



**SAN FELICE**  
AGRICOLA

RESEARCH and EXPERIMENTATION

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*From Vigorello to Pugnitello:  
30 years of experimentation  
looking towards the future*



## Research and Experimentation

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*The history of San Felice is undoubtedly linked to the experiments undertaken and developed since 1968 under the then manager Enzo Morganti.*



1968

San Felice's strong belief in the inherent qualities of Sangiovese led to the introduction of Vigorello.

1970/1980

Cuttings originally from Enzo Morganti's massal selection of Sangiovese were planted in the vineyard of Poggio Rosso.

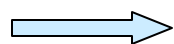
1981

The beginning of a collaboration with the University of Florence, enabling an even more effective dedication to scientific programmes.

## Research and Experimentation

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*Principal fields of application since 1982 in collaboration with the University of Florence*



Clonal selection of different grape varieties with particular focus on Sangiovese.



Study of optimal interaction among the following agronomic practices:

vine density

vine rootstock

vine training system

vine pruning processes



Varietal germplasm: classification, preservation and study of the rich Tuscan varietal patrimony at risk of extinction.

**A TOTAL OF 10 HECTARES DEDICATED TO  
THIS RESEARCH ACTIVITY**

### *The History*

To understand clearly how this varietal germplasm question has emerged, two themes must be examined and considered: germplasm itself & its genetic erosion.

**Germplasm** consists in the totality of all traits of a variety.

**Genetic erosion** is the phenomenon that affects vine varieties accumulated over millennia by the wine growers.



- ◆ The history of viticulture in Tuscany begins with the Etruscans, around the 9th to the 7th century B.C.
- ◆ It is safe to assume that the Etruscans assisted & promoted the introduction of various varieties into Tuscany.
- ◆ It is reasonable to assume that the Romans inherited a wide spectrum of varieties from the Etruscans.



- ◆ With the Roman Empire gone, viticulture during the Middle Ages went into steep decline, losing, in all probability, most of its varieties.





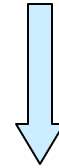
- ◆ In the centuries after 1000 viticulture & wine became the focus of renewed, strong interest.
- ◆ Beginning in the Late Middle Ages and continuing into the Renaissance, numerous works appeared documenting the existence of a wealth of grape varieties in Tuscany.



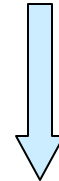
## Research and Experimentation

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Centuries of viticultural history contributed to the buildup of a rich genetic heritage; over 200 varieties were described by ampelographers in the first half of the 19th century



Over time, this genetic stock suffered losses, as a result of technical, agronomic, socio-economic, & disease factors



**Genetic Erosion**

## Research and Experimentation

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The second half of the 20th century saw attention now focused on the problem of the preservation of genetic stock

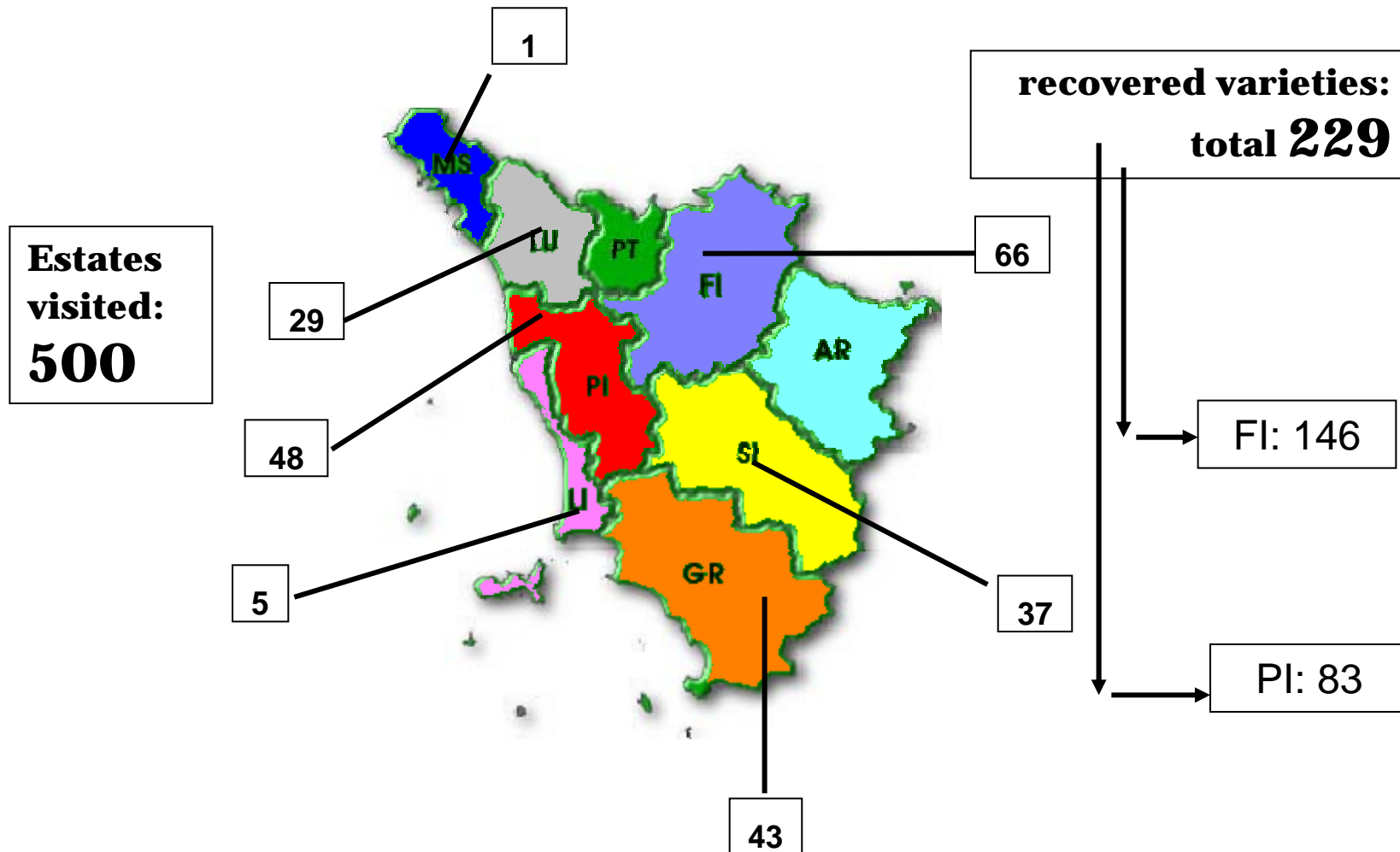


In 1981, a group of researchers for the protection of the agricultural genetic resources was founded with the following objectives:

- ◆ To identify & define ampelographical traits & enological values of the varieties making up the varietal patrimony of Tuscany.
- ◆ Insertion of those varieties exhibiting significant viticultural & enological promise into the National Register of Vine, with the purpose of encouraging their propagation & cultivation.
- ◆ Utilisation of such varieties in genetic improvement programs involving variety crossingbreeding.

## Research and Experimentation

The research group managed to trace a good 229 vines in the various wine production areas of Tuscany



## Research and Experimentation

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In 1987 [San Felice](#) offered to plant these vines in an experimental vineyard on its property.

This “Conservation Field” became known as

### *VITIARIUM*



### Chronology and development of the project

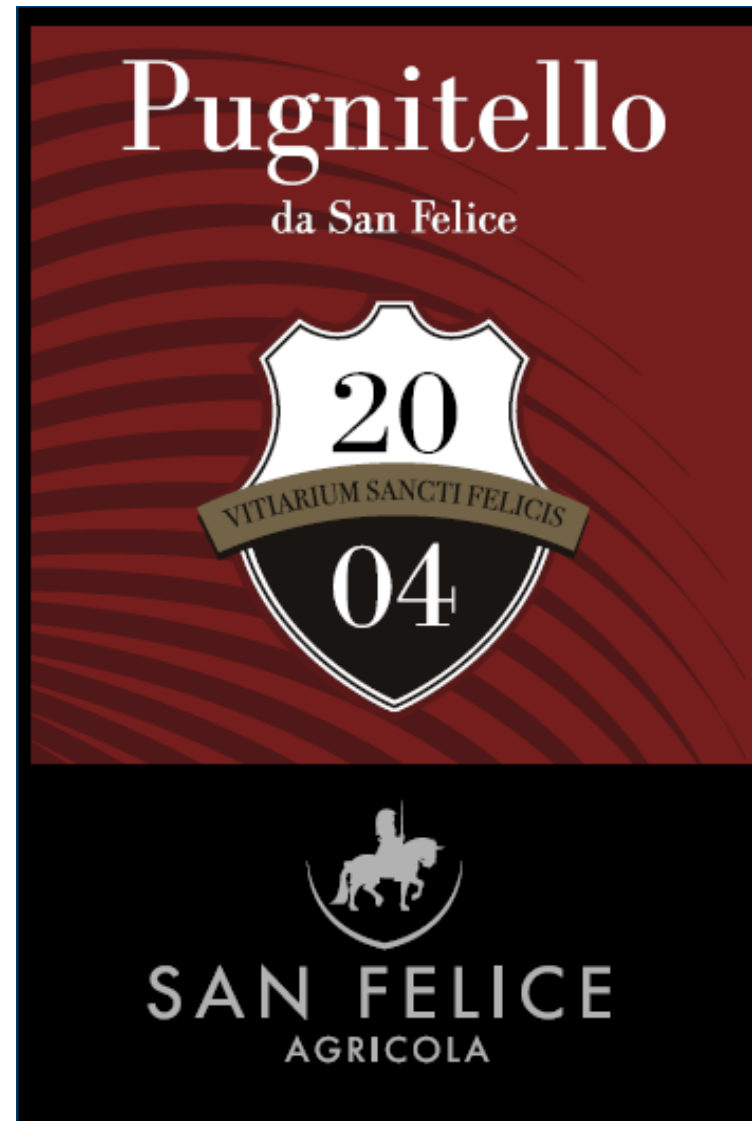
- ➔ 1987 Plant of 229 vines identified in the various wine production areas of Tuscany (18 vines per variety)
- ➔ 1989 The first findings allowed the identification of certain varieties *Abrusco*, *Abrustine*, *Pugnitello* and others, of particular interest
- ➔ 1990 Bottling of the first 280 bottles of wine produced from the vinification of 13 selected varieties
- ➔ 1991 Separate microvinifications of this selected varieties. *Pugnitello* displayed itself as being the “cream of the crop”

- ➔ 1992 The first 1,000 cuttings of Pugnitello were grafted over in an area of 0.3 hectares near the Poggio Rosso vineyard
- ➔ 1995 Production of the first 600 bottles of Pugnitello
- ➔ 2002 Italian Ministry of Agriculture placed Pugnitello in the “National Registry of Vine Varieties”
- ➔ 2003 Tuscan Regional Commission placed Pugnitello in the official Record Book of Varieties approved for wine production throughout the region



# Pugnitello

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## Pugnitello

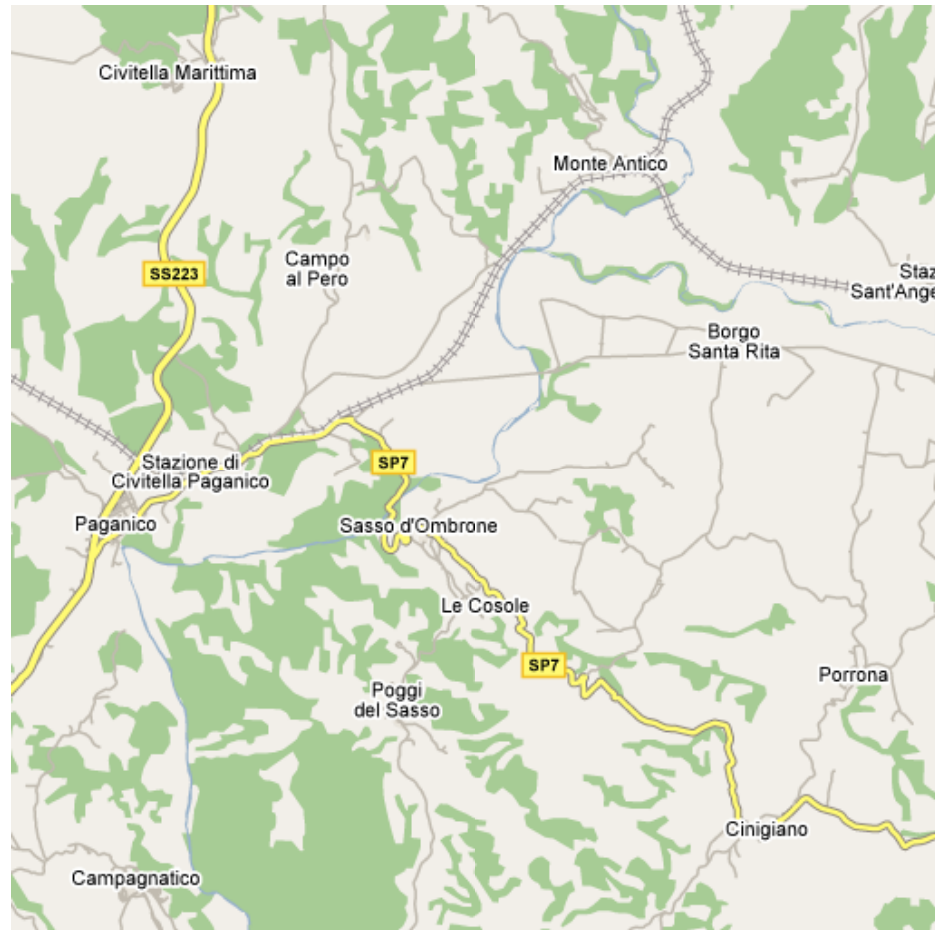
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Among the different retrieved red grape varieties, **Pugnitello** has shown to be the most interesting

## Pugnitello

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It was rescued in 1981 at Cinigiano, an area between the provinces of Siena and Grosseto

## Pugnitello

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- ◆ The owner of the vineyard where it was growing had no information regarding its provenance.
- ◆ Its name is derived from the shape of the cluster.
- ◆ There were no written references found in recent or past ampelographical works.



*Pugnitello* mother vine

## Pugnitello

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The variety was placed in the Experimental Vineyard at San Felice.

Years of research and observation led to the clarification of its characteristics related to ampelography, cultivation, genetics, health, and winemaking potential.

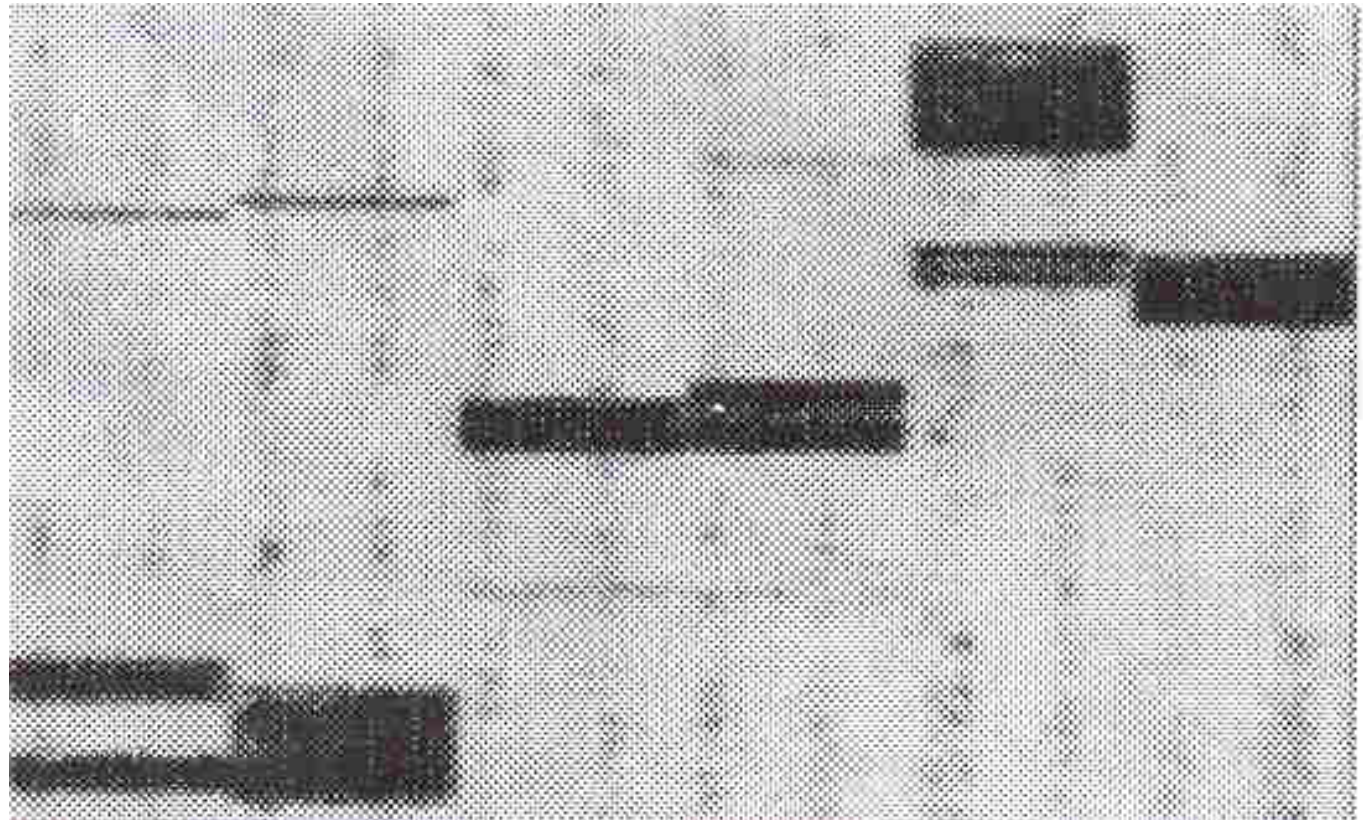




## Pugnitello

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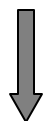
DNA analysis showed that there were no genetically similar varieties.



## CONCLUSIONS

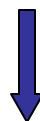
*With regard to its ampelography, cultivation, and wine qualities, Pugnitello is very distinctive*

in the vineyard



- ◆ small clusters with middle size berries
- ◆ very thick skin with intense color
- ◆ very low yield per vine

in the cellar



- ◆ ample polyphenol and anthocyan components, high acidity, smooth tannins
- ◆ elevated alcohol content

in the bottle



- ◆ long aging potential

# Pugnitello

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## Current & future scenarios

- ◆ Use Pugnietello as a monovarietal
- ◆ Find its role in the Chianti Classico blend
- ◆ Use Pugnietello to improve also other wines of the San Felice range

### San Felice unique values

- ◆ First producer to experiment with Pugnitello and so far still the sole in the world to make a wine with this grape variety.
- ◆ In contrast to the Chianti-area habit of the '80s of expanding International varieties, by the first rehabilitating native variety