

Intervention:	Water-harvesting for silkworm production
Country:	India, Thammadihalli
Date:	Since 2002
Challenge:	Silkworm production (or “sericulture”) is an attractive option for small-scale farmers. But the fodder for silkworm production, mulberry trees, grow on moist soils, and precipitation in Thammadihalli was too few.
Approach of the Intervention:	In 2002, BAIF suggested that the villagers try growing mulberry trees without using irrigation. They showed the villagers how to harvest rainwater and store it in the soil so it would be available for the trees. They taught the villagers how to raise the silkworms, and helped them market the cocoons. And they arranged for the villagers to buy silkworm eggs to hatch and rear. BAIF introduced a method called the “biomass-filled trench system”. As its name implies, this uses trenches dug across the slope, filled with vegetation and manure. The trenches act as a sponge: they catch and hold scarce water, while the decomposing plants and manure provide nutrients for the mulberry trees.
Benefits and Impacts:	<ul style="list-style-type: none"> □ <u>Income</u>. The farmers’ income has more than doubled. Previously, a typical farmer with 3.5 acres (1.4 ha) of land planted an acre each of sorghum, finger millet and coconuts, and left half an acre uncultivated. That brought in only Rs 8,000 a year. Converting the uncultivated land to a mulberry garden meant the same farmer could produce four batches of cocoons a year, weighing about 25 kg each, which led to additional income of Rs 11,000. □ <u>Soil conservation</u>. The organic matter added to the trenches has raised the soil fertility, improved the soil structure and boosted the soil’s ability to store water. Erosion has been checked, and it has been possible to bring more land into cultivation. □ <u>Water</u>. Over-use of groundwater has stopped, and the water table has begun to rise again. The farm ponds and trenches help recharge the nearby boreholes and improve the quality of the water in them. That means more and better-quality water for people and livestock alike. □ <u>Employment</u>. Building and maintaining the rearing sheds, establishing tree nurseries and digging trenches created jobs for the farmers and for landless labourers. Villagers with skills such as masonry and carpentry were able to help one another build the required structures. Running the sericulture is ideal work for women and other family members, including children and the elderly. □ <u>Gender</u>. Women involved in the project were for the first time able to earn some money of their own. They were actively involved in the self-help groups and in making decisions, and have gained enough confidence to speak up in discussions and open their own bank accounts. □ <u>Savings and credit</u>. Some farmers have started savings accounts at the local post office. A local bank has provided financial support to the self-help groups, which take loans on behalf of their members.
Lessons learned:	<ul style="list-style-type: none"> □ BAIF and the villagers of Thammadihalli, Baluvaneralu and Bagadagere have shown that it is possible for poor farmers to grow mulberry without irrigation, so enabling them to make money from silkworms. They have also shown that the whole potential of the land is currently unused. With relatively little input, and sensible use of water and other natural resources, this idle land can be turned into a highly productive asset.

	<p>☐ Silkworm raising works only if an established market and a grainage are within easy reach. However, once a critical mass of farmers start doing sericulture, it should be possible for them to capture more of the value chain by establishing a silk-spinning facility.</p>
Wider application:	<p>☐ Scaling up potential lies mainly in those areas where markets and grainages are in place. Establishing these in other non-irrigated areas would enable local residents also to take up silkworm raising, so scaling up the approach.</p>
Implementing agency & partners	<p>Bharatiya Agro Industries Foundation (BAIF) www.baif.com BAIF Institute for Rural Development, Karnataka www.birdk.org German Agro Action (Deutsche Welthungerhilfe) www.welthungerhilfe.de</p>
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