

Changing Cultivars in Existing Citrus Orchards through Top Working



Muhammad Jafar Jaskani

Institute of Horticultural Sciences,
University of Agriculture, Faisalabad



The world citrus industry is diversified and has a wide market window of 6-8 months. Pakistan's citrus production is Kinnow based, a late maturing and seeded cultivar with a market window of 3-4 months. However, low seeded Kinnow strains are now available which have high demand in local and international market. Hence varietal diversification and changing citrus trees to a different variety are necessary to meet market demands and for sustainable citrus industry in Pakistan. Establishing new low seeded Kinnow orchards is

long term planning and needs millions of nursery plants, which are not available. Top Working is the best solution to change varieties in existing orchards which become productive earlier than new plantings. The other advantages of top working are:

- Old, unproductive, diseased and inferior cultivars could successfully be replaced in short time period
- The strong, well established root system of the existing tree helps to produce rapid re-growth of the new scion
- A quick return to full production with good crops is achievable in 3 to 5 years

Scope and Significance

There is high demand of seedless nursery plants but it is hard to meet the growers demand. Similarly new exotic citrus varieties have been made available in UAF through ACIAR Citrus Project to extend citrus market window. These cultivars also need to be evaluated in different localities prior to recommend as new commercial citrus cultivars.

Orchard establishment is a long-term investment. It is difficult to convince growers for replacing orchards (low quality fruit with less production) with new plantation (seedless

Kinnow/new cultivars). It is all because, uprooting productive plants is direct economic loss to the growers. Therefore, a rapid system is required to establish trees which take minimum time to start fruit bearing. Top working is a successful tested technology to change varieties with market demand. Keeping this problem in view, the Institute of Horticultural Sciences has developed and standardized the Top Working technology to replace existing orchards with low seeded Kinnow or new exotic citrus cultivars.

Services

- Budwood is maintained and available at UAF
- Provision of services to citrus growers for replacing their existing low productive and poor quality mother plants with seedless Kinnow or new citrus cultivars
- Training of budders, growers and researchers on the technology
- Get 10 trees of your orchard top worked by UAF budder, observe the results and top work rest of the orchard by yourself
- Availability of a self-explanatory practical manual for budders, growers and researchers

We hope that the adoption of the technology will create a large number of jobs for skilled and semi-skilled workers in top-working operations. It will enhance good quality and high production of citrus fruit on sustainable basis and thus leading to greater availability of fruits for local production and a larger export surplus.



Preparation of scion wood



Preparation of mother trees for top working



Cutting and loosening bark of mother plant for insertion of budwood