

Female farm workers at highest risk of leukaemia

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Agricultural workers have the highest incidence of leukaemia of all New Zealand occupation groups, probably because of their exposure to chemicals, the University's public health specialists have found.

And women agriculture workers are even more at risk than men, according to the Centre for Public Health Research.

The centre has just released analysis of a study started in 2003-04, when researchers interviewed 225 cancer patients aged 25-75 and 471 randomly selected participants from the general population.

They found elevated leukaemia risk four or five times greater among market gardeners and nursery growers compared to the general population. Market farmers and crop growers, and field crop and vegetable growers, also all experienced varying degrees of elevated risk.

The study builds on research published by the centre last year, which showed those working in plant nurseries were four times more likely to develop non-hodgkin's lymphoma, while vegetable growers and those in general horticulture production have a two-fold risk of developing that disease.

Lead researcher for the latest study Dr Dave McLean says that market farmers and growers face a risk 1.8 times greater than the average population, probably due to exposure to pesticides. The overall risk appeared to be up to 3.4 times greater in women than men.

“It is not clear why this gender difference exists, but it has been hypothesised that it may be due either to the different tasks (and therefore potential for exposure) traditionally performed by men and women in horticultural occupations, or to the fact that some of the chemicals are endocrine disruptors that affect women in a different way than they do men.”

Such trends had also been detected in previous studies of workers in horticultural occupations in Italy, and in workers with occupational exposure to agricultural chemicals, such as fungicides and insecticides, in the United States and Italy

Elevated risk was also found to be associated with ever having worked as a rubber and plastics products machine operator and also in the plastic product manufacturing industry, with the chemical 1,3-butadiene, a chemical used in their manufacture a likely suspect.

An increased risk of contracting leukaemia was also suggested for other occupations including electricians, blacksmiths and toolmakers, slaughterers along with those working in textile bleaching, dyeing or operating dyeing and with cleaning machines.

Occupational cancers account for more than 300 deaths in New Zealand each year, with the National Occupational Health and Safety Advisory Committee estimating that 30 deaths annually from [leukaemia](#) are attributable to occupational exposures.

Source: Oxford University Press

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