1. Name Dr Raj Kumar

2. Designation: Principal Scientist

(Genetics & Cytogenetics)

3. Contact Details

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4. Academic Background:

Degree	**Year**	**Name of University/Board**
B.Sc.	1987	Dayanand College, Hisar
M.Sc. (Genetics)	1989	College of Basic Sciences & Humanities, Haryana Agricultural University Hisar
Ph.D (Genetics)	1996	College of Basic Sciences & Humanities, CCS Haryana Agricultural University Hisar

5. Area of research: Potato breeding, Germplasm Conservation

6. Current Institute projects:

1. Project title: Integrated nutrient and water management for improved productivity of potato (Project No.: IXX11498)
2. Project title: Breeding to evolve trait specific varieties for productivity, quality and resistance to biotic and abiotic stresses (Project No.: IXX11484)
3. Project title: Management and enhancement of Potato germplasm (Project No.:: IXX11483)
4. All India Coordinated Research Project on Potato.

7. Externally funded projects:

DUS testing of Potato

8. Award's/honours

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9. Publications:

Research papers:

1. **Goyal, R.K**., R.K. Jain and J.B. Chowdhury 1990. Anther and somatic explant culture

of *Brassica juncea* and its implications in breeding Brassica oilseed crops. *Indian J.*

Exptl. Biol. 28:1034-1039.

2. **Goyal, R.K.**, R.K. Jain and J.B. Chowdhury 1990. Comparative morphogenetic potential of haploid and diploid callus cultures of *Brassica juncea* L. Current Science

59:616-618.

3. **Goyal, R.K**., J.B. Chowdhury and R.K. Jain 1997. An efficient protoplast–to-plant

system in *Sinapis alba* L.*Cruciferae Newsletter* **19**:53-54.

4. **Kumar, R.,** J.B. Chowdhury and R.K. Jain 2001. Interspecific hybridization in *Brassica juncea* and *Brassica tournefortii* through embryo rescue and their evaluation

for biotic and abiotic stress tolearnce. *Indian J. Exptl. Biol.* 39:911-915.J.

5. Kang, G.S. and **Raj Kumar** 1997. Effect of activated charcoal on germination of

botanical seeds of Potato (*Solanum tuberosum* L.). *J. Indian Potato Assoc*. **24** (3&4):114-117.

6. **Kumar, R**. and G.S. Kang 1998. Genetic diversity among Andigena potatoes. *J.*

Indian Potato Assoc. **25** (1&2):21-24.

7. **Kumar, R** and G.S. Kang 2000. Path coefficient and Stability analysis studies in

Andigena potatoes*. Indian Journal of Agricultural Sciences* **70**: 158-162.

8. **Kumar, R.** and G. S. Kang 2000. Characterizing genetic diversity in andigena potato

using Non-hierarchical Euclidean Cluster analysis. In: *Potato, Global Research and*

Development (Eds. S.M. Paul Khurana, G.S. Shekhawat, B.P. Singh and S.K. Pandey).

Indian Potato Association, Central Potato Research Institute, Shimla, pp. 146-149.

9. **Kumar, R.** and G. S. Kang 2000. Combining ability for yield and its components in

true seed crop of potato. In:*Potato, Global Research and Development* (Eds. S.M. Paul

Khurana, G.S. Shekhawat, B.P. Singh and S.K. Pandey). Indian Potato Association,

Central Potato Research Institute, Shimla, pp. 701-704.

10. Kang, G.S. and **R. Kumar** 2000. Breeding early bulking potato varieties for north-

western plains of India. In: *Potato, Global Research and Development* (Eds. S.M. Paul
Khurana, G.S. Shekhawat, B.P. Singh and S.K. Pandey). Indian Potato Association,
Central Potato Research Institute, Shimla, pp. 143-145.

11. **Kumar, R**. and Jai Gopal 2001. Evaluation of Andigena x Tuberosum potato progenies for combining ability in early generations. *J. Indian Potato Assoc.* 28(1): 6-
7.

12. **Kumar, R**. and G.S. Kang 2001. Stability analysis for tuber yield in Andigena potato. *J. Indian Potato Assoc.* 28(1): 18-20.

13. Kang, G.S., **R. Kumar**, S.K. Pandey and S.M. Paul Khurana 2001. Keeping quality
of some advanced potato hybrids at room temperature storage. *J. Indian Potato Assoc.* 28(1): 137-138.

14. **Kumar, R**. and G.S. Kang 2001. Combining ability in potato for some economic
characters in 75 days crop. *J. Indian Potato Assoc* **28**(2-4): 257-261.

15. Gopal, J., **Raj Kumar** and G.S. Kang. 2002. The effectiveness of using a minituber crop for
selection of agronomic characters in potato breeding programmes. *Potato Research* 45:145-151.

16. **Kumar, R.** and G.S. Kang 2002. Genetic analysis for combining ability in true

seed crop of potato (*Solanum tuberosum*). *Indian Journal of Agricultural Sciences* 72 (9):532-36.

17. Kumar, R. and G.S. Kang 2003. Genetic analysis of early blight (*Alternaria solani*)

resistance in potato (*Solanum tuberosum*)***.*** *Advances in Horticultural Science* ***17(4):192-195.***

18. **Kumar, R**. and Jai Gopal 2003. Combining ability of andigena accessions for yield components and tuber dry matter in third clonal generation. *J. Indian Potato Assoc. 30*(1-2): 3-4.

19***.*** **Kumar, R*. 2004.*** Estimation of genetic variances and combining ability in potato (*Solanum tuberosum*). *Indian Journal of Agricultural Sciences* ***74(10): 544-7.***

20. **Kumar, R**., S.K. Pandey, D.S. Uppal and R.S. Marwaha. 2004.. Evaluation of potato (*Solanum tuberosum*) varieties for chips production. *Indian Journal of Agricultural Sciences* 74(11): 578-82.

21. **Kumar, R**. 2004. Combining ability for yield and its components under heat stress in Potato. *Crop Improvement* 31(1): 92-99.

22. **Kumar, R** and G.S. Kang. 2005. Heterosis and combining ability for yield and its components in Potato crop in early planting heat stress conditions. *Potato Journal* 32(1-2): **43-47**.

23. Kumar, R., S.K. Pandey and S.M.P. Khurana. 2005. Keeping quality of potato processing cultivars during room temperature storage. *Potato Journal* 32(1-2): **55-59**.

24. Kang, G.S., **Raj Kumar** and S.K. Pandey. 2005. Yield performance and storage behaviour of early bulking potato hybrids in north-western plains of India. Potato Journal 32(3-4):135-136.

25. Pandey, S.K., R.S. Marwaha, P. Manivel and **Raj Kumar** 2005. Evaluation of potato germplasm for cold chipping ability and cold sweetening. Potato Journal 32(3-4):121-122.

26**. Kumar, R**. and J. Sharma 2005. Effect of soil solarization on true potato (*Solanum tuberosum* L.) seed germination, seedling growth, weed population and tuber yield. *Potato Research* 48 :15-23.

27. **Kumar, R.** 2005. Specific and general combining ability for yield and tuber dry matter of Potato (*Solanum tuberosum* L.) crop. SAARC Journal of Agriculture 3:179-189.

28. **Kumar, R**. G.S. Kang and S.K. Pandey 2006. Induction of fertile flowers in potato (*Solanum tuberosum* L.) by silver thiosulphate anionic complex. Euphytica 149 (1-2): 27-33.

29. **Kumar R** and G.S. Kang 2006. Usefulness of Andigena (*Solanum tuberosum* ssp. andigena) genotypes as parents in breeding early bulking potato cultivars. Euphytica 150 (1-2):107-115.

30. **Kumar, R.** and J. Gopal 2006. Repeatability of progeny mean, combining ability, heterosis and heterobeltiosis in early generations of a potato breeding programme. *Potato Research* 49:131-141.

31. **Kumar, R**., G.S. Kang and S.K. Pandey 2007. Inheritance of resistance to late blight (*Phytophthora infestans*) in potato. Euphytica 155(1-2):183-191.

32. Kang, G.S., **Raj Kumar** and S.K. Pandey 2007. Evaluation of potato cultivars and lines for frost tolerance. Potato Journal 34(1-2):47-48.

33. Gopal, J., Vinod Kumar, S.K. Pandey, **Raj Kumar**, P.C. Pande and S.V. Singh 2007. Morphological descriptors for DUS testing of Potato varieties. Potato Journal 34(1-2):59-60.

34. **Kumar, R.** and G.S. Kang 2007. Analysis of variance and combining ability of yield components of potato (*Solanum tuberosum*) under early planting heat stress conditions. *Indian Journal of Agricultural Sciences* 77 (8):523-25.

35. Kang, G.S., **Raj Kumar**, J. Gopal, S.K. Pandey and S.M. Paul Khurana 2007. Kufri Pushkar - A main crop potato variety with good keeping quality for Indian plains. Potato Journal 34(3-4):147-152.

36. Manivel, P., R.S. Marwaha, S.K. Pandey, Raj Kumar and S.V. Singh 2007. Identification of parental lines for breeding potatoes for cold chipping. In: *Root and Tuber Crops Post harvest management and value addition* (Eds. G. Padmaja, T. Premkumar, S. Edison and Bala Nambisan). Central Tuber Crops research Institute, Thiruvanthapuram, pp. 165-168

(Proceedings of the National Seminar on Achievements and Oppurtunities in Post harvest Management and value addition in Root and Tuber crops held at Central Tuber Crops research Institute, Thiruvanthapuram during 19-20 July 2005).

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38. Chimote, V.P., **Raj Kumar**, N. Sharma and S. Kamal 2008. Nuclear-cytoplasmic diversity in parental genotypes used for Indian early bulking potato (*Solanum tuberosum* ssp. *tuberosum*) breeding programme. Indian J. Genet. 68(2):171-176.

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40. **Raj Kumar**, Kang, G.S., J. Gopal, and S.K. Pandey 2009. Kufri Khyati - A new early maturing potato variety for Indian plains. Potato Journal 36(1-2):14-19.

41. **Kumar, R**., R.S. Marwaha, J. Gopal and S.K. Pandey. 2009. Relationship between chip colour and compositional characters in potato (*Solanum tuberosum*). *Indian Journal of Agricultural Sciences* 79(8): 679-683.

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43. **Raj Kumar**, J. Gopal and S.K. Pandey 2012. Genetic improvement for yield and tuber size in Andigena potatoes (*Solanum tuberosum* subsp andigena) after one cycle of recurrent selection. *Indian Journal of Agricultural Sciences* **82**(10) 885-888.

44. **Gopal, J., V. Kumar, Raj Kumar and P. Mathur** 2013. Comparison of different approaches to establish a core collection of Andigena (*Solanum tuberosum* Group Andigena) potatoes. *Potato Research* **56** :85-98.

45. **Raj Kumar** and R.S. Marwaha 2014. Variability for carotenoid content and relationship between flesh colour and carotenoid content in Potato. *Potato Journal* **41**:81-85.

46. Trehan, S.P., **Kumar, R.** and Singh, B.P. 2014. A new input efficient promising potato hybrid JX 576 - IV. Its water use efficiency in comparison to other potato cultivars. International Journal of Agricultural and Statistical Sciences **10** (1): 171-174.

47. **Raj Kumar** 2014. Reciprocal effects in potato (*Solanum tuberosum* L.) in Andigena-Tuberosum intergroup hybridization under shortdays. *Indian J. Genet.* 73(3):396-399. (DOI: 10.5958/0975-6906.2014.00861.X)

48. **Raj Kumar**, G.S. Kang and S.P. Trehan 2014. Kufri Gaurav : A nutrient efficient medium maturing potato variety for north Indian plains. Potato Journal 41(2): 137-144.

49. **Raj Kumar** 2014. Combining ability of improved Andigena clones in Andigena × Tuberosum crosses. Potato Journal 41 (2): 180-184.

50. Kunar, P., **R. Kumar**, J.S. Minhas, S.P. Trehan, V.K. Dua and B.P. Singh 2016. Identification of nitrogen use efficicent potato genotypes. In: *Natural Resource management: Ecological perspectives* (Eds. R. Peshin, A.K. Dhawan, F. Bano and K.S. Risam). Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, India, pp. 682

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Bulletin

1. Birhman, R.K., Jai Gopal, S.K. Kaushik, G.S. Kang, **Raj Kumar**, T.A. Joseph and

S.K. Luthra 1998. Inventory of Potato germplasm (Group Andigena) collection. Technical Bulletin No. 46, Central Potato Research Institute Shimla (H.P.) India.

2. Kumar, V., Jai Gopal, **Raj Kumar**, S.K. Luthra, S.K. Kaushik, and S.K. Pandey 2005. Inventory of cultivated potato germplasm. Technical Bulletin No. 70, Central Potato Research Institute Shimla (H.P.) India.

3. CPRI 2006 (Pandey, S.K., Jai Gopal, V. Kumar, S.V. Singh, P.C. Pande and **Raj Kumar**). National test guidelines for the conduct of Tests for Distinctness, Uniformity and Stability of potato (*Solanum tuberosum* L.). CPRI technical bulletin No. 79, Central Potato Research Institute, Shimla, HP, India, 20pp.

4. **Kumar, R**., V. Kumar, Jai Gopal, S.K. Luthra and S.K. Pandey 2008. Inventory of Potato germplasm (Group Andigena) collection.Technical Bulletin No. 86, Central Potato Research Institute Shimla, Himachal Pradesh, India, 100pp.

Book chapters

1. Gopal, J. and **Raj Kumar** 2003. Strategies for successful potato breeding. In: *The potato* (S.M. Paul Khurana, J.S. Minhas and S.K. Pandey Eds.), pp. 61-68. Mehta Publishers, New Delhi.

2. Kang, G.S., Raj Kumar, S.P. Trehan and R.K. Arora 2007. Potato in Punjab. In: Potato production and utilization in India (B.C. Chaudhary, P.K. Ray and S.K. Singh Eds.). pp. 78-81. Rajendra Agricultural University, Pusa, Bihar.

3. Kumar, R. 2007. The canon of potato science: 42. Flowering. *Potato Research* 50:383-385. (invited general topic article published in Potato Research).

4. Kumar, R., V. Kumar, V. Bhardwaj and J. Gopal 2008. Potato Germplasm Resources. In: Twenty steps towards hidden treasure (Technologies That Triggered Potato Revolution in India) (S.K. Pandey and S.K. Chakrabarti Eds.) pp.21-32. Central Potato Research Institute Shimla, Himachal Pradesh, India, 281 pp.

5. Trehan, S.P., R.K. Arora and **Raj Kumar** 2009. Punjab. In: Region specific technologies for potato production in India (P.S. Naik and S.S. Lal Eds.) pp.114-124. All India Coordinated Research Project on Potato, Central Potato Research Institute, Shimla. 164 pp.

Popular articles

1. Kumar, R., G.S. Kang and S.K. Pandey 2003.Early potato varieties for Indo-gangetic plains. *Indian Horticulture* 48 (2):12-13.

2. Kumar, R., G.S. Kang, J. Gopal and S.K. Pandey 2006. JW 96 - An elite potato parental line for earliness. *Central Potato Research Institute Newsletter* 35:2.

3. Kumar, R., G.S. Kang and S.K. Pandey 2006. JX 123 - An elite potato parental

line for early blight resistance and earliness. *Central Potato Research Institute Newsletter* 35:2.

4. Kumar, R., G.S. Kang, J. Gopal and S.K. Pandey 2007. 'Kufri Pushkar'- a new medium maturing potato variety with good keeping quality. *Indian Farming* 57 (1):18,29.

5. राज कुमार, गुरजीत सिंह कंग और सुमन कुमार पाण्डेय 2007। आलू – भरपूर फ़सल, सही क़िस्में। खेती 60(7):33, 36।

(5. Raj Kumar, Gurjit Singh Kang aur Suman Kumar Pandey 2007. Aalu-bharpur fasal, sahi kisme. Kheti 60(7):33,36.)

6. Kumar, R., G.S. Kang, R.S. Marwaha and S.K. Pandey 2007. J.93-139: An early bulking potato line with high carotenoid content. *Central Potato Research Institute Newsletter* 37:2-3.

7. Marwaha, R.S., Raj Kumar and S.K. Pandey. 2008. Antioxidant rich andigena potatoes. *Central Potato Research Institute* ***Newsletter 38*** *(*June 2008):5. (under Research Highlights)

8. 3. Kumar, R., G.S. Kang, S.K. Pandey and J. Gopal 2009. A new germplasm JX 90 registered. *Central Potato Research Institute Newsletter* 40:5-6.

9. राज कुमार और गुरजीत सिंह कंग 2008। मैदानी क्षेत्रों के लिए उन्नत क़िस्में। खेती 61(9):18-20

(9. Raj Kumar aur Gurjit Singh Kang 2008. Maidani kshetro ke liye unnat kismet. *Kheti* 61(9):18-20.)

10. Kumar, R., G.S. Kang and S. P. Trehan 2012. A new nutrient use efficient

potato variety Kufri Gaurav released for Indian plains. *Central Potato Research Institute Newsletter* 50:1.

11. Kumar, R., G.S. Kang and S.P. Trehan 2013. Kufri Gaurav - A new potato variety requiring less nutrients. *Indian Farmers' Digest* 46 (11):12-13.

12. Kumar, R., G.S. Kang and S. P. Trehan 2013. J.93-58: A potato hybrid with better nitrogen use efficiency. *Central Potato Research Institute Newsletter* 54:2.

13. Kumar, R., G.S. Kang, S.K. Pandey and J. Gopal 2015. Kufri Khyati (J.93-86) : A new early maturing potato variety with late blight resistance. *Indian Farmers' Digest* 48(2) 13-14.

Abstracts of research papers presented in Seminars/Conferences/Symposia

1. **Kumar, R**. 1997. Phenotypic stability for tuber yield in Andigena Potato. In "Abstracts National Seminar on Potato Production Constraints in low productivity areas "(B.P. Singh and S.M. Paul Khurana eds.) held on September 6, 1997 at Orissa University of Agriculture and Technology Bhubaneshwar. Indian Potato Association, Shimla. pp. 19.

2. Kang, G.S. and **Raj Kumar** 1997. JEX/C 166- A prominent Potato culture for Indian plains. In "Abstracts National Seminar on Potato Production Constraints in low productivity areas" (B.P. Singh and S.M. Paul Khurana eds.) held on September 6, 1997 at Orissa University of Agriculture and Technology Bhubaneshwar. Indian Potato Association, Shimla. pp. 19.

3. Gopal, J., **Raj Kumar** and G.S. Kang 1998. Use of minitubers produced via tissue culture for selecting superior genotypes in Potato breeding programmes.

In: Abstracts National Symposium on “Emerging Scenario in Vegetable Research and Development" held on 12-14th December 1998 at Project Directorate on Vegetable Research, Varanasi. Indian Society of Vegetable Sciences, Varanasi. pp. 88.

4. Kang, G.S. and **Raj Kumar** 1999. Breeding early bulking varieties for north-western plains of India. In "Abstracts Global Conference on Potato 1999" held on 6-10th December 1999 at Indian Agriculture Research Institute, New Delhi. Indian Potato Association, Shimla. pp. 169.

5. **Kumar R**. and G.S. Kang 1999. Characterizing genetic diversity in andigena potato

using Non-hierarchical Euclidean Cluster analysis.. In "Abstracts Global Conference on Potato 1999" held on 6-10 th December 1999 at Indian Agriculture Research Institute, New Delhi. Indian Potato Association, Shimla. pp. 169.

6. **Kumar, R** and G.S. Kang 1999. Combining ability for yield and its components in

true seed crop of potato. In "Abstracts Global Conference on Potato 1999" held on 6-10 th December 1999 at Indian Agriculture Research Institute, New Delhi. Indian Potato Association, Shimla. pp. 248.

7. **Kumar, R**. and G.S. Kang 2001. Combining ability study in the development of early bulking potato hybrids. In: Abstracts Diamond jubilee symposium “Hundred years of Post-Mendelian Genetics and Plant Breeding- Retrospects and Prospects” November 6-9, 2001. Indian Society of Genetics and Plant

Breeding, Indian Agricultural Research Institute, New Delhi, pp. 153.

8. **Kumar, R**. and G.S. Kang 2001. Heterosis and combining ability analysis for resistance to early blight (*Alternaria solani*) in potato. In: Abstracts Diamond jubilee symposium "Hundred years of Post- Mendelian Genetics and Plant Breeding- Retrospects and Prospects" November 6-9, 2001. Indian Society of Genetics and Plant Breeding, Indian Agricultural Research Institute, New Delhi, pp. 203.

9. **Kumar, R.** D.S. Uppal and S.K. Pandey 2003. Performance of Indian and exotic

processing varieties in Punjab. In: Abstracts "Conference on Processing and export

potential of potatoes within Asia" March 10th, 2003 held at Central Potato Research

Institute Campus Modipuram. Indian Potato Association, Shimla, pp. 43.

10. Manivel, P., R.S Marwaha, S.K.Pandey, **R. Kumar** and S.V. Singh. 2005. Identification of parental lines for breeding potatoes for cold chipping. Abstracted In: 'National Seminar on Achievements and opportunities in post-harvest management and value addition in roots and tuber crops' held at Central Tuber Crop Research Institute, Sreekariyam, Thiruvanthapuram, Kerala, India on 19-20 July, 2005.

11. **Kumar, R.** and Jai Gopal 2005. Evaluation of exotic and Indian potato

cultures for yield performance at 60 and 75 days harvests. Presented in

symposium on "Current Prospectives in Potato Research" held at Rajasthan

College of Agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur on 11th September 2005.

12. **Kumar, R.** and G.S. Kang 2005. Combining ability analysis for early blight (*Alternaria solani*) resistance in Potato (*Solanum tuberosum L*). In Abstracts "Second Global Conference, Plant Health-Global Wealth" held at Rajasthan College of Agriculture, Maharana Pratap University of Agriculture and Technology, Udaipur from 25-29th October 2005. Indian Society of Mycology and Plant Pathology and Maharana Pratap University of Agriculture and Technology, Udaipur, pp 242.

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14. **Kumar, R**., G.S. Kang and S.K. Pandey 2008. Screening of potato breeding lines and varieties for frost tolerance. In abstracts "Global Potato Conference 2008 Opportunities and Challenges in the New Millennium" held at NASC Complex New Delhi from 9-12 December, 2008. Indian Potato Association, Central Potato Research Institute, Shimla pp. 17.

15. **Kumar, R**. and J. Gopal 2008. Development of improved andigena accessions for tuber size and yield. In abstracts "Global Potato Conference 2008 Opportunities and Challenges in the New Millennium" held at NASC Complex

New Delhi from 9-12 December, 2008. Indian Potato Association, Central Potato Research Institute, Shimla pp. 17.

16. Marwaha, R.S**., Raj Kumar** and S.K. Pandey 2008. Identification of potato accessions ideal for cold chipping. In abstracts "Global Potato Conference 2008 Opportunities and Challenges in the New Millennium" held at NASC Complex New Delhi from 9-12 December, 2008. Indian Potato Association, Central Potato Research Institute, Shimla pp. 18.

17. S.P. Trehan, **Raj Kumar** and B.P. Singh 2012. Screening of hundred germplasm for nitrogen efficiency under field conditions. In abstracts "5th Indian Horticultural Congress: Horticulture for Food and Environment Security" held at Punjab Agricultural University, Ludhiana from 6-9 November 2012. The Horticultural Society of India, New Delhi. Pp. 67.

18. **Raj Kumar**, J. Soto and D. Tay 2012.Genetic diversity of Indian accessions in comparison to other cultivated potato (*Solanum tuberosum* L.) accessions as revealed by molecular markers. In Souvenir "National Consultation on Potato Research and Development: Way Forward" held at Orissa University of Agriculture and Technology, Bhubaneshwar on 26th September 2012 (Abstract).

19. **Kumar, R**. and A. Mehta. Evaluation of Tuberosum germplasm for processing quality. In Abstracts National Seminar on "Post Harvest management and processing of Potato for increasing food security in India" held at University of Agricultural Sciences Dharwad on 22 September, 2014. University of Horticultural Sciences Bagalkot and Indian Potato Association, Central Potato Research Institute, Shimla.

20. **Kumar, R**. and V. Kumar 2014. Evaluation of Tuberosum germplasm for foliage maturity. Abstract in Souvnei “National Seminar on Emerging problems of Potato” held at Central Potato Research Institute Shimla from 1-2 November, 2014. Indian Potato Association, Central Potato Research Institute, Shimla pp. 127-128.

Research papers presented in Seminars/Conferences/Symposia

1. Trehan, S.P., R. Kumar and S.K. Pandey 2009. Nitrogen, phosphorus and potassium use efficiency of hybrids JX 576 in comparison to some released potato cultivars. Presented in ‘International symposium on potassium role and benefits in improving nutrient management for food production, quality and reduced environmental damages’ held at Orissa University of Agriculture and Technology, Bhubneshwar, 5-7th November 2009

2. Trehan,S.P., Kumar, R. and Singh, B.P. 2010. Agronomic, physiological and uptake efficiency of N, P and K in a promising Hybrid JX 576 in comparison to some released potato cultivars. Presented in National Seminar on Development in Soil Science: 2010 held during 14-17 November, 2010 at Institute of Soil Science, Bhopal.

3. Trehan,S.P., Kumar, R. and Singh, B.P. 2011. Water use efficiency of a promising Hybrid JX 576 in comparison to some released potato cultivars. Presented in National Seminar on Development in Soil Science: 2011 held during 16-19 November, 2011 at University of Agricultural Sciences, Dharwad

10. Professional Affiliations:

1. I am a life member of Indian Society of Genetics and Plant Breeding

2. I am a life member of Indian Potato Association

11. Foreign exposure

I attended International Training on Gemome Resource Conservation from 29th June 2011 to 26th September 2011 at International Potato Centre (CIP), Lima Peru

(Raj Kumar)

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