

## Third Laureate Applied Research

**Project Title:** Development of new technologies in propagation and growing walnut trees in Iran

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**Collaborators Organization:** Seed and Plant Improvement Institute, Iran National Science Foundation, Council of Scientific Poles



### Abstract:

Iran is the second producer and the most important source of walnut genetic in the world. Besides high nutritional value of walnut, it also has a high potential for export. This project is the results of “20 years research on walnut in Iran” which were carried out aiming “to improve growing and export of walnut using new technologies” in this county. Some of the most important achievements of this project include: commercial propagation of walnut grafting under greenhouse and moist bed conditions, commercial propagation of walnut topworking for changing inferior walnut genotypes; refining walnut micropropagation methods and commercialization of this method by private companies; identification and evaluation of walnut genotypes in Iran; selection of dwarf rootstocks of walnut; introducing a protocol for propagation of walnut by stool layering; improving seed germination methods of walnut; selection of drought tolerant rootstocks of walnut; genetic engineering of walnut for tolerance to drought and salt stresses; production of haploid plants in walnut; measuring of chilling requirement and cold tolerance in walnut cultivars; finding reasons of walnut kernel browning; collaboration in design and construction of post-harvest machineries such as walnut dryer, sorter, huller and sheller.



Topworking of a walnut genotype with superior cultivars

