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Innovation Networks for Cork, Resins & Edibles

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Arboretums in Tunisia: importance and interest

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Keywords

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NWFP

Aromatic & Medicinal Plants
Cork
Resins
Wild Mushrooms & Truffles
Wild Nuts & Berries

Scale

National

Context

In support of major reforestation operations launched in Tunisia in the late 1950s, a major research effort was made in the selection of forest species. Such an effort has led to creating a network of 28 forests arboretums across the country (Khouja, 2001), covering a variety of soil and climatic conditions, and high contrast was established. These arboretums have the advantage of being well-characterized: well-spotted sites (geographical coordinates); Well-studied environmental conditions (climate, soil, vegetation) and well-known species (geographical origin, inventory number in the original book).

Objective

The selection of forest species and the analysis of their behavior variability, considering the main environmental factors, remains a major concern for the forester in Tunisia. This work is prepared to answer the following question: for reforestation needs, which is the most suitable species to reach a sustainable and productive plantation? The answer can be provided in the elimination trials in the arboretum. The arboretums offer an ideal experimental support to know the requirements of the forest species and to make a selection in favor of the best adapted and the most efficient species.

Results

The arboretums set up throughout the country are 28 in number. They have the distinction of covering very different and very contrasting bioclimatic and edaphic conditions. 28 arboretums have been set up including 208 coniferous and broadleaved species in 32 genera that the most important are: *Eucalyptus* genus: 117 species; Acacia: 26 species; *Pinus*: 18 species; *Casuarina*: 7 species
The study of the adaptive behavior of the species relative to the different environmental conditions and the evaluation of their productivity has made it possible to draw up a list of the most suitable species for the environment and the most productive, suitable for many uses.

Recommendations

Arboreta offer a wide range of species with different production and uses objectives:

- Species of forest interest for the production of wood and biomass such as: Pinus *laricio* and *Eucalyptus saligna*, (in humid bioclimate), *Pinus brutia* and *Eucalyptus brockwayi* (in wet and semi-arid bioclimates).
- Pastoral species of interest such as: *Pistacia atlantica*, *Prosopis juliflora*, *Acacia salicina*
- Species of honey interest such as *Eu bicolor*, *Eu gillii*, *Eu lehmani*, *Eu incressata*, *Eu salubris*, *Eu Leucoxylon*.
- Species of ornamental interest including several species of Eucalyptus, Acacia and Cypress.
- Bioenergetic species of interest: *Eucalyptus diversifolia* and *Eu. lehmanii*.

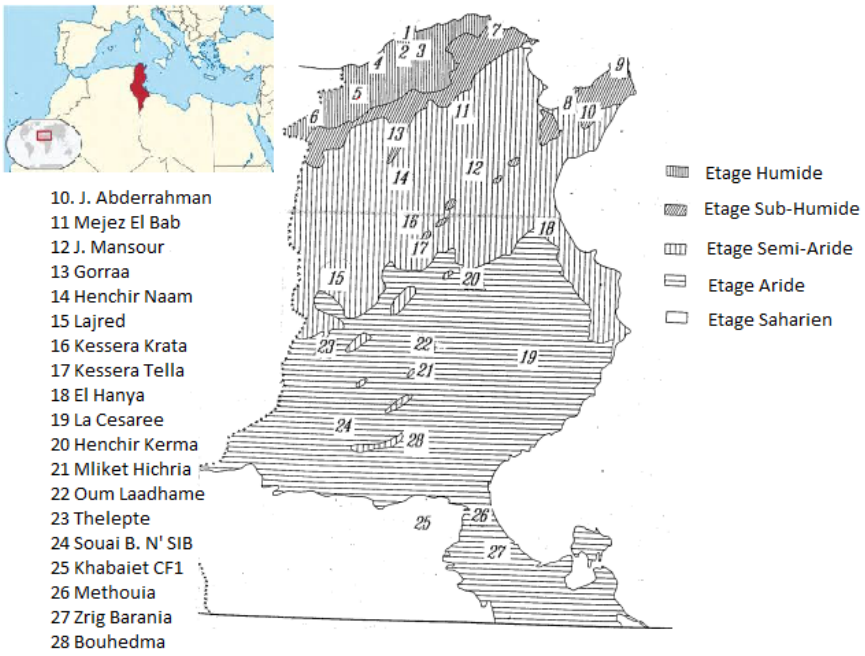
Agroforestry species of interest: *Ceratonia siliqua* and *Argania spinosa*.

Impacts and weaknesses

Results allow the selection of the most productive and suitable species to different environmental conditions. It is very useful in reforestation projects as the planning offers better guarantees for the success of the plantations and durability. Unfortunately, due to a lack of resources, several arboretums are in poor condition due to a lack of maintenance and illegal logging. To preserve this heritage, we must act urgently to preserve existing plantations and ensure their maintenance (cutting dead and dying trees, clearing trees, reopening tracks within the arboretums ...).

Future developments

We propose future actions to reinforce the role of arboretums:
- Renewal of the collection (replacement of dead and dying trees, the extension of successful species, rare species, of great economic and ecological interest).
- Enrichment with new potentially interesting species for multiple uses (new plantations).
- Long-term monitoring of species behavior (an adaptation of species to climate change).
- The establishment of seed stands from confirmed species for the supply of reproductive material (particularly seeds) to meet reforestation needs.



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Further information

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About INCREDIBLE Project

INCREDIBLE project aims to show how Non-Wood Forest Products (NWFP) can play an important role in supporting sustainable forest management and rural development, by creating networks to share and exchange knowledge and expertise. 'Innovation Networks of Cork, Resins and Edibles in the Mediterranean basin' (INCREDIBLE) promotes cross-sectoral collaboration and innovation to highlight the value and potential of NWFPs in the region.

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