st</sup> Annual Meeting of Society of Biological Chemist (India) held at PAU, Ludhiana. (Nov 14-16, 2002).

16. The 7<sup>th</sup> Punjab Science Congress held at GNDU, Amritsar. Feb 7-9, 2004
17. The 73<sup>rd</sup> Annual Meeting of Society of Biological Chemists held at GB Pant Agricultural University, Uttaranchal. (Nov 21-23, 2004).
18. The 8<sup>th</sup> Punjab Science Congress held at Punjabi University, Patiala. (Feb 7-9, 2005).
19. One day workshop on modernization of teaching methodologies. Expert from Ohio State university, USA. (Aug 22, 2005)
20. International Conference on food derived from genetically modifies crops held at the Metropolitan hotel Nikko, New Delhi. (Sept 26-27, 2005).
21. International conference on post harvest technology and value addition in cereals, pulses and oilseeds at Kanpur (Nov 27-30 2006)
22. The 12<sup>th</sup> Punjab science Congress held at PAU, Ludhiana (Feb 7-9, 2010)
23. The 13<sup>th</sup> Punjab science Congress, held at Panjab University, Chandigarh (Feb 7-9, 2010)

## 1 DUTIES PERFORMED AS CONTROLLER OF EXAMINATIONS

### 1 RECRUITMENT TESTS

#### For State Government

Conducted written tests for recruitment of **various posts in the Departments of Agriculture; Horticulture; and Soil & Water Conservation, Punjab** during the period Nov 28, 2011 to Dec 5, 2011 as detailed below. The final results on the basis of written tests, qualifying marks, experience etc. were prepared and submitted to the Registrar, PAU for onward submission to Department of Agriculture, Punjab

S. No.	Written Test for recruitment to the posts of	Date	Department
1.	Assistant Agricultural Engineer (G-II)	28.11.2011	Department of Agriculture, Punjab
2.	Assistant Geologists	29.11.2011	Department of Agriculture, Punjab
3.	Assistant Statistical Scientist	29.11.2011	Department of Agriculture, Punjab
4.	Horticultural Development Officers	30.11.2011	Department of Horticulture, Punjab
5.	Statistical Assistants	1.12.2011	Department of Agriculture, Punjab
6.	Senior Technical Assistants (Hydrology)	2.12.2011	Department of Agriculture, Punjab
7.	Agricultural Development Officers	3.12.2011	Department of Agriculture, Punjab
8.	Soil Conservation Officers	4.12.2011	Department of Soil and Water Conservation, Punjab

Conducted written tests for recruitment of **various posts in the Department of Horticulture** during the period August 18, 2013 to August 20, as detailed below. The final results on the basis of written tests, qualifying marks, experience etc. were prepared and submitted to the Registrar, PAU for onward submission to Department of Horticulture, Punjab.

S. No.	Written Test for recruitment	Date	Department
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**N to the posts of**

S. No.	Name of Post	Date	Department
1.	Horticulture Development Officer	18.08.2013	Department of Horticulture, Punjab
2.	Horticulture Development Officer (Entomology)	20.08.2013	Department of Horticulture, Punjab
3.	Horticulture Development Officer (Plant Pathology)	20.08.2013	Department of Horticulture, Punjab
4.	Horticulture Development Officer (Soil)	20.08.2013	Department of Horticulture, Punjab

**For Punjab Agricultural University**

- i) **Programme Assistants (Computer):** Conducted written test for recruitment to the posts of Programme Assistants (Computed) on July 18, 2012.
- ii) **Assistants at KVKs:** Conducted written test for recruitment to the posts of Assistants at KVKs on Oct 3, 2012 and computer test of the successful candidates on Oct 12, 2012.
- iii) **Stenographers/ Steno typists at KVKs and PAU:** Conducted shorthand tests for recruitment to the posts of Stenographers at KVKs on Oct 10, 2012 and Steno-Typists at PAU on Oct 11, 2012
- iv) **Departmental Examinations for PAU Employees:** Conducted six papers of Higher Standard Departmental Examinations for the PAU employees during the year 2011, 2012 and 2014
- v) **Clerks:** The typing test in Punjabi of the 51 candidates who qualified written test for recruitment to the posts of Clerks was conducted by this office on Sept 17, 2013.
- vi) **Programme Assistants (Computer):** Conducted written test for recruitment to the posts of Programme Assistants (Computer) on Nov 6, 2013.
- vii) **Clerks on compassionate grounds:** Conducted written test for recruitment to the posts of Clerks on compassionate grounds on Jan 9, 2014 and April 3, 2014

**ENTRANCE TESTS****Entrance tests for various Graduation and Masters programmes:**

Conducted the following entrance tests for the academic session, 2011-12, 2012-13, 2013-14. OMR sheets were evaluated and result prepared for all these tests. Also Co-ordinated in the conduct of counseling/interviews for admission to Undergraduate and Masters' programmes based on the merit list of these entrance tests

S. No.	Name of Entrance Test	Date of Entrance Test	For admission to
1.	MET-AGRIBUSINESS	03-06-2011	MBA (Agribusiness)
2.	MET-BASIC SCI	08-06-2011	M.Sc in Botany, Biochemistry, Microbiology & Zoology
3.	MET PHYSICS	09-06-2011	M.Sc in Physics

4.	MET-CHEM	10-06-2011	M.Sc in Chemistry
5.	MET-MCA	14-06-2012	Master of Computer Applications
6.	MET-JOURNALISM	13-06-2011	Master of Journalism and Mass Communication
7.	MET HOME SCI	17-06-2011	M.Sc in Food & Nutrition
8.	AAT	16-06-2011	B.Sc. Agri. (Hons.) 6-year programme
9.	CET	20-06-2011	B.Sc. Agri. (Hons.) 4-year, B.Sc. Biotech. (Hons.) 4-year, B.Tech. Food Tech. (Hons.) 4-year and 5-Year Integrated M.Sc. (Hons) programmes
10.	MET-CSE	22-06-2011	M.Tech in Computer Science and Engineering
11.	MET-AE	23-6-2011	M.Sc in Farm Power & Machinery, Soil & Water Engineering, Processing & Food Engineering
12.	MET-CE	23.06.2011	M.Tech in Civil Engineering
13.	MET-BIOTECH	24-06-2011	M.Sc in Biotechnology
14.	MET-AGRI	27-06-2011	M.Sc in Agronomy, Agrometeorology, Extension Education, Entomology, Food Technology, Pomology, Veg. Crops, Flori. & Land., Plant Breeding & Gen., Plant Pathology, Nematology, Soil Science, Forestry, Economics, Sociology
15.	PET-AGRI	15.11.2011	Ph.D. in Agronomy, Entomology, Food Technology, Flori. & Land., Fruit Sci, Veg. Sci, Plant Breed. & Gen, Plant Pathology, Soil Science
16.	PET-AE	16.11.2011	Ph.D. in Farm Machinery & Power Engg., Processing & Food Engg
17.	PET-BIOTECH	16.11.2011	Ph.D. in Biotechnology
18.	PET-AGROMET	19.11.2011	Ph.D. in Agrometeorology
19.	PET-HOME SCI	20.11.2011	Ph.D. in Clothing & Textiles, Food & Nutrition, Home Sci. Extn & Comm. Mgmt.
20.	PET-BASIC SCI	21.11.2011	Ph.D. in Biochemistry, Botany, Agril. Economics, Sociology, Microbiology, Chemistry, Business Management
21.	MET-AGRIBUSINESS	21-5-2012	MBA ( Agribusiness)
22.	MET-BASIC SCI	23-5-2012	M.Sc in Botany, Biochemistry, Microbiology & Zoology
23.	MET PHYSICS	24-5-2012	M.Sc in Physics
24.	MET-CHEM	28-5-2012	M.Sc in Chemistry



25.	MET-MCA	11-6-2012	Master of Computer Applications
26.	MET-JOURNALISM	12-6-2012	Master of Journalism and Mass Communication
27.	MET HOME SCI	13-6-2012	M.Sc in Food & Nutrition
28.	AAT	14-6-2012	B.Sc. Agri. (Hons.) 6-year programme
29.	CET	18-6-2012	B.Sc. Agri. (Hons.) 4-year, B.Sc. Biotech. (Hons.) 4-year, B.Tech. Food Tech. (Hons.) 4-year and 5-Year Integrated M.Sc. (Hons) programmes
30.	MET-CSE	20-6-2012	Master of Computer Science and Engineering
31.	MET-AE	21-6-2012	M.Tech in Farm Power & Machinery, Soil & Water Engineering, Processing & Food Engineering
32.	MET-CE	21.6.2012	M M.Tech in Civil Engineering
33.	MET-BIOTECH	22-6-2012	M.Sc in Biotechnology
34.	MET-AGRI	25-6-2012	M.Sc in Agronomy, Agrometeorology, Extension Education, Entomology, Food Technology, Pomology, Veg. Crops, Flori. & Land., Plant Breeding & Gen., Plant Pathology, Nematology, Soil Science, Forestry, Economics, Sociology
35.	PET-Agri	15.11.2012	Ph.D. in Agronomy, Entomology, Food Technology, Flori. & Land., Fruit Sci, Veg. Sci, Plant Breed. & Gen, Plant Pathology, Soil Science
36.	PET-AE	16.11.2012	Ph.D. Farm Machinery & Power Engg., Processing & Food Engg
37.	PET-BIOTECH	16.11.2012	Ph.D. in Biotechnology
38.	PET-AGROMET	19.11.2012	Ph.D. in Agrometeorology
39.	PET-HOME SCI	20.11.2012	Ph.D. in Clothing & Textiles, Food & Nutrition, Home Sci. Extn & Comm. Mgmt.
40.	PET-BASIC SCI	21.11.2012	Ph.D. in Biochemistry, Botany, Agril. Economics, Sociology, Microbiology, Chemistry, Business Management
41.	MET-JOURNALISM	7.6.2013	Master of Journalism and Mass Communication
42.	MET-AGRIBUSINESS	8-6-2013	Mba ( Agribusiness)
43.	MET PHYSICS	8.6.2013	Master's programme in Physics
44.	MET-BASIC SCI	9.6.2013	M.Sc in Botany, Biochemistry, Microbiology & Zoology
45.	MET-CHEM	10.6.2013	M.Sc in Chemistry
46.	MET HOME SCI	10-6-2013	M.Sc in Apparel & Textile Science, Family Resource Management, Food & Nutrition, Home Science Extension & Communication Management, Human Development
47.	MET-MCA	11-6-2013	Master of Computer Applications
48.	AAT	14-6-2013	B.Sc. Agri. (Hons.) 6-year programme
49.	CET	18-6-2013	B.Sc. Agri. (Hons.) 4-year, B.Sc. Biotech. (Hons.) 4-year, B.Tech. Food Tech. (Hons.) 4-year and 5-Year Integrated M.Sc. (Hons) programmes

50	MET-CSE	20-6-2013	Master of Computer Science and Engineering
51	MET-AE	21-6-2013	M.Tech in Farm Power & Machinery, Soil & Water Engineering, Processing & Food Engineering
52	MET-CE	21.6.2013	M.Tech in Civil Engineering
53	MET-BIOTECH	24-6-2013	M.Sc in Biotechnology
54	MET-AGRI	25-6-2013	M.Sc in Agronomy, Agromet, Extn. Edu, Entomology, Food Tech, Flori. & Land., Plant Breed. & Gen., Plant Pathology, Soil Science, Forestry, Economics, Sociology
55	PET-AE	14.11.2013	Ph.D. in Farm Machinery & Power Engg., Processing & Food Engg & Soil & Water Engg.
56	PET-BIOTECH	14.11.2013	Ph.D. in Biotechnology
57	PET-AGRI	19.11.2013	Ph.D. in Agronomy, Entomology, Extension Education, Food Technology, Horticulture (Flori. & Landscaping), Horticulture (Fruit Sci), Horticulture (Veg. Sci,) Plant Breed. & Gen, Plant Pathology, Soil Science
58	PET-AGROMET	21.11.2013	Ph.D. in Agrometeorology
59	PET-EST	21.11.2013	Ph.D. in Energy Science & Technology
60	PET-HOME SCI	25.11.2013	Ph.D. in Apparel & Textile Science, Family Resource Management, Food & Nutrition, Home Sci. Extn & Comm. Mgmt., Human Development
61	PET-BASIC SCI	28.11.2013	Ph.D. Agril. Economics, Biochemistry, Botany, Business Administration, Chemistry, Microbiology, Sociology, Zoology

## TRAININGS

- **Introductory training course for teachers:** Organized an 8-day Introductory Training Course for Teachers to prepare them for the Departmental Examination in Accounts from May 9, 2012 to May 18, 2012. A total of 8 lectures by various experts were arranged and 51 teachers applied for the training course.
- **Introductory training course for superintendents and AAOs:** Organized 9-day training course for the Superintendents and AAOs of the Punjab Agricultural University for improving and working efficiency of the office staff from Sept. 23 to Oct. 4, 2013
- **Introductory training course for teachers:** Organized 7-day Introductory Training Course for Teachers to prepare them for the Departmental Examination in Accounts meant for teachers from Dec 2-13, 2013

## ACADEMICS

I was member of the following academic bodies of PAU

- **Academic Council** of PAU session (2011-12, 2012-13, 2013-14)
- **Resident Instruction Committee** of PAU (2011-12, 2012-13, 2013-14)
- **Board of Studies** for session (2011-12, 2012-13, 2013-14) of College of Agriculture, College of Agricultural Engineering & Technology, College of Basic Sciences & Humanities; and College of Home Science, PAU

## Co-ordinator for tests

- Acted as Nodal Officer of ICAR's 18<sup>th</sup> All India Entrance Examination for

admission to UG programmes in Agriculture and Allied Science subjects held on 18.4.2013.

- Acted as Coordinator of **MET-2012** of Punjab Technical University, Jalandhar for admission to MBA programme at PAU Ludhiana

## 1 **DUTIES PERFORMED AS ADDITIONAL DIRECTOR COMMUNICATION**

2

Coordinated the activities of different sections of the Centre for Communication and International Linkages viz. publications, print and electronic media, photography, business and international linkages

**Publications:** The following documents were published

- Annual Report of PAU, 2012-13 Ludhiana
- PAU Prospectus 2014
- Convocation Report-2014
- Monthly Magazines (Changi Kheti and Progressive Farming)
- Package of Practices (Kharif, Rabi, Flower and Vegetable Cultivation)
- Bouchure (PAU an overview-2014)

### **Electronic Media**

- Live coverage of Kissan Mela for Door Darshan (March 2014)
- Video coverage of workshop for ADO's and Agri Inspectors
- Annual Convocations PAU May 12, 2014.

### **Print Media**

- News coverage of various activities of PAU
- Designing of advertisement and messages to farmers for newspaper

### **Business**

- Nearly 13,000 copies of PAU magazines are sent to farmers every month.
- A special campaign was launched during Kisan mela to enroll subscriber for Farm magazine - Changi Kheti and Progressive Farming and 4,500 new members were enrolled.
- To fetch advertisements in PAU publications, the student have been involved in a programme "Earn while you Learn"

## 1 **Life Member of Scientific Societies and Committees**

3

- Society of Biological Chemicals (India)
- Bio-Energy Society of India
- Indian Society of Technical Education
- Indian Society of Agricultural Biochemist
- Punjab science Congress
- SAASCA (Society for the Advancement of Academics, Sports and Cultural activities, COBS&H, PAU, Ludhiana.
- Indian Society for the advancement of Insect Science.

## 1 **Sports accomplishments**

4

- Honored at the 45<sup>th</sup> Annual Athletic meet of Punjab Agricultural University for contribution to PAU sports
- President, Sports & Cultural Activity Committee , College of Basic Sciences and

- Humanities (2010-11)
- National Commissaire (UCI-FIAC) cycling
  - President of the Cycling Club of PAU since 1998.
  - Best Athlete of COBS&H (1979-80)
  - Fastest Man of the University, PAU, Ludhiana.(1979-80)
  - Member of PAU Football Team, in All India North Zone Football Tournament (1974, 1975 and 1978).
  - Nominated as Technical official of **Asian cycling Championship** in 1991 and 2005 by the Cycling Federation of India.
  - Member of Athletics club of PAU, since 1991.
  - Member of Sports and Cultural Activity committee of the PAU

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### **Extra-curricular activities**

**As secretary, PAU Science Club and Secretary, SAASCA. I have been actively associated with various co-curricular activities of the University.**

- i) PAU Science Club Activities; Organized large number of lectures of eminent scientist
- i) SAASCA (Society for the Advancement of Academics Sports and Cultural Activities) organized, conducted and attended
- ii) INSPIRE CAMP (DST) for science students were organized as Coordinator

Dated:

Signature of Applicant