



*“SRT humming..... Soil enriching, Crops booming and Farmers Empowering”*

## Regreening Hills and Preventing Forest Fires : SRF’s Work on Saguna Vansavardhan Technique (SVT)

Namaskar,

Welcome to the 177th edition of the Saguna Rural Foundation (SRF) Newsletter!

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Since 2018, SRF has been actively engaged in restoring the ecological balance of Hill No. 2 in the Neral-Matheran forest area. Through the innovative Saguna Vansavardhan Technique (SVT), we are addressing critical environmental challenges, such as forest fire prevention and regreening degraded hills and mountains. Over the years, our efforts have yielded remarkable results, demonstrating sustainable and effective methods to conserve soil, water, and biodiversity.

### 1. Continuous Contour Trenches (CCT) vs. Live Contour Bunding (LCB) of Vetiver Grass

In this high rainfall zone, the traditionally Continuous Contour Trenches (CCT) has been promoted. However, our work reveals significant drawbacks to this method. CCTs often exacerbate soil erosion and promote surface water runoff, leading to speeding of the land degradation over time. In contrast, Live Contour Bunding (LCB) with vetiver grass offers a sustainable alternative:

- **CCT:** Promotes soil erosion and water runoff, especially during heavy rains and the slopy lands.
- **LCB:** Prevents soil erosion by stabilizing the soil and enhances water infiltration deep into the ground in a similar topographic condition.

The deep root system of vetiver grass anchors the soil, significantly reducing erosion while recharging groundwater. This technique is not only more effective but also restores the natural ecosystem.



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## **2. Myth vs. Fact: The Impact of Burning Grass**

A prevalent myth among local communities is that burning grass improves its growth for livestock grazing. However, this practice is detrimental to the environment:

- **Myth:** Burning grass promotes better quality grass in the following year.
- **Fact:** Burning grass destroys organic carbon and biodiversity which is binding material for the soil particles resulting into soil aggregation. Moreover, it leaves the soil barren and accelerates land degradation.

Through awareness programs, we are educating local communities about these harmful impacts and promoting easier and parallel solutions for livestock fodder.



### 3. Fire Belts vs. SVT Laxman Rekha

The conventional method of creating fire belts to prevent forest fires often proves ineffective and, in some cases, may even spark wildfires. SVT's Laxman Rekha offers a transformative solution:

- **Fire Belts:** Cleared zones prone to degradation of local surrounding and often ineffective in stopping wildfires.
- **SVT Laxman Rekha:** Implemented during the rainy season when the soil and grass are moist. We apply a non-selective weedicide to create a no-fire zone. The decaying plant matter enriches the soil with organic carbon, fostering biodiversity without the risk of fire.

This innovative approach arrests forest fires and rejuvenates the soil, creating a sustainable fire management system.



*Prevention of forest fire by traditional Fire belt method*



*Prevention of forest fire by SVT Laxman Rekha*



#### 4. Resilience of Vetiver Grass in Degraded Areas

Vetiver grass has demonstrated extraordinary survival rates because of its vertically deep root system even in degraded landscapes where rocks are exposed. Its adaptability and resilience make it a vital component of our regreening efforts.



#### 5. Soil Formation Through In-Situ Decomposition

The process of soil formation has begun on previously barren land due to the in-situ decomposition of organic matter triggered by SVT. The decaying vegetation is broken down by termites, earthworms and microbes, enriching the soil with organic carbon and creating a fertile base for further vegetation growth.



*Stay tuned for more updates as we continue our journey towards a greener and more sustainable future.*

*Thank you!*



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