



Improvement of the Strategy in Food Safety, through the Research Action, the Huacana, Michoacán

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Abstract

The creation of new mechanisms of social participatory action, constitutes the reformulation of the community organization, corresponding to the transversal axes from the local to the inclusion and adaptation of globalizing parameters.

That is why, through the research-action methodology, new reorganization alternatives are implemented in the microregion of Huacana, Michoacán; to include new gears of reorganization of production and food education, resulting in the increase in the use of the region's own foods to the usual diet.

Keywords: Food; Production; Intake; Food Safety; Consumption

Introduction

Currently food within Mexican society, has suffered different variants in the consumption of food typical of its region, as well as its customs and customs. This has led to a number of structural changes in the food intake of rural populations, which have adopted a culturalization framed in the increase in consumption of a high caloric intake; in addition to the establishment of foods that are not produced within communities in their daily food practice.

Causing communities to spread attention to food production for an improvement in the quality of the usual diet and encourage irrational consumption of non-own food, which is at a higher price and increasing the impact and risk of the association of noncommunicable diseases.

That is why the creation of different strategies in the face of food security, facing the right to food and food sovereignty axis; will be careful to contribute special attention to people in the various rural communities, considered high and very high marginalization, to achieve an optimization of food security, creating a healthy life.

Given this situation, an intervention was made in the community of the chaux, of the municipality of Huacana, Michoacán, in order

to improve the cooperativeness of the population to introduce food typical of its locality in the usual diet.

To understand the physical, environmental, social, human, economic, and productive context of the region, in order to identify its potential, productive, problematic vocation, as well as alternatives of solution or development opportunities, in such a way that they provide the framework of the social integration of the community and decrease the mitigation of food insecurity.

Problems identified in the learning community

The concept of Food Safety was born in the 70's, which is based on the production and availability of food at the global, national and local levels.

For the Institute of Nutrition for Central America and Panama (INCAP), Nutritional Food Security "is a state in which all people enjoy, in a timely and permanent manner, physical, economic and social access to the foods they need, in quantity and quality, for their proper consumption and biological use, guaranteeing them a state of general well-being that contributes to the achievement of their development".

In the food production of the municipality of Huacana, Michoacán., the main references of basic foods of rural areas were taken into account, which are catalogued with high and very high marginalization.

According to the statisticians presented above, micro-regional production is considered not to meet human consumption, as it is limited to the sale of these products to meet other basic needs such as housing, health, among others.

Agricultural production						
Culture	Seed surface (HA)	Harvested surface (HA)	Production (TON)	Performance (TON/HA)	PMR (\$/TON)	Value production (Thousands of weights)
Jamaica	380	380	152	0.4	50,000	7,600
Corn Grano	6,665	2,945	9,923	3.37	3,929.71	38,994.50
Sorghum Grain	2,690	1,076	3,873	3.6	3000	11,620.80
Sesame	1,100	440	396	0.9	13,000	5,138

Table 1: Source: SIAP, 2015.

Pecuary production									
Classification/ species	Standing cattle				Won on channel				
	Foot production (TON)	Average price in standing	Value in standing (Miles \$)	Average weight in standing (KG)	Production (TON)	Average price in canal	Average value in channel (MILES \$)	Number of heads	Average weight in canal
Bovine	777.220	13.50	10,492.470	367.654	338.847	27.04	9,163.067	2,114	160.287
Pig	103.540	20.01	2,071.781	92.944	80.854	33.42	2,702.183	1,114	72.580
Sheep	1.489	21.67	32.264	35.452	0.772	39.60	30.573	42	18.381
Caprino	47.812	20.56	983.144	36.030	23.003	34.70	798.298	1,327	17.335
AVE	4.493	15.28	68.648	1.823	3.461	27.92	96.635	2,465	1.404

Table 2.

The fact complies, that the population with limited production will have a lack in the physical availability of food for self-consumption, demeritating the nutritional requirements for its body because of the lack in the intake of these., so at the end of the balance of food production is granted greater sale of the products to the amount that is intended for self-consumption, generating a food deficit in the population.

In the light, the largest generation of food products is exercised for commercialization, so that families in rural areas obtain a higher economic income and meet other needs; therefore, emphasize in the timely intervention of scheduled activities for food and nutrition education in rural areas with the greatest vulnerability.

Research Objective and Methodology

Improve the predominant productive systems (SPP), the productive and potential vocation of the region, that increase food

production the food security project, through the research action, the Huacana, Michoacán.

Learning community context

Corresponding to the analysis presented with the cabinet information, specified by the baseline indicator in the Family Productive Units; whose productive aspects (activities, infrastructure and food production systems present), natural characteristics of the municipality, social conditions and community cohesion.

It should be noted that, within the municipality of Huacana, Michoacán, there is a common denominator in the rural microregion and mountains,, since it has weakened agriculture, for some years, as its main economic contribution, exerting optional changes such as livestock or fishing, main sources in those of 60% of the year.

The Huacana is located in the south of the state, between the parallels 18-37' and 19-05' of north latitude; meridians 101-36' and 102-14' west-length; between 200 and 1,600m. Colinda to the north with the municipalities of Múgica, Gabriel Zamora, Nuevo Urecho and Ario; to the east with the Municipalities of Ario, Turicato and Churumuco; to the south with the Municipalities of Churumuco and Arteaga; to the west with the municipalities of Arteaga, Tumbiscatío, Apatzingán, Parácuaro and Múgica. The distance to the state capital is 161 kms. Its area is 1,952.60 km² and represents 3.3% of the total state.

The Huacana geographically consists of 139 localities (InEGI Population and Housing Census, 2010). Of the total localities, 17% have a very high degree of marginalization, 80.2% have a high degree and only 2.8% have an average degree of marginalization. The same source reports that the municipality has a population of 32,584 inhabitants, where 50.6% is represented by women and 49.4% by men. The population tends to concentrate in four locations: La Huacana, Zicuirán, El Chaúz, Cupuán del Río, places where 49.3% of the total population of the Municipality is concentrated.

The definition of the Huacana microregion was determined because the distribution of the localities in care has a lot of similarity in terms of climatic conditions, soil types and the same management of the production systems identified in them, which together with the proposal of strategic and secondary communities allows the strategy method to be more efficient to achieve articulated projects that generate greater impact.

The main activated ones that develop within the region is the breeding of cattle, goats, sheep and pigs as well as fishing as an important economic activity for a large number of identified families, as far as agriculture is concerned, the production of maize, sorghum, sesame and Jamaica are the ones that are carried out in the greatest proportion, however it is emphasized that lemon production has great potential in the region as it is considered as being considered a significant source of income for families who have the conditions for such production.

Intervention process

According to the information analyzed in cabinet and complemented by field trips at the region level, this with the aim of carrying out the weighting interventions of social action and cooperative activity between community actors and facilitators. Emphasizing the production, availability and variability of food for

self-consumption and thus the dispersion of the inclusion of high calorie-density foods, based on the ideology of globalizing food consumerism.

Giving the main problems, which are described below.

Problem	Description
Backyard	The situations that limit food production from the physical-environmental aspect is the low availability of water caused by the lack of hydro-agricultural infrastructure for irrigation, exacerbated by agricultural practices that favor soil loss and its moisture retention capacity. The lack of adequate infrastructure for the rearing of compact birds, as well as poor health management, causes a considerable decrease in production, so they are forced to buy these foods (Chicken and Egg).
Livestock	Lack of actions that incentivize the efficient use of pastures (feeding livestock) and water deficiency.
Milpa	The use of Creole varieties for livestock feeding, makes the crop unproductive, the pests within the crop and the bad storms frequently present in the region.

Table 3

Also, one of the main problems in the physical-environmental field are the few works of conservation and restoration of soil which causes that year after year the soils are lost.

In the economic sphere, the lack of a culture of savings, means that by having no money to invest in the inputs needed for livestock and production in Jamaica and sesame seek loans with very high interest, this detonates their purchasing power.

As for the nutritional part, production for self-consumption is very limited (corn, bean, chili, chicken meats, egg), so the dish of good eating is not completed and as a result there is a high rate of malnutrition in the population.

Boost to productives systems

The region is suitable for the production of a wide variety of crops, so establishing alternative crops is a development opportunity, such as maize, Jamaica, sorghum and lemon, provided that a follow-up is provided to generate capacity building that allows beneficiaries to possess the knowledge and skills for the good development of these crops and thus generate the expected results.

The region has the right conditions for the exploitation of cattle and ovi-goats, caprinos therefore this opportunity in the region will be seized to boost the production of these species in a semi-intensive and intensive system, with the help of leading producers, in supplementation of resources.

Strengthen through Capacity Development, knowledge related to feeding techniques, health management and reproductive management of livestock and minor species.

Strengthen the capacities of producers in soil conservation practices, by means of sticks at the level, as well as seek a boost to the production of basic grains through supports for equipment or "production technology" and post-harvest management (storage and conservation).

Encourage the exchange of successful experiences, first between regions and then between neighbouring municipalities with other producers that are already more consolidated, according to the SPP concerned.

Care for the environment

Increase the recharge of aquifers based on soil and water conservation practices.

To carry out awareness-raising and organization actions for the improvement of the natural resources of the localities and the promotion of soil and water conservation in order to take advantage of the productive potential of the microregion.

Results and Discussion

The results of the process of intervention of this research work, within the municipality of Huacana, Michoacán, specifies the characteristics of the evolution of the community for work together.

Based on the following figure 1, I express the shaping of the learning community that was formed.

Carrying out the first session, where 8 main problems were limited that they presented in the group and which limited the work of cooperation within the locality regarding the subtracted indicator from the food standard, a diagnostic tool of the program itself.

Of the 100% that represent the number of sessions completed, there was a 33% participation in the first session, 31% the diagnosis to raise the action plans to be carried out within the community, giving a guideline in this second session, the participants annexed

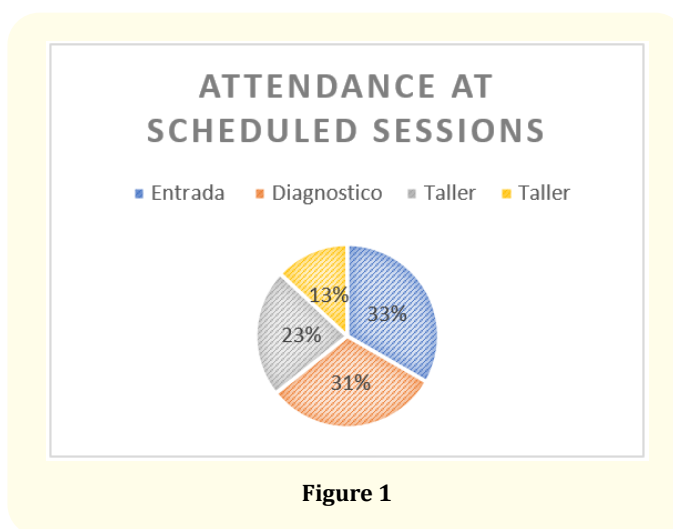


Figure 1

collaborative working sessions that were recorded in checklists, since for extraordinary reasons the technical accompaniment by the facilitators of the agency could not be required.

In carrying out the action plans, the learning community raised fieldwork, in company with technical assistance of the agronomist, the main facilitator of the community, determining the timely attendance in the community primary school, involving the students, children of beneficiaries and attached teachers.

23% of the graph presented above represents the third session of the workshop called: "What food I have in my land and how they help me", the participants identified through the reports of the food they produce in the locality and in the own orchards of wispath, the net amounts of kilograms that produce week, how much they use for consumption and/or sale; to identify the macro nutrients and micro nutrients they contain and the health benefit.

13%, corresponds to the last session that could be held with the community, with a workshop called: "From the field to the table", where participants mentioned the products that can be marketed within the community and expand the production of food at a lower cost, but, with higher quality in their production and a better technique.

Figure 2 shows that the food product with the highest availability in the localities of this microregion, is the egg with 97% availability, followed by cow's milk, with 96%, followed by bean, tomato, onion and chilli. It is important to mention, that availability is expressed as production (even if it is low, in addition to purchases,

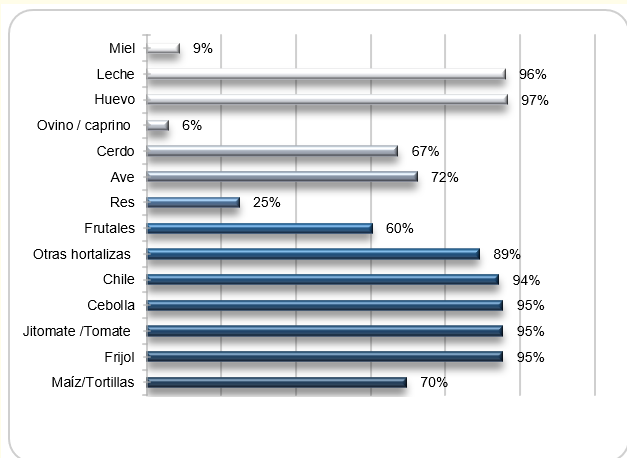


Figure 2

products available in local shops, proximity to the municipal head office, etc.).

Figure 3 shows that 34% of microregion families acquire their food within their community. The price at which they sell food in the town is generally higher than if they buy it at the municipal head, however, they prefer to do so to avoid the costs of the transfer. 64% of families, they do so in the municipal head, they do so because they find greater variety of products and it is cheaper; occasionally take advantage of trips to the village to attend to some personal matter and make food purchases. Only 2% buy their food in some neighboring community.

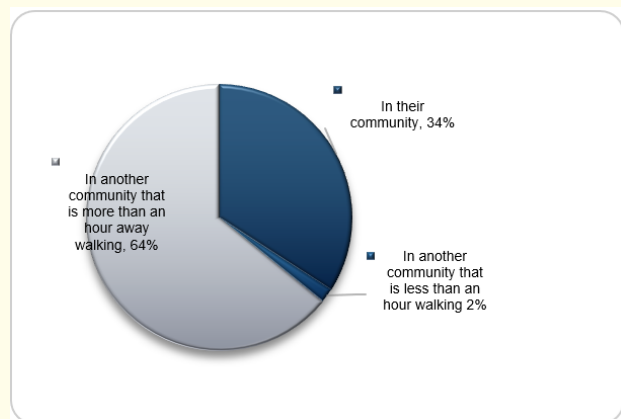


Figure 3

Conclusion

As described in the developed process and the analysis of the results, it can be concluded that the shaping of the cooperativeness of the social structures based on ideological reorganization, the implication of the research action methodology establishes a generative system of mechanisms to develop community skills for the management of the internalization of new dietary - eating habits based on the inclusion of the region’s own products; helped in non-globalizing axiological thinking, modifying the schemes of food well-being.

Rhetorically, theories that are established as interveners in echo-education, in this axis of transdisciplinary between the conceptualization of context in the face of a civilizing crisis of globalizing ideology, are confirmed, adjacent between the facilitator and the actors of the communities generated a coherence between the culturality, uses and customs of contempt for the intake of high-density food that were already in root and availability of economic rise in its microregion.

This resignedness of consciousness gives a sustainability between the interrelationship of humanity - nature and totalizing in the axiological and praxeological means of communities to coexist the solution of the immediate problems of food insecurity, concrete the linear transformations based on the availability of food typical of the region, thus favoring the integration of food variability and decreasing the usuality of food inherent in its uses and customs [1-7].

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