

Résumé of Dr. Amrendra Kumar



1. Personal Details

Name	:	Amrendra Kumar
Designation & Discipline	:	Senior Scientist, Horticulture
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2. Qualifications (Highest degree)

	Year	Institute/ University	Subject (Specialization)
Ph.D.	1998	Ranchi Agril. College, BAU, Kanke, Ranchi	Horticulture
M.Sc.	1995	Ranchi Agril. College, BAU, Kanke, Ranchi	Horticulture

3. Research Projects (Ongoing projects)

Details such as Title, PI/Co-PI, Allocation, Duration etc.	Salient accomplishment
<p>Studies on effective utilization of interspaces in young bearing litchi orchards for income and soil health improvement. As PI (project started from 2010-13) 31.43 lakhs</p>	<ul style="list-style-type: none"> ➤ Healthy and vigorous litchi plants and intercrops were found in the experiments. ➤ Laboratory facilities for nutrient analysis were developed ➤ Samples were collected from litchi orchards for studying the nutrient uptake.
<p>Investigation and establishing the physiological and biochemical relations for improved litchi Production. As PI (project started from 1st April 2008-12) 32.58 lakhs Duration : 5 years</p>	<ul style="list-style-type: none"> ➤ Studies of regulating the flower induction in litchi through use of growth regulators shows that foliar of ethrel 150 ppm twice in October and December shoed positive trends. Similarly foliar application of NAA 40ppm during the above period also gave encouraging results. ➤ Studies on shoot maturation showed that panicle initiation shown on fully matured shoot (6-9 months old.) ➤ Girdling of branches helps in induction of flowering is in progress.
<p>Development of sustainable production techniques in litchi As Co.PI (Project started from 2008) 41.85 lakh Duration 5 year</p>	<ul style="list-style-type: none"> ➤ Split application of nutrient showed positive trend and better performance of litchi plants were found till 5th year of application. ➤ Early flower initiation was noticed in some of the treatments in 5th year but with low fruit set. ➤ Development of laboratory for leaf nutrient diagnostic technique
<p>Plant propagation and growth physiology of vegetatively propagated plants in litchi As Co.PI (project started from 1st April 2010) 11.43 lakhs</p>	<ul style="list-style-type: none"> ➤ High mortality was observed in the nursery plants due to substandard propagating medium and occurrence of diseases. ➤ Standardization of potting medium showed that RBS+VC (2:1)+Vermiculite (50g/kg mixture) shoed healthy and vigorous growth of saplings with maximum number of secondary and tertiary root. ➤ Dipping of airlayers in carbendazim solution and vermi-wash and local paste were helpful in reducing the mortality of newly planted saplings.

4. Publications (Important research publications)

1. Amrendra Kumar and B.P. Jain (2002). Combining ability studies in Pea (*Pisum sativum* L.). *Indian J. Horticulture*. 59(2): 181-184.
2. Amrendra Kumar and B.P. Jain (2003). Genetic Variability in Pea (*Pisum sativum* L.). *Journal of Research* (BAU). 15(1):55.
3. Amrendra Kumar and B.P. Jain (2003). Inter-relationship studies for different yield and yield attributes in Pea (*Pisum sativum* L.). *Madras Journal of Agriculture*. 447/98.

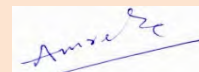
4. Amrendra Kumar, S.D. Pandey, Vinod Kumar and Vishal Nath (2011). Evaluating potting media for production of quality planting materials of litchi (*Litchi chinensis* Sonn). *Bihar Journal of Horticulture* 1(1): 48-50.
5. Kumar V, Kumar A and Vishal Nath (2011). Emerging pests and diseases of litchi (*Litchi chinensis* Sonn.). *Pest Management in Horticultural Ecosystems* 17 (1): 10.
6. Rajesh Kumar, Amrendra Kumar and Mathura Rai (2004). Studies on Crop Productivity, Soil Fertility Status and Nutrient Use Trends in Litchi (*Litchi chinensis* sonn.) Production System in Bihar. Proc. *National Seminar on Recent Advances in Production and Post Harvest Technology of Litchi for Export*, BCKV, West Bengal, June 24-26, 2004 pp 6-11.
7. K.K. Kumar and Amrendra Kumar (2010). Integrated Pest Management in Litchi – A Case Study. Proc. *National Seminar on New Approaches to Insect Pest Management*, Dept. of Zoology, University of Lucknow, March 26-27, 2010 pp 7-12.
8. Vishal Nath and Amrendra Kumar (2010). Canopy Architecture management for Precision Farming in Fruits. *Souvenir National Seminar on Precision Farming in Horticulture*, MPUAT, Udaipur, Rajasthan, December, 28-29, 2010 pp106-111.
9. Vishal Nath, Amrendra Kumar and S.D. Pandey (2011). Current Scenario and Outlook for Future of Litchi Industry in India. *Souvenir National Seminar on Development of Horticulture in Bihar Issues and Strategies*, RAU, Pusa, Bihar, January 28-29th, 2011 pp 57-61.
10. Vishal Nath, Amrendra Kumar and S.D. Pandey (2011). Canopy Architecture management for Precision Farming in Fruits. *Souvenir National Seminar on Biodiversity of Tropical and Sub Tropical Fruit Crops*, Orissa Horticultural Society, OUAT, Bhubaneswar, Orissa, February, 27-28, 2011 pp30-36.
11. K.K. Kumar and Amrendra Kumar (2007). Managing fruit borer complex in Litchi. *Indian Horticulture* 56(6): 22.
12. Amrendra Kumar, S.D. Pandey and K.K. Kumar (2008). Get income in pre-bearing litchi orchard through intercropping. *Indian Horticulture* 53(3): 16

5. Important Research Contributions in Brief

- ❖ Developed cropping system model for pre-bearing litchi orchards
 1. Fruit based model: Litchi + banana (Main + R1+R2) has high potential of income generation up to 3 year
 2. Vegetable based model up to age of 8th year in new orchards:
 - i. Litchi + Gladiolus- Okra
 - ii. Litchi+ Cowpea-potato-onion
- ❖ Standardized potting mixture for commercial production of poly-bag raised litchi gooties/ layers
- ❖ Standardized growth regulator concentration for bearing regulation in litchi
- ❖ Standardized growth regulator concentration for control of fruit drop in litchi
- ❖ Developed Integrated Pest Management technology for
 - a. Litchi fruit borer complex
 - b. Litchi mite
- ❖ Standardized the concentration of micronutrient for improvement of yield and quality of Shahi litchi
- ❖ Fine tuned the harvesting time and pre-cooling period for extending shelf life of fruits.

6. Membership of Professional Societies

- The Horticultural Society of India, New Delhi, since 1998
- Indian Society of Vegetable Science, IIVR, Varanasi, since 1999
- Indian Association of Hill Farming, ICAR Complex (NEH) Region, since 2001
- Journal of Research (BAU), Ranchi, Jharkhand, since 1998
- Indian Society of Horticultural Research and Development, Uttrakhand, since 2010
- Bihar Horticultural Society, RAU, Pusa, since 2010
- Life member of the Society for Advancement of Pest Management in Horticultural Ecosystem, IIHR, Bangalore since 2011.



Signature of the Scientist