Controversy of Arsenic in Pesticides - *some facts*

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The alleged presence of arsenic in pesticides utilized in Sri Lanka has caused much concern in the media, academic community and in government circles. The issue was created by a team of academics from the University of Kelaniya and Rajarata stating that the cause of Chronic Kidney Disease in North Central Province is due to the detection of high level arsenic in kidneys of those who have died and these academics believe the reason is high levels of arsenic in community used pesticides in the area.

LET US EXAMINE THE ISSUE IN DETAIL:

In late 1960s in the era of the Green Revolution, plant breeders bred new improved varieties (NIV's) of cereals to meet the challenges in food security. These new varieties bred needs and this led to the growth of pesticide industry including multinationals. Fertilizers have been identified as an essential ingredient for increased food production. The government recently allocated fertilizer subsidy not only to rice but coconut and vegetable crops as well at a cost of Rs. 50,000 million.

Excessive use of pesticides can cause a health risk

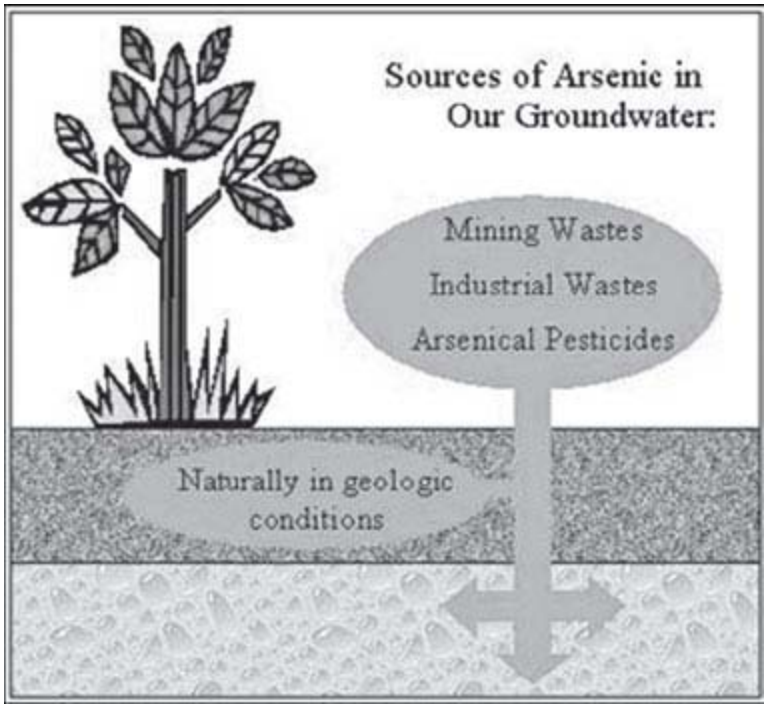
Pesticide industry is big business. The growth of pesticide industry grew from virtually zero in the 1940s to a market worth US $ 31 billion in 1998 and now may be reaching $ 100 billion in 2010. Private sector corporations are constantly merging to form even - bigger conglomerations in the pesticide industry. In 1998, herbicides accounted for 49 percent of Pesticide use, followed by insecticides at 27 percent and fungicides at 20 percent and others at 4 percent.

The WHO estimates that at least three million people are poisoned by pesticides every year and more than 200,000 die and in Sri Lanka 7-15 percent of farmers experience poisoning at least once in their lives.

Multinational companies

The registration and introduction of a new pesticide in Sri Lanka is a complex process. It has been estimated that multinational companies spend more than

US $ 10-50 million to introduce a new pesticide due to stringent laws enforced by federal agencies like the US Environment Protection Agency in USA.



Pesticide registration process in Sri Lanka is performed by the Office of Registration of Pesticides which examines the ingredients of the pesticide, the crops for which it is to be used, the amount and timing of its use and storage and disposal practices.

In the registration process the pesticides will be subjected to pre-registration evaluation, local tests on suitability/bio efficacy, risks and a benefit analysis is performed before the licence is granted. The licence granted will be re-evaluated after three years for the risks/benefits, based on updated information and knowledge.

The Pesticide Registrar's Office needs information not only on physical parameters but reports on pest resistance, effect on beneficial organisms, fish toxicity, levels of major contaminates in surface water bodies, treated vegetables, sales/ import statistics and a lot of other information to register a new pesticide.

Sri Lanka under the free trade policy subjected to the licensing by RPO allows importation of pesticides. The arsenic pesticide was banned by the Pesticide Registrar in 1988 and recently endosulfan (1998), based on the recommendation of the Pesticide Advisory and Technical Committee of the Department of Agriculture. Still, Sri Lanka is to adopt integrated Pest Management as a national policy. The CARE IPM Project team with Dr. Keith Jones as chairman in early 1990s proposed and handed over a proposal to declare IPM as national policy to the government, but it was not implemented.

Agriculture sector

The findings by the team attached to the University of Kelaniya and Rajarata have shaken the Sri Lanka agriculture sector and the core issue is the supposed detection of arsenic in rice samples collected. The Rice Research Institute at

Batalagoda denied there is arsenic in rice and was quick to declare after experiments that rice in the market is completely safe to consume.

The ROP office is now confident that only three pesticides did contain minor amounts of arsenic out of 28 samples tested, which have been removed from the market and the testing process is completed thoroughly and in line with international standards of testing and regulations and also according to the Pesticide Act.

The government through Mahinda Chinthana has prioritized organic farming and had allocated funds for compost making in the 2010 budget. However, the truth is pesticides sales in Sri Lanka are rising every year, with weedicides predominant and this is due to the fact the farmers are increasingly dependent on pesticides as advocated by multinational companies.

The Agricultural Extension Service was devolved in 1994 and at present farmers are at the mercy of five organizations regarding Agriculture Extension. Therefore proper accurate information could not be communicated to the farmers, due to shortfalls in national Agriculture Extension Service.

As pointed out the pesticide industry is an 'international trade' with many stakeholders. In Sri Lanka Nuwaraeliya, Jaffna and Hambantota are the three districts with heavy pesticide usage. But if Arsenic in the root cause of kidney disease, it is surprising there are no records of kidney patients from these three districts which has recorded highest pesticide usage. The ROP office has guaranteed that no pesticide with high levels of arsenic or mercury has seen registered in Sri Lanka.

Chronic Kidney Disease

The World Health organization (WHO) in its mission reports pertaining to the Chronic Kidney Disease (CKDU) of unknown etiology has reported that in North Central province and Uva provinces, a minimum of 15 percent of people in the age group 15-70 years are affected by CKDU. The WHO team has analyzed arsenic and cadmium in 118 water samples in the NC and has concluded that these water samples do not show raised arsenic values. Therefore WHO has recommended a multi-sectoral strategic plan with all stakeholders that are needed to be developed with relevant ministries with following concerns:

a. The ROP office is to ensure a regulatory framework to test for toxic impurities in pesticides in an accredited laboratory

b. Ensure the pesticides are applied only by certified personnel with safety clothing, gloves and masks in NC Province.

c. The necessity to address the issues of Quality Control and regulations related to toxic impurities in subsidized imported fertilizer especially to detect impurities such as cadmium and arsenic.

The above recommendation I believe would be acceptable to both groups who are agitating for pertinent action to prevent CKDU further making inroads in the NC Province.

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