

The correlation of air temperature with seedless percentage was positive and significant at  $\alpha \leq 0.05$  ( $r=0.571$ ). Therefore high temperature would be caused an increase in seedless percentage.

As if the general characters of tree (tree height and diameter, etc.) showed the Terebinth trees of forest zones have rather vertical growth than other on the contrary of horizontal growth, this result can be caused by the high inter and intra specific competition (for light, space, etc.) in the forest zone.

To pay attention to large changes of ecological characteristics in the studied areas, it can be stated that one of important factors of Terebinth's permanency in kurdestan is its compatibility to different ecological conditions.

The result of cluster analysis based on distances and similarities percentage among studied groups (areas) showed that it can be decreased from 13 to 7 area in the future studies.

## Assessment of diameter growth of beech (*Fagus orientalis* Lipsky) in Guilan province

Z. Siahipour<sup>1</sup>, A. R. Mirbadin<sup>2</sup>, B. Amanzadeh<sup>1</sup>,  
A. Hemmati<sup>1</sup>, B. Khanjani<sup>1</sup>

### Abstract

Beech (*Fagus orientalis*) is one of the most valuable species in Hyrcanica forests which contains 26% of standing volume. A National project was planned and carried out to assessment of growth and performance of *Fagous orientalis* in Asalem region. In this study, eight plots were selected in different aspects and elevations from 550 up to 2000 m. a. s. l. Each plot covered one hectare and in terms of dbh classification, five trees were selected in each plot. Tree height, dbh, diameter at median height, crown height and crown diameter was assessed. Other characteristics such as crown layer, crown health, crown size warp and branchiness of stem was considered. The obtained results of this study indicated that trees under 80 cm diameter had 170 m<sup>3</sup> volume per hectare. The calculated form factor for Beech was 0.4075. The value of mean annual increment was 3.47 m<sup>3</sup>. Correlation analysis showed that there was significantly correlation between height and age, diameter and age as well as dbh class and mean height crown, depth and dbh crown size.

---

1- Research center of Natural Resources and Livestock of Guilan Province.

2- Research Institute of Forests and Rangelands.

# Comparative survey of ecological and genetic characteristics of Terebinth tree (*Pistacia atlantica*) population in Kurdistan province

B. Yossefi<sup>1</sup>

## Abstract

In order to evaluation and comparison of ecological and genetic characteristics of Terebinth tree (*Pistacia atlantica*) populations in Kurdistan province, 13 sampling areas (and 30 femal trees in each area) were selected and evaluated in 2 years time (1996-1997).

The resulted data were analysed based on the compeletly Randomized Design model and means were compared by Dancans test at  $\alpha \leq 0.05$ . for determination of relations between characters the correlation coefficients calculated and for grouping of areas on the basis the studied characteristics, cluster analysis were accomplished.

The studied areas for all of genetic characterostics (unless cluster length) showed significant differences at  $\alpha \leq 0.01$  (for leaflet weight at  $\alpha \leq 0.05$ ). As a general rule Terebinth trees of forest zones (Maryvan and Baneh in Kurdistan) for all characteristics of leaf, leaflet and fruit,s distances were upper than the other zones.

It seems as though smallness and narrowing of leaflets in cold and dry zones is a one of the resistance mechanism to drought.

The Terebinth tree seeds of Abdulmomonen (Saghez), Dezli (Maryvan) and Khorriabad (Baneh) with lower seedless percentage (%57.83, %66.33 and %66.83 respectively) and attentive to high 100 seeds weight mean of them, are suitable for afforestation.

---

1 - Research Center of Natural Resources and livestock of Kurdistan Province

## The study of quantity and quality for zanjan-Rood Native Poplars.

R. Baghery<sup>1</sup>, M. Namiraniran<sup>2</sup>, M. Zobeiry<sup>2</sup>,

A.R. Modir-Rahmati<sup>1</sup>

### Abstract

The cultivation of poplars supply some of countrys demands of wood. Thus, they have an important role to reduce the pressure on forests. The poplar plantation along the Zanjan - Rood river banks are in valuable. This project was prepared and executed to get information about the structure, variety and growth rate of the poplar plantations. At first, after exploration of the area, the map of the poplar cultivation in the area was prepared. There are 98 discrete poplar plantations between the village of Kooshkan and Nickpay. Then, on the basis of a statistical plan, 56 plote 300 m<sup>2</sup> in area were picked through the area by the " PPS " method. Various data were collected form these. After analysis and processing of the information variable were calculate regression charts provided, and these results were concluded:

- 90% of poplars plantation consist of the two species of *P.nigra* var " *pubescens* " (60%) and *P.alba* cv " *shirazi* " (30%)
- The average volume of these plantations are 270 m<sup>3</sup> and about 1100 tree per hectare with a diameter grater than 8 centimeter. The shortage of young trees in the area is very abvious, and the future of the cultivation of poplars the area is danger.
- The trees in the *P.alba* plantation have a better condition than these in the *P.nigra* plantation regarding features like, diameter, height, cylindrical form, elongation of trunk, few number of branche excrecence of the trunk, form and thickness of the bark ,...
- The trees of the *P. alba* have 2.5 m<sup>3</sup> of volume with the diameter of 50 cm and height of 25 m , while trees of the *P.nigra* with these dimensions are just 1.6 m<sup>3</sup> in volume.

Totally, the area is capable of being converted to a plantation of poplars center. It is necessary to in troduce the new method of cultivation, and agriculture, by through survey and coherent planning and management. It is also need to give the urgent supports of poplar farmers in long time plans.

---

1 - Research Institute of Forests and Rangelands

2 - Faculty of Natural Resources, Univ. of Tehran

# Poplar pest management in northern provinces of Iran.

Sadeghi, S.E.<sup>1</sup>, M.Salehi<sup>2</sup> and H.Askary<sup>1</sup>

## Abstract

In order to establish a pest management program on poplar in IRAN, several studies have been carried out since 1985. These works were reviewed in this paper and summarized as follows:

1- In different classes, orders and families were collected and identified and up to 200 species from different classes, orders and families were determined. Some of these collected arthropods are pests of poplar and the others are either entomophagous feeding on other insects or their ecological roles are not defined.

2- The most important pests of poplar in northern provinces of Iran were determined as, *Capnodis miliaris miliaris* Klug., *Paranthrene tabaniformis* Rott, *Monosteira unicostata* (Muls. & Rey), *Chaitophorus leucomelas* Koch, *Melasoma populi* L, *Gypsonoma aceriana*, *Nycteola asiatica*, *Cerura vinula*, *Straunematus compressicornis*.

1- The biology, life history, feeding behavior, number of generations and seasonal population dynamics of some important pests as; *Capnodis miliaris*, *Paranthrene tabaniformis* Rott, *Monosteira unicostata* and *Melasoma populi* were studied.

2- A great deal of insects, spiders and mites with predatory or parasitic roles on their insect hosts were collected and identified. These entomophagous insects belong to insect families as, *Coccinellidae*, *Chrysopidae*, *Miridae* and *Anthoridae*. The efficiency of *Chrysoperla carnea*, on *Monosteira unicostata* and *Schizonotus sieboldi* Ratzeburg on *Melasoma populi* were studied.

Field and laboratory studies on the methods of pest control such as poplar clonal resistance against major insect pests as, *Paranthrene tabaniformis* Rott were carried out in these regions. In the base of these experiments, poplar resistant clones can be used as the main method for controlling poplar pests in IRAN. Mechanical, cultural, biological, use of light traps and the use of biorational products are the other elements of poplar pest management in IRAN. This poplar pest management program will be completed by using efficient biological agents and resistant poplar clones against the most destructive pests of poplar.

---

1 - Research Institute of Forests and Rangelands, P. O. Box 13185-116 Tehran, Iran

2 - Research Center for Natural Resource and Livestock of Guilan Province.