

Evaluation of Genetic Erosion by Analysing the Fruit varieties listed in Nursery Catalogues from Last Century

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Introduction

The evaluation of the genetic erosion is based on the following thesis:

- Survival of fruit varieties is strictly linked to their cultivation, that simuli the varieties nursery propagation and their publication on the catalogues.
- The un-cultivated varieties, gradually, disappear from the catalogues and can be lost if not kept in some collections.

Materials and Methods

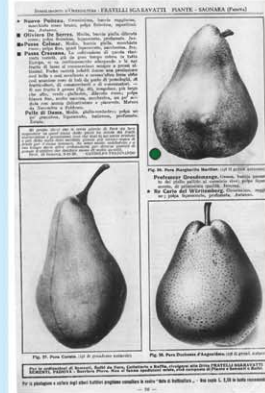
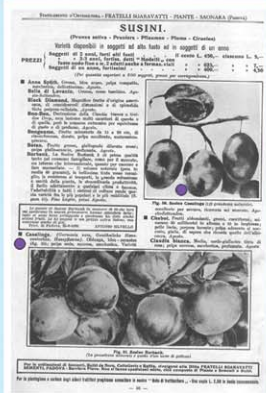
122 nursery catalogues edited from 1897 to 2005 were analyzed. Almond, Apple, Apricot, Cherry, Peach, Pear, Plum, and Quince fruits varieties were grouped in three years periods (1897-1932=**P1**, 1933-1966=**P2**, and 1967-2005=**P3**), fixed taking into account the laws funded the Italian agriculture (*R.D. n° 215 of 1933 and Piano Verde 1st and 2nd expired on 1966*). These laws promoted the expansion of the fruit orchards with new varieties.

Results and Conclusions

Comparing the period **P1** vs **P3** the missed varieties in the catalogues resulted proportional to the economic importance of the species with a general average of 75%. By species, the survival rates resulted: Apricot and Pear varieties 12%; Apple, Peach, Plum and Cherry ranged from 20% and 22%; Quince an Almond 24% and 27%. Some of the missed varieties had rare and specific agronomic or pomologic characteristics (Table 1).

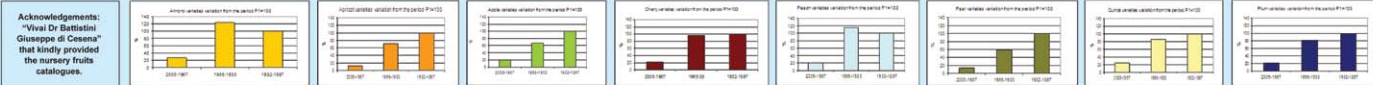
Are there in somewhere or missed forever?

| Species | Variety | Main characteristics | Source |
|---------|----------------------|--|--|
| Plum | Seedless prune | Seedless | Fratelli Zazzari, Cecina (Livorno) 1935 |
| Pear | Butira senza semi | Seedless | Primo Baldacci & Figli, Pistoia 1938 |
| Pear | William Duchesse | Large fruit (800-900 gr) | |
| Cherry | Nera di Piemonte | Large fruit | |
| Quince | Del Portogallo | Large fruit (800-900 g) | |
| Peach | S. Anna | Large fruit with red-purple skin | |
| Peach | Toscana | White red purple pulp and skin | |
| Plum | Susina Frate | Medium size, very taste | |
| Peach | Cotogna sanguigna | Large fruit, red skin. Late bearing | Giuseppe Malagola, Mercato S. Severino (Salerno). 1928 |
| Apricot | Meraviglia di Napoli | Large fruit (100 g), early bearing | |
| Cherry | Bella di Barbanti | Large fruit, self-fertile, early bearing | |
| Cherry | Bianca | Large fruit, white skin, hard flesh | |
| Almond | Grossa di Bari | Large nut, very fertile | |
| Almond | Schiacciarella | Soft nut (hand crushable) | |
| Pear | Angelica di Saonara | Large fruit, delicate flesh | Ferdinando Fedi, Pistoia. 1929 |
| Pear | Tommaso Conventi | Large fruit, delicate flesh | |
| Peach | Morellone precoce | Large fruit, productive tree | |
| Apple | Calanna | Red skin, yellowing flesh | Sgaravatti-Piante, Saonara (Padova). 1929 |
| Apple | Renetta di Cassel | Large fruit | |
| Apple | Mantovana | Resistant to <i>Eriosoma lanigerum</i> | |
| Pear | Margarita Marillat | Large fruit, uscat small | |
| Plum | Casalunga | Dry ability | |



levo molto vigorosa, a portamento certo, di grande produttività, sostanziale. Frutto di generoso quasi medio, ed al massimo come una ginzia noce, con la metà, pressoché uguale, sottile, senza pronunciata, super prestante; buccia sottile che si separa dalla polpa a maturazione completa, colore rosso scarlatto molto scuro, prunis molto spesso; polpa gialla verdognola, dolce, consistente, senza filamenti, buona.

Alla sezione si nota l'assenza assoluta del nocciolo e la presenza di una piccola mandorla quasi nulla in qualche esemplare si ricorreva un piccolo frammento di nocciolo. Circa la sua genesi, abbiamo da supporre da tutte altre varietà, è da notare che, essendo senza nocciolo, garraglia come peso di polpa, con qualunque altra buona prugna. Danno per tavola, e per cuocere, vitigno per essiccare. Matura la prima quindicina di luglio. E consigliabile a climato e dove l'inverno è troppo rigido. (Giuseppe De Sola, in L. 43 - n. 10 - 1906, LXXVIII con nocciolo eliminato.)



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 catalogues.