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Evaluation of persimmon cultivars in Campania (Italy)

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SUMMARY – Italy, with a production of approximately 42,000 t in 2000, ranks fourth in world production of persimmons, after China, Japan and Korea; 50% of the total amount is produced in Campania, 38% in Emilia Romagna, the rest in other regions. 'Kaki Tipo', a Pollination Variant Non Astringent (PVNA) cultivar, represents over 90% of Campania's production. Only a modest quantity of the local cultivars ('Zellona', 'Melella', 'Cioccolatino', 'Lampadina', etc.) are employed as pollinators. The fruits of these cultivars are generally of small size, with a weight of less than 100 g; they are early ripening, with vanilla-coloured flesh, a high concentration of sugar, six to eight seeds per fruit, and are ready for consumption at harvest. They are much appreciated by local consumers. Since the 1970's, the Caserta Section of the Experimental Institute for Fruit Crops has worked for the introduction of new cultivars of Italian and foreign origin in order to evaluate their productive behaviour in Campania. The following cultivars of recent introduction have been tested at the Experimental Station "Aia Spaccata", Francolise (Caserta): Pollination Constant Astringent (PCA) Group – 'Yamato', 'Saijo'; Pollination Constant Non Astringent (PCNA) Group – 'Hana Gosho', 'Yamato Gosho', 'Maekawa Jiro', 'Matsumoto Wase Fuyu', 'Koda Gosho', 'Izu' and 'Suruga'; PVNA Group – 'Mikatani Gosho'; Pollination Variant Astringent (PVA) – 'Hiratanenashi'.

Key words: Persimmon, cultivar evaluation, local varieties.

RESUME – *"Evaluation des cultivars de plaqueminier en Campanie (Italie)". L'Italie, avec une production d'environ 42 000 t pour l'année 2000, se situe au quatrième rang de la production mondiale de plaquemines, après la Chine, le Japon et la Corée ; 50% du total est produit en Campanie, 38% en Emilie Romagne, le reste dans d'autres régions. 'Kaki Tipo', un cultivar Pollinisation Variante Non Astringent (PVNA), représente plus de 90% de la production de la Campanie. Uniquement une modeste partie des cultivars locaux ('Zellona', 'Melella', 'Cioccolatino', 'Lampadina', etc.) sont employés comme pollinisateurs. Les fruits de ces cultivars sont généralement de petite taille, avec un poids inférieur à 100 g ; ils mûrissent précocement, avec une chair couleur vanille, une forte concentration en sucre, six à huit semences par fruit, et sont prêts à consommer à la récolte. Ils sont très appréciés par les consommateurs locaux. Depuis les années 1970, la Section de Caserte de l'Institut Expérimental pour les Cultures Fruitières a œuvré pour l'introduction de nouveaux cultivars d'origine italienne et étrangère afin d'évaluer leur comportement productif en Campanie. Les cultivars suivants récemment introduits ont été testés à la Station Expérimentale "Aia Spaccata", Francolise (Caserte) : Groupe Pollinisation Constante Astringent (PCA) – 'Yamato', 'Saijo' ; Groupe Pollinisation Constante Non Astringent (PCNA) – 'Hana Gosho', 'Yamato Gosho', 'Maekawa Jiro', 'Matsumoto Wase Fuyu', 'Koda Gosho', 'Izu' et 'Suruga' ; Groupe PVNA – 'Mikatani Gosho' ; Pollinisation Variante Astringent (PVA) – 'Hiratanenashi'.*

Mots-clés : *Plaqueminier, évaluation de cultivars, variétés locales.*

Introduction

Italy, in 2000, had production of around 42,000 t of persimmons and was thus the fourth producer in the world after China, Japan and Korea; 50% of production originates in Campania, 38% from Emilia-Romagna and the remaining percentage from other regions.

The cultivar 'Kaki Tipo' (Pollination Variant Non Astringent – PVNA) represents over 90% of the regional production; a modest percentage belongs to local cultivars, such as 'Zellona', 'Melella', 'Chocolate', 'Lampadina', used as pollinators since they bring both female and male flowers. The fruits of these cultivars are generally of modest size and weight (less than 100 g), with brown and very sweet flesh, rich in seeds (six to eight per fruit), edible at harvest, ripening earlier than 'Kaki Tipo'; they are much appreciated by local consumers.

Table 1. Main characteristics of the studied persimmon cultivars

Cultivar	Tree					Fruit					Harvest time	Overall judgment	Notes
	Vigour	Productivity	Flowering time	Fruit set	Fruit drop	Size	Shape	Skin colour	Flesh colour	Taste			
PCA													
Yamato	High	High	Late	High	Medium	Large	Squared-conical	Yellow-orange	Orange	Very good	Late	Very good	Very good fruits, suitable for drying
Saijo	Medium-high	High	Intermediate	High	Low	Medium-large	Round-conical	Yellow-orange	Deep yellow	Very good	Intermediate	Very good	Excellent quality that makes up small fruit size
PCNA													
Hana Gosho	Medium	Medium	Intermediate	Medium-high	Medium	Large	Round-squared	Red-orange	Orange	Very good	Late	Very good	Used as pollinator for Fuyu and Jiro
Yamato Gosho	Medium	Medium-high	Intermediate	High	Low	Large	Round-squared	Yellow-orange	Red-orange	Very good	Late	Very good	Astringency is lost in warm autumns
Maekawa Jiro	Medium	High	Intermediate	High	Low	Large	Flat-squared	Deep yellow	Orange	Very good	Medium-early	Very good	Excellent fruits for all traits
Matsumoto Wase Fuyu	Medium	High	Late	Medium	Low	Large	Flat-round	Deep yellow	Yellow-orange	Good	Intermediate	Very good	Low suitability for drying
Koda Gosho	Medium	High	Intermediate	High	Low	Large	Round	Red-orange	Deep orange	Very good	Medium-late	Very good	Very good taste and colour
Izu	Low	Medium	Medium-early	Medium-low	Medium-high	Medium-large	Flat-round	Red-orange	Orange	Good	Early	Fairly good	Medium suitability for drying
Suruga	Medium	High	Intermediate	High	Low	Large	Round-flat-squared	Red-orange	Red-orange	Very good	Late	Good	Susceptible to calyx separation; medium-low suitability to drying
PVA													
Hiratanenashi	High	High	Medium-early	High	Low	Medium	Flat-squared	Yellow-orange	Yellow-orange	Very good	Medium-early	Good-very good	High quality, with hard and juicy flesh; high suitability to drying
PVNA													
Mikatani Gosho	High	Medium-high	Intermediate	High	Medium	Medium-large	Flat-squared	Yellow-orange	Yellow	Very good	Early	Good	Interesting to produce early ripening pollinated fruits

Materials and methods

In order to verify the behaviour of the different cultivars, the Section of Caserta of the Experimental Institute for Fruit-growing in Rome has handled since the 1970's the introduction of new cultivars belonging to different pomological groups and of Italian or foreign origin for the agronomic and pomological evaluation by the "Aia Spaccata" farm of Francolise.

In the last years, the following cultivars have been studied: 'Yamato', 'Sajo' (PCA); 'Hana Gosho', 'Yamato Gosho', 'Maekawa Jiro', 'Matsumoto Wase Fuyu', 'Koda Gosho', 'Izu', 'Suruga' (PCNA); 'Mikatami Gosho' (PVNA) and 'Hiratanenashi' (PVA).

Data regarding tree vigour (crown volume), time and entity of flowering, harvest and ripening time, productivity, and fruit quality (size, shape, skin and flesh colour) were collected for at least five years.

Results and discussions

The results of the evaluation are summarised in Table 1. All the studied cultivars have shown a good adaptability and productivity has been almost always very high. Fruit quality was very good for all non PCNA cultivars. PCNA cultivars adapted very well to environmental conditions, productivity was high in presence of pollinators and fruit quality (taste and colour) was also very good.

Further reading

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