

# **Agroforestry in Italy: the new HandBook on agroforestry practices for farmers**

Theme: Agroforestry in Practice

Subtheme: European Initiatives and Projects

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## **Introduction**

In 2023, the Italian National Rural Network funded the publication of the handbook entitled "Agroforestry in Italy: an opportunity for farms" (*Agroforestazione in Italia: una opportunità per le aziende agricole*). The initiative, promoted also by the Italian Agroforestry Association (AIAF), compiled contributions from numerous authors. It was mainly targeted to farmers, technicians, extensionists and aimed at providing comprehensive information on the current state of agroforestry systems in Italy.

Following a brief analysis of the current agroforestry terminology and a short illustration of agroforestry landscapes at both national and European level, the handbook gives a detailed overview of silvoarable and silvopastoral systems with a special focus on both historical and innovative practices focusing on the interactions among trees, crops, and animals.

The handbook addresses the following issues: the effects of trees on microclimate, edaphic environment and biodiversity, the tree-crop interactions in silvoarable systems, the tree-animal interactions in silvopastoral and agrosilvopastoral systems, adaptability and growth of tree species in silvoarable systems, the multifunctionality and ecosystem services in agrosilvopastoral systems. Emphasis is placed on market dynamics, economic considerations, and environmental sustainability, along with a thorough examination of current and future policies within national and regional Rural Development Programs. A comprehensive overview of the novel certification scheme developed in Italy for agroforestry wood products highlights the key role of certification in the market. The final section offers detailed descriptions of some of the most representative agroforestry case studies. In this paper, just three out of seven case studies are reported.

## **Case description**

### **Sasse Rami pilot Farm - Veneto Agricoltura Agency (Ceregnano RO)**

The «Sasse Rami» pilot and demonstrative farm of Veneto Agricoltura, Ceregnano (RO), hosts experimental agroforestry trials focused on poplar (*Populus × canadensis* Moench) and paulownia (*Paulownia tomentosa* Steud), two of the most interesting tree species for high-productive alley-cropping systems in the Padana Plain. 14 poplar clones and 6 paulownia clones are cultivated both in a specialised plantation (6 x 6 m for poplar and 5 x 4 m for paulownia) and in a nearby alley-cropping system (one clone per row), with N-S oriented tree rows planted along drainage ditches and spaced 40 m apart. Veneto Agricoltura, together with Universities and Research Centers, is studying the multiple interaction between trees and arable crops, with a focus on the identification of the poplar and paulownia clones more suitable to agroforestry.

### **Alberata d'Asprinio system**

The “Alberata d'Asprinio”, also called *Alberata Aversana* or *vite maritata* (“married vine”), is a vine cultivation system dating back to the Etruscan times and featuring the rural landscape of Aversa (Campania region). The “married vine” grows high up to 15 metres, held up by live supports (poplars or elms). The impressive vine barriers have given rise to a peculiar wine-growing culture, closely linked to the type of farming. The harvesting of the Asprinio grapes is defined as “The heroic grape harvest” as it is managed by very skilled grape-pickers climbers. This practice declined after the 1970s. In recent years, young farmers are engaged again in Asprinio production, lately nominated as intangible UNESCO heritage.

#### **Centro di Ricerche Agro-Ambientali Enrico Avanzi Pisa**

The "Enrico Avanzi" Agro-environmental Research Center, Pisa, is leading a long-term experiment (LTE) to understand the potential contribution of perennial crops within arable or mixed systems (agro-pastoral). The initiative named ARNINO LTE is led by the University of Pisa and Scuola Superiore Sant'Anna, with the support of CREA - Foresta e Legno. Through a multidisciplinary approach, it focuses on studying ecosystem services generated by agroforestry systems comparing two crop rotations (three-year arable and seven-year mixed) within a agroforestry system and a conventional (without trees).

#### **Conclusions**

Even though this publication cannot be classified as an exhaustive technical compendium, it can be considered as a guideline offering useful inputs to farmers who wish to start or implement agroforestry systems.

In this respect, the description of the case studies, mainly related to on-farm transfer of innovations at real farms, can represent for farmers and technicians a set of different agroforestry models to take into account when applying agroforestry practices. Moreover, it can serve as a pilot set for developing a possible agroforestry mapping.

However, the handbook can also be an easy source of information for beginners to get acquainted with agroforestry as well as a reference tool highlighting points of strength and criticalities of agroforestry for policy and decision makers when developing policy measures and land planning.

#### **References**

Chiarabaglio et al. (2023) Agroforestazione in Italia: una opportunità per le aziende agrarie. Rete Rurale Nazionale 2014-2020, Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria, Roma, ISBN 9788833852690 <https://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/25192>