



UAS Seri Suvarna Technology

(* Kishore S. M. and Parvati B Morabad)

Keladi Shivappa Nayaka University of Agricultural and Horticultural Sciences, Shivamogga-577204

*Corresponding Author's email: kp464751@gmail.com

The UAS Seri Suvarna Technology is a game-changing technique to mulberry production that combines superior rainwater management with soil enrichment. This method's fundamental component is the purposeful collecting and conservation of rainwater via absorption trenches inside mulberry plantations. This strategy fulfils the vital need for sustainable water use by increasing moisture availability and decreasing evaporation losses, both of which are essential for keeping healthy mulberry plants. The Seri Suvarna approach, which incorporates organic and green manures as well as biofertilizers, dramatically enhances soil qualities such as water-holding capacity and fertility. This methodical approach entails digging trenches for water absorption and nutrient storage, which promotes increased biological activity and soil structure.

The methodology includes dividing the garden into sub-plots, filling trenches with layered organic materials, and utilizing surface mulching to prevent evaporation.

The advantages of this technology are manifold: it increases organic carbon content, boosts microbial activity, and improves overall soil health. By minimizing soil erosion, reducing nutrient loss, and controlling weeds, the Seri Suvarna method supports sustainable sericulture practices, enhances leaf quality, and improves economic returns. Its eco-friendly nature and effectiveness make it particularly suitable for rainfed mulberry cultivation, contributing to both agricultural productivity and environmental sustainability.

Basic principle of Seri Suvarna method is to collect and conserve 'rainwater' in the absorption pits in mulberry plots for longer period to meet the water requirement of mulberry plants by checking evaporation using soil surface.

- ❖ This technique improves Water holding capacity
- ❖ Physical properties
- ❖ Fertility of the soil in addition to improved biological activities and by using biofertilizers and locally available organic matter (Eg. *Glyricidia*)

For conversion of unplanned mulberry garden

1. Initially a trench has to be made.
2. Filled with organic manure and green manure in organized manner (This pit is called manure pit/nutrients bank) and another pit becomes water absorption/soaking pit in another side of the row.
3. Totally, for soil fertility, one nutrient bank pit and one water collection and conservation pit are to be made in the mulberry plot in an organized way.

Methodology

- 1) Mulberry garden may be divided into sub-plots by making suitable contour bunds (opposite to slope).

- 2) Trenches of 2' width, 1½' depth by leaving horizontal checks are to be made.
- 3) All along the trenches 10-12' space should be prepared in between every alternative row after pruning.
- 4) A layer of locally available green manure leaf (4 tonnes) cut into pieces to be filled in the trenches followed by FYM, compost (5 tonnes) and tank silt if available may be put as layer after layer on the green leaf.
- 5) Rows adjacent to the prepared trenches should also be made as trenches.
- 6) The soil removed from these trenches may be used for covering the previous trenches like nursery bed in slab shape.
- 7) For ensuring the soil moisture 2 kg of biofertilizers may be mixed with compost and put near the bottom of the plant rows and to be mixed with the soil.
- 8) Waste sugarcane leaf, banana leaf and available green leaf may be spread over the trenches as surface mulch after one or two showers.
- 9) Green manure crop, grown in the trenches of the field (in situ) or grown outside (ex situ) the field may be removed and put into the trenches and mixed with the soil.
- 10) To ensure the soil fertility, all the above cultural practices may be repeated in regular intervals.

Advantage over alternative technologies

- Adoption of Seri Suvarna method increases organic carbon content and also assures availability of macro and micronutrients to the mulberry plots.
- Biological activities enhance, as microorganisms increased in large numbers.
- Physical properties of soil, improves water holding capacity.
- Easy aeration around the root zone helps in good and quality growth of mulberry plants.
- Rain water absorption in the open trenches assures moisture for long duration for mulberry plants, apart from the soil erosion and minimizes nutrient loss.
- Soil mulching minimizes evaporation loss and helps to keep the root zone cool.
- Improved leaf quality and quantity results in improved brushing capacity and economic returns and helps for sustainable sericulture and poverty alleviation.
- This method minimizes soil hardening, cultivation practices thereby saves the expenditure.
- By this method, quantity of weeds drastically reduces incidence of the disease and insects will be reduced as there was less quantity of weeds.
- This method is environmental and user friendly.
- UAS Seri Suvarna practice is quite effective and profitable and it is suitable in rainfed mulberry.

Conclusion

The UAS Seri Suvarna Technology offers a highly effective solution for enhancing mulberry cultivation through improved rainwater management and soil enrichment. By strategically employing absorption trenches and integrating organic and green manures, this method not only optimizes water retention but also significantly enhances soil fertility and biological activity. The approach fosters better soil structure, reduces erosion, and minimizes nutrient loss, leading to healthier mulberry plants and improved leaf quality. Its advantages, including increased organic carbon content, enhanced microbial activity, and effective weed control, contribute to sustainable sericulture and greater economic returns. Moreover, the eco-friendly nature of this technology aligns with environmental sustainability goals, making it particularly suitable for rainfed mulberry cultivation. Overall, the Seri Suvarna method proves to be a valuable practice for boosting productivity and ensuring long-term viability in mulberry farming.