



Pineapple as alternate cropping to control soil erosion in Nepal

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Summary

This practice shows pineapple cultivation not only minimizes soil erosion but also promotes the rehabilitation of degraded sloppy lands for additional income. Technical details are provided for the implementation of this practice including pit preparation and seedling plantation. The economic advantages of this practice include local labour generation and additional income.

Description

Pineapple cultivation for household consumption is a traditional practice in the hills of Bengri in Nepal. However, the concept of cultivating pineapple in degraded land as a means of erosion control and alternative income source was itself a new practice adopted by local farmers. Cultivation of pineapple is appropriate in sloppy land, prone to erosion and even degraded lands. Before adopting the practice, maize was cultivated for household consumption. However, land management practices such as tillage were not properly adopted for maize cultivation and thus resulted in severe soil erosion. Due to unpredictable rain and longer droughts even during rainy season, maize cultivation is more risky. The objective of pineapple cultivation is to minimize soil erosion and promote the rehabilitation of

degraded sloppy lands for additional income through pineapple cultivation.

1. Technical details of implementation of the practice/technology

Pineapple plantation in sloppy land is implemented in small 4 inch depth pits unlike the traditional 2 feet depth to apply some compost manure in the pits. Seedling plantation of pineapple sets should be carried out between February and March. An advantage of pineapple is its resistance to pests/diseases compared to maize. Pineapple cultivation has important economic advantages for small and marginal farmers in mid-hills of Nepal.

The per unit cost for pineapple cultivation in 1 kattha (around 67 m²) of land is estimated at Rs.1 200 (USD 15.19), of which Rs. 450 (USD 5.70) are for land preparation and labour cost; Rs. 150 (USD 1.90) for weeding; and Rs.600 (USD 7.59) for seeding.

The net income from pineapple cultivation in the same plot of land is between Rs. 3 500 and 4 000 (between USD 44.30 and USD 50.63).

The net income from maize in the same plot of land is Rs. 600 (USD 7.59), far less

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to that of pineapple. Given the income advantage and its multiple benefits, farmers showed interest in large-scale pineapple cultivation. If this practice is carried out with commercial aims, it can generate local labour and additional income. The practice's capacity to generate additional income with low investment provides the farmers the opportunity to put in practice this alternative crop to protect sloppy and degraded lands.

Figure 1. Pineapple cropping



2. Validation of the practice

In the Bengri village in Udaypur district, 44 poor and medium categories of Tamang families with low landholding were selected to study and monitor the impact of pineapple cultivation in sloppy land.

A further 82 families in Bengri are currently adopting this practice.

3. Minimum requirements for the successful implementation of the practice

Seedling plantation of pineapple sets should be carried out between February and March. And depth of implantation should be small as recommended for sloppy land.

4. Agro-ecological zones

- Temperate, cool
- Temperate, cold

5. Objectives fulfilled by the project

5.1 Labour-saving technology (LST)

This practice does not require high-intensive labour.

5.2 Women-friendly

One of this practice benefits is that it is a women friendly practice

5.3 Resource use efficiency

Protects sloppy and degraded lands.

5.4 Pro-poor technology

This practice requires low investment and generates higher income.