COMMISSION REGULATION (EC) No 3406/93

of 13 December 1993

establishing the varieties of Indica rice for the purposes of intervention

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Regulation (EEC) No 1418/76 of 21 June 1976 on the common organization of the market in rice [1], as last amended by Regulation (EEC) No 1544/93 [2], and in particular Article 5 (5) thereof,

Whereas Article 5 (5) of Regulation (EEC) No 1418/76 defines the rice varieties that may be considered Indica varieties; whereas only varieties having certain morphological and qualitative characteristics can match to this definition; whereas those characteristics should accordingly be established and the varieties which currently meet them be listed;

Whereas provision should be made, however, for procedures to supplement the aforementioned list each year on the basis of suitable analytical methods and an appropriate sampling system;

Whereas the measures provided for in this Regulation are in accordance with the Management Committee for Cereals,

HAS ADOPTED THIS REGULATION:

Article 1

1. For the purpose of applying Article 5 (2) of Regulation (EEC) No 1418/76, the varieties of Indica rice shall be those having the following characteristics after the husk has been removed:

(a) morphological characteristics:

— grain length: not less than 6,6 mm,

— length/width ratio of not less than 3 : 1,

— total absence of pearl or striation in the case of at least 60 % of the grains of milled rice sampled;

(b) qualitative characteristics:

— a glutinosity value not exceeding 2,50 g/cm,

— a consistency value of not less than 0,85 kg/cm^2,

— an amylose content of not less than 21 %.

2. The methods to test for the characteristics laid down in paragraph 1 are set out in Annex II.

3. Varieties meeting the morphological and qualitative characteristics specified in the first paragraph above shall be those set out in Annex I.

Article 2

1. Member States wishing to have new varieties of rice included in Annex I shall submit to the Commission not later than 20 December of each year an application stating the name of the variety and its reference in the national catalogue of agricultural plant varieties.

2. Having submitted an application in accordance with the provisions of paragraph 1, the Member States shall supply a sample of unhusked certified seed of each of the varieties for which an application is made to one only of the laboratories listed in Annex III and indicated by the Commission by 31 December of each year at the latest.

The sample, weighing at least five kilograms, shall have been produced in a Member State during the year.

Article 3

1. The laboratory responsible for processing the rice shall, having carried out germination tests and having processed the rice, send samples labelled with a code to all the laboratories listed in Annex III and shall send the Commission a notification under enabling the samples to be decoded.

2. The sample to be sent to the laboratories for analysis shall consist of at least 100 grams of husked rice and at least 750 grams of milled rice. Samples shall consist of entire grains only, and entire but chalky grains shall be eliminated from samples of milled rice.

Article 4

1. The Commission shall determine the characteristics of the varieties using the arithmetical mean of the results of the analysis carried out, after excluding the highest figure and the lowest.

2. Should two or more applications for the inclusion of a single variety be received, its characteristics shall be determined according to the mean of the test results, as set out in paragraph 1.

3. The Commission shall inform the Member States of the results of the analyses before 31 March of each year.

Any inclusion of new varieties shall be decided before that date in accordance with the procedure laid down in Article 27 of Regulation (EEC) No 1418/76.

Article 5

This Regulation shall enter into force on the seventh day following its publication in the *Official Journal of the European Communities.*

[1] OJ No L 166, 25. 6. 1976, p. 1.
[2] OJ No L 154, 25. 9. 1993, p. 5.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 13 December 1993.

For the Commission
René STEICHEN
Member of the Commission

ANNEX I

— Artiglio
— Bluebelle E
— Dedalo
— Graldo
— Icaro
— Idra
— Lemont
— Mida
— Pegaso
— Puntal
— Rea
— Star
— Thaibonnet = L 202

ANNEX II

METHODS OF ANALYSIS

A. MORPHOLOGICAL CHARACTERISTICS

The following method shall be used to measure the rice grains and to check for the absence of pearl or striation :

1. a number of entire grains will be drawn from the sample ;
2. an average shall be established by taking two measurements of 100 grains each ;
3. the result shall be expressed rounded up or down to one decimal place.

B. QUALITATIVE CHARACTERISTICS

(a) Standardized procedure for the use of the Instron Food Tester to determine the glutinosity of cooked rice

1. *Purpose*

This method may be used for assessing the glutinosity of cooked rice with the Instron Food Tester.

2. *Scope*

Cooked wholly milled rice.

3. *Definitions*

The following definitions apply for the purposes of this method.

3.1. Glutinosity : tendency of cooked rice grains to adhere to each other.

3.2. Wholly milled rice : as defined in paragraph 1 (d) of Annex A to Regulation (EEC) No 1418/76.

4. *Principle*

Measurement of the effort required to overcome the resistance to the separation of two plane surfaces of smooth steel between which some grains of cooked rice have been compressed with a given force for a given duration.

5. *Apparatus*

5.1. Instron Food Tester, operating, for compression and traction, at a constant speed of 0,5 cm/min, provided with a loading cell having a measuring range of 0 to 5 kg.

5.2. Piston, adaptable to the loading cell of the Instron Food Tester (5.1), provided with a square smooth steel base.

5.3. Smooth-surfaced steel plate placed axially in relation to the piston (5.2.) and firmly on the base of the Instron Food Tester.

5.4. 25-ml beakers.

5.5. Electric water bath provided with a non-airtight lid and a perforated plate on which the beakers (5.4) are placed. The level of water in the vessel must be such that, during boiling, it does not rise above the perforated plate.

5.6. Balance, accurate to 0,1 grams

5.7. Glass rod.

5.8. Watch glasses, 6 cm in diameter.

5.9. Timer.

5.10. Spatula.

5.11. Plastic bags or other recipients capable of containing 2 grams of cooked rice and preventing dehydration thereof.

6. *Procedure*

6.1. Heating of bath

Adjust the temperature of the bath (5.5) so as to keep the water bubbling vigorously.

6.2. Preparation for cooking

For each determination : prepare two beakers (5.4) by introducing into each a sample of 8 grams of wholly milled rice (entire grains only), weighed to within 0,1 grams, with 12 ml of distilled water. Stir gently with the glass rod (5.7), cover the beakers with watch glasses (5.8).

6.3. Cooking

Take the lid off the cooking vessel, place the beakers on the perforated plate and quickly replace the lid. Switch on the timer (5.9). After 20 minutes turn off the heat and leave everything undisturbed for 10 minutes. Remove the beakers from the cooking vessel and invert them onto the watch glasses. Allow to cool for at least one hour.

6.4. Adjustment of the Instron Food Tester

Adjust the Instron Food Tester (5.1) according to the manufacturer's instructions, ensuring that the response of the loading cell corresponds to values between 0 and 640 grams and the speed to 0,5 cm/min.

6.5. Measurement with the Instron Food Tester

Remove the cooked rice from each beaker and, using the spatula (5.10), discard the extreme upper and lower layers. Prepare eight samples weighing 2 grams each, four from each beaker, weighed to within 0,1 grams, keeping them in the plastic bags (5.11) until they are to be measured. Place one sample, axially in relation to the piston (5.2) on the steel plate (5.3), piling the rice as closely as possible without pressure. Cause the piston to descend at a constant speed of 0,5 cm/min, until the compression force on the rice registers 640 grams. Stop the movement of the piston for 10 seconds then draw it back at the same speed.

Calculate the area beneath the curve defined (on the ordinate) by the tractive force in grams and (on the abscissa) by the distance covered by the piston in cm during the phase in which a positive tractive force value was exerted. The area represents the effort expressed in grams × cm.

7. *Repeatability*

The difference between the results of two determinations (two series of eight measurements) must not exceed 15 % of the mean value.

(b) **Standardized procedure for the use of the Instron Food Tester to determine the consistency of cooked rice**

1. *Purpose*

This method may be used for assessing the consistency of cooked rice with the Instron Food Tester.

2. *Scope*

Cooked wholly milled rice.

3. *Definitions*

The following definitions apply for the purposes of this method.

3.1. Consistency: resistance to mastication of cooked rice.

3.2. Wholly milled rice: as defined in paragraph 1 (d) of Annex A to Regulation (EEC) No 1418/76.

4. *Principle*

Measurement of the effort required to extrude wholly milled cooked rice through a perforated plate.

5. *Apparatus*

5.1. Instron Food Tester, operating, for compression, at a constant speed of 10 cm/min.

5.2. 50 cm^2 model of the Ottawa texture measuring system cell, modified, if necessary, to reduce the section to 15 % of the original area, with a perforated plate insert.

5.3. Piston, adaptable to the loading cell of the Instron Food Tester (5.1.).

5.4. 100-ml tall beakers.

5.5. Electric water bath, fitted with a non-airtight lid and a perforated plate on which the beakers (5.4) are placed. The level of water in the bath must be such that, during boiling, it does not rise above the perforated plate.

5.6. Balance, accurate to 0,1 grams.

5.7. Glass rod.

5.8. Watch glasses, 6 cm in diameter.

5.9. Timer.

5.10. Spatula.

5.11. Plastic bags or other recipients capable of containing 17 grams of cooked rice and preventing dehydration thereof.

6. *Procedure*

6.1. Heating of bath

Adjust the temperature of the bath (5.5) so as to keep the water bubbling vigorously.

6.2. Preparation for cooking

For each determination : prepare two beakers (5.4) by introducing into each a sample of 20 grams of wholly milled rice (entire grains only), weighed to within 0,1 grams, with 38 ml of distilled water. Stir gently with the glass rod (5.7), cover the beakers with watch glasses (5.8).

6.3. Cooking

Take the lid off the bath, place the beakers on the perforated plate and quickly replace the lid. Switch on the timer (5.9). After 20 minutes turn off the heat and leave everything undisturbed for 10 minutes. Remove the beakers from the bath and invert them on to the watch glasses. Allow to cool to room temperature.

6.4. Adjustment of the Instron Food Tester

Adjust the Instron Food Tester (5.1) according to the manufacturer's instructions, ensuring that the response of the loading cell corresponds to values between 5 and 10 kg and the speed to 10 cm/min.

6.5. Measurement with the Instron Food Tester

Remove the cooked rice and prepare six samples weighing 17 grams each, three for each of the two beakers, weighed to within 0,1 grams, keeping them in the plastic bags (5.11) until they are to be measured. Place one sample in the Ottawa cell (5.2) and cause the piston (5.3) to descend at a speed of 10 cm/min, recording continuously the effort required to extrude the sample of cooked rice.

The consistency of the sample is taken to be equal to the effort (in/kg) expressed by the mean value of the plateau of the extrusion curve.

7. *Repeatability*

The difference between the results of two determinations (six measurements each) must not exceed 10 % of their mean value.

(c) **Amylose content**

Determined according to ISO standard 6647.

ANNEX III

LIST OF LABORATORIES

1. INSTITUUT VOOR GRAAN, MEEL EN BROOD TNO
Lawickse Allee 15
6701 AN Wageningen (Nederland).

2. LABORATOIRE DE TECHNOLOGIE DES CEREALES
CIRAD, Département des cultures annuelles
2, Place Pierre Viala
34060 Montpellier Cedex 1 (France).

3. INSTITUTO DE AGROQUÍMICA Y TECNOLOGÍA DE LOS ALIMENTOS
C/Jaime Roig 11
Valencia (España).

4. ENTE NAZIONALE RISI — CENTRO DI RICERCHE SUL RISO
Mortara (Italia).

5. INSTITUTO DE PROTECÇÃO DA PRODUÇÃO AGRO-ALIMENTAR (IPPAA)
Avenida Conde de Valbom, 96-98
1000 — Lisboa (Portugal).