

CURRICULUM VITAE

VIJAY. DUNNA

Seed Technologist

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Personal details:

- Born on March 19, 1975
- Indian Citizen
- Unmarried

Education:

<i>Degree</i>	<i>Subject</i>	<i>University</i>	<i>O.G.P.A</i>	<i>Year</i>
Ph.D.	Seed Science & Technology	Indian Agricultural Research Institute, New Delhi	3.83 / 4.00	2005
M.Sc.(Ag)	Seed Science & Technology	Indian Agricultural Research Institute, New Delhi	4.00 / 4.00	2000
B.Sc.(Ag)	Agriculture	A N G R A U, Hyderabad	8.79 / 10.00	1998

Other Qualifications:

Completed the prestigious online course “Introduction to the UPOV System of Plant Variety Protection under the UPOV Convention (DL-205)” offered from September 19 to October 21, 2005” by UPOV and WIPO Academy with 79.5% pass rate.

Field of Work:

- Seed Quality and storage studies at physiological, biochemical and molecular levels
- Use of *Molecular Markers* and *Isozymes* in seed quality assessment
- DUS testing in relation to PVP and Intellectual Property

Employment Experience:

Sept., 2005 – Continuing:

Name of the Organisation : **Vibha Agrotech Ltd.**, Hyderabad

Department : Quality Control Dept.

Position held : Seed Technologist

Key Activities :

- In-charge of Plant Variety Protection and Intellectual Property dept.
- Coordinator of Grow Out Testing and Genetic Purity
- Associated in Seed Testing and Seed Processing in relation to Quality Control
- Associated in seed deterioration, seed storage and Germplasm maintenance projects.

Jan., 2005 - Aug., 2005:

Name of the Organisation : **International Plant Genetic Resources Institute**
IPGRI Office for South Asia, New Delhi

Position held : Scientific Assistant

Brief resume of duties :

- Assist in coordinating IPGRI's project activities for Asia, the Pacific and Oceania (APO) region and other thematic activities which are currently being under taken by South Asia Associate Coordinator, including donor reporting.
- Different ongoing project management and review activities.
- Study of conservation and diversity analysis using GIS techniques.
- Formulate ideas for understanding and managing diversity in priority areas and assist for the mobilisation of regional technical and financial resources.
- Respond independently to external and internal inquiries for technical information, and liaise with external agencies and other IPGRI staff as appropriate.
- Maintain and update databases for the Diversity for Livelihood project related activities.
- Assist in scientific editing including compilation and editing of APO Newsletter, preparation of publications and scientific presentations.

Research Experience:

As a PhD candidate

Division of Seed Science and Technology, Indian Agricultural Research Institute, New Delhi, India.

Thesis: *“Physiochemical and molecular comparison of deteriorative patterns in safflower and soybean seeds”*.

Abstract:

The Deterioration patterns of soybean and safflower seeds, containing high poly unsaturated fatty acids and different storability, were compared at physiological, biochemical and molecular level. The sorption isotherms were drawn and correlated to storage pattern along with the NMR studies of water activity. The biochemical estimation of volatile aldehydes along with the activity and isoenzyme profiles of esterase, lipoxygenase and superoxide dismutase enzymes were determined with respect to ageing. Effect of different seed treatments using antioxidants was studied in relation to ageing in both seeds. Different molecular markers like RAPD, SSR and AFLP were used to study the changes associated with ageing at the DNA level with a practically important outcome for the DUS testing.

Advisor: Dr. Malavika Dadlani, Principal Scientist; PI, NSP.

Major: Seed Science and Technology

Minors: 1. Plant Breeding

2. Agricultural Statistics

As an M.Sc. candidate

Division of Seed Science and Technology, Indian Agricultural Research Institute, New Delhi, India.

Thesis: *“Relationship between physiochemical parameters and deterioration mechanisms in maize and soybean seeds”*

Abstract:

The physiochemical and storage patterns of soybean and maize seeds, having different chemical composition as well as storability, were compared. The absorption and desorption curves and relaxation times at different EMC were estimated to study the deterioration pattern in soybean and maize seeds. Different biochemical parameters like volatile aldehyde content, dehydrogenase, esterase, superoxide dismutase enzyme activities were studied in relation to ambient as well as accelerated ageing. Protein and esterase isoenzyme patterns were also studied in relation to ageing.

Advisor: Dr. Malavika Dadlani, Principal Scientist; PI, NSP.

Major: Seed Science and Technology

Minor: Genetics

Key Skills:

Laboratory	Electrophoresis of Proteins (SDS PAGE) and Isoenzymes (PAGE), qualitative and quantitative estimation of enzyme activities, protein and volatile aldehydes; application of NMR analysis; seed testing, quality evaluation and invigoration protocols; GC, GEL-DOC, Micro-centrifuge and PCR techniques.
Molecular	Rapid DNA extraction from dry seeds, RAPD, SSR and AFLP markers and Southern Hybridisation.
Analytical	NTSYS, RAPDistance, GEL Manager, DNASTAR, Exome and other scientific software.
GIS Knowledge	Analysis of Biological and other data using Diva-GIS and Arc-GIS.
Statistical	MStatC, Design and SPSS.
Computer Knowledge	Windows 98, 2000, XP; MS Office (Word, Power-point, Excel), EndNote, Photoshop, Swish. Experience in Database management (MS Access) and web designing.
Languages	Fluent in English, Hindi and Telugu.
Communication	Good communication skills with good quality technical writing of research articles and reports, superior compilation and oral presentation skills.
Personal	Self-motivating and capable of persistent independent work as well as ability to work well in a team. Willing to work flexibly in a well organised manner with different approaches to problem-solving and decision-making.

Professional Affiliations:

- Indian Society of Seed Technology
- The Indian Science Congress Association

Awards and Honours:

- IARI Gold Medal for Outstanding Research during PhD programme in 2006.
- Senior Research Fellowship awarded by Council of Scientific and Industrial Research (CSIR) during Ph.D. program for 2003- 2005.

- Junior Research Fellowship awarded by Council of Scientific and Industrial Research (CSIR) during Ph.D. program for 2001-2003.
- Junior Research Fellowship awarded by Indian Council of Agricultural Research (ICAR) during M. Sc. (Ag.) program for 1998-2000.
- Gold medal in B. Sc. (Ag.) for topping in agronomy and soil science.
- CSIR National Eligibility Test 2001 – for lectureship and Research any where in India.
- ICAR National Eligibility Test 2002 – for lectureship and Research any where in India.

Peer reviewed Publications:

Vijay, D. and Dadlani, M. (2003) Seed longevity and water absorption patterns in maize, soybean and safflower. *Indian Journal of Plant Physiology* (special issue) 8: 244-248.

- Four more articles are in pipeline, suitable to be published in peer reviewed International Scientific Journals.

Seminar / Conference Presentations:

Vijay, D. and Dadlani, M. (2001) Water relations and deteriorative changes in soybean and maize seeds during storage. *Abstracts of 88th Indian Science Congress*, 2001, New Delhi.

Vijay, D. and Dadlani, M. (2002) Studies on water sorption patterns and deteriorative changes in soybean and maize seeds during storage. *Proceedings of XI national seed seminar on quality seed to enhance agricultural profitability*, 2002, Dharwad, Karnataka, pp. 47-51.

Vijay, D. and Dadlani, M. (2003) Studies on comparison of maize, soybean and safflower in relation to their seed longevity and water absorption patterns. *II International Plant Physiology Congress 2003*, New Delhi.

Vijay, D., Dadlani, M. and Veena Vashisht (2003) Physiological and biochemical comparison of soybean and safflower seeds in relation to their longevity. *Abstracts of National Seminar on Physiological intervention for improved crop productivity and quality: opportunity and constraints*, Dec. 12-14, 2003, Tirupathi, Andhra Pradesh.

Vijay, D., Veena Vashisht and Dadlani, M. (2005) Post harvest storage studies of soybean and safflower seeds. *Abstracts of International Conference on Plasticulture and Precision Farming*, Nov. 16-20, 2005, New Delhi, India.

Vijay, D and Dadlani, M. (2006) Physiochemical and molecular analyses of seed ageing in soybean and safflower. *Proceedings of XII national seed seminar on prosperity through quality seed*, 2006, Hyderabad, A.P.

Other Publications:

Vijay. D., Patil, B.S., Ghosh, S.K. and Vidyasagar, P. (2006) Scope for export oriented seed production in India. *Souvenir, XII National Seed Seminar on Prosperity through Quality Seed*, Feb. 24-26, 2006, Hyderabad, India

Seminars presented during MSc and PhD course work:

- Genetic engineering in relation to Seed Technology.
- Genetic basis of seed dormancy.
- Development of male sterility and fertility restoration systems and their use in hybrid breeding: conventional and molecular approaches.
- Salient features of the National Seed Policy, 2002.

Extracurricular activities:

- Participated in National Service Scheme (NSS) camp in 1997
- Participated in National Cadet Course (NCC) – A level certificate
- Board of Studies student representative during PhD

References:

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Other Details:

Father's name : D. Krishna Rao
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Date : March, 2006
Place : Hyderabad

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