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Now, a farmer-friendly pesticide sprinkler



Two IITGn students have come up with a design that reduces exposure to pesticides and eliminates weight on the back

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Realising that farmers were being regularly exposed to harmful chemicals while using pesticide sprinklers, two students of Indian Institute of Technology, Gandhinagar (IITGn) have come up with a new design that will make work easier for the farmers.

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The current pesticide sprinkler has to be carried on the shoulder and thus exposes the farmer to the pesticides. This in turn causes health problems ranging from short-term impacts such as headaches and nausea to chronic ones like cancer, reproductive disorders and endocrine disruption. Also, too much of weight causes trouble to the back as well as the shoulder.

Having identified the problems, PVS Anurag and Pranshul, student of IITGn, got down to work. They took up the project as part of Design and Innovation course at the institute. They decided to design a sprinkler on a platform and need not to carry on shoulder. The entire process of designing the new machine – including market research, survey and making of the pesticide sprinkler took them five months.

“The machine is designed to primarily reduce the exposure to suspended pesticide particles in the fields and prevent permanent damage to the back of farmers due to the weight of the existing equipment. The product is a pull-type case with two pesticide sprayer nozzles at the rear end and a pulling handle on the front end. Hence, the distance between the spraying arm and the farmer is effectively increased. The pulling mechanism ensures that the farmer is always facing away from the pesticide jets,” said Anurag.

He said that keeping the pesticide container on a platform effectively increases the total amount of pesticide that can be carried at one time – the design increases the pesticide volume from 15 litres to 30 litres. Other features include – pulling instead of pushing the machine to reduce pesticide exposure and automatic spraying with controlled switches on both sides while spraying.

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