



## Processing and Marketing of Walnuts: Processing Steps, Technology and Marketing Opportunities

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The walnut is a true multifunctional talent with a wide range of potential uses: Every part of the tree - from fruits to timber - can be utilized.

Archaeological findings prove that the walnut (*Juglans regia*) is one of the oldest trees used by mankind. Nowadays, walnuts are popular for their multifunctional and versatile applications: Edible products include nuts, oil, tea, liquor and sweetener. In addition to medical applications, wood is also of great economic importance due to its high value and durability. However, litter, tannin, dyes, insect repellents, bio-pesticides and -herbicides as well as oil (for paints, wood polishing and soap making) may also be generated.

Walnut consumption in Germany is increasing, but the majority of walnut products are imported - mainly from California. In addition, Germany imports around 13,500 tons of walnut kernels every year, making it the second largest importer in the world. Despite increasing demand and popularity, commercial walnut cultivation in Germany remains underdeveloped. This results in promising potential for domestic producers.

To unleash the value creation potential of walnut production in Germany, the following key processing steps should be considered:

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| <ol style="list-style-type: none"> <li>1. Raw Walnuts           <ul style="list-style-type: none"> <li>• Harvesting and Collecting</li> <li>• Cleaning and Washing</li> <li>• Drying (target moisture content 6 - 12% to prevent mold growth and mycotoxins)</li> <li>• Cool and airy Storage</li> <li>• Sorting and Grading</li> </ul> </li> <br/> <li>2. Shelled Walnuts           <ul style="list-style-type: none"> <li>• Hulling</li> <li>• Shelling</li> <li>• Screening</li> <li>• Sorting</li> </ul> </li> </ol> | <ol style="list-style-type: none"> <li>3. Chopped or Crushed Walnuts           <ul style="list-style-type: none"> <li>• Shelling</li> <li>• Chopping</li> <li>• Packaging (vacuum-sealed/ airtight)</li> </ul> </li> <br/> <li>4. Flour or Meal           <ul style="list-style-type: none"> <li>• Grinding of shelled walnuts</li> <li>• Sifting (optional)</li> <li>• Packaging (airtight)</li> </ul> </li> <br/> <li>5. Walnut Oil           <ul style="list-style-type: none"> <li>• Cold Pressing</li> <li>• Filtration</li> <li>• Bottling (in dark glass containers to preserve quality)</li> </ul> </li> </ol> |
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Conclusion: The increasing demand for walnut products in Germany offers new business opportunities and interesting market potentials for local and regional producers, especially within a growing agroforestry sector.



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