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EFFECT OF CLEAR THE FRUIT FOR THE QUALITY OF THE SEEDS OF HABANERO PEPPER (*Capsicum chinense* JACK) PRODUCED IN YUCATÁN, MÉXICO

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INTRODUCTION. Habanero Pepper is sowed mainly in Yucatan México, where exist a large diversity of genetic variety according the agro ecological conditions where this crop is produced (Bautista *et al.*, 1997 y 1999), with a smaller surface in Campeche and Quintana Roo, México. The majority of the actual requirements of seeds for this crop used in Yucatan comes from Creole cultivars that are produced by the same producers to cover their own needs, and in second place trade the excess of product in the surrounding area to obtain the seeds the farmers use handcraft labor, few producers keep in mind save seeds for the next crop but others select from the biggest fruits in the plant or the first fruits produced at the main branch of the plant. Another producers use the residual fruits not sold as fresh fruits (Pozo, 1992). The producers do not follow any procedure to improve the seeds and fruits, due they do not select the best plants for seeds, their crops have a mixtures and variety of plants and fruits, so it becomes in a crop with less quality and performance. The previous reasons made me develop this research on effect of clearing the fruit for the quality of the seeds of Habanero Pepper in open field with the objective to produce good quality of seeds.

MATERIAL AND METHODS. As the result to produce a good quality seed of Habanero Pepper from cultivars improved by means of the mass selection (8 cycles of improvement) in Maní Yucatan, this research was carried on at the horticulture unit named " Lol 'lc " (pepper flower), San Antonio, Conkal, Yucatan, México in open field conditions. To transplant the crop in the field was dug a plant hole (0.40 m wide x 0.40 m depth), adding 100 g of stock manure, 60 g of chicken manure well disinfected, with 4 g of fenamidofos per hole. The irrigation system used was spaghetti, set apart each one 2 m along the mainline, 0.80 m between rows and 0.50 m from hole plant to hole plant. A random design with 10 repetitions was used in this experiment, a media test (Tukey) was used too. The repetitions was determined on base of clear the fruits per plant: 10 fruits per plant (T1), 20 fruits per plant (T2), 30 fruits per plant (T3), 40 fruits per plant (T4), 50 fruits per plant (T5), 60 fruits per plant (T6), 70 fruits per plant (T7), 80 fruits per plant (T8), 90 fruits per plant (T9) and 100 fruits per plant (T10), beside the proof (T0) that consisted in do not apply the clearing of the fruits per plant. Fertirrigation was used in this research. During the flowering, Methomilo was applied in dose of 250 g ha⁻¹. And oxamil 1.0-1.5 L ha⁻¹, to control *Anthonomus eugenii*, Cupravit was used too. To prevent diseases Tribaqué and Agrimixin 500 in dose of 1 kg ha⁻¹ were used weekly with rotation of this pesticide. The weed control was made using the herbicide paraquat in dose 1 L ha⁻¹. The variables in this experiment were: height of plants, performance (weight fresh fruit), total weight of the seed, vigourosity proof and viability rate.

RESULTS AND DISCUSSION. Treatments T0, T10 and T9, were the best for the total weight variable of the seeds with 45.2, 34.8 and 30.6 g per plant, respectively. Even when the proof T0 surpassed slightly all the treatments cleaning the fruits per plant, statistically (Tukey proof) displayed the same behavior that the treatments T6, T5, T4, T3, T2, T1. The proof displayed the lesser rate of germination (50% aprox.) meanwhile T7, T8, T9 and T10 displayed 68, 65, 60 and 60% of germination respectively. Which indicate than the more quantity of fruit smaller is the rate of germination (less quality). This behavior is associated with seeds malformed in larger number of fruits per plant (spotted, malformation and flat seeds.).

The percentage of germination in the treatments T2, T3, T4, displayed the highest effect of cleaning the fruits in the plant (100%). This show up

that the quantity of fruits per plant have a direct effect in the germination of the seeds, so you get a good sizes but the seeds achieve a good strength, good germination, meanwhile in the case of the total fruits, those were smaller in sizes and less quality of the seeds. Although the proof got a major seed weight per plant but the lesser rate in germination, compared with the best treatments.

CONCLUSIONS. According to the results gotten in the treatments with 90 and 100 fruits per plant, they were the best, although they surpass the proof they were superior to the proof as soon as the percentage of germination given by 10% aprox. The highest quality of seeds (germination) was achieved with a clear of 20-40 fruits per plant.

LITERATURA CITED:

- Bautista P. S.G., Soria F.M, Ortiz O.J. 1997. Selección y caracterización fenotípica del chile X'catic (*Capsicum annuum*, L.) en Yucatán. VI Congreso Nacional de Investigación y Desarrollo Tecnológico Agropecuario Roque, Celaya, Guanajuato. P. 162.
- Bautista P.S.G., Latournier M.L. 1999. Efecto de aclareo de frutos en la calidad de semillas producida de chile X'catic (*Capsicum annuum* L.) en Yucatán. X Congreso Nacional de Investigación y Desarrollo Tecnológico Agropecuario, Oaxaca, Oaxaca, P. 168.
- Pozo C.O. 1992. Situación actual de la producción de semillas de chile. Agromundo, 8 (49): 34-39.