



Punjab govt starts cancer registry: studies indicate pesticides-cancer link

Two studies pointing to the link between heavy pesticide use and several illnesses, including cancer, in Punjab have prompted the state government to set up a cancer registry programme

The Punjab government has decided to begin a cancer registry programme. The move is believed to be in response to mounting evidence of pesticide-induced health disorders in the state that experienced the 'green revolution' in the 1970s aided by large quantities of pesticide use.

Two recent reports have added to available health studies that indicate that several health disorders are due to heavy pesticide use. The report by Punjab University , Patiala , revealed a high rate of DNA damage among farmers due to pesticide use. Titled 'Assessment of genetic damage in workers occupationally exposed to pesticides in various districts of Punjab ', the report found significant DNA damage in 36% of farmers' blood samples. The worst affected were cotton, paddy and wheat growers.

"Pesticides cause damage to the DNA and eventually its fragmentation. This increases the chances of cancer and chromosome mutation," said one of the researchers, Satbir Kaur.

Between 2003 and 2006, blood samples of farmers were collected and tested twice a year. The first 210 samples were collected soon after a day of intensive spraying. The second tests were conducted on 60 farmers from the first group after six months, to determine the frequency of DNA repair. While DNA fragmentation was found in 36% of the fresh samples, 15% of the follow-up cases showed fragmentation. Smoking, drinking and age were not found to be related to the extent of DNA damage. DNA damage enhances the risk of cancer and gene mutation.

Cotton farmers were the worst affected because pesticide is used liberally in cotton fields. Since farmers use a mixture of pesticides, it was not possible for the researchers to pinpoint any one specific pesticide that possibly caused the damage. But the worst affected were those who used herbicides and organophosphates; the

latter is deemed to be safe by the pesticide industry.

A representative of the pesticide industry put the blame on the failure of the government's extension services and retailers in training farmers.

The other study, carried out by a committee headed by J S Bajaj, vice-chairperson of the Punjab State Planning Board, showed widespread contamination of drinking water with pesticides and heavy metals.

The study surveyed areas which saw heavy pesticide use and reported high and rising instances of cancer and other illnesses. Pesticides and fertilisers had contaminated the drinking water and, the reports says, contaminated drinking water is one of the major causes of death in Punjab .

Contaminated water had led to an increase in the number of cases of cancer, asthma, joint pain, premature greying of hair, skin diseases and, to an extent, mental impairment. It was conducted in 17 villages in southwest Punjab 's Bathinda, Faridkot, Mansa and Muktsar districts that come under the Malwa region -- the cotton-growing belt known for very high pesticide use. Five villages in Bathinda district registered 91 deaths due to cancer in the past 10 years, and 10 more cases were reported in 2008. Jhanduke and Balton in Bathinda registered 17 cancer deaths in the last year alone.

The pesticide industry does not accept that pesticides could be the cause of diseases. Punjab uses 17% of the total pesticides applied in India .

The Punjab government has decided to begin its cancer registry programme with the Indian Council of Medical Research. According to sources, the Post Graduate Institute of Medical Education and Research, Chandigarh (which, in February 2005, submitted its own report showing high levels of pesticide contamination and recommended the setting up of a cancer registry) is likely to be the nodal agency for the programme that will most likely begin in July.

Source: ***Down to Earth*** , June 11, 2008