



Desarrollo sustentable: motor de crecimiento económico de los productores de sandía del ejido ricardo flores magón, municipio de Tonalá, Chiapas.

## Sustainable development: economic growth engine of the producers of sandia del ejido ricardo flores magón, municipality of tonalá, chiapas

Pérez Pérez, Dra. Isabel; Orozco Gutiérrez, Dr. Mario; Flores Preciado, Dr. Juan; Marroquín de Aquino, C.P. Briseina

**Dra. Isabel Pérez Pérez**

Universidad Autónoma de Chiapas, México

**Dr. Mario Orozco Gutiérrez**

Universidad Autónoma de Chiapas., México

**Dr. Juan Flores Preciado**

Universidad de Colima, México

**C.P. Briseina Marroquín de Aquino**

Universidad Autónoma de Chiapas, México

**Revista Científica Profundidad Construyendo Futuro**

Universidad Francisco de Paula Santander, Colombia

ISSN: 2422-1783

ISSN-e: 2422-2518

Periodicidad: Semestral

vol. 5, núm. 5, 2016

profundidad@ufpso.edu.co

Recepción: 12 Abril 2016

Aprobación: 11 Mayo 2016

URL: <http://portal.amelica.org/ameli/journal/737/7373970003/>

DOI: <https://doi.org/10.22463/24221783.2285>

**Resumen:** Este estudio se realizó en el Ejido Ricardo Flores Magón, Municipio de Tonalá, Chiapas (México). Se fundamenta en las apreciaciones cualitativas del proceso productivo que realizan los productores de Sandía para conocer las perspectivas que tienen en cuanto a la siembra, cosecha, comercialización y venta de su producto con respecto a la obtención de ingresos que les permite mejorar su nivel de vida detonando lo sustentable. Para esto, se aplicó un cuestionario a 41 productores de este Ejido que representa el 100% del total de productores en la comunidad. El resultado que se obtuvo fue que la siembra de sandía si representa una fuente de ingreso para ellos y sus familiares, sin embargo, mejoraría si se implementara por parte de las Autoridades Agrarias un Plan de Control de los volúmenes de siembra en temporadas altas porque el exceso de oferta impacta negativamente los precios del mercado local propiciando disminución de los mismos.

**Palabras clave:** Desarrollo sustentable, productores de sandía.

**Abstract:** This study was carried out in the Ejido Ricardo Flores Magón, Municipality of Tonalá, Chiapas (Mexico). It is based on the qualitative appreciations of the production process carried out by the producers of Watermelon to know the perspectives they have regarding the planting, harvesting, marketing and sale of their product, obtaining income that allows them to improve their standard of living detonating the sustainable. For this, a questionnaire was applied to 41 producers of this Ejido that represents 100% of the total producers in the community. The result that was obtained was that the watermelon planting if it represents a source of income for them and their families, however, would improve if a Control Plan for planting volumes in high seasons was implemented by the Agricultural Authorities because the Excess supply negatively impacts local market prices leading to a decrease in them.

**Keywords:** sustainable development, producers of watermelon.

## INTRODUCTION.

Mexico with its great diversity and the excellent geographic location it has decided to take advantage of its competitive advantage. On the one hand; Vegetable consumption is of great importance for health. And on the other, to the wide range of fruits that grow in different areas of the Mexican Republic, forming part of the daily diet for being a source of vitamins and minerals; being consumed mainly in fresh form, which is why our country continues to position itself in the first place as an exporter (Cruz & Tapia, 2012).

In this aspect, one of the natural resources (soil) that exist in rural communities does not represent a consumable good because there is a common but erroneous belief that soils are renewable on a human scale; but it is not so, they are fragile and of low resilience (Galdamez et al. 2007).

This situation turned out to be healthy, because it created the opportunity to devise and develop new approaches to land knowledge quickly and inexpensively with the knowledge of farmers (Zinck, 2005; Galdamez et al. 2007). In this sense, the study of the land, its use, and management with traditional knowledge has allowed the understanding of the communities, to improve the chances of success in the field of agricultural sustainability (Barrera- Bassols & Zinck, 2003). This knowledge has been transmitted for generations, is often an important factor in the sustainable management of land in communities (Ortiz & Gutiérrez 1999; Baker, 2000).

The Ejido Ricardo Flores Magón is located in the Municipality of Tonalá (in the State of Chiapas). It has 231 inhabitants, is 20 meters high (INEGI, 2010). It is located southeast of the Mexican Republic, in the southern part of the state of Chiapas, immersed in the Hydrological Region No. 23, within the so-called Southern Border, in this community they are engaged in the production of watermelon, fruit that is considered as a refreshing, depurative and slightly laxative food as a result of the cellulose it contains, being an irreplaceable fruit in the summer months. For its consumption it must be juicy, sugary and with appetizing colored flesh; if it is not fully mature it can cause digestive disorders; on the contrary, if it is passed, the pulp is spongy, has less weight and is not very appetizing.

Watermelon is consumed naturally and is also used in the preparation of freshwater, juices, ice cream, popsicles, pens, snow, jams, etc. Watermelon has been a crop planted in the southern part of the country under systems, which consists of winter plantings; in times of spring (May, June and July) and last (September, October and November) and "Humidity", which consists of using the water stored in the soil and which is influenced by the coasts; in the months of November, December and January.

Traditionally, watermelon has been sown with seeds (pips) from elongated and oblong forms destined for the local, municipal and state market, but very little for export. The commercialization to markets (January to May), forced to begin to use seedless cultivars ("seedless") and to improve the production technology. Currently, watermelon is a crop that is sown throughout the State of Chiapas and throughout the year. In this way, the regional market is kept covered

and profitable and attractive windows are profitable (June, July, September, October, and November).

## **JUSTIFICATION.**

The production and harvest of watermelon in the municipality of Tonalá, Chiapas, specifically in the Ejido Ricardo Flores Magón, is carried out for the benefit of producers in sustainable, labor and economic matters since the importance it represents for the support of the producers and their relatives. Similarly, the temporary variation in prices is a current problem in the Isthmus Coast Region as it manifests itself with decreases in the months of high production at the municipal level and increases in which availability is low. In addition to controlling volumes, temporary excess supply could be eliminated through exports.

Another alternative to control the flow of product in the market is to save it, so a part could be reserved in months of low prices, to sell it when they increase, and thus the profit would be greater. Therefore, this study aims to know the perspectives that producers have, when they sow, harvest, and market or sell the product, also, to identify the causes and effects of the marketing and sale of the same.

One of the many problems faced by watermelon producing ejidatarios, is that when it is sown, the crops do not sprout 100%, because rodents are pests that harm eating the seeds sown, once the seeds are achieved, that is to say, that the crop was harvested total sowing, 95% of seedlings developed come what are the fruits; This refers to the fact that only 95% of the harvest is produced, and they are finally sold as 85% because 10% is lost due to the theft of humans who abuse and subtract the fruit of the crops, as you can There are many complications that these producers face.

## **METHODOLOGY.**

This study was carried out, observing, analyzing and studying the sowing, harvesting, and commercialization of watermelon, to know that are the economic resources that are generated in the operation of the project. Therefore, a non- experimental design, descriptive and analytical, where the instruments were applied: observation, interviews and documentary research that allowed us to recover all the information available to carry out this investigation. Following the methodology, the entire population of watermelon producers was taken as a sample, which is a total of forty-one located in the Ejido Ricardo Flores Magón, Municipality of Tonalá, Chiapas, obtaining the following results:

## **RESULTS**

Question No. 1: Do you consider that the price in the watermelon market is according to the quantity that is produced?

As can be seen in Figure No. 1, 80% of the producers stated that if they consider that the price in the watermelon market is according to the quantity that is produced, however, 20% does not consider it.

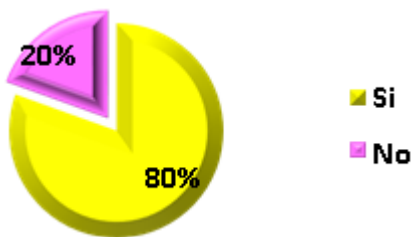


Figure No. 1  
Watermelon Price

Question No. 2 What do you do in your work as a farmer?

The producers interviewed, said that 59% is dedicated to Agriculture, 32% to Livestock, while 7% to others and 2% did not answer.

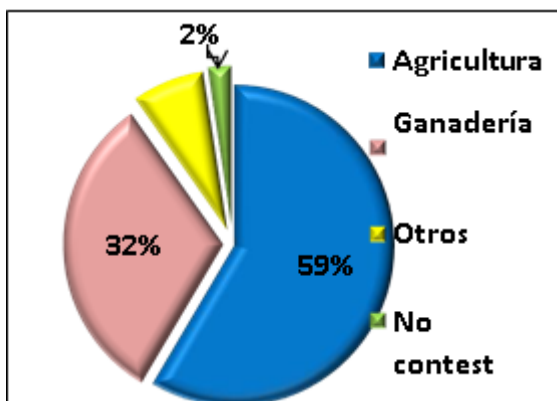


Figure No. 2  
Activity of the peasants

Question No. 3 If your activity is agriculture, what does it produce?

According to the results that are projected in the graph, it indicates that 54% of the producers are engaged in the planting, harvesting, and harvesting of Watermelon, while 41% do not answer and 5% are engaged in the planting and harvesting of Corn.

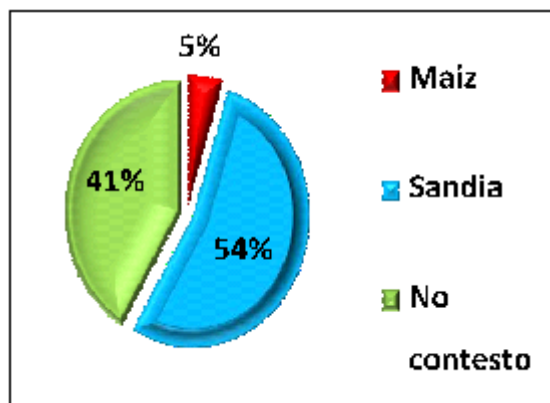


Figure No. 3  
Farmers productive activity.

Question No. 4 In addition to the head of the household, who else contributes to family spending?

This graph shows the following results in which it is stated that 39% did not answer, 25% is their Wife in addition to the head of the household who contributes to family expenses, while 24% are the Children who support the expenditure and 12% are Others (relatives) who support family spending.

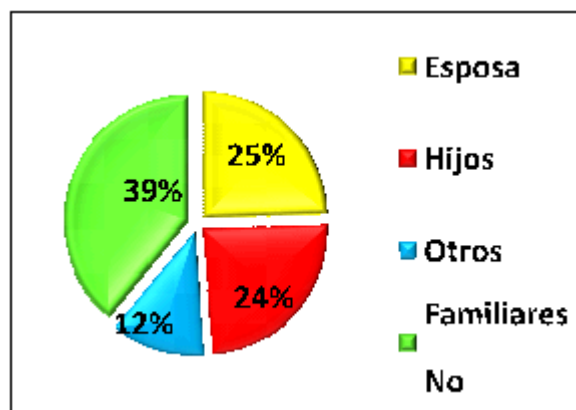


Figure No. 4  
Additional contribution of family spending.

Question No. 5. If you produce watermelon, where do you sell it?

When asking this question, the producers concluded that 71% do produce watermelon and sell it with an Intermediary, however there is an equal percentage that sells it between the Market and the one that sells it at 12%, while 7% said they sell it and 2% did not answer.

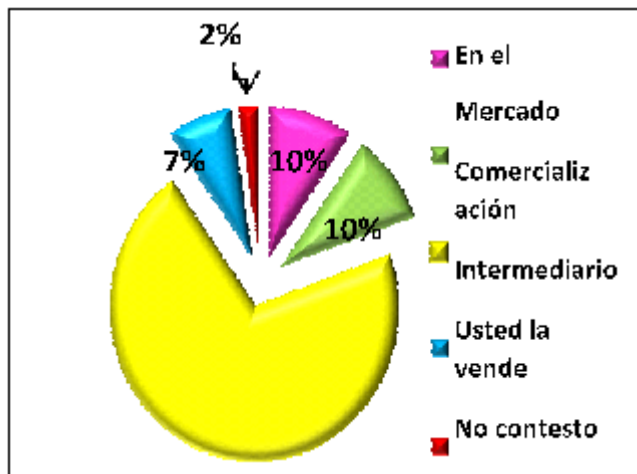


Figure No. 5  
Watermelon producers sell it

Question No. 6 How do you assign the price to your product?

This question is oriented to know how producers assign the price to their product, 49% determine it by piece / size, 42% said that by Kilo, while 7% according to the Market and 2% I do not answer.

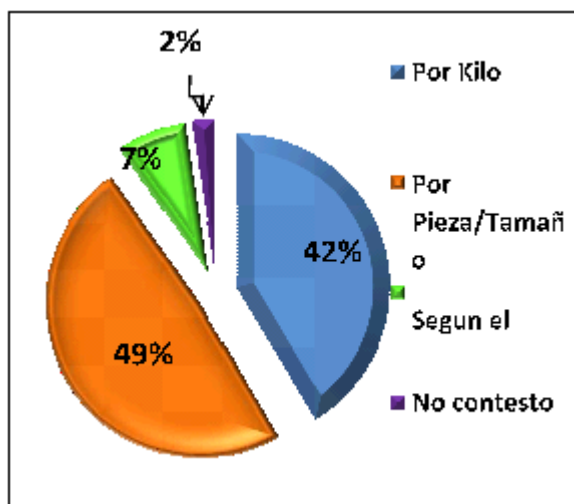
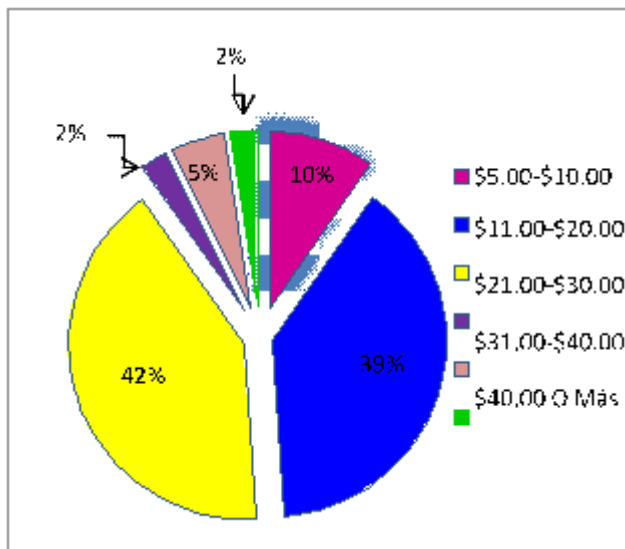


Figure No. 6  
Watermelon price allocation.

Question No. 7 What is the average price per watermelon

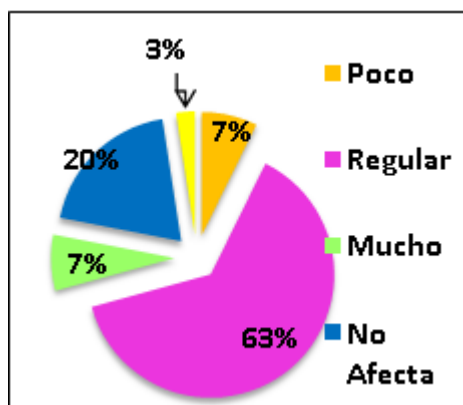
With this question we will identify what is the average price per watermelon that the producers assign to it ?, 42% said that the average price is \$ 21.00- \$ 30.00, 39% of \$ 11.00- \$ 20.00, while 10% of \$ 5.00 - \$ 10.00, 5% of \$ 40.00 o Plus, however there is an equality with 2% between \$ 31.00 to \$ 40.00 and the other 2% did not answer



**Figure No. 7**  
Average price per watermelon

Question No. 8 Does the market offer affect you as a producer??

According to statistical data thrown by the survey, 63% of the producers are influenced by the supply in the regular market, 20% said it is not affected by the supply in the market, and however there is a 7% equality between much and little that the offer on the market impacts, while 3% did not answer.



**Figure No. 8**  
The market offer affects you as a producer.

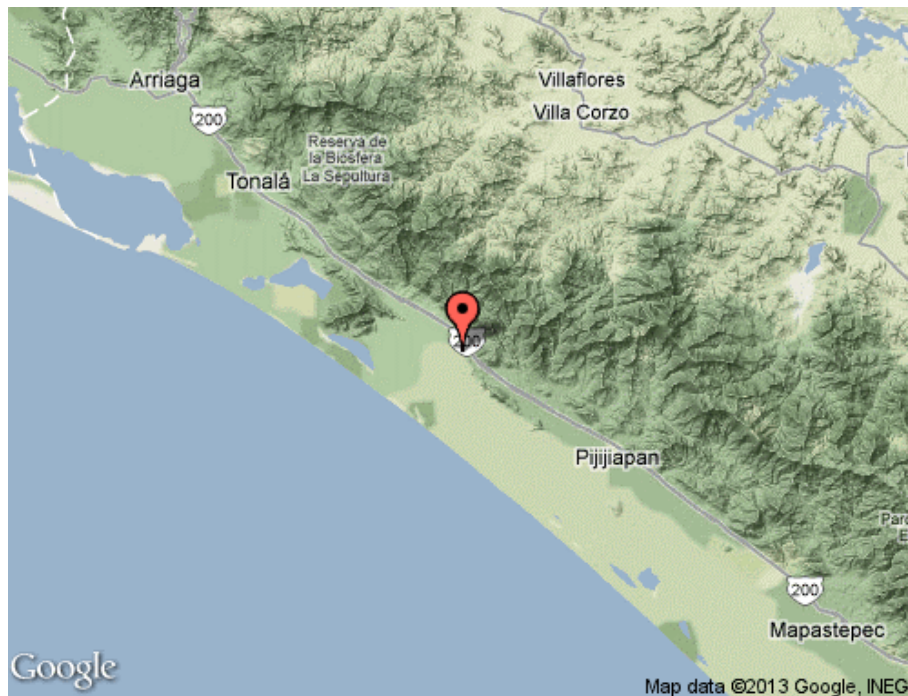
## CONCLUSION.

Currently, the watermelon market in Mexico, Chiapas, specifically in the Municipality of Tonalá, the result of this investigation indicated that the problem of low prices in some months of the year can be solved with supply control measures, that is, implementing the reduction of the crop in high production seasons and its planning over time would help increase the income of the producers and marketing. Although these measures are only practiced in irrigation sowing; both farmers dedicated to it, as well as temporary farmers, would benefit from the increase in national prices caused by the elimination of temporary excess supply.

## PROPOSALS

Watermelon cultivation is a product that demonstrates an abundance of temporary supply and low prices. Thus, watermelon is one of the most important fruits in the agro- food trade of Mexico and Chiapas, is low in May, June, and July when it reaches maximum production, which causes too much supply (García et al. 2011). Therefore, adequate planning of production and commercialization would avoid the seasonal fall in prices, hence the promotion of Mexican watermelon in foreign markets in the months of abundance could be an effective measure to give way to surpluses. Even if it does not exist in government and municipal plans, the creation of an organism that orders the volumes of commercialization and national production, supply control measures could be applied to avoid the seasonal fall of prices, and avoid the decrease of profits, and also expand the municipal and local market.

### Annexes:



**Figure No. 9**

Geographic location: Relief maps around Ricardo Flores Magón, Municipality of Tonalá, Chiapas (Mexico).





**Figure No. 10.**  
Watermelon in the bush ready to cut.



**Figure No. 11**  
Watermelon harvest.



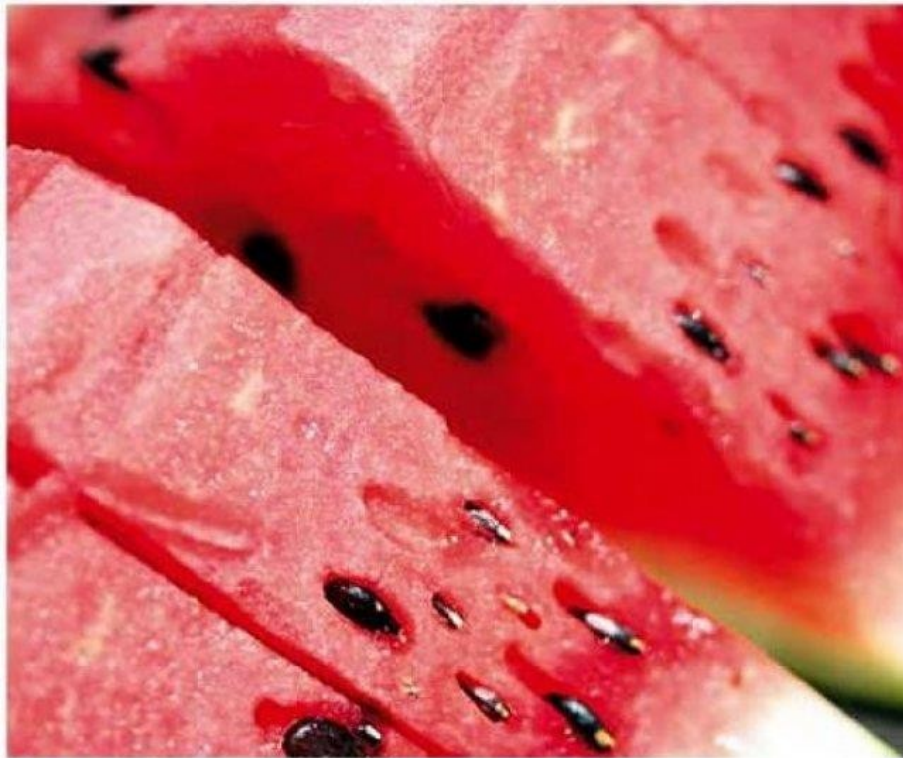
**Figure No. 12.**  
Watermelon Cut.



**Figure No. 13**  
Watermelon Test.



**Figure No. 14.**  
Watermelon storage.



**Figure No. 15.**  
Watermelon ready for consumption.

## **BIBLIOGRAPHY.**

- Baker, K. (2000): "Indigenous Land Management in West Africa, an Enviromental Balancing Act. Geographical and Enviroment Studies". Oxford, Oxford University Press. pp. 271.
- Barrera-Bassols, N. & Zinck, J.A. (2003): "Etnopedology: a worldwide vie won the soil knowledge of local people, Geoderma, Vol. 111, pp. 171-195.

- Cruz, O.M. & Tapia, S.M.A. (2014): "México, como un país sustentable". Centro Educativo Cruz Azul, A.C. en Vinculación con la UNAM.
- Galdámez, G.J.; Aguilar, J.C.A.; Gutiérrez, M.A. & Mendoza, P.S. (2007): "Conocimiento Local de clases de Tierra y su productividad agrícola en la depresión central de Chiapas" *Quehacer Científico en Chiapas*. Vol. 1 (9), pp. 25-36.
- García, V. A.; García, S. J.A.; Guzmán, S. E.; Portillo, V.M.; Fortis, H.M. (2011): "El Mercado de la Sandía en México: un estudio de caso sobre exceso de oferta y volatilidad de precios". *Región y Sociedad*. Colegio de Sonora. Vol. XXIII (52), pp. 239-260.
- INEGI, (2010): Segundo Censo de Población y Vivienda. Obtenido en [www.inegi.org.mx](http://www.inegi.org.mx).
- Ortiz, S.C.A. & Gutiérrez, M.C. (1999): "Evaluación taxonómica de sistemas locales de clasificación de tierras" *Terra*, Vol. 4 (17), pp. 277- 286.
- Zinck, A. (2005): "Suelos, información y sociedad" *Gaceta Ecológica*, Núm. 76. Instituto Nacional de Ecología, México, pp. 7-22.