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AVOCADO CULTIVATION IN MICHOACÁN: STATE OF THE ART

[1]Quero Gutiérrez E., [2]Robles Monroy J. C., [3]Rivera González J. M., [4] Gallegos Espinoza R.

[1] División de Investigación, Instituto Tecnológico Superior de Uruapan, Carretera Uruapan Carapan No. 5555, Col. La Basilia, Uruapan, Michoacán, México 60015, E-Mail: queroed@hotmail.com
[2] Asociación Agrícola Local de Productores de Aguacate de Uruapan, Independencia No. 19 int. 201-4, Col. Centro, Uruapan, Michoacán, México 60000, E-Mail: correo@aproam.com
[3] Agroquímicos de Michoacán, S. A. de C. V., Gran Parada No. 22, La Magdalena, Uruapan, Michoacán, México 60080, E-Mail: agromich@mich1.telmex.net.mx
[4] Asuntos Agropecuarios y Pesca, Presidencia Municipal de Uruapan, Av. Chiapas No. 514, Col. Ramón Farías, Uruapan, Michoacán, México 60050, E-Mail: regidores@uruapan.gob.mx

The chain of value of avocado production is described, establishing the horizontal and vertical flow of activities that are performed in the management of this crop, and its correlation with avocado biodiversity, natural and technological resources availability, according with the experience of farmers, technicians and researchers. Finally, the minimum of health, economic and ecologic welfare generated by this crop are shown. Management alternatives in the short, medium and large terms are presented and discussed, highlighting the requirements of basic, and applied research and innovation.

The framework of the chain of value is the following: In Michoacán there are approximately 8.5 millions trees, with a foliar surface of 700 millions m^2 of leaves, which absorb 8 to 12 mol E m^{-2} of photosynthetically active solar radiation per day and assimilate 1 to 2.5 millions tons of CO2 year [1] and produce 0.8 to 1.0 millions tons of fruits that promote an economical benefit of 3 to 4 billions of pesos. This represents 400 to 500 pesos per tree. This productivity must be enhanced making more efficient the biological process, to obtain a tree yield higher than 500 kg.

Management practices in avocado must stimulate CO_2 assimilation and absorption of photosynthetically active radiation, to reflect its efficiency in yield and crop quality. Potentially, it is possible to increase CO_2 assimilation to 10 millions tons per year and fruit yield could be higher than 3 millions tons. At the same time, the efficiency in the application of fertilizers, pesticides, soils, etc., should be increased.

It is known that fruits contain important components for consumer health; here we show quality, nutritional and health indicators that make avocado a functional fruit.