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Exposure to Agrochemical and Health Symptoms: An Analysis of Soybean Production in Brazil

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Abstract

This paper aimed to analyse a group of aspects related to the quality of life and, particularly, to the health of conventional and organic soybean producers in the southern region of Brazil. For this survey, 200 farms with similar characteristics were selected – small and medium farms, mostly with family farming workmanship. Through self-reported questionnaires applied to them between November of 2015 and February of 2016, it was possible to access their work conditions and profits related to the two previous harvests, as well as the households' structure. Based on the acute pesticide poisoning, which is a proposed classification tool of the World Health Organisation, a logit estimation model was applied. Comparing the results of typical symptoms of recurrent exposure to fertilisers and pesticides, one concluded that the probability of the conventional soy producer having those symptoms was 20% higher than the organic producers. Even considering that the average profit of the conventional producers was also higher than the organic ones, and that this group had a broader access to the private health system in Brazil because of their income, this research presented evidences that their physical health is more precarious. The decision to compare producers from the same region, who work with the same crop, standardises our sample and shows that, what sets them apart is the production technology – organic or conventional – and the consequent level of exposure and degree of intoxication. In this aspect, it is an unpublished study. Then, it shows that the apparent environmentally harmonious landscape may not reveal the quality of life of the rural workers, especially with regard to their health.

Keywords: Disease, family farming, fertilisers, health, pesticides, soybean