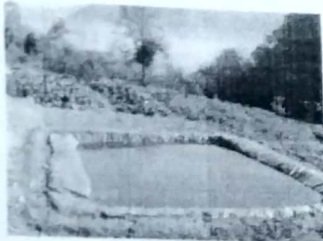




Jalkund
(A water harvesting structure)
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Jalkund, a micro rain water harvesting structure is a suitable technology for providing climate resilience and improving livelihood of small and marginal farmers of Senapati district of Manipur. The average annual rainfall of Senapati district is aboutmm. Almost% rainfall is received during rainy season for every year. Hill farmers of Senapati district suffer from extreme water scarcity during October to April for every year. Rain water harvesting and efficient utilization holds promise for sustainable livelihood in hills.

The capacity of a Jalkund is differ as per size. Each *Jalkund* can harvest approximately one and half times its original capacity considering replenishment of the pond by intermittent rains and consequent evaporation loss of about 10%.

Steps for Jalkund making:

Site selection: Soil type, depth, the purpose for which water to be used etc. to be given importance. Hill tops and upper portion of the slopes are preferred to divert water with gravitational flow.

Dimension: Farmers have the option to go in for size and capacity of the *Jalkund* according to the water requirement for crops intended to be cultivated. Preparation cost is reflected accordingly. However, considering the seepage loss of water, the size was restricted from 6000 to 30,000 l with respective

dimensions of 3 m x 2 m x 1 m, 3 m x 2 m x 1.5 m, 4 m x 3 m x 1 m, 4 m x 3 m x 1.5 m and 5 m x 4 m x 1.5 m. A dimension of 5 m x 4 m x 1.5 m has been found optimum for hills. The size of lining material of the corresponding dimension was 6 m X 4 m, 7 m x 6 m, 7 m x 6 m, 8 m x 7 m and 9 m x 8 m respectively.

Excavation: Proper side slope should be maintained for all four walls to provide stability and hold the lining materials properly. For compact and heavy soils, slope may be gentle, whereas, for loose soils more slope should be provided.

Plastering: Plastering of bottom and all the sides of the *Jalkund* should be done with slurry of clay and cow dung mixed in the ratio of 5:1. Such activity should be done in order to make the excavated *Jalkund* smooth and also to avoid any damage to the lining material.

Cushioning: Dry pine leaf or coir pith, Paddy hask, thatch grass etc. (1 kg/m²) should be used for cushioning of the wall and bottom of the *Jalkund* in order to avoid any kind of damage to the lining material.

Lining the jalkund: Lining of *Jalkund* has to be done with the LDPE agri-film (250 micron thickness) or other lining materials like silpaulin. Trench of 25 x 25 cm has to be made