

**AN ANALYSIS OF FACTORS AFFECTING INFECTION RISK OF COFFEE PLANTS
BY COFFEE LEAF RUST FUNGUS (*Hemileia vastatrix*) IN THE LOS SANTOS REGION
OF COSTA RICA, 2013**

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The Los Santos region in Costa Rica is internationally known for the high-quality coffee it produces. At the start of 2013, this zone, and much of Central America, was suffering from the worst outbreak of the coffee leaf rust fungus (*Hemileia vastatrix*) that the region had ever seen. This study took place in March and April of 2013 in Llano Bonito, Costa Rica, on a number of small coffee farms. I determined the relationship between a series of variables (number of sprouts per plant, amount of shade, altitude and slope) and the level of rust infection. As the number of sprouts per plant increased, the level of rust infection increased ($P=0.0048$); as the amount of shade increased, the level of rust infection increased ($P<0.0001$); as the altitude increased, the level of rust infection decreased ($P<0.0001$); as the slope increased, the level of rust infection decreased ($P<0.0001$). I conclude that farmers must work to promote only 2-3 sprouts per coffee plant and must regulate the level of shade their farms receive. Using this information regarding risk of rust fungus infection, coffee farmers can better prepare themselves in the fight against this threat to their livelihoods.