

Indian scientist warns of 'golden rice' impact

UNB

Challenging the claims about genetically modified "Golden Rice" as a remedy to vitamin A deficiency among mothers and children, renowned Indian scientist Dr Tusher Chakraborty has cautioned that the controversial rice poses a serious threat to human health and rice itself.

Talking to the UNB on the sidelines of a workshop on Food Security and Modern Biotechnology in the capital yesterday, he noted that the basic safety concern over "Golden Rice" is the presence of retinoic acid, which is a metabolite of vitamin A.

The retinoic acid is a teratogen linked to causing defects of fetus.

Besides the inclusion of the targeted retinoic acid, the numerous other derivatives can be created in the transgenic rice that can incite numerous unknown metabolic receptors in human body and lead to various kinds of health complications at all stages of the lifespan, he added.

Dr Tusher, a member of State Council of Biotechnology, West Bengal, India, said: "Golden rice involves an unnecessary risk in the name of meeting vitamin A deficiency. It's a move in the wrong direction, it's a plot to divert the food culture to the wrong route."

In the diverse food culture in the South Asian regions there are numerous other sources of vitamin A that enrich the diet with many other supplements, not to mention some indigenous rice varieties that are enriched in vitamin A, he explained.

"It's a culturally distorted concept of nutrition to interject four-five other things in the staple grain. Nutrition security means the diversity of nutritious food, not to have all the supplements in one grain."

While the genetic modification of most of the food crops are not focused on improving the traits of the plant, but rather on management trait like controlling pests and weeds, the "Golden Rice" is posing a much delicate "nutritional distortion," he continued.

As the acreages of major GM crops, including corn and soy, have gradually been decreasing globally over the last few years, rice soon will be the main target of the agrochemical giants, he observed adding that Golden Rice is a threat to rice.

Bangladesh Rice Research Institute (BRRI) says it is taking the "Golden Rice" variety – GR-2 E BRRI Dhan29 – to confined field trials in the coming Boro season in November next.

Dr Tusher noted that the experiments with the earlier "GR-1" strains came out with unrealistic outcomes as one was supposed to take about 1.5kg rice daily to meet the vitamin A requirement.

The "GR-2" strain of the transgenic rice that the BRRI has developed based on the popular high-yielding variety BRRI Dhan 29 is supposed to have much higher vitamin A concentration that implies higher risks related to retinoic acid, he said.

The government earlier introduced six varieties of GM brinjal and aims at releasing five more varieties this year. It has plans to introduce GM cotton and potato.