Plants, Producing Toxicity: Plant Defense Between Germany and Brazil in Transnational Perspective, 1900–1980

Mariah Freitas Monteiro

This project investigates the historical connections between the vocabulary of plant defense and protection—particularly the German concept *Pflanzenschutz* and Brazilian formulations such as *defesa vegetal* and *defesa agrícola*—and the growing association of plant protection with pesticides during the twentieth century. Originally encompassing inspection, quarantine, phytopathology, entomology, and regulatory practices, plant protection gradually became associated with chemical products and productivist models of agriculture. Germany and Brazil offer a particularly relevant transnational perspective, given Germany's role in institutionalizing plant protection and developing the chemical industry, and Brazil's historical connections with European scientific, technical, and corporate networks.

The central research question concerns how a broad scientific and administrative field became a vocabulary increasingly associated with chemical intervention. The main research questions are therefore: How did concepts of plant protection circulate between German and Brazilian scientific, governmental, and corporate environments? Through which actors and processes did pesticides become embedded in this semantic field? What changed when protection came to designate not only practices and institutions but also chemical products? Addressing these questions, the project examines the changing meanings of plant defense between 1900 and 1980, focusing on scientific publications, legislation, administrative records, professional journals, and corporate communications.

The research builds on primary sources already consulted at the Biological Institute of São Paulo, the Agronomic Institute of Campinas, and the Martius-Staden Institute Archive in Brazil; the Bayer Archive in Leverkusen, Germany; and the Valencian Institute for Agricultural Research (IVIA) and the López Piñero Interuniversity Institute for the History of Medicine and Science in Valencia, Spain. These materials document scientific concepts, institutional practices, and corporate vocabularies associated with plant protection. The project also draws on scholarship concerning the institutionalization of *Pflanzenschutz* in Germany, the scientific and political construction of agricultural pests, and the historical development of *defensivos agrícolas* in Brazil.

During the research stay at the Rachel Carson Center (RCC), I will examine German-language literature and historical sources available through the LMU university library and RCC collections, concentrating on the late nineteenth century through the 1980s. Comparing these materials with Brazilian sources already collected will allow me to investigate conceptual translations, institutional references, and corporate terminology, while distinguishing direct transfers from parallel developments. Participation in RCC academic events will also contribute to refining the project's transnational framework and identifying additional comparative perspectives.

The project's principal contribution is to demonstrate that the association between plant protection and pesticides was historically constructed. By examining how the vocabulary of protection became associated with the chemical industry and its products, the project brings together environmental history, the history of science, conceptual history, and business history. The research stay is intended to lay the groundwork for a journal article and the further development of a broader postdoctoral project on the global history of plant defense.

Rachel Carson Center