



## State Award – Odisha

### Herbal preparation for protecting vegetables and rice against insect pests

Jyotsna Mayee Patra

Keonjhar, Odisha

Scout: Innovate Odisha Initiative

Jyotsna Mayee Patra (18) is a young innovator, studying Political Science Honours course for her graduation. In her home garden, she noted that the rose hedges were severely infested by insects and were not bearing flowers. She observed a climber (name withheld due to IP reasons) bearing fruits was growing close to the vicinity of the roots zone of the rose plants. The fruits of the climber decayed and decomposed in the root zone and the insects infesting the rose disappeared soon. The growth of the rose plants improved and they started bearing flowers. A curious young student of class 8th at the time, she searched similar fruits from the village pastures and placed in the root zone of other insect infested plants in her garden and in rice fields and noted the control of all types of insects including soil insects. She has been using the practice in her fields (rice) and garden (vegetables) for the last four years.

The preparation is very effective in low volumes and can be used for the control either in the form of a solution/juice or powder or can directly be buried equidistant in the soil, spread across the rice fields for maximum control. Care while handling,

spraying of preparation and use of protective gear is required due to its poisonous nature.

The validation facilitated by NIF-India at Department of Entomology and Agricultural Zoology, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi against insect pests of Okra reported the efficacy against borer and sucking insect pests. The preparation was most effective against leafhoppers in both the sprays at all the doses tested providing control in the range of 50 – 56%. The preparation at farmer's dose was very effective in control of fruit borer infestation providing 50.6% reduction in infestation as compared to control and a 52.6% reduction in population of whiteflies. In case of mites, the preparation effectively reduced 54.6% and 52.7% mite populations as compared to control at half the farmer's dose and farmer's dose respectively. An overall 62.58% - 59.8% increase in production as compared to control was reported at the three doses tested and none of them caused any harm to the crop or to the beneficial insects like spiders and coccinellids during the whole course of trials.