Physical rehabilitation of olive resources through pruning

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Abstract

Old olive trees are in danger of extinction, because they have extreme age. Wood dominates compared to vegetation. They have infections from different diseases.

Methods

- In white populations, it is experimented with pruning rehabilitation of new trees, centuries degraded trees and trees infected by disease, frost and fire.
- Olive reacts quite positively to pruning. The level of response.
- Unfortunately pruning is not always realized by technical rules, based on the principles of physiology and biology of the tree.
- The pruning is a technical priority because it provides active vegetative state, capable, for great productivity and uniform, it reduces or suppresses periodic production.
- The pruning express an idea or concept related to the development and production mode.
The function of nutrition:
mineral nutriment, carbonic food, Their mutual influence. Are three physiological periods:
1. nitrogenous food abundance; very strong vegetation, very little production in the first phase of life.
2. balance or slight excess of carbon food: Normal flowering - full of tree production.
3. Emphasizing food abundance of carbon: Abundantly production some years, Accompanied little or no in other years, pronounced periodicity (1:8), the tree begins to grows old

Physiology of pruning and influence on plants

- It creates and maintains the relationship between pruning, vegetation and differentiation of fruit
- Uniformly distributes the production, in time and volume of the tree.
- Lighting and ventilation of all parts of the tree crown, favors spraying.
- Regeneration sprig of 2-5 years: replacing old ramule with new ramule.

- Generally: The trees vigorous, new, must be pruned lightly
- The trees in production, with average power - require average pruning
- Old trees and degraded, severely pruned
Pruning practices

First, monitoring the orchard and determine type of pruning measures of pruning: light, medium, heavy determined, skeletal branches which are completely removed on the basis of the trunk. Branches to be reduced their leader, above a third secondary branch. Reducing the extremes of each branch, to collect the maximum the tree. Preserving in maximum the fruit elements.
Reconstitution on the basis of skeletal branches, 3-4, according varieties
Other branches completely eliminated
Trunk remains only, with 20-70 cm of each of three first skeletal branches
In general, consisting for the regeneration of the crown
Regeneration and conservation on farms ex situ

Has resulted
- Formative pruning is carried out in the period of active vegetation, to avoid large incisions,
- Avoiding leaving the branches of a point and not more than 3-4 branch

Physiological Principe: Tendency that have mineral substances
- They go right to extremities (Tropism)
- We sprig with vertical position (positive geotropism)
- In parts of illuminated and ventilated (fototropism)
- Preferences, we sprig with powerful and new
In situ, Pruning of reconstitution

Reconstitution on the basis of skeletal branches, 3-4, according varieties
Other branches completely eliminated
Trunk remains only with 20-60 cm of each of three first skeletal branches
In general, consisting for the regeneration of the tree crown
Reduction of wood 70 to 90%...
Cutting on the neck of three skeletal branches, 70-90% of the wood is reduced, reduced crowns, New sprig regenerated,
The pruning of the production phase,

- The pruning performed in the period from baking fruit until flowering avoiding the low temperature time.
- It aims a better balance between production and vegetation, reduced to 5-10% of the crown, for a good balance between mineral and carbon food (the ratio C / N).
- To replace the old ramule sick and dried on the basis of news.
- Airing and lighting for the crown to activate the function of the leaves.
- Reduced vertical and lateral branches extremes, removal of wood sprig, vegetative sprig peaks.
- Elimination of the leaders of the first skeletal branches, their replacement with weak branch in the same position.
- Dried sprig removed, in the interior of crown, not empty center of the crown, because caused, burning of the skin and conductive vessels.
Rehabilitation from frost damages, age and Infections

Cutting up the healthy segment,
Cleaning of branches, with infections, disinfection
Grafting on the neck of trunk
Chemical treatments with streptomycin or copper sulphate colloidal
The mineral complex fertilization at the same time to prune trees
Rehabilitation from frost damages, age and Infections

Cuttings (wounds) carried out in the cambium ring
Cuttings always be performed on the healthy part
Scissors must be disinfected after each tree
The wounds must be polished and disinfected
Pruned branches should be burned immediately
Conclusions

The tree assures the most favorable form, to maintain abundant and economic production, for harvesting and appropriate maintenance works.

To customize and uniformity of production in time and volume of the crown, by the maintenance pruning.

To regenerate the degraded tree and the production capacity by the pruning of reconstruction.

In the life of an olive tree, progressively transferred from the formation pruning to the pruning production and finally the regenerative pruning.

Pruning is a high priority for sanification and longevity of the olive tree.


