



Which, says the former union secretary for health and security, is too bad. "The government doesn't always recognize the interests of workers," says Mr Corona, who now works with a construction company. "Workers have to learn to represent themselves and participate in research on their work environment."

The project designed by Mrs Laurell and Mr Noriega was the first step toward that goal. It gave workers increased knowledge about their occupational health problems, empowering them with the tools needed to fight for a safer working environment. For the workers of SICARTSA in Mexico, subjected for years to hazardous working conditions and plagued by a variety of occupational illnesses, it is a step long overdue.

Gilles Castonguay in Mexico



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## THE HIGH PRICE OF A GOOD CUP OF COFFEE

At this coffee-hulling factory, 7 kilometres outside of Kampala, Uganda, the constant coughing and rhythmic wheezing of workers are among the regular sounds of a typical work day. Without protective equipment like face masks, goggles, and gloves, workers here toil long hours in a plant with little ventilation, breathing in dusts produced by the processing of coffee beans. The working conditions here are poor but they are likely no worse than in the dozens of other coffee-hulling and processing plants across Uganda.

Agricultural products supply nearly all of Uganda's foreign exchange, with coffee alone accounting for more than 90% of the country's exports. The coffee industry is a major source of employment in Uganda: the Coffee Marketing Board (CMB) depot and processors themselves employ about 20,000 people. Coffee is grown in 16 of the country's 36 districts with an annual average production of between 100,000 and 150,000 tonnes.

There is no doubt that coffee is important to Uganda's economy: what is less recognized is the potential health risk for coffee workers who can easily develop respiratory diseases.

Dr D.K. Sekimpi, former chief of the Occupational Hygiene Department with Uganda's Ministry of Labour, recently concluded an IDRC-funded survey of workers in the coffee industry that assessed the occupational hazards of the sector. He found that the "health of many coffee workers is poor due mainly to the failure of owners of hulling factories to comply with basic safety regulations."

These regulations, set out in the 1965 Factories and Public Health Acts state, among other things, that "where in any factory workers are employed in any process involving exposure to dust, fumes or to any injurious substances, suitable protective equipment, including suitable gloves, footwear, goggles and head coverings, shall be provided and maintained for the use of such workers."

Since protective clothing is not often supplied, workers are exposed to a range of occupational health problems including chronic coughing, breathing difficulties, chest pain, rhinitis — an inflammation of the mucous membrane of the nose — and conjunctivitis — a form of eye disease.

To carry out his research Dr Sekimpi examined the working conditions in 22 coffee-hulling factories and surveyed the health of more than 1,000 workers. He used a control group of 128 workers who were not exposed to coffee dusts to compare with the exposed workers. The results were hardly surprising for anyone who has worked in the industry.

Dr Sekimpi found that the coffee dust sampled at the factories contained fungi, bacteria, and bacterial toxins, all substances potentially dangerous to the human respiratory system. More than 92% of workers tested were exposed to dust levels greater than 2 mg/m<sup>3</sup>. These conditions resulted in above-normal rates of airways disease among coffee workers.

Occupational airways diseases were diagnosed in 9.3% of coffee workers compared to only 3.9% among workers not exposed to coffee dusts. And, according to Dr Sekimpi, all respiratory and allergic symptoms of cough, breathlessness, chest tightness, rhinitis, and conjunctivitis were significantly greater among coffee workers than nonexposed workers.

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The reasons for this high incidence of airways diseases among coffee dust workers are easy to pinpoint: high dust levels, lack of protective equipment, old machinery, and poor design and ventilation in factories. Certain types of coffee dust pose a greater danger to workers. The arabicca coffee dust is more likely to be associated with airways disease than robusta coffee dust. In addition, tobacco smoking increases the risk of airways disease among coffee workers. Thus, workers who handle arabicca coffee and who smoke are at greatest risk of having respiratory problems.

It is also clear from the study's findings that the exposure of workers to high levels of coffee dust is the result of poor factory design and engineering, old machinery, and little protective equipment. To help minimize airways diseases Dr Sekimpi submitted a list of recommendations to the Ugandan government concerning the coffee industry.

He said the control of dust in coffee factories should be kept to a limit of  $0.2 \text{ mg/m}^3$  through better machinery and engineering design. Dr Sekimpi pointed to newer factories in the Kampala area, which have reduced the amount of dust to low levels of  $0.6 \text{ mg/m}^3$ , as proof that changes can be made.

Workers who develop occupational airways diseases caused by coffee dusts should also be covered by compensation, he said. Currently, these workers are not given financial assistance because of the difficulties involved in proving that illnesses are work related. Smoking should be discouraged among coffee workers by informing them of the increased risks of combining cigarette use with long-term exposure to coffee dusts.

And, Dr Sekimpi said, more studies should be carried out on the possible effects of contaminants in coffee dust such as fungi, bacteria, and bacterial toxins.

For workers who handle coffee husks to burn tiles and bricks, these recommendations are not merely good intentions but urgent matters of well-being. Workers at factories in the Kampala region complain of eye problems caused by fire from the coffee husks and say they have constant breathing problems.

Dr Sekimpi said the working conditions in these factories, as documented in his study, merit attention from the government. He is hoping that the project's findings will put pressure on coffee companies to provide their workers with protective equipment. Indeed, the Coffee Marketing Board in Uganda has recently made orders to import masks for its workers.

It is one small sign that change may be on the way for Uganda's beleaguered coffee workers. *Moses Seruwagi in Uganda* 





Daily exposure to dust in the working environment is common in the coffee industry.



*Current working conditions in a clay factory on the outskirts of Kampala.* 

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