

EATING AROMATIC RICE MAY CUT ARSENIC RISK FOR BANGLADESHIS

[DHAKA] Aromatic rice from Bangladesh's Sylhet region may be safer to eat than other varieties as they contain less arsenic, a study reveals.

Varieties of aromatic rice also contain higher concentrations of essential nutrients, according to researchers, whose findings have been published in *Biomedical Spectroscopy and Imaging*.

They estimate that a person could reduce their intake of toxic arsenic by up to almost 70 per cent and increase the intake of two essential nutrients which they mainly get from rice — selenium and zinc — by more than 40 per cent, if they switch to aromatic rice from the region of Sylhet.

The same varieties could be grown in other countries that have high levels of arsenic in irrigation water, says the corresponding author of the paper, Parvez Haris, head of research at the School of Allied Health Sciences at De Montfort University, United Kingdom.

Around 70 million people living in Bangladesh are exposed to arsenic because of the contamination of groundwater used for drinking and irrigation.

Arsenic has been found in groundwater in the country at concentrations up to six times higher than the 50 parts per billion the WHO recommends as the maximum safe value for human consumption.

Chronic exposure to the element can cause multiple organ cancer.

Rice is highly efficient at absorbing heavy metals such as arsenic from soil and water, and is reported to be the highest arsenic-containing cereal, says Haris.

"We have been investigating diverse types of foods and non-food products from Bangladesh in order to identify key sources of arsenic exposure," he says. "Rice was particularly important as it is the staple for Bangladeshis and is already known to contain high arsenic levels."

The team studied 98 varieties of non-aromatic rice — which were collected from various markets in the capital, Dhaka, but grown in other regions — and 28 aromatic varieties from the greater Sylhet region that is about 200 kilometres northeast of the capital.

The study suggests that aromatic varieties could be a healthier alternative to non-aromatic rice, which is more commonly consumed in Bangladesh.

Haris tells *SciDev.Net* that one reason for the lower arsenic levels in aromatic varieties may be genetic, but that further studies are needed to examine the genetics of aromatic rice plants and why they are good at absorbing essential nutrients.

But the other reasons are that there are lower concentrations of arsenic in groundwater in the Sylhet region and that aromatic rice is typically grown during the monsoon season, reducing the need to use groundwater for irrigation, he says. Muhammad Ali Siddiquee, a principal scientific officer at the Bangladesh Rice Research Institute, tells *SciDev.Net* that, while it is alarming to find arsenic in rice, the levels found in the food chain often do not exceed the WHO recommended maximum.

Source : <http://www.scidev.net/global/farming/news/eating-aromatic-rice-may-cut-arsenic-risk-for-bangladeshis.html>