

Tinker Grant Report: Bud Rot Disease in Tumaco's oil palm plantations

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In June 2022, I arrived in Tumaco, aiming to continue mapping how local communities undergo herbicide-based eradication campaigns against coca leaf crops. Since 1970, with the support and coordination of the United States, the Colombian government has promoted glyphosate's manual and aerial spraying as a "safe" and "necessary" strategy to control drug trafficking and subversive groups. Particularly in Tumaco, between 2005 and 2010, the Colombian police sprayed vast quantities of glyphosate using military aircraft. I was interested in how eradication campaigns have produced food insecurity and reproductive health inequalities. Local inhabitants argue that aerial sprayings (*las fumigaciones*) have not just killed coca leaf crops. For them, aerial sprayings have destroyed their food practices, undermined their reproductive health, and changed Tumaco's landscapes radically.

While listening to people's stories about skin damage, miscarriages, preterm births, congenital malformations, breathing problems, water pollution, and the destruction of gardens and food crops regarding glyphosate spraying, I heard for the first time about *pudrición del cogollo*, or bud rot disease. A peasant told me, "since the military fumigation planes dropped the fungus, everything collapsed in Tumaco." At first, I didn't quite understand what he meant. Was he referring to glyphosate as a fungus? I asked him about it. He answered that the planes tried to kill coca plants by all possible means, which included a destructive fungus. This critter, using his words, didn't destroy coca leaf crops. Instead, it almost annihilated all of the oil palm trees. "And so without palm, everyone got into the coca business," he remarks. I wanted to ask more questions but had an appointment with his friends. After the conversation, I was intrigued by many things. By then, the oil palm industry did not seem ruined, as thousands of palm trees were the predominant plant species in the region. So, the idea that oil palm plantations were in crisis was not evident to me. Also, I was struck by how this fungus makes the relationship between oil palm and coca leaf evident. But, in particular, I was curious to know more about that fungus. I made an internet search, digging into the open-access institutional archives of oil palm companies. I was fascinated by what I find it.

Between 2005 and 2006, a mysterious fungal disease, *Pudrición de Cogollo*, caused the death of most of the 8000 hectares in Tumaco's region. The Colombian Research Center in Oil Palm, Cenipalma, has led the research on identifying, preventing and controlling bud rot disease. Experts fostered by Cenipalma have determined two causal agents of this epidemic. First, they blame the famous semi-fungus pathogen *Phytophthora Palmivora* (PP). They argue that PP lives in soils around the globe, but it has become only a lethal disease in the Latin American oil palm monoculture. There is no consensus about why this happens. However, most experts believe, and this is the second factor, that bad agricultural practices and inaccurate irrigation systems encourage the metamorphosis of PP into bud rot disease. In this context, experts have proposed three sanitary and phytosanitary measures to prevent and control the epidemic:

eradicate chemically and manually the diseased palms (the “African” *Elaeis Guineensis*) to avoid new contagious, create a new palms specie (the OXG) “capable” to resist the disease, and hire humans to pollinate new palm species because it is sterile, and without a careful process carried out by human hands, *assisted pollination*, it can’t produce fruits.

Practically all the literature I found exclusively focused on bud rot’s biological, genetic, and ecological basis. But, I wondered, what is the socio-cultural life of this plant pathogen? How did it change the socio-ecological life in Tumaco? Keeping that question in mind, I started asking local people about bud rot disease. It was fascinating to see all the uncertainties around this pathogen. Some people agreed with my first informant, arguing that glyphosate spraying caused bud rot outbreaks. They said that glyphosate destroyed ecological equilibrium, making room for the transformation of *Phytophthora Palmivora* into a lethal plant disease. They blamed the national government and underscored that it always wanted to destroy Tumaco and its inhabitants. Others pointed out that bud rot emerged because of monoculture. Monoculture degraded soils and their microbial life, they asserted. And finally, others argued that agrochemicals were the origin of this epidemic, as they worked as a sort of pharmacon, a remedy that only brings new diseases. I’m not interested in knowing which is true or false amid these stories. Instead, I’m fascinated by what all these diverse viewpoints bring to the table: the multiple and uneven experiences and rural positionalities involving Tumaco’s region. Each story reveals a particular way to inhabit and embody the city. The point is not what is true or false but what stories tell about the life of those who are telling them.

My research focuses on tracing the multiple experiences involving bud rot’s disease, which also emerged in two other Colombian oil palm zones: Puerto Wilches and Magdalena. It is largely unclear how this plant epidemic has impacted and changed the lives of local farmers, workers, and rural communities and how they learn to live amid the outbreaks. This project underscores how this disease interweaves multiple social, economic, labor, and technoscientific traits. For instance, Since bud rot has spread in Colombia, companies have implemented an intense process of eradicating diseased palms and creating a new palm, one able to resist the disease. Unlike big agro-companies, most small-scale growers have not received the economic and technical resources for eradicating and replanting. Hence, they have sold their “diseased lands” to big oil palm companies at meager prices. Eradication and replanting have also introduced new labor relationships based on gender and race inequalities. The OxG palm is an infertile one. Without a process called assisted pollination, OxG produces a lot of aborts and low-quality fruits. Companies hire mainly black women to do this job, and they are usually underpaid.

My next steps are to visit other oil palm zones and follow bud rot’s social trajectories. For my dissertation project, I will conduct a multi-situated ethnography of how bud rot’s disease has significantly shaped plantation ecologies, economies, labor relations, and technoscientific speculations.