

# The Importance of Rejuvenation Pruning in National Fruit Production and Economy

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## ABSTRACT

Rejuvenation pruning is a critical practice in fruit crop management, aimed at revitalizing aging trees and enhancing productivity. This technique involves significant removal of older wood to stimulate new growth and improve fruit quality (Ushkempirova *et al.*, 2023). Rejuvenation pruning is one of the major field practices required in horticulture, since it helps economically efficient use of older fruit trees. This technique enhances tree vigor, fruit quality as well as encourages new growth by purposefully removing unproductive branches. All that aside, rejuvenation pruning tackles the issue of national fruit production and significantly the economy. We look deeper into its benefits at various fronts.

## INTRODUCTION

### Enhancing Fruit Yield and Quality

The older a fruit tree gets, the more often it fails to produce any fruit because of its dead and weakened

parts. Rejuvenation pruning is a method that addresses the above by speeding up the growth of new and healthy branches. The process results in a greater yield as well as the quality of fruits, such as better size, colour, and taste

(Salomão *et al.*, 2018). Pests and diseases are also weakened so they are not easily transmitted from the trees to other plants. Enhancement of these factors will not only benefit the fruits in the markets but also the farmer's income increment by a larger margin.

### **Prolonging Orchard Lifespan**

Rejuvenation pruning is a method that prolongs the life of orchards. Rather than cutting old trees and planting new ones a very expensive and time-consuming process farmers can use a technique called rejuvenation pruning to maintain their orchards. Resource conservation, lesser necessity to establish new plantation, and the guaranteed continuous production from the trees that are existing has been achieved by the application of this method making them a sustainable long-term solution for fruit production.

### **Boosting National Fruit Production**

The practice is the most essential way of meeting the ever-growing demand for fruits in the country and beyond. The rejuvenation pruning, by which the yield and bush trees are taken care of, makes sure that there will be a good supply of high-quality fruits. The recurring of this will be a force to reckon with in the world and this can be easily done via a horticulture dominated country. With this, they can easily compete in the international market and at the same time experience higher export revenues.

### **Economic Benefits for Farmers**

Rejuvenation pruning represents a cost-effective way of rejuvenation for farmers, particularly small-scale growers. It allows them to improve orchard productivity without having a large investment. The financial benefits are the fact that, on one hand, the

income will be greater due to the increased yields, and on the other hand, businessmen will reduce less expenditure on imports, and in addition, they will compete more at the market. By ensuring the health and productivity of their trees, farmers can secure their livelihoods and contribute to the broader economy. Guava trees pruned at optimal times and intensities achieved a maximum cost-benefit ratio of 1:1.79, indicating substantial economic returns (Singh *et al.*, 2024)

### **Supporting the National Economy**

Fruit production is a vital component of many economies. It boosts GDP, creates jobs, and generates export income. By maximizing fruit trees' capacity for production, rejuvenation pruning supports associated sectors including fruit delivery, processing, and packing. Additionally, higher exports provide valuable foreign exchange, which improves a country's financial situation and promotes economic expansion.

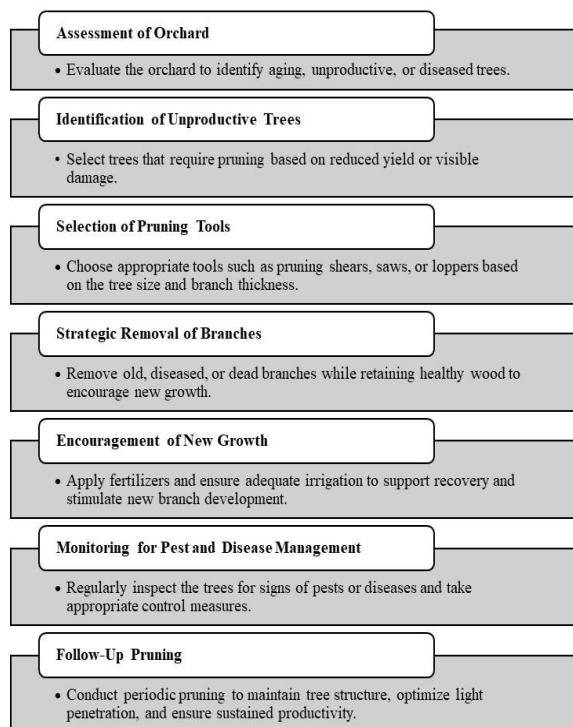
### **Environmental and Sustainability Benefits**

Rejuvenation pruning aligns with sustainable agricultural practices. It reduces the reliance on chemical fertilizers and pesticides by promoting the natural health of trees. The practice also enhances orchard biodiversity and mitigates climate change effects by maintaining green cover and improving carbon sequestration. These environmental benefits make rejuvenation pruning an eco-friendly method for maintaining productive orchards.

### **Challenges and Implementation**

Despite its benefits, rejuvenation pruning requires technical expertise and skilled labour. Farmers often need training to implement this practice effectively (Raji *et al.*, 2024). Governments and agricultural institutions play a key role in promoting its adoption by:

## Process of rejuvenation pruning



1. Training programs and workshops are essential to equip farmers with the knowledge and skills required for effective rejuvenation pruning.
2. Providing subsidies for pruning tools and equipment makes the practice more accessible and affordable for farmers
3. Conducting research on tree-specific pruning techniques ensures the adoption of scientifically proven methods for optimal results.

## CONCLUSION

Rejuvenation pruning is a transformative horticultural practice with far-reaching benefits for fruit production and the economy. By enhancing yield, quality, and sustainability, it ensures long-term productivity and supports

economic growth. Governments, agricultural experts, and farmers must collaborate to promote this practice, securing a prosperous and sustainable future for the agricultural sector.

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