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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR FRUIT CROPS

Forty-Second Session
Hiroshima, Japan
November 14 to 18, 2011

ADDENDUM TO
PROPOSAL FOR A PARTIAL REVISION OF THE TEST GUIDELINES FOR
MANDARIN (CITRUS; GROUP 1)

Document prepared by an expert from Spain

1. The purpose of this document is to provide additional information for consideration in relation to the partial revision of the Test Guidelines for Mandarin (document TG/206/1).

Status of the proposal for the Characteristic 25 :

2. All experts agree with the proposed modification.

Status of the proposal for the new Characteristic after. 98:

3. At its forty-first session, held in Cuernavaca, Morelos State, Mexico, from September 27 to October 1, 2010, the Technical Working Party for Fruit Crops (TWF) agreed to propose to the Technical Committee to adopt the partial revision of the Test Guidelines for Mandarin on the basis of document TWF/41/28 with the reservation of experts from Morocco with regard to the proposed new characteristic (after characteristic 98) "Fruit: number of seeds (controlled manual cross-pollination)", for which the experts from Morocco explained that more time was needed for study of the new characteristic. The TWF agreed that the Technical Committee should be invited to consider the "Comments of Morocco concerning the new characteristics proposed 'Fruit: number of seeds (controlled manual crosspollination) and pollen viability in the UPOV Test Guidelines for Mandarin", as set out in Annex VII to this document, in conjunction with its consideration of the proposed partial revision of the Test Guidelines for Mandarin.

4. At its meeting on January 6, 2011, the Enlarged Editorial Committee (TC-EDC) concluded that there were technical issues to be resolved and recommended that those issues be referred back to the TWF for further consideration.

5. The TC, at its forty-seventh session, held in Geneva from April 4 to 6, 2011, agreed that, as explained in document TC/47/24, there were technical issues to be resolved concerning the proposed revision of the Test Guidelines for Mandarins (Citrus; Group 1) (document TG/201/1) and recommended that those issues be referred back to the TWF for further consideration.

6. The main technical question presented refers to the possible interaction of compatibility or not between pollinators and candidates varieties.

7. The recommended methodology sets to be used of pollinating varieties with high production of viable pollen (characteristic 25). None of the tested showed incompatibility issues with receiving varieties, and trials conducted to date in the center of DUS testing of reference in the EU have been satisfactory.

8. The high concentration of pollen viable to saturate the stigma receptivity, used in the proposed methodology ensures the development of the full potential of fertilization and production of seeds in the receiving variety and therefore is a good measure of female fertility of the candidate variety which is the subject of the characteristic.

9. Although there are no citations of cases of incompatibility timely using pollinators varieties recommended in the methodology, a supposed future incompatibility with some new variety, unlikely and theoretical issue may arise. For that potential case might recommend the use of a mixture of pollinators that they ensured the presence of more than one viable pollen on the stigma of the candidate variety.

10. An abstract of the trials crosses made at IVIA in 2004 is expressed at the pollination table and the graphic enclosed.

11. The proposed methodology is well known of all the processes improvement by classical cross used in obtaining varieties and not assumed a surprise for experts involved by his familiarity with it.

12. The new characteristic comply with the criteria for a standard guidelines at GN 12 (TG template, chapter 7).

13. In any case, should focus on the objective of the proposed revision, which is to provide a technical solution of distinctness of new varieties obtained by irradiation whose distinguishing characteristic is the absence of production of seeds. In this objective, the proposed method is effective and without objection, because it consists in comparing the results of pollination, in the same circumstances, from the candidate variety and similar original variety. It is proposed for general use in the distinction of any variety but as specific for certain types of new seedless varieties.

14. In this sense the new characteristic is proposed without an asterisk.

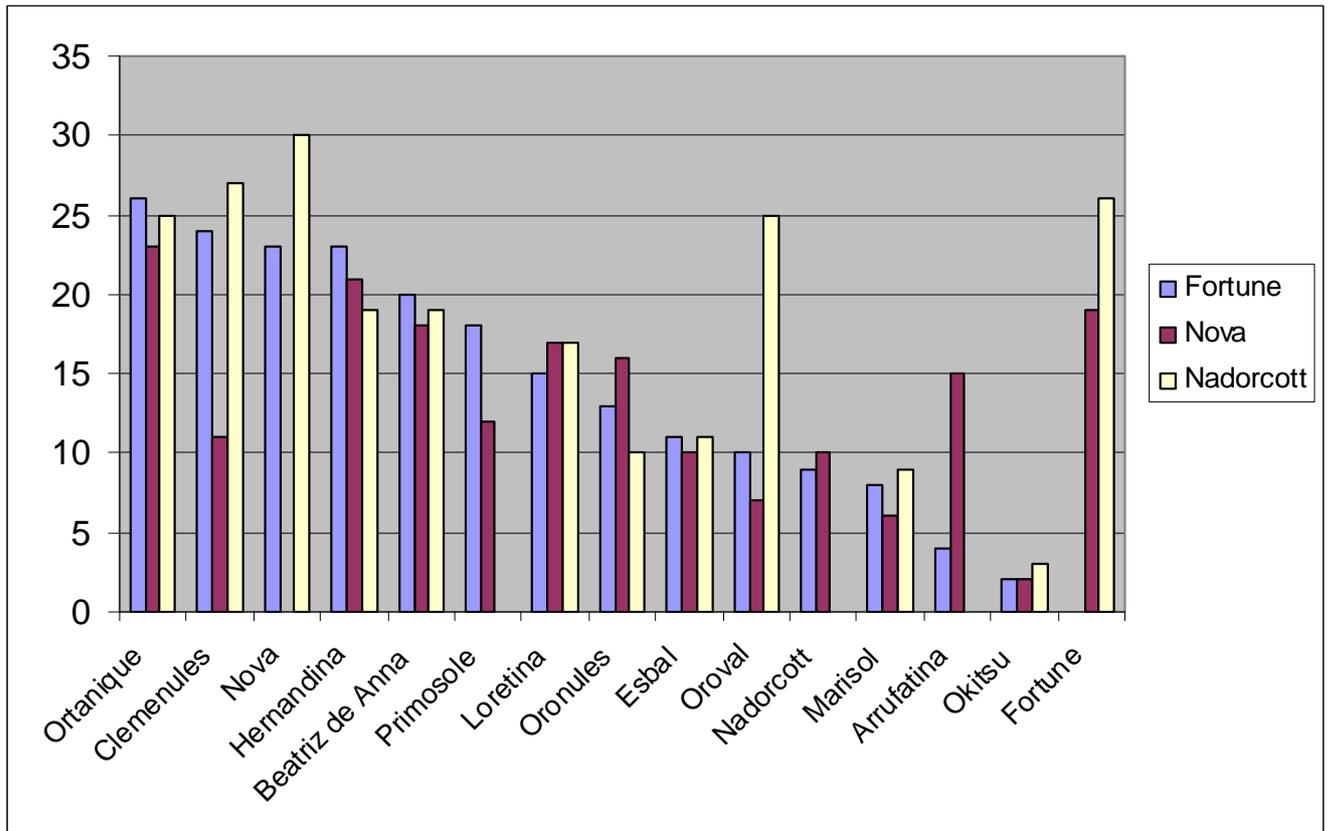
POLLINATION TABLE

Reference: Bono,R., Soler, j. , Buj, A. , Villalba, D. , Salvia, J. , Bellver, R. IVIA. 2004

NUMBER OF SEEDS *					
			MALE		
			Fortune	Nova	Nadorcott
FEMALE	Hybrids	Fortune		19	26
		Nova	23		30
		Nadorcott	9	10	
		Ortanique	26	23	25
		Primosole	18	12	-
	Clementines	Arrufatina	4	15	-
		Beatriz de Anna	20	18	19
		Clemenules	24	11	27
		Esbal	11	10	11
		Hernandina	23	21	19
		Loretina	15	17	17
		Marisol	8	6	9
		Oronules	13	16	10
	Oroval	10	7	25	
	Satsuma	Okitsu	2	2	3

- No seeds
 - No assay
 Average of seeds
 * produced

As reported by Kahn, T.L. and Chao, C.T. clementines and satsuma mandarines are self-incompatible inside the group. Furthermore satsuma mandarines have a low capability to produce seeds when are grown with a mixed variety, and as it is shown in the table, Fortune, Nova and Nadorcott are self-incompatibles.



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