



TWA/37/7 Add.

ORIGINAL: English

DATE: July 14, 2008

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

TECHNICAL WORKING PARTY FOR AGRICULTURAL CROPS

Thirty-Seventh Session
Nelspruit, South Africa, July 14 to 18, 2008

ADDENDUM TO DOCUMENT TWA/37/7
COMBINATIONS OF LINES OR VARIETIES

Document prepared by experts from Colombia

CASTILLO COFFEE VARIETY

The Office of Colombia received the following consultation by Coffee Breeders who want to request a Plant Breeder's Right for a variety composed of a mixture of lines with different combinations of resistance genes against the coffee rust (*Hemileia vastatrix*).

They used as progenitors the varieties Caturra and the Timor Hybrid, both genetic resources widely known which are used in CENICAFE's program for coffee improvement, towards the development of varieties with resistance to the coffee rust and other potential diseases.

Caturra is a dwarf variety, which is used, generally in high density, reaching increased productions. Nevertheless, it is highly susceptible to the pathogens coffee rust (*Hemileia vastatrix*) and coffee berry disease- CBD - (*Colletotrichum kahawae*), they limit the yield potential and affect the bean quality.

Timor's Hybrid is a tall variety, which has been used as a resistant parent to rust and CBD in different coffee breeding programs around the world, because it has several resistant genes.

The parents **Caturra** and **Timor's Hybrid** were crossed, and the offspring selection was performed by the genealogical breeding method during five generations. In order to reduce the selection time, the breeders, in generations F1 and F2 performed the selection with

the first harvest. The select progenies were evaluated in at least five years in generations F3, F4 and F5. In a conventional program the scheme selection lasts about twenty-five years, but, with these modifications it was possible to reduce the selection time to eighteen years.

Agronomic Characteristics of the Castillo Variety

It is a variety composed by 35 lines, obtained by genealogical method, each one has outstanding agronomic characteristics such as resistance to coffee rust, CBD, a larger bean, low height and wide adaptations to the Colombian coffee regions. These lines are alike and uniform in its essential characteristics.

The yield production in the Castillo variety is similar to the Caturra variety, which was used as check, when the latter one is protected by fungicides against rust. The new variety is clearly better in environments that are favorable to the disease.

For the test of the coffee quality in the cup, tasters perform sensorial evaluations. They evaluate acidity, body, aroma and flavor of samples taken from all the lines that compose the variety, and they compare with commercial varieties. The results in the panel testing show a balance score the sensorial characteristics.

The F5 selected lines, that composed the **CASTILLO** variety, are propagated in individual increase plots, these are harvesting individually, after that the seed is mixed in equal weights. The final result in the farmers plot is a variety with excellent agronomic features, quality and resistance to diseases. Its morphologic and agronomic characters considered for the selection are homogeneous between and within the lines.

Pursuant to the foregoing, we request the analysis of whether it could be protected by means of one unique Breeder's title, considering the DHE criteria in relation with this type of varieties, for the essential characters to be evaluated following the directives for *Coffea Arabica*, also determining which standard deviation would be acceptable for these cases taking into account the observations in each of the variables reported by the Breeder, and considering the fact that it is an autogamous plant.

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