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Populus × *euroamericana* (cv. I) *Populus deltoides*

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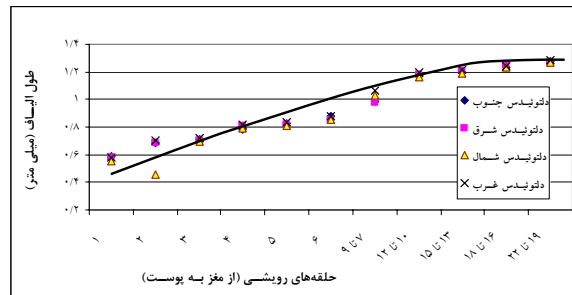
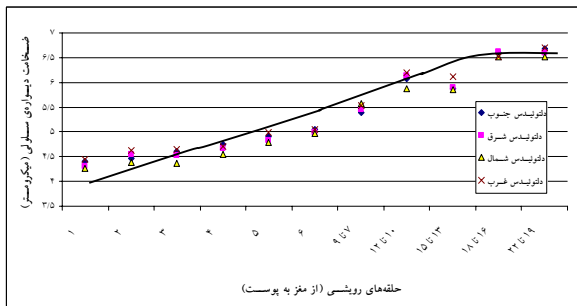
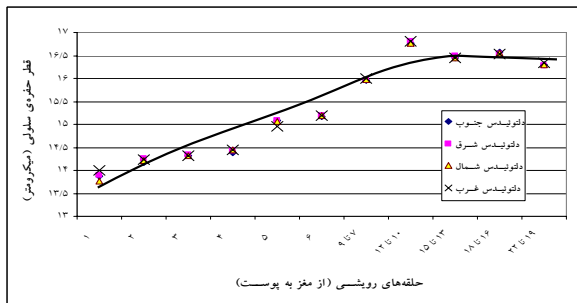
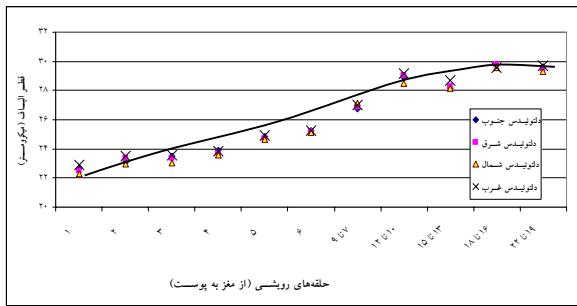
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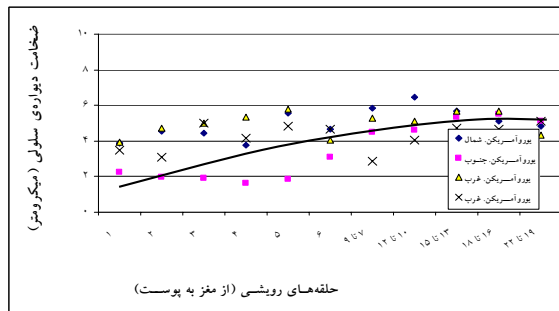
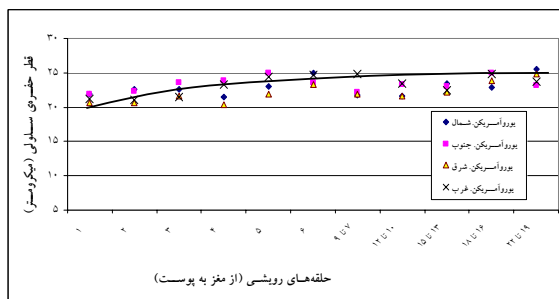
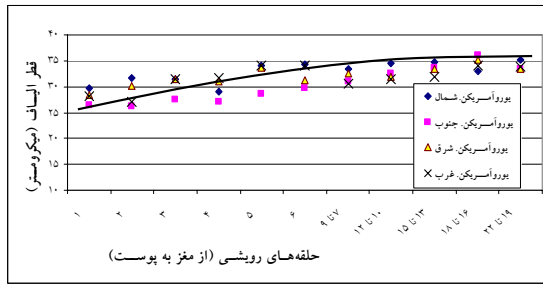
Populus deltoides (69/55).

Populus× euroamericana (cv. I-214).

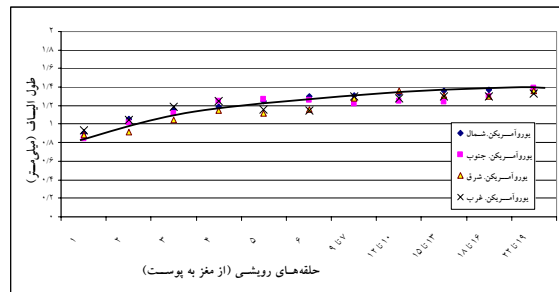


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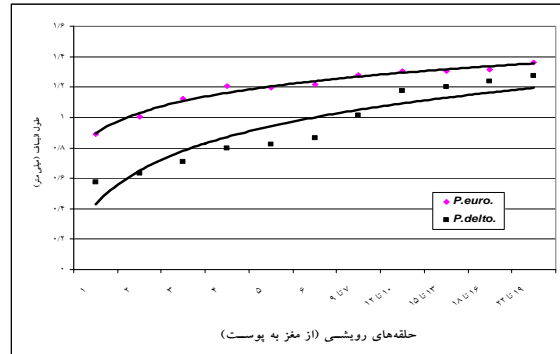
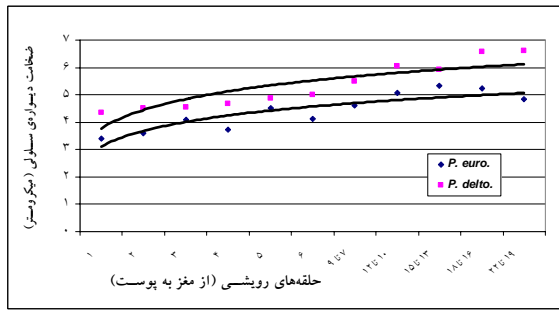
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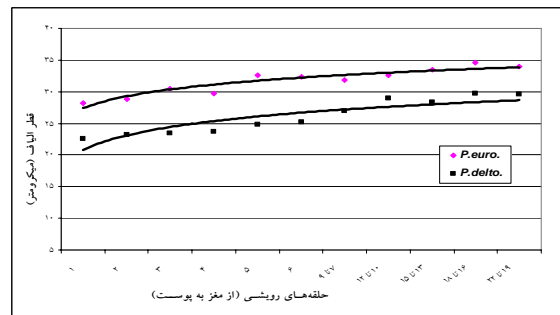


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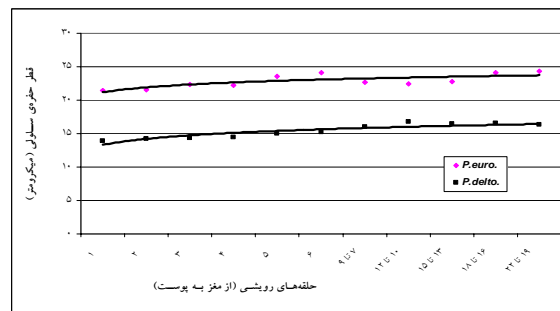


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Populus×euroamericana

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Evaluation of fiber characteristics in the juvenile and mature wood of *Populus deltoides* (69/55) and *Populus × euroamericana* (cv. I-214), grown in Gillan province, Iran

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Abstract

The increase in the volume of wood consumption on one hand, and the shortage of resources on the other hand, has made an urge for utilizing fast-growing trees. In this connection, special interest is focused on different poplar hybrids and clones due to their many outstanding characteristics. It has been long since *Populus deltoides* (69/55) and *Populus × euroamericana* (cv. I-214) have been under close consideration as well as vast plantation in Iran due to their high yield, adaptation to different climates, and ease in tending techniques, protection, and utilization. Therefore, in the present study we evaluate and compare fiber characteristics of juvenile and mature woods of these two clones. Sample trees were taken from Safra-baste Poplar Research Station, located in Gillan province, Iran. Fiber characteristics were taken yearly for the first 6 years of growth, and then every three tree rings together for the rest 14 years of growth. Results show that the transition age of juvenile wood to mature wood in these two clones takes place approximately when trees are 12 years old. Statistical analysis shows that there is no significant difference in fiber characteristics at %1 confidence level for different geographical directions in *Populus × euroamericana*; whereas significant difference was observed for lumen and wall thickness in *Populus deltoides*. Statistical analysis also shows that there is significant difference at %1 confidence level between fiber characteristics of these two clones. Based on the means and statistical analysis we can find out that fiber length, fiber diameter, lumen, and wall thickness in *Populus × euroamericana* (cv. I-214) are generally higher than *Populus deltoides* (69/55).

Keywords: *Populus × euroamericana*, *Populus deltoids*, Juvenile wood, Mature wood, Fiber characteristics, Clone, Hybrid