



## Herbal formulation to control pests in cotton

Consolation

### Naranbhai Shamjibhai Solanki

Bhavnagar, Gujarat

Scout: SRISTI

#### Background

Naranbhai (39) has developed a multi-herb preparation, which improves the quality of cotton apart from protecting the plants from pests.

He is an agriculturist and lives with his wife, Gauriben and four young children. Other members of his family, staying in the same village, include his father, Shri Shamjibhai Ramjibhai Solanki, who was a farmer himself, mother Gangama and five brothers also engaged in farming.

Having a population of around 5000, the village is predominantly agricultural with the main crops grown being cotton, groundnut and onion.

Naranbhai, who worked as a diamond polisher for ten years at Surat earlier, has four acres of land presently where he grows cotton, groundnut, chilli, jowar, bajri, etc. His formal education has been only up to third standard but inquisitiveness has made him to develop a herbal formulation for pest control.

#### Genesis

A simple man with strong observation power, Naranbhai observed that the cotton crop infested with pest did not bear good quality of cotton and the yield was also affected. The cost of chemical pesticide available in the market was very high and it also made adverse effect on the soil quality.

This made him think to find an alternative to chemical pesticides. His sharp mind gave him the idea of using herbs that were bitter in taste and freely available in the surrounding areas. Thus began the process of trial and error of testing various herbs. Over a period of a few months he was able to identify various herbs, to be used in the herbal pesticide formulation.

#### Innovation

Naranbhai uses the stem of aloe vera '*kuvar*', fruit of Karen (*Nerium indicum* L.), '*kadi jeeri*' (*Nigella sativa* L.), custard apple (*Annona squamosa* L.), detergent powder, inner bark of neem '*limdo*' (*Azadirachta indica* A Juss), chilli (*Capsicum*

*annum* L.) and roots of drumstick '*saragvo*' (*Moringa oleifera* Lam.) and a couple of other herbs to control attack of insect pest in cotton crop.

Varying proportions of the different constituents of the formulation are collected, mixed and boiled in water. Upon cooling it is filtered and diluted in water before being sprayed in the field.

This practice can be used as an alternative to chemical pest control formulations and needs to be sprayed on the crop 2-3 times in the month. Using this formulation up to fifty percent of pest control is achieved. The cost incurred on the purchase of pesticides is also reduced to half.

The practice is eco-friendly and no adverse effects have been reported. Use of this formulation is believed to improve the quality of cotton, thereby helping the farmer in fetching good market price.

Naranbhai himself has been using the pesticide since eight years now and claims to have much better returns as compared to other farmers.