

VISHAL KUMAR AGRAWAL, Ph.D.

Plant Breeder | Genetics & Genomics | Watermelon R&D Expert

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PROFILE SUMMARY

Strategic and results-oriented Plant Breeder with 12+ years of experience across diverse crops, including watermelon, okra, tomato, cabbage, cotton, millets, and other cucurbits. Proven ability to lead market-driven breeding programs, with a strong track record of developing and advancing hybrids tailored to regional needs across Asia and Africa. Served as breeder-of-record for six commercial watermelon hybrids (2020–2023) and advanced two more for 2026 release in India, Bangladesh, and East Africa. Represented R&D in East-West Seed's Marigold Country Crop Team (2022–2023), coordinating cross-functional efforts to align product trialing with market demand. Well-versed in modern breeding approaches, with working knowledge of genomic tools and their applications in crop improvement. Actively engaged in continuous learning with 30+ certifications in R, statistics, leadership, and decision-making, bringing analytical and adaptive thinking to modern breeding challenges.

CORE COMPETENCIES

- **Breeding Program Management** (Watermelon & other Cucurbits, Okra, Tomato, Cabbage, Cotton, Millets)
- **Hybrid Development & Product Advancement**
- **Global Market Understanding** (India, SEA, Africa, LATAM)
- **Multi-location Trial Design & Data Analysis** (Excel, Google sheets, Phenome, R)
- **Cross-functional Collaboration** (PD, QA, Seed Production, Sales)
- **Genomics & Pre-breeding Collaboration** (Philippines, Thailand teams)
- **Stakeholder-Centric Breeding & Market Fit Strategies**

GLOBAL BREEDING IMPACT

- **Breeder-of-record for 6 hybrids** launched in India by EWS between 2020–2023
- **Advanced region-specific hybrids** for 2026 release (2 hybrids) in **India, Bangladesh, and East Africa**
- **Collaborated globally** with Thailand and Philippines breeding teams on seedless and inbred development
- **Contributed to crop master planning** and product positioning with the Global Crop Portfolio Manager
- Supported early-stage hybrid testing in **Guatemala and Brazil**

CAREER SNAPSHOT

East-West Seed (India) Pvt. Ltd.

Senior Associate Breeder – Watermelon (2020–2025)

Associate Breeder – Okra (2019–2020)

Additional Role: India R&D Representative – Marigold Country Crop Team (2022–2023)

Key contributor to East-West Seed's commercial pipeline through hands-on breeding, market-aligned innovation, and cross-regional collaboration. Represented India R&D in the Marigold Country Crop Team (2022–2023), aligning breeding & product evaluation with market needs.

ICAR-IIVR (NICRA Project, Tomato) – Research Associate (2017–2019)

Led components of climate-resilient agricultural technologies, contributing to hybrids released post-tenure.

Namdhari Seeds | Monsanto (now Bayer) | Nuziveedu Seeds

Early roles in cabbage, cotton, and millet breeding laid the foundation for strong technical and field expertise.

EDUCATION

- **Ph.D. Genetics & Plant Breeding**, Banaras Hindu University (BHU), Varanasi, UP, India | 2009 – 2014
- **M.Sc. (Ag.) Genetics & Plant Breeding**, BHU | 2006 – 2008
- **B.Sc. (Ag.)**, BHU | 2002 – 2006
- Council for Scientific & Industrial Research (CSIR), Govt. of India, **NET – JRF & SRF** (Life Sciences)
- **11 research publications** in national/international journals on genetics, breeding, and crop improvement.

TECHNICAL EXPERTISE

- **Breeding Program Leadership:** Extensive experience in hybrid development, varietal trials, and germplasm enhancement, especially in watermelon; exposure to okra, cabbage, row crops and support for varietal/breeding trials & seed production evaluations in cucumber, ridge gourd, and bottle gourd.
 - **Trial Design & Data Interpretation:** Proficient in multi-location trial planning, experimental designs, and statistical analysis using R and Excel.
 - **Product Advancement & Market Fit:** Involved in hybrid positioning and advancement through cross-functional evaluations and market feedback.
 - **Cross-functional Collaboration:** Strong alignment with seed production, QA, marketing, and regulatory teams for product delivery.
 - **Global Market Insight:** Direct exposure to markets in India, Bangladesh, Thailand, Philippines, East Africa, and Latin America.
 - **Genomic & Digital Tools:** Practical exposure to genomic selection workflows; advanced user of digital breeding tools including Phenome.
 - **Crop Management Expertise:** Hands-on knowledge of crop agronomy, trial sanitation, and nutrient/pest management practices to optimize field expression and hybrid performance.
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PROFESSIONAL EXPERIENCE
East-West Seed (India) Pvt. Ltd.
Senior Associate Breeder – Watermelon

May 2020 – Jun 2025 | Aurangabad, India (Global Role)

- Led India-based watermelon breeding program (Icebox Sugar Baby Oblong and Family Size Oblong types), driving hybrid and inbred line development with product advancement across Asia and Africa.
- Breeder-of-record for six commercially launched hybrids in India (2020–2023) and two hybrids advanced for 2026 release —targeting India (Icebox) and Bangladesh & East Africa (Family size oblong).
- Recognized as EWS India’s pioneering “Phenome Grand User” (2022) for advanced implementation of multi-module data workflows.
- Integrated technology-led approaches in breeding, including support for MAS-based inbred selection and trialing of seedless hybrids in collaboration with regional teams in Thailand and the Philippines.
- Served as India R&D representative on the Marigold Country Crop Team (2022–2023), coordinating product trialing and advancement between India-based commercial teams and the Thailand marigold breeding team.
- Mentored and led technical staff across multiple trial locations for execution, evaluation, and digital data collection.
- Participated in EWS’s Advanced Plant Breeding (APB) Program (2023–2025; completed four of six modules)
- Conducted strategic market visits in India, Bangladesh, Thailand, and the Philippines to align breeding objectives with farmer preferences, local adaptation, and commercial fit.
- Strengthened regional alignment through annual working visits to Thailand; collaborated with the Thailand watermelon breeding team for joint germplasm evaluation, selection of hybrids for Indian and African markets, and bilateral exchange of germplasm to enhance program diversity.

Key Contributions:

- Developed hybrids in Icebox and Family Size segments, with several entering pre-commercial or launch-ready stages.
- Enabled cross-departmental collaboration for seamless product delivery.
- Strengthened germplasm with long-term trait innovation.

East-West Seed (India) Pvt. Ltd.
Associate Breeder – Okra

Sep 2019 – Apr 2020 | Aurangabad, India

- Managed okra trials targeting yield and disease resistance.
- Hybrid selection/advancement in collaboration with product development and commercial teams.
- Gained field insights into Indian okra markets through targeted travels.

ICAR – Indian Institute of Vegetable Research (IIVR)**Research Associate – Tomato (NICRA Project)***Sep 2017 – Sep 2019 | Varanasi, India*

- Coordinated climate-resilient product development activities (heat, drought, submergence) using conventional breeding and grafting-based strategies.
- Managed project execution, hybrid creation, trialing, data analysis, and technical reporting.

Namdhari Seeds Pvt. Ltd.**Assistant Breeder – Cabbage***Jun 2016 – Mar 2017 | Sirsa/Kullu, India*

- Executed early-generation evaluations, breeding nursery selections, and field trial support under senior guidance.

Monsanto Holdings Pvt. Ltd. (now part of Bayer Crop Science)**Research Associate – Cotton Breeding***May 2014 – May 2016 | Gandhinagar/Udaipur, India*

- Supported line development through generation advancement, field operations, and inventory management.
- Contributed to operational setup at a new research station and trained technical staff in safety protocols.

Nuziveedu Seeds Pvt. Ltd.**Management Trainee – Millet Breeding***Jun 2008 – Mar 2009 | Hyderabad, India*

- Participated in germplasm maintenance, field trials, and basic breeding operations in sorghum and pearl millet.

EDUCATION

- **Ph.D. Genetics & Plant Breeding** – Banaras Hindu University (BHU), Varanasi, UP, IN, 2014 | **GPA 8.22/10**
CSIR JRF (Life Science)/SRF & ICAR-SRF recipient;
Thesis: *Genetics of Yield and Quality Traits in Quality Protein Maize (Zea mays L.)*
Focus: Diallel mating | RCBD | Quantitative genetics | Biochemical assay | Phenotyping | G×E interaction
- **M.Sc. (Ag.) Genetics & Plant Breeding** – BHU, 2008 | **GPA 8.65/10**
Thesis: *Studies on genetic variability, interrelationships and D² analysis in French bean (Phaseolus vulgaris L.)*
- **B.Sc. (Agriculture)** – BHU, 2006 | **GPA 8.15/10** | Rural Agricultural Work Experience

PUBLICATIONS

Authored in 11 publications in peer-reviewed international journals, technical bulletins, and conference proceedings on crop improvement, variability, and breeding strategies in maize, tomato, and other crops. (Full list available on request.)

CERTIFICATIONS & CONTINUOUS LEARNING

- Completed 30+ LinkedIn Learning courses (2021–2025; full list available on [LinkedIn](#)) in:
 - **Data Science & Statistical Tools** (*R, data visualization, statistics foundations*)
 - **Leadership & Team Management** (*strategic thinking, transformational leadership, team development*)
 - **Critical Thinking & Decision-Making** (*mental agility, conflict resolution, faster decision-making*)
 - **Productivity & Communication** (*time management, personal branding, executive presentations*)

PROFESSIONAL OUTLOOK

- Open to relocation and new challenges that align breeding innovation with market-driven outcomes.

LANGUAGE & TOOLS

- **Languages:** English: Fluent (Professional) | Hindi: Native | Spanish, Portuguese: Beginner
- **Tools:** MS Excel | Google Sheet | Phenome | Breeding Management Apps | R | AI tools (ChatGPT/Gemini/Perplexity)