

## ***Now there is no area left without mulching this year, CSV Kavre***

At the time when Ms. Kamala Timalsina planted Bittergourd using innovative practices of climate smart technology, she did not know it was going to be a success. She even did not know the people in her community would be able to combat the problem of drought for growing bittergourd during Feb-March. But it took no time to the arduous farmers in Kalchhe to find their way of growing bittergourd even during the driest season.

Mrs. Kamala Timilsina is a dweller of Kalchhe village linked with Araniko Highway through agricultural road. Kalchhe has hot humid climate during spring season and it has very low rainfall (1.26 mm in Feb, 2015) and trending higher temperature in the season. The area faces problems in irrigation, rivers get dry and there is no water source during the season. This is one of the hardest times the farmers in the village faces for cultivating their land.

In May 2014, CEAPRED implemented a “Climate Smart Village Project” in support of ICIMOD for developing and implementing affordable climate adaptive practices in the village. The approach taken was to demonstrate technologies in community that can be replicated to farming areas if found beneficial to farmers. To address the problem of drought, straw mulching practice in cucurbits (cucumber and bittergourd) was demonstrated as one of the water smart technologies. A package of practices was developed for comparing mulching with jholmal<sup>1</sup> application as a climate smart practice. This package of practice would be compared with farmers’ (non-mulching) plot. Inspired with the demonstration, this spring Ms. Timalsina planted bittergourd in 500 square meter of land practicing paddy straw mulching to prevent moisture loss from evaporation. Mulching is not a very new practice in agriculture; it has been extensively used in dry season farming as protective technique for reducing soil evaporation and providing conducive temperature for crop growth. This improved technology involves covering of the plants around its canopy with dry paddy straw. Ms. Sumita Basnet, an agriculture technician started demonstrating the farmers to show how mulching would reduce water requirement by preventing evapo-transpiration from the crop. It was planned to establish demonstrations with one mulching plot and one non-mulching plot, so that group members could visibly compare the effects of mulching.

Demonstrations were set up and farmers started implanting the practices to grow the bittergourd. After some days it was seen that the crop grew healthier, started spreading its vines and plant grew vigorous in the plot where mulching was practiced. However, in non-mulching plots plant growth was not good and even it had been irrigated daily. Ms. Kamala is one of the lead farmers in the community. She is secretary of Shramjivi Mahila Krisak Samuha, a community based organization in the village. The members interacted during their regular meeting and also asked about the benefits of technology. When farmers knew the mulching practice saves labour by reducing the number of irrigation by fourth times less, they started following the technologies in their own land. Gradually, all the areas where bittergourd had grown found mulched by farmers. Farmers found mulching the only option to save their plants as there was prolonged drought because of no rain this year.

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<sup>1</sup> Jholmal is a bio-fertilizer and bio-pesticide prepared by mixing animal urine, water, Jeevatu, farmyard manure, and plant materials in defined ratio. It controls insect pests which attack and damage crops, protects crops against fungal and vector prone diseases, and supports improved plant health.

Ms. Kamala Timalisina was first lady who had tried this technology one year back in her own plot. The year she earned about NRs. 70,000 from bittergourd planted in 500 square meter area. However, there were very few plots that were grown with mulching practices and that was confined only to the demonstrations plots established by the project. Looking at the success of the technology, farmers practiced mulch in entire field for growing bittergourd. There is no land now left without mulching this year. The mulching technology is very affordable and it doesnot require any additional cost and its benefits to the plant is higher because in prolonged dry season farmers saved their crop with this technology.

Ms. Kamala Timalisina says, "We could grow bittergourd during the dry season with the help of mulching and it saved our labour by fourth time than where no mulching was done. The reason is that with mulching practice we would only irrigate our crop twice in a week while if there is no mulching our crops had to be irrigated daily. Mulching prevents from evaporation and also helps in moisture retention to soil."