

IIT KUDOS FOR DEVICE THAT GIVES WEATHER AND SNAKE ALERTS

2 schoolboys doff their smart hat to farmers

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Chakdah: Two Class X students of the Chakdah Purbachal Vidyapith in Chakdah, Nadia, have developed what they call a “farmer’s shield”, a solar-powered smart hat designed to protect farm workers from multiple hazards.

Made of bamboo and other natural materials, the eco-friendly hat integrates several features into a single platform — from weather and snake alerts to offering relief from extreme heat.

The brains behind the hat, Sannoriyo Sanyal and Aditya Saha, both Chakdah boys, explained the features.

The hat has a Bluetooth speaker that delivers weather forecasts and emergency warnings such as thunder-



Aditya Saha (left) and Sannoriyo Sanyal (right) explain the utility of a smart hat to a farmer in Nadia

storms. It also features a solar-powered cooling fan, a detachable LED torch for visibility before daybreak and after sundown, a solar-charged power bank for mobile phones in remote areas, weather sensors to monitor environmental conditions, and a snake-detection system.

To access the full range

of features in the hat, users need to sync their smartphone to it.

The hat apart, the boys have designed a bamboo-and-straw flask that keeps drinking water cool during the long hours of work in the fields.

Developed under the mentorship of Tanmay Sanyal, the assistant professor

of zoology at the Krishnanagar Government College, the project was showcased at the National Climate Innovation Challenge held at IIT-Kharagpur on World Environment Day, June 5.

The innovative model secured first spot in the Class XI-XIII category.

According to the boys, the idea of a smart hat emerged from their observation that farmers often spend long hours under the sun, face extreme humidity and poor visibility during early mornings and evenings, making them vulnerable to sunstroke, lightning strikes and snakebites.

The duo said the death of a farmer from sunstroke at Hingnara village in Chakdah two years ago pained them. “The future of his son was thrown into uncertainty,” said Sannoriyo.

“Other hazards such as lightning, thunderstorms and snakebites collectively claim hundreds of lives in Bengal every year. So we tried to develop a comprehensive solution by integrating multiple utilities into a single device,” he said.

Aditya called the smart hat a tribute to farmers whose hard work often goes unnoticed despite the risks they face.

He said the gross cost of the hat comes to around ₹600.

Their mentor, Tanmay Sanyal, said the project sought to ensure a “safer, more sustainable and dignified life for farmers”.

The smart hat also received special appreciation from the Noble International University, US.