



# Proceedings of the 16th International Pepper Conference Tampico, Tamaulipas, Mexico. November 10 – 12, 2002

## **GENETIC DIVERSITY OF THE HABANERO CHILE (*Capsicum Chinense* Jaq.) IN YUCATAN. RESCUE OF GENETIC DIVERSITY**

Trujillo- Aguirre J. Jorge G.  
Investigador INIFAP CIRSE CE UXMAL. MEXICO

**INTRODUCTION.** El chilli represents an important source of income for the producers dedicated to this culture. In the last years it has taken an important summit so much nationally and internationally, they are multiple the uses to which this being destined the product that goes from the consumption up to the industry and in this they are also very diverse his destinies. The Habanero chilli is a Creole representative species of the region of the Peninsula of Yucatan where it has been domesticated and nowadays this established to the regional diet, is in each of the regional saucers. The intensive production and technified of the culture, the introduction of the improved species, the loss of the practice for the traditional producers of obtaining his own seed, as well as factors as plagues and diseases, they have Technificate the culture, the introduction of the improved species, the loss of the practice for the traditional producers of obtaining his own seed, as well as factors as plagues and diseases, they have Influenced severely in the Creole species a severe genetic erosion being detected in the species.

**OBJETIVE.** Rescue the genetic diversity that there presents the Habanero chilli (*Capsicum Chinese Jaq.*) Creole in the region of the Peninsula of Yucatan by means of the collection and characterization phenological beside establishing the bases of a program of improvement and formation of varieties with characteristics superior to the existing ones

**MATERIALS AND METHODS.** Actually in the experimental field Uxmal, is carried out a program of rescue of the genetic diversity of the Creole species by means of the obtaining of germ plasma with Creole characteristics, catching to select on characters as type and form of fruit, orange color typical of the Creole chilli of the region, thickness and hardness of pericarp, aroma typical of Habanero typical chilli and fruits trilocolados between the characters that the producer demands.

**RESULTS AND DISCUSION.** It has realized for a period of four years diverse incursions into diverse regions of the condition and in the Peninsula with the intention of collecting germplasm Creole that the typical characteristics assemble previously described to level back yard, it is a common practice of preserving his seeds of diverse chilli as well as others of eatable use and where it has been possible to obtain some of the collected materials, it is possible to find between the variability of diverse germ plasma colours of fruit, type and form, and great variability in type of plant. In the following picture 1 the advance is indicated in the realized collections.

In the experimental field Uxmal besides the rescue of the genetic diversity and of the characteristics of the of Habanero chilli, one possesses materials advanced in the process of improvement the approach to obtain varieties with top characteristics, as for the advances in exploratory studies one has found response of genetic resistance to some Gemini virus which brings as consequence the possibility of generating in a short time varieties resistant to the virosis caused by the white small fly. Initiating also exploratory studies for *Capsicum's* concentration in the collected species.

**CONCLUSIONS.** It has advanced in the rescue and characterization of the Creole germ plasma of Habanero chilli, orange chilli of Yucatan. Nowadays one possesses a group of Creole varieties improved to initiate a program of genetic improvement. Improved resistant varieties have been identified to Gemini virus with which it is feasible using in the improvement for the resistance the virosis caused by white small fly.

### **BIBLIOGRAPHY**

Alpizar Lara. E. *et al*, 2001. Determination of qualities parameters of chilli Habanero (*Capsicum Chinese (Jaq.)* In Creole and improved

varieties collected in Yucatan. Protocol of Investigation Univ. Aut. Yucatan. Fac. Ing. Chemistry. Join. Of Post degree. Godines-Hernandez Y., J Luis Anaya-López., Raúl Díaz-Plaza., Mario González-Chavira, and Irineo Torres. 2001. Characterization of Resistance to Pepper Huasteco Geminivirus in Chilli Peppers From Yucatan, Mexico. Hortscience. Vol. 36 (1), February 2001. Trujillo Aguirre, J. Jorge G.; Diaz Plaza Raúl 1994 Tropical Society for Horticulture Interamerican. Obtaining of you will cultivate of Habanero chilli with good horticultural characteristics and tolerantly to the virosis transmitted by white small fly. Campeche, Camp. 13 to 19 Nov. 1994. Trujillo Aguirre, J. Jorge G.; Diaz Plaza Raúl 1995 Obtaining of you will cultivate of Habanero chilli with resistance to virosis transmitted by white fly. IV. Latin-American workshop on white flies and Gemini virus. Zamorano, Honduras.