



**MOVING**  
MOUNTAIN VALORISATION THROUGH  
INTERCONNECTEDNESS AND GREEN GROWTH

**Policy Brief**

# NORTHERN APENNINES | Chestnut flour



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862739

## Northern Apennines: Chestnut flour

*Authors: Francesco Felici, Tarek Alalli, Michele Moretti, Gianluca Brunori (University of Pisa)*

### Summary

Chestnut flour production is historically characteristic of the Northern Apennines, and more precisely the Apuan Alps. Chestnut flour is produced by planting chestnut trees at 500 to 1 000 m above sea level. The chestnuts are collected on small farms that process the fruit in small batches, with high identity value. The chestnut tree performs various functions: productive, protective, naturalistic, and landscape feature.

The production of chestnut flour in the municipalities of Stazzema and Seravezza, both in the high Versilia territory, is done in a traditional way. However, in recent years some innovations have improved the processes of roasting and peeling, marketing strategies (new packaging, use of social networks, etc.) and the organisation of the value chain.

In the last years, this chestnut value chain has started to successfully enhance traditional chestnut products (such as flour, honey, and wood) by sustainably exploiting the semi-natural forest.

**Know more about the Northern Apennines Reference Region**, its selected value chain and the regional multi-actor platform (MAP), [here](#).

### Key policy messages

- Cultural and economic identity for the territory
- Traditional cultivation practices
- Family and small community business
- Local food
- Diversification of outputs (e.g., food, land preservation, animal feed)

## 1. The Mountain Reference Region (MRR)

The Mountain Reference Region (MRR) of Northern Apennines consists of three sub-chains: the Ligurian (Appennino ligure), Tuscan-Emilian (Appennino tosco-emiliano), and Umbrian Apennines (Appennino umbro). The analysed value chain (VC) is in the Tuscan-Emilian Northern Apennines, and precisely in a separate branch of the Apuan Alps. Topographically, only the valley of the river Serchio, which runs along the coast and flows into the Tyrrhenian



Sea north of Pisa, separates the MRR from the Apennines. The Apuan Alps are a highly distinctive orographic complex, with deep valleys abounding with water.

Known since Roman times for the extraction of the precious white marble, the Apuan Alps are a unique mountain range and an extraordinary region of natural and cultural heritage in the Mediterranean basin, with many geological and biological features of national and international interest. There are very few places in Italy and Europe, like the Apuan Alps, which can boast such a natural heritage rich in landscapes, environments, and naturalistic elements. This holds true not only for flora and fauna, which are rich in endemic species, but also for rocks, minerals, fossils, tectonic structures, and superficial and hypogeal morphologies. In 1985, a Regional Park was established in the territory to try to protect all those aspects and, in 2015, the Regional Park obtained the status of "UNESCO Global Geopark".

The area has a high level of vulnerability caused by land abandonment and climate change. In the high Versilia, there was a natural catastrophe, which caused about 300 debris flows and overflows of watercourses within a few square kilometres. On the 19 June 1996, an extraordinary rainfall - amounting to more than 500 mm throughout the day, with peaks of 176 mm/per hour, destroyed many buildings and killed residents, especially in the towns of Cardoso and Stazzema.

## 2. Resilience and innovation

Chestnut trees (*Castanea sativa*) have been cultivated for centuries for their economic relevance of their fruits. The current global chestnut production is estimated at 2.3 million tons, distributed across 612 000 ha. China is the leading producer of chestnuts, followed by Turkey, Italy, South Korea, Greece, Portugal, Japan, Spain, and North Korea.

Chestnut trees occupy almost 10% of the Italian forested surface and have been from ancient times a major source of food for rural populations in mountain regions. Italy possesses a rich source of germplasm, and the trees have a very old tradition of cultivation.

In the Northern Apennines, the production of chestnut flour is done in a traditional way; but in the last ten years some innovations have improved the nut roasting and peeling processes, the marketing strategies (new packaging, use of social networks, etc.), and the value chain's governance. The community interaction is one of the main aspects that characterised this value chain. The harvesting of chestnuts is done by each family farm member, while the roasting and peeling processes are done on small groups of farms following very specific protocols and rules.

### **3. Value chain contribution to sustainability and resilience of the Mountain Reference Region: barriers and opportunities**

In the MRR, chestnut trees have historically represented the most important land use. The nutritional traits of chestnuts have always been considered valuable and have been particularly appreciated by the local population. Many products have been obtained from the chestnut for food use, from the nut and the flour that is ground from it. However, other parts of the tree are also used, including the leaves for livestock bedding in stables or for mattresses, and as components of fertiliser. The softer suckers, which grow at the base of the plant, were considered good forage for goats. The tannin from the bark was used for leather tanning. For this reason, the chestnut tree has been defined as the “bread tree” because historically it was strategic for the mountain population.

Nowadays, debris flows in wooded areas and land abandonment in marginal areas are the main cause of increasing unmanaged woodland, linked with the decrease of traditional practices and the loss of biodiversity and cultural heritage values. For this reason, the conservation of traditional land uses, including natural and semi-natural forestry systems, is a priority.

Local foods with a traditional character or image are often perceived by consumers as of higher quality.

Small mountain municipalities, as Stazzema and Seravezza, whose economy has been historically based on chestnut production, have maintained ancient genotypes and traditional recipes of typical food specialties.

Nowadays, the familiar association between geographical origin and typical food can be a useful tool for increasing the touristic appeal of these areas, if supported by recognised high-quality standards. Origin information, intrinsic properties (e.g., nutritional value) and sensory traits can be conveniently explored as tools to be combined for communicating typical food quality. The value chain is a good example of the combination of traditional and innovative production for the contemporary market, allowing the population to increase the viability of economic activities.

### **4. Policy relevant considerations**

The valorisation and preservation of the chestnut value chain is of interest both for the development of the local economy and for the maintenance of local forest management. The main effects are at local level, where chestnuts contribute to reduce the negative impacts of socio-economic trends, such as land abandonment and the loss of historical and cultural heritage.

According to the outcomes of a focus group with local policymakers, population ageing, local forestry policies supporting chestnut growers’ incomes, social and economic needs, and land



fragmentation were seen as the most important negative driving forces for the conservation of the chestnut landscape. Whereas the demand from young chestnut growers and the economic crisis of intensive fruit growing are considered of secondary importance. Policies should also improve the innovation processes of farms by fostering the widespread dissemination of technical innovations and economic diversification opportunities, such as agri-tourism, rural tourism, energy production, and ecosystem services. The analysis of this value chain allows us to understand how socio-cultural and environmental elements can be used to improve the sustainability and resilience of human communities that face challenges like climate change.

## References

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## Authors

Tarek Allali, University of Pisa, [tarek.allali@phd.unipi.it](mailto:tarek.allali@phd.unipi.it)

Michele Moretti, University of Pisa, [michele.moretti@agr.unipi.it](mailto:michele.moretti@agr.unipi.it)

Gianluca Brunori, University of Pisa, [gianluca.brunori@unipi.it](mailto:gianluca.brunori@unipi.it)

Francesco Felici, [francesco.felici75@gmail.com](mailto:francesco.felici75@gmail.com)