

# MARCEL BARBIER, Ph.D.

SOIL & PLANT NUTRITION SCIENTIST | CROP PROTECTION EXPERT | AGRIBUSINESS STRATEGIST

R&D • PRODUCT DEVELOPMENT • TECHNICAL LEADERSHIP • INTERNATIONAL MARKETING • BUSINESS DEVELOPMENT

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## EXECUTIVE SUMMARY

Agricultural scientist and international agribusiness executive with advanced expertise in soil and plant nutrition, crop protection, product development, technical marketing, research, field trials, product registration, and commercial strategy. Ph.D.-level specialization combined with more than three decades of practical experience across North and Latin America. Experienced in translating scientific research into commercially viable agricultural solutions, including fertilizers, biopesticides, biofungicides, herbicides, and plant-extract/mineral-based technologies. Proven ability to connect R&D, regulatory, technical, marketing, sales, customers, researchers, government stakeholders, and agricultural producers.

## CORE EXPERTISE

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|-------------------------------------------------------|----------------------------------------------|--------------------------------------|
| • Soil & Plant Nutrition                              | • Crop Protection                            | • Integrated Crop Management         |
| • Biological & Eco-Friendly Agricultural Technologies | • Biopesticides & Biofungicides              | • Fertilizer Technology              |
| • R&D Strategy & Field Trials                         | • Product Development & Commercialization    | • Product Registration & Stewardship |
| • Technical Marketing                                 | • Strategic Marketing & Business Development | • International Market Development   |
| • Technical Training & Knowledge Transfer             | • Customer & Stakeholder Engagement          | • Agribusiness Strategy              |
| • Budgeting & Financial Management                    | • Strategic Planning                         | • Multicultural Leadership           |

## PROFESSIONAL EXPERIENCE

### Director of Research | B&W Quality Growers, LLC

Jan 2024 – Present

Overseeing and advancing scientific and technological initiatives to optimize leafy greens (arugula, watercress, and water spinach) yield, quality, and sustainability.

- Develop and implement research programs to improve yield, quality, and resistance to biotic and abiotic stressors, including pests, diseases, and soil salinity.
- Investigate and recommend practices to enhance soil fertility, mitigate salinity issues, and improve nutrient availability tailored to the unique needs of leafy greens.
- Lead studies on irrigation techniques, such as precision irrigation or fertigation, to reduce water usage while ensuring optimal plant growth and minimizing salt accumulation.
- Evaluate and refine nutrient application strategies, including non-essential nutrient needs (e.g., selenium for arugula), to maximize productivity and address deficiencies without overapplication.
- Assess and adopt innovative technologies like sensors, drones, and machine learning tools for monitoring plant health, growth rates, and environmental conditions.
- Collaborate with breeding programs to develop and trial new varieties with improved traits such as faster growth, disease resistance, and better tolerance to environmental stress.
- Oversee the collection and interpretation of field and lab data, ensuring actionable insights are used to inform management decisions and improve operational efficiency.
- Ensure all research initiatives align with local and international regulations related to food safety, pesticide use, and environmental standards.
- Lead training programs for staff and coordinate with agronomists, universities, and industry stakeholders to foster innovation and disseminate findings.
- Led multi-location agronomic trials to optimize crop performance and quality under variable environmental conditions
- Generated data supporting operational and supply chain decision-making

- Collaborated cross-functionally with production and commercial teams

### **President & CEO / Consultant | ABC Organics, LLC**

May 2010 – Present

- Lead an international consulting organization serving companies in soil and plant nutrition and crop protection.
- Develop field and clinical data studies, best-use and management practices, product positioning, and technical messaging.
- Provide independent technical expertise to farmer-producers, nutritionists, crop consultants, farm managers, and other high-value decision makers.
- Lead organizational strategy, operations, resources, major business decisions, agreements, and contracts.
- Communicate with government entities, industry stakeholders, customers, and the public on technical and business matters.

### **International Chief Technical Lead | Monty's Plant Food**

January 2020 – September 2026

- Design, conduct, and oversee laboratory and international field trials supporting product performance and technical validation.
- Prepare and deliver technical presentations and reports concerning Monty's activated humic products.
- Represent the organization at tradeshow, conferences, forums, and professional meetings.
- Coordinate in-country technical training and provide technical support to customers, influencers, researchers, and country teams.
- Support product registration activities and contribute to corporate and country-level development and sales strategies.

### **Development Specialist | Rio Tinto Borates / US Borax, Inc.**

April 2016 – January 2019

- Developed relationships with prospective clients and coordinated research, field trials, and innovation programs across Latin America.
- Provided technical support to field sales teams and customers in plant nutrition and crop protection.
- Executed laboratory, greenhouse, and field trial programs with research organizations and universities.
- Prepared educational and technical presentations for international conferences, including Argus Fertilizers Conferences in Brazil, China, and the USA.

### **Postdoctoral Researcher / Vice President, Research & Development | Organic Laboratories, Inc.**

November 2015 – December 2016

- Created and evaluated new product formulations and provided technical expertise across product lines.
- Supported sales and marketing teams in achieving commercial and profitability objectives.
- Oversaw multivariate studies of current and new products.
- Collaborated with universities, laboratories, distributors, key customers, and producers.

### **Doctoral Researcher | University of Florida**

August 2010 – August 2015

- Conducted doctoral research on the potential of polyhalite as a multi-nutrient fertilizer for corn.
- Supported laboratory, greenhouse, and field research addressing plant nutritional deficiencies and pest and disease management in vegetables and tropical fruits.
- Dissertation: "The Potential of Polyhalite as Multi-Nutrient Fertilizer for Corn."

### **Research Specialist Intern | B&W Quality Growers**

July 2014 – February 2015

- Studied nutrition and pest issues in watercress and investigated leafhopper transmission of phytoplasma disease.
- Supported improvements to fertilization and irrigation systems and troubleshooting of injection-line clogging and water-pumping requirements.

### **Farm Advisor Intern | J&C Tropical's**

August 2011 – December 2011

- Improved production practices for sweet potato (boniato), mango, and avocado.
- Developed crop production plans incorporating nutrition, crop management, and crop protection.

### **R&D Consultant / Regional Manager, Central America | Stockton Agrimor, AG**

August 2006 – October 2015

- Coordinated research studies of Timorex biofungicide across multiple crops in Latin America.
- Led product registration activities with Departments of Agriculture throughout Central America.
- Developed research, development, marketing, and sales-launch strategies.

### **Distribution & E-Business Manager / Regional CRM Manager / Fungicides Product Manager | Syngenta Crop Protection**

January 1999 – July 2006

- Developed and implemented e-business, multichannel sales, direct-sales, CRM, and fungicide marketing strategies across Mexico and Latin America.
- Led market research, value mapping, customer classification, contract tools, and e-commerce initiatives.
- Developed crop-needs-based marketing and sales programs for major fungicide products.

### **Registration & Stewardship Manager / E-Business Manager | Bayer CropScience**

January 1997 – December 1998

- Coordinated product registration, media relations, product quality systems, hazard communication, labels, and regulatory activities in Central America and the Caribbean.
- Reviewed marketing claims and intellectual-property matters including trademarks.
- Developed and implemented a sales and marketing e-platform and educational materials for pesticide development and registration.

### **Territory Manager | Monsanto**

May 1993 – December 1996

- Managed R&D, marketing, and sales activities for glyphosate products in banana and coffee.
- Researched and documented glyphosate phytotoxicity in banana and supported product promotion and commercialization.
- Launched and developed RIVAL™ granulated glyphosate and RANGER™ formulation for banana production.
- Represented Monsanto before AGREQUIMA and CROPLIFE.

### **Farm Manager | Chiquita Brands**

February 1991 – April 1993

- Managed banana production and supervised production resources, plant nutrition, irrigation, and crop protection.
- Supervised maintenance of ground and aerial farm equipment.

## **EDUCATION**

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**Ph.D., Soil and Plant Nutrition** — University of Florida, Gainesville, Florida, USA

2010–2015 | Minor: Plant Health Management

**M.Sc., Crop Protection in International Commerce** — Universidad Rafael Landívar, Guatemala

2008–2009

**B.S., Agronomy** — Universidad Rafael Landívar, Guatemala

1984–2001

**Phyto-technician** — Universidad Rafael Landívar, Guatemala

1984–1991

## PROFESSIONAL DEVELOPMENT & CERTIFICATIONS

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- Crop Modeling, DSSAT — University of Georgia
- Marketing — Borlaug Institute, Texas A&M
- Sales & Marketing — INSEAD, France
- Strategic Marketing — Impact Group, Mexico
- Leadership — Syngenta, Greensboro, NC
- Ag Tech Transfer — University of Chiapas, Mexico
- Internet Marketing — Peppers & Rogers, São Paulo, Brazil
- Cost Analysis — INCAE, Costa Rica
- Branding & Direct Marketing — Francisco Marroquín University, Guatemala
- Toxicology & Ecotoxicology — Bayer CropScience, Leverkusen, Germany
- Agricultural Research — University of Tennessee

## SELECTED PUBLICATIONS & TECHNICAL RESEARCH

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- Barbier M., Y. Li, F. Pierce, Z. He, G. Liu, R. Mylavarapu and S. Zhang (2015). Characterization of Polyhalite for its Plant Nutritional Properties.
- Barbier M., Y. Li, F. Pierce, Z. He, G. Liu, R. Mylavarapu and S. Zhang (2015). Comparing polyhalite with other potassium-based fertilizers for growing corn in a sandy soil.
- Barbier M., Y. Li, F. Pierce, Z. He, G. Liu, R. Mylavarapu and S. Zhang (2015). Corn response to Polyhalite and Other Potassium Based Fertilizers Applied in a Sandy Soil.
- Barbier, M.; Crane, J.; Castillo, J.; and Li, Y. (2012). Effectiveness of Flumioxazin Alone and in Combination with Glufosinate-ammonium for Control of Parthenium under Grove Conditions in Homestead, Florida.
- Reuveni, M., Ramirez, F., and Barbier, M. (2010). Timorex Gold – a Potent Biofungicide for the Control of Black Sigatoka in Banana.
- Barbier, M.; Leon See, J. M.; and Villatoro, A. (2007). Evaluation of Timorex Gold (*Melaleuca alternifolia*) on controlling Sudden Death in melon.
- Leon, J. M. and Barbier, M. (2007). Evaluation of Timorex 66 EC (*Melaleuca alternifolia*) on controlling Black Sigatoka on plantain.
- Barbier, M.; Urrutia, V.; and Figueroa, L. (2001). Symptomatology characterization of phytotoxicity caused by Glyphosate on banana.
- Barbier, M. and Amado, R. (1998). Product Stewardship and Toxicological Data management software User Manual.
- Barbier, M. and Urrutia, M. (1994). Evaluation of dry glyphosate in controlling broad and grass leaves in corn.

## CROP & AGRONOMIC EXPERIENCE

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Agave • Arugula • Avocado • Banana • Citrus • Coffee • Corn • Horticulture • Melon • Oil Palm • Pastures • Rice • Soybean • Sugarcane • Sweet Potato • Tomato • Watercress • Watermelon

## LANGUAGES & TECHNICAL TOOLS

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**Languages:** Spanish, English, and Portuguese — speaking, reading, and writing.

**Technical tools:** Microsoft Office (Excel, Word, PowerPoint, Outlook), SAS, and JMP.

## PROFESSIONAL POSITIONING

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Internationally experienced scientist and agribusiness professional combining scientific depth with commercial, regulatory, marketing, and leadership capabilities. Particularly suited to senior technical leadership, agricultural R&D, product development, technical marketing, crop nutrition, crop protection, business development, consulting, and international agribusiness strategy.

*Professional references available upon request.*