



Exponent[®]
Engineering & Scientific Consulting

Bonnie MacCulloch, M.S.

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Professional Profile

Bonnie MacCulloch is a Senior Managing Scientist and regulatory strategist with more than 20 years of experience in agrochemical and biological product registration, stewardship, and market integration. She specializes in developing science-based regulatory strategies that support the registration and commercialization of biopesticides, biostimulants, fertilizers, and conventional crop protection products in the United States, Canada, and internationally.

Ms. MacCulloch's expertise includes FIFRA and state registrations; CFIA and PMRA submissions; regulatory intelligence and policy monitoring; PRIA and non-PRIA data gap analyses; dossier preparation; label development and product claims substantiation; and organic and OMRI compliance. She advises clients on product positioning, data strategies, product lifecycle management, and regulatory pathways aligned with evolving global frameworks.

Her background uniquely integrates hands-on laboratory and field research with deep regulatory affairs and policy expertise. This foundation informs her practical, end-to-end approach to advancing sustainable technologies from early research and development through successful market adoption.

Ms. MacCulloch holds an M.S. in Environmental and Forest Biology (Entomology concentration) from SUNY College of Environmental Science & Forestry and a B.S. in Environmental Interpretation from the University of Maine.

Academic Credentials & Professional Honors

M.S., Environmental & Forest Biology, SUNY College of Env. Science & Forestry, 2001

B.S., Parks, Recreation & Tourism, University of Maine, Orono, 1991

Prior Experience

Senior Managing Consultant, Ramboll, January 2025 – February 2026

Senior Regulatory Manager, Non-Conventionals, AMVAC Chemical Corporation, Jan 2024 - Jan 2025

Regulatory Product Manager, AMVAC Chemical Corporation, Oct 2022 - Dec 2023

Partner, ERM, Inc., 2020 - 2022

Vice President, Crop Protection, Knoell USA, LLC, 2016 - 2020

Regulatory Affairs Specialist, Critical Path Services [Knoell USA, LLC], 2015 - 2016

Project Coordinator, Regulatory Specials Projects, Critical Path Services, 2012 – 2015

Business Owner / President, Independent Consulting, 2005 – 2012

Cooperative Agriculture Pest Survey Coordinator, VT Agency of Agriculture, Food and Markets, 2003 – 2005

Plant Protection & Quarantine Officer, USDA, APHIS, 2001 – 2003

Professional Affiliations

Biological Products Industry Alliance (BPIA) – Co-chair, Regulatory Committee

Crop Life America

Household and Commercial Products Association

Publications

Shriver, W. G., D. Evers, T. P. Hodgman, B. J. MacCulloch. 2006. "[Mercury in sharp-tailed sparrows breeding in coastal wetlands](#)," Environmental Bioindicators 1:129–135.

Presentations

MacCulloch, B. PA Agronomic Education Society Annual Conference. The Biologicals Revolution: From Global Pressures to On-Farm Solutions. State College, PA. 2025

MacCulloch, B. The Biologicals Revolution. Keystone Crops and Soils Conference. Harrisburg, PA. 2025

Warkentien, K., Priest, M., and MacCulloch, B. Updates from the U.S: The Farm Bill, U.S. EPA Biocontrol Authorization and Timelines, and the U.S. Plant Biostimulant Act. Webinar for the International Biocontrol Manufacturers Association. Online 2025.

Project Experience

Regulatory Strategy & Product Compliance

- Led regulatory strategy for biochemical and microbial active ingredient pipeline candidates supporting early-stage development to advance new product concepts.
- Prepared comprehensive weight of evidence dossiers to support multiple submissions to EPAs Biochemical Classification Committee.
- Developed global registration roadmaps for EPA and PMRA submissions, aligning data strategies with international regulatory frameworks and market entry objectives.
- Managed a diverse portfolio of crop and non-crop products, serving as the primary liaison with federal and state regulatory agencies, including implementing submission strategies.
- Directed regulatory support for EPA reregistration and registration review actions, including implementation of risk mitigation measures and product label revisions.
- Improved pipeline efficiency by establishing and implementing Standard Operating Procedures (SOPs) for regulatory submissions and cross-functional coordination

Agricultural Research & Outreach

- Directed a four-year project funded by a Sustainable Agriculture Research and Education (SARE) grant project focused on native bee conservation within agricultural systems, overseeing study design, stakeholder coordination, and reporting.
- Coordinated global R & D seed treatment field research trials, managing efficacy and residue trials to support early-stage development and evaluation of formulation and use parameters.
- Facilitated statewide surveys for invasive plant pests and weeds, providing technical guidance to growers and supporting early detection, monitoring, and management initiatives.

Additional Education & Training

Leading Strategically, Center for Creative Leadership (2019)

Better Culture Starts with Better Conversations, Center for Creative Leadership (2019)