

# PROPOSAL OF ORGANIZATIONAL INNOVATION FOR THE CREATION OF SME'S PRODUCTS EXOTIC IN A COMMUNITY INDIGENOUS TONACA IN PAPANTLA, VERACRUZ, MEXICO

**Dra. Bertha Alicia Arce Castro**

Pinos No 13 Col Santa Fe Las Trancas, Xalapa Veracruz, México

**Dr. Jorge Ramírez Juárez**

Calendario Huízar No. 32 Indeco Animas Xalapa Veracruz, México

**Dra. Rosa María Sánchez Hernández**

Morelos 23 Coatepec, Veracruz, México

## Abstract

*In this work we're given the results obtained after a year of improvement and application of a new model called Model of organizational change for the creation of small and medium-sized companies in non-traditional products, into a Totonaca a community in Veracruz, Mexico. This proposal has been designed to answer the under treatment of technical literature about rural family business, satisfying the lack of General models, which doesn't respond to identified needs in farming communities with similar characteristics, generating companies to promote change in the Mexican food industry, able to meet the requirements of the current socio-economic context. The project has a strong element of innovation, which should gradually relates knowledge of farmers and that combined with them, generate knowledge management, which will become in organizational knowledge of the new company. In the selected region is intended to replicate the good results obtained in the implementation of the model in the region of Coatepec Veracruz, where 13 peasant families dedicated to beekeeping formed an innovative company that is involved in local, national and international markets.*

**Key words:** innovation, rural development, strategy, change.

## 1. Introduction

The model of organizational change for the creation of small and medium-sized companies of non-traditional products<sup>1</sup> was conceived to answer the under treatment of technical literature that makes rural family companies, as well as satisfying the lack of General models that respond to the identified needs in farming communities with similar characteristics, in the generation of companies capable of responding to the demands of the current socio-economic context, that promote change in the agricultural Mexican sector. This change has shown its efficiency to be applied to a group of people dedicated to beekeeping in of the municipality of Coatepec, Veracruz, where as a result of the model was the creation of a company characterized by their innovative character and quality in these processes.

The Group of researchers belonging to the body academic technology innovation and sustainable development of the Universidad Veracruzana, with this work, became involved in the task of showing

---

<sup>1</sup>Model created by Dr. Bertha Alicia Arce Castro

if the aforementioned archetype can achieve similar results in rural families of non-traditional products in fields and different circumstances to which characterized the subjects of study of Coatepec, based on the assumptions of that underlie it.

A new research is situated in the northern part of the State of Veracruz in the interior of a Totonaca indigenous community, where its inhabitants still preserve knowledge for the production of native honey from Meliponas or bees stingless.

It is characteristic of this new social group the dominance of a strong cultural component, great marginalization and loss of their natural resources. This situation calls for the need to develop forms of organization in which the Totonaca Indians do not lose their identity, essence, culture and traditions; and they can find the best way to take advantage of opportunities and economic improvements that openness to trade leads, and become promoters of the conservation of forests and forests essential for beekeeping activity.

This research work focuses attention to the production of the honey bee meliponas (*Melipona beecheii*), the forest or Virgin also known primarily by the following aspects: the natives of the region of Totonaca possess ancestral knowledge in the management of small bees stingless, originating in our country since before of the arrival of the Spaniards. Honey obtained from the meliponas bees, is of better quality than the European bees produced.

Meliponas bees, are part of Mexican culture for centuries, however, the lack of dissemination and the absence of technology validated for its handling, lack of knowledge of forms of organization for the production and marketing has slowed down its development, ceding ground to beekeeping of his close cousin or European honey bee (*Apis* bees).

The implementation of the above-mentioned model in the municipality of Papantla, Veracruz, in the community of Gildardo Muñoz, will provide very valuable elements that will allow to defining criteria that could lead or not its generalization (Arce, 2008). This research project has been designed for a period of three years. So the goals and objectives contained below correspond to the first and second year, affecting methodologically to the preliminary phase and development.

## **1.2 Approach to the problem**

### *Rural families and the benefits of trade liberalization in Mexico*

The trade and economic needs of the world today, require that organizations will be able to assume the functions of the dominant economic technical paradigm (Guizar, 1998). International competition forces the Mexican organizations face increasing rapidly changing. This is particularly difficult in a country like Mexico's and it is dramatic, if focuses attention on the agricultural sector, where coexist two forms of agriculture: the traditional and the modern, still a considerable technological gap between them.

Farms in México, require viable proposals and practical solutions through development models that consider the organizational culture that moves to these groups, their values, customs and aspirations. Government efforts have ignored these elements, so the actions of modernization based on exogenous models to them are doomed to failure (Moriello, 2003). Therefore, it is important to use a model that is not weird to those concerned, but rather, respected as their own and as a key factor in its success, consider the change of mind of peasant to entrepreneur.

Target research on wild honey, it is important for two reasons: to generate income for families and preserve the ecosystem Totonaca where the insect lives, i.e. the conservation of forests. The importance of providing a source of alternative livelihoods to the Totonaca Indians will avoid

predation of forests, will give you the motivation, sense of responsibility and pride retain the inherited. This unfortunate event offers an unequalled opportunity to the region of *Totonacapan* honey producers, if they are able to organize and compete in the national and international markets, where the trend towards the shortage of honey will be constant over the past years.

Models that relate to the process of change lie mainly in a regulatory, prescriptive and reeducate approach and are not sufficient to respond to the demands of the current socio-economic context by imposing the need to propose a new one. Organizational development models do not respond to the needs identified in Mexican farming communities, so the question arises.

**Scientific problem:** they may replicate successfully the model of organizational change for the creation of SME's of products non-traditional in an indigenous community Totonaca with a strong predominance of culture and traditions, which preserves the culture and particular competencies of this group of people and the environment in which they operate through the creation of production units business to facilitate their integration in today's competitive markets?

**Hypothesis:** The development and implementation of the model of organizational change to transform indigenous rural family enterprises to SMEs of non-traditional products to incorporate into the behavior and knowledge of the group approach to achieve business competitiveness, will provide a solution to the community to preserve their culture, their environment and participate in the benefits of global markets.

For the verification of the hypothesis, is defined as a General objective of the work: applying the model of organizational change that allows to transform rural family enterprises in small and medium-sized enterprises of products non-traditional approach to achieve the business, sustained competitiveness based on the synergy that produce four fundamental pillars: "Differentiation", "Management of knowledge" "Culture of quality" and "Ecological culture".

Methodologically and during the development of the work followed the phases set forth: **Investigative phase:** theoretically the research on the State modern trends in organizational theories that respond to new scenarios of the current socio-economic system, as well as information regarding uses, customs, culture, traditions, religion, language, and worldview Totonaca, review of the State of the art of the meliponicultura in different areas collection and information usage, composition, benefits, benefits of bees meliponas and honey they produce. From the collection of information on the topic of interest and on the basis of its critical assessment identifies the limitations and benefits of the possible application of the model, these aspects which constitute the basis for the decision-making on the chances of success or failure of the replica of the model.

**Conceptual phase:** Is the phase where the model of organizational change unfolds is checked as it was conceived first and then if it is necessary as a derivation of the results obtained during the investigatory phase the possible adjustments to be made, based on the requirements of the model, the basis for its replica in the new context. The relevance of the assumptions in your application is finally reviewed.

**Stage design:** detailing the implementation of the model proposed in the object of study comprising its test, validation and adjustment. The analysis of the results of the application is finally done.

At each stage of the research methods are used individuals of analysis and synthesis, combined with other more specific and technical integration and group participation, interviews depth to the members of the participating groups, experts, implementation of surveys, and didactic bibliographical and technical reviews of teaching learning, among others.

In summary, these stages followed during the investigation allowed to identify the characteristics that the socio-economic environment requires organizations, the limitations of the current organization and structure of production in the activity object of study, the fundamental components of the model and their interrelationships; as well as performing validation of the developed model, defining variable demographic economic and social indicators whose results were validated in implementing.

The design of the model with systemic approach is supported in:

- Contributions relating to the development, change and organizational culture, communication, knowledge, group participation, the quality, innovation and creativity.
- Theories, models and approaches of change that literature concerns have been formulated for the industrial sectors or services companies and its application in peasant families has not been considered as proposed in this research.
- Community learning, change of mentality, behavior and forms of work, creativity and innovation factors that accrued on business successes.

As premises of the model are established as subjects of study to rural families with experience in production or transformation of some non-traditional good, with a desire to work collectively and learn new ways of doing things.

Objectives of the model are a) Promote the integration of rural family Totonaca in organizations sustainable production of honey melipona, competitive, able to participate in new markets and benefit from the advantages of economic globalization. (b) Provide alternative employment and income for farmers in the community. (c) Give young people the opportunity to stay and avoid migration d) assist in the conservation of the bee and its habitat.

The practical object of study for research is located in the region of Totonaca of the coast and sierra, in the community of Gildardo Muñoz, municipality of Papantla, Veracruz the principles that underpin the model are as follows: work in equipment and basic knowledge of the Administration, identify the market niches where will address the new product and know the trends of consumption; the management of knowledge and the development of product innovation; the culture of quality and sustainable approach in the production which leads to the conservation not only the environment but the culture and identity of the peasants.

### **1.3 Model of organizational change for the creation of small and medium-sized companies in non-traditional products**

The model integrates and links the new company with the development of the community, to move the individual accomplishments of the first towards the community, through the impact on organizations concerned by the inter linkages and networks that are generated in complex systems where the company acts.

As well as the relationships are established with the environment far from the new organization, made up of systems in which also the company is immersed and which determine its success.

This model allows SME's to participate effectively in the economy and the scientific novelty and originality to consider: a) generating a multiplier effect dynamic of progress to replace the current inertia of rural organizations (B) To promote learning change, based on quality, innovation, creativity, flexibility, mutual cooperation, respect for the conservation of resources, biodiversity and culture of the organization with emphasis on collective learning as a key element to counteract fear and overcome resistance to change of participants in the system under study, (c) Establish a link between theory and practice (D) consider the company as part of an open system.

Table No. 1 sets out basic summary and results goals expected of each one of the steps that make up the model.

Table 1 Stages of the development of the model

Stages	Objectives	Results goals
<b>I Preliminary.</b>	Determine the environmental conditions, characterize the subjects of study and have the information necessary to identify training needs.	Rural family businesses chosen as subjects of study. Identified training needs.
<b>II Development</b>	Identifying strategies to follow to manage and order changes and define the objectives of the company	Organizational culture of new SMEs. Determination of resource requirements and funding sources. Training programme.
<b>III Consolidation</b>	Identify new products that are feasible to bid for the company, design and determine how to make them and sell them, ensuring a continuous improvement based on the feedback cycle.	New products identified to produce. Documents and procedures (among others) that make up the organizational knowledge. Processes certified from the point of view of quality and organic if possible.
<b>IV Validation.</b>	Demonstrate compliance with the model through its results.	Variables and indicators.
<b>V Dissemination and promotion</b>	To present the model and its results in different areas.	Evidence of the knowledge of the model and its results. (Requests for application in other subjects of study, references to the new organization and its results).

Model of organizational change for the creation of small and medium-sized enterprises of non-traditional products (Arce, 2008).

## 2. Implementation of the model in the Totonaca community Gildardo Muñoz, municipality of Papantla, Veracruz State, Mexico

As a result of investigative efforts to determine the conditions of the environment and characterize the subjects of study, was obtained the initial information from which defined the justification of the project.

- 1) There is ignorance about the processes, techniques and target melipona honey production as well as its importance among the Totonaca a Indian families.
- 2) There is no information regarding the species of stingless bees in this region.
- 3) There is a need to document the uses and benefits of honey without sting gives the Totonaca a and analyze their components from the chemical-nutritional approach
- 4) No change models developed in the community to facilitate the indigenous optimize their skills and knowledge
- 5) It is necessary to provide rural families of this community Totonaca alternative sources income and occupation to improve their welfare and ensure their permanence.

- 6) Find the mechanisms to promote the conservation of natural resources, forests, rivers, flora and fauna.
- 7) The need to promote sustainable organizations to preserve the environment, the culture, history, traditions and the pride of belonging.

### **2.1 Phase I preliminary: analysis of the environment**

In this step is carried out an analysis of the economic activity of the area of study on the basis of a group of variables of the macro environment and the circuit competitive, getting, as a result of this analysis, information about the environment; It is of interest to the rest of the steps that make up the preliminary stage. Methods and techniques: consultation of statistical sources, interviews with experts and visits in situ.

Muñoz Gildardo community is located in the town of Papantla, Veracruz, about 30 minutes from the theme park of El Tajín, 100 meters above sea level, is characterized by warm weather enjoy - regular, with an average temperature of 20.8 ° C.

It has a population of 526 inhabitants of Totonacaorigin, they are characterized by strong cultural component in their social, and they have economic marginalization and loss of natural resources. The oil industry has increased in the region. This has caused a strong cultural impact in the communities, the deterioration of their lands and the ecosystem in general, increasing logging.

It's important to say, that the poverty rates have not declined; young people seeking employment outside the community. Only seniors are interested in preserving traditions. The migration is large. Population movements are toward the Mexican and U.S. cities.

Communities are facing a reality in traditions, usages and customs continue to be attacked and underrated culturally, which translates into a serious deterioration to their identity. This situation urgently needed rescuing endogenous activities this indigenous group, enabling them to reaffirm their identity, traditions, knowledge as well as the creation of jobs, improve income, without losing sight of the preservation of the ecological environment.

Low prices of agricultural products of export such as citrus fruits, the inefficiency of the production in the field lack of infrastructure, funding and training have led to farmers in the State of Veracruz to resort to migration either internal or external mainly to the United States, this population phenomenon has affected the family losing the cohesion that gave him strength. In addition to this, the Totonaca a peasant has also lost the resources as the "monte" or forest offered him, hunting and food of different species, deforestation, the shift to arable crops and livestock have modified their Habitat and limited resources.

A Totonaca a production structure is purely family, characterized by strong links between the family and productive activities. Stresses in this traditional social organization and kinship as a highly flexible element the basis for adjustments. The family regardless of their type and without ceasing to be a cultural element is constituted as the mechanism to address the demands of modernization and change.

Economically as many rural families of Mexico face low income and few employment opportunities; agricultural activities are reduced and the production obtained is auto consumption given the low fertility of the Earth.

As a survival strategy, farmers diversify the crops and preserve ancient techniques. Ignorance of these characteristics of the nuclei peasants explains the failure of the government's actions to try to

modernize traditional forms of rural production, which probably have been successful in other contexts, but ineffective when applied to the indigenous group.

On the other hand, the impact on the environment, bodies of water and native species are revealed the vulnerability of the ecosystem of the entire municipality and thus the beekeeping activity. It is necessary to reverse possible situations of deterioration and social unrest and find how to promote mechanisms to extend responsible participation of citizenship and of the Government in the economic reactivation that is conducive to the creation of jobs.

This calls for the need to develop forms of organization in which the Totonaca Indians do not lose their identity, the essence, culture and traditions, and they can find the best way to seize opportunities and economic improvements that openness to trade leads they can become advocates of forest conservation

The indigenous people of the region of Totonaca and this community in particular have an ancestral knowledge in the management of small bees stingless, originating in our country and preserved by Totonaca and Maya before the arrival of the Spaniards, whose honey is of better quality than the European bees produced.

Agriculture is the main economic activity of the community, the sowing of corn, beans, squash, and chile, as well as the breeding of poultry, men also find work as day laborers and pawns receiving a daily wage of \$12.00, lately has opened a new way of working in the production of leaf of maize for tamales is gathered by a company that regularly collects the cut and bleached to export to the United States product. PEMEX employs few settlers that this requires some preparation and skills of workers, although you pay some land owners by the use of the land to establish warehouses or parks of machinery.

Totonaca women are responsible for the care of home and family and housework, childcare, domestic poultry breeding, helps her husband in the collection of firewood, harvesting or planting of the plot. Young people are not very interested in continuing the traditions of their elders, only religion, religious ceremonies, dancing, and celebrations are a source of interest that brings families together.

## **2. 2 Meliponicultura and Totonaca people**

Mexican indigenous peoples are owners of a rich culture and ancient traditions in the production of assets that today's world is rediscovering giving them their fair value. This is the case of the honey bee called *meliponas* which use dates back to times prior to the Spanish conquest.

This product of the work of bees meliponas honey and Totonaca production techniques are almost into oblivion, by the lack of interest of new generations of young people who do not find profit in their marketing, this production is consumed within the community as a remedy of indigenous healers.

The small insects it-producing honey, live in the rainforest and they have survived for thousands of years pollinating species endemic to the forest that have evolved in parallel, in an ecosystem which today is endangered by human activity.

The meliponicultura between the descendants of the Totonaca culture inhabiting in Veracruz still retains the traditional technology developed since pre-Hispanic times, they keep the bees domesticated in clay pots, closed with a mixture of ash and water; which dries not to allow the entry

of any predator, making them a hole on one side, only with a diameter that allows bees to enter and exit; These pots hanging them from the roofs of their houses.

Honey is cropped manually two times in a year, in March and August getting approximately one liter of honey by swarm.

The production is low, due to the small number of domestic bees, however in the jungle there are swarms in wild state, but in places of difficult accessibility. The wax is processed placing it in hot water and the Totonaca use their hands to agglutinate once it has been dissolved.

These techniques are falling into forgetfulness, only the old people are performed. The young people aren't interested in participate in this activity and prefer to focus on other activities.

Honey is very scarce, however the price is very high prices comparatively with the European honey, a liter of honey melipona in the community reaches cost between \$30 to \$ 50 dollars, the European honey on the market is priced at \$2.20 dollars per liter.

The fate of the production is currently directed towards the same members of the community where it occurs and is very demanded by traditional healers and indigenous women to use after the Parthians and wax for citrus grafts. Producers don't believe that honey from these insects may have a market outside its scope and has not made efforts to increase the swarms in captivity. In the region of Totonaca has been detected as stated in table no. 2 the following inventory of meliponarios:

Table No. 2 Inventory of meliponarios

Comunity	Meliponarios	Pot	Indian families
Plan de Hidalgo	2	30	2
Gildardo Muñoz	2	370	10
Cerro del Carbón	1	40	2

Source: Direct investigation

Notwithstanding that the municipality of Papantla located firstly in apicultural production of the State of Veracruz by the number of hives of European bees, according to information obtained from the national organization of beekeepers, the owners are mostly from the State of Puebla and the city of Coatepec, this economic activity don't benefits the natives, which do not have the economic resources to participate. In the region of Totonaca apan was detected three communities, that are located geographically very close: Plan of Hidalgo, Gildardo Muñoz and Cerro del Carbón.

In recent years, has aroused the interest by the properties of this honey, that the Totonaca healers are used to that as alternative medicine since pre-Hispanic times, the promotion of melipona honey production has led to scientific research and development in several countries, among them Brazil, Venezuela, Colombia and Costa Rica, El Salvador, Guatemala, Peru among others; in Mexico the Universidad Autónoma de Yucatán, the University of Guadalajara and Universidad Veracruzana have made significant contributions as well as in the State of Jalisco and San Luis Potosí, in Cuetzalan, Puebla and the Meliponacultura project of the Mayab in Saaban municipality of José María Morelos.

The "stingless bees" (*Apidae, Meliponinae*) are native to the tropical parts of America, where the Europe's bee (*apis mellifera*) isn't native. There are over 300 different species, these bees are the most abundant in neo-tropical ecosystems, they are living in permanent colonies mainly in tree

Hollows, also in underground nests or abandoned nests of parrots or termites. The nests of many species have a large number of bees. In this they store honey, pollen and wax. Species of stingless bees are very diverse: its size varies from two millimeters to a little more than one centimeter.

### 2.3 Ecological importance:

Because of its biodiversity, its abundance in the forest and the fact that evolved with the local vegetation since the Cretaceous period, stingless bees are essential for pollination of many tropical ecosystems. Because this species nests in hollow trees, depends on them making it very vulnerable to deforestation and habitat fragmentation, these processes reduce nesting sites and food plants for bees. The flight range of stingless bees is usually between 600 and 2400m; The remains of forests and crops can provide food. The Bees produced is of more honey under conditions of ecological equilibrium which is characterized by the existence of many wild flowers that attract and keep bees.

The potential of stingless bees in forest systems lies primarily in its role as pollinators. These insects collect pollen and nectar of flowers, about half of the 1000 species of plants grown in the tropics for food, the production of spices and medicines, are pollinated by bees.

Bees stingless, almost on an experimental basis, are being used for pollination of crops of economic importance and under conditions of greenhouses: in Japan, *Nannotrigona testaceicornis* pollinate the strawberry in Costa Rica *T. angustula* to pollinate the *Salvia farinacea*, *Partamona bilienata* in Mexico to pollinate Cucurbitáceas and Australia species of *Trigona* have used to pollinate the *Macadamia ternifolia*. Today in the American continent about 14 species of *Melipona* and 21 species of *Trigona* are handled traditionally for peasants



Photo: Bee stingless of the Totonaca a region and orange blossom of orange. Source: the authors.

### 2.4 Properties medicinal antimicrobial activity

Among the most important properties of the honey is the bactericidal effect, due to the high concentration of enzyme that will prevent growth of bacteria. This feature can open up the market, as it is very effective in topical application intake; this honey helps fight infection in the respiratory tract. It has been widely used in traditional medicine of the Yucatan Peninsula and the region of Totonaca.

The differences between the traditional honeys vs. honey melipona, is mainly in taste and consistency: more acidic and liquid (the humidity is higher).

### **2.5 Economic importance.**

Is clear that consumption of natural products has been growing significantly in the world; According to studies, the evolution of the market of natural products has experienced great growth in the last three years--approximately an annual growth close to 50%, which is above all a global trend where the natural raw on the chemical, and not only as far as drugs is concerned, but also in relation to all kinds of food and other natural products that have as final object the improvement of the health.

Currently consumers appreciate natural products, organic, products with stamps and "ecolabelling" to ensure production according to good environmental practices and manufacturing processes. As a result of this and the dissemination within the world of what is called the "green consumer", are following new patterns of consumption and habits of life in the world, and Mexico is no exception, so medicinal plants and natural products have been gaining importance as basic elements for good health.

### **3. How can the melipona honey get to modern markets?**

It is clear that if you want to offer the possibility to market the honey of bee's meliponas in domestic and international markets it is necessary to find mechanisms to increase their output. Changes in organizational and productive structure containing essential elements such as production quality and teamwork with objectives of collective benefit, admitting generating organizational knowledge to socialize the individual experiences and recreate new forms of production, to preserve the traditional culture inherited for the benefit of future generations of Totonacaare required to reach success.

#### **3.1. The honey of bee's meliponas new exotic product**

To succeed in international business is necessary use a strategy called differentiation, which is to give to the products being offered some feature which makes them "special" or "different"; in order to attract new customers, to benefit business opportunities or to monopolize niche's market.

The product nontraditional, according to Kouzmine, (2000), has a greater dynamism in exports, these products showing a rise in their sales, because are more important for the economy of the country concerned, and represent sources of foreign exchange and employment. A product can be considered as non-traditional product, if met certain requirements established by ECLAC in 1992:

(a) the product must not be included in the integrated program for commodities (18 listed in resolution 93 (IV) of UNCTAD); (b) the product must not belong to the Group of energy; (c) export can be a new phenomenon for the producing country; (d) the exporting country could find a new market for this item; (e) the product can appear on the market outside the traditional season; the export of the product must be of some importance for any sector of the economy of the country.

#### **3.1.2 Honey Melipona gourmet and "specialty food" product**

In addition to the concept of "New product" there are other ways to differentiate products, give them higher added value or accessing niche markets provide opportunities, one of these is the focus of product known as product gourmet or "specialty food". The word gourmet is a French word which refers to a person who holds a palate capable of discriminating taste, exquisite and connoisseur of fine food and drinks, in the gourmet food in general applies to those of the highest quality, which are perfectly prepared and presented.

A product can be defined as gourmet provided that it complies with the qualities of owning a taste exquisite, extremely pleasant to the palate, giving a degree of pleasure to whoever eats and who above all is of very high quality. It is for them that the gourmet products are so coveted in the

international markets and that many exporters are interested in developing products that satisfy the most demanding palates.

In United States there is a term equivalent to the gourmet product, this term is the "specialty food". The National Association for the specialty food trade NASFT for its acronym in English defines this style of food such as: "food and beverages that are show quality, innovation and style in its category", and even though this definition may seem very brief or even low, is very clear that describes: unique features coming mainly from the origin of the product either ethnic or cultural commitment to production processes and traditional development; both provide products of specialty of a cultural identity that makes them more attractive for demanding consumers.

Another difference of these products are the ingredients which are made and the originality of their packaging; all this coupled with the great taste they possess have as a consequence that its offer is limited and almost in the majority of cases that prices are high. I.e., they are products aimed at markets in addition to know appreciate the willing to pay the high prices of these products in order to be able to enjoy them.

In the case of honey melipona, considered that it can be marketed as gourmet product due to the production process whereby you get, which is a traditional and ancestral representing an entire culture and process which gives the product an identity that goes beyond just the honey; because it encompasses the values, customs and beliefs of the Totonaca a culture. In addition to respecting the aspect of sustainability and environmental awareness, as it will be explained in greater detail, this type of bee contributes to maintain the ecological balance of the region.

In this way not only is a product of a great taste, great history and origin, but is interesting in many ways; and increasingly attractive for consumers demanding palates, more aware of their health and ecology.

### **3.2 Selection of rural family enterprises**

Identify and assess if peasant enterprises meet the assumptions of the model. For this activity should conduct interviews with stakeholders, collect information with the educational institutions of promotion and any other which due to its proximity to this sector of population can provide information that helps in the grounds of discrimination. Defined the universe of possible members for the new organization, should be a primer giving them to know the purposes of the model, the objectives and expected results, the commitments of participating in the project such as time for training, share experiences and show solidarity with the organization.

To get to the selection of the families concerned, it was necessary to obtain the consent of the Council Supreme Totonaca a, form of internal organization, governed by the Customs and usages, this Council of elders, have an authority that is not in Mexican laws if it exists within the indigenous Totonaca a. Explained the intentions and a desire to offer the opportunity to not only preserve their culture if not offer alternative sources of income to the families of the region, the Council gave its authorization to convene the community and potential stakeholders that they inform you of the project, scope and benefits. As a result of this step, the 10 rural families that will make up the new organization are defined.

#### **3.2.1. Internal and external diagnosis**

The internal diagnostic aims to learn about the characteristics of families that make up the new organization. It provides information on the most favorable conditions for the implementation of the model. This information identifies the criteria for the identification of strengths and weaknesses. The external diagnostic aims to meet the conditions of the macro environment economic, social, cultural,

political and environmental surrounding the Organization, identifying aspects of the market which may promote or hinder their management. Result of this activity were unable to identify the fundamentals of the Totonaca group willing to participate in the project and so have the bases for the detection of training needs.

**TableNo. 3SWOTANALYSIS**

<b>STRENGTHS</b>	<b>OPPORTUNITIES</b>
S1: Own resources S2: Experience in the process. S3: Knowledge of the product and its uses. S4: Close ties in the community. S5: Embedded identity and pride in their knowledge and roots. S6: interested in learning the new techniques to improve the production of honey.	O1: New product O2: Interest in the benefits of consuming it. O3: Preparation of Gourmet products O4: New markets for organic products O5: Research medical and cosmetic about the honey and its properties
<b>WEAKNESSES</b>	<b>THREATS</b>
D1: Lack of knowledge by some of the obtaining of the honey. D2: Never have worked in team. D3: Do not know the way of how to join. D4: Consumption, a few swarms D5: There is no quality in the process of obtaining. D6: Hierarchies in family units. D7: Little formal education	T1: Similar products on the market. T2: High number of pests. T3: Destruction of forest and invasion of the ecological zones. T4: Global warming T5: Agrochemicals and pollutants T6: Further increase of migration

Source: authors.

**3.3. Detection of training needs.**

The detection of needs should be considered the causes that may hamper the success of the organization. The authors proposed in this paper, based on his practical and theoretical experience valued, by a group of academic experts. This causes proposal constitutes a reference for the analysis of the information derived from the diagnosis of families. identifying himself as possible causes to the vagaries to close: how to define the Organization's objectives, how to change of family labor to the collective, with the conviction of new hierarchies, command lines, responsibilities and obligations; How to foster the sense of belonging to the company without violating the identified values and strengthen the cohesion of the Group and the development of work equipment; How to develop the management skills of planning among others.

Whereas the above should be done reconciliation among the causes related earlier and revealed gaps in the diagnosis in order to define training needs. This suggests employ an array of weighting of causes and results, develop and implement policies and actions to improve the aspects less favorably evaluated. It is important to note that all decisions must be by consensus, minimizing individual or unilateral decision-making.

#### **4. Developments**

The objective of this stage is to identify strategies to follow, to manage and order changes of the company, allows conceive a vision of the future of the as the Organization will play with an active character. It serves to anticipate events that it expresses the main goals, allow you to concentrate efforts and resources in the development of competitive advantages, it requires consistently adapt to the environment.

##### **4.1 Identification of the action strategy**

It must be based on identifying the critical factors of success of the Organization, to envelope this basis draw the strategy and objectives of work corresponding to. It is necessary to have the strengths and weaknesses of this new company to define the most appropriate strategy. The company define its competitive strategy should identify in their processes generators costs and value. Another important aspect identifies the value chain. Weighted value matrix elements should be summarized and join the diagnostic information and SWOT analysis, integrating the findings generated by these instruments in a single list of weaknesses that will make it possible to establish the factors which obviously must be addressed in the process of change to achieve the expected results. Methods and techniques: SWOT matrix. Value, value working group, interviews matrix chains.

##### **4.2 Development of the culture of the organization**

It consists of direct efforts to integrate individual behaviors towards common goals, activities, develop standards and policies to establish, as well as expand and consolidate the culture of the company. The quality objectives constitute a valuable instrument of planning, it is advisable to establish in them the responsibility of compliance, status of operation, quality indicators, the frequency of their occurrence, evidence of compliance and the goals to achieve the objective.

##### **4.3 Organizational communication**

It is aimed at preserving the climate of trust and participation, determine how to know and strengthen the organizational culture, generate values stability. The Organization must implement and improve internal communication channels, and must involve all aspects, behaviors and internal levels of the Organization, using informal networks and other sources of information.

##### **They are learning to work together**

The group should begin to be trained to acquire the requisite knowledge of how to overcome fear of change and uncertainty. This is possible if one considers that the changes to be made must be by consensus, never imposing. People must make the commitment and therefore, understand that change is a necessity and it is only possible with the participation of all stakeholders.

##### **4.4 Analysis of resources**

Sources of financing can come from the same partners, supported by a project of investment banking or Government through credits. The company can grow gradually, but is important to ensure resources for training and other services that the model requires at all stages.

##### **4.4.1 Elaboración and implementation of the training programme**

After detection of needs and have the availability of resources for the implementation of the training program is necessary to ensure the active participation of members of the group, in search of a real organizational change.

##### **4.5 Preliminary results**

The model of organizational change for the creation of new SMEs of non-traditional products implemented in an indigenous community in its first two stages has been successful; the Organization of 10 peasant families in a cooperative society of production has been achieved "*The stick of honey*

from Mount workers" (ChalkatnainXlaKiwitaxkat) organization that among its activities is technological improvement, increase in the production and marketing of honey meliponas.

**"Trabajadores del Palo de la Miel del Monte"**(ChalkatnainXlaKiwitaxkat),



Photo 4: Group Totonaca a community producers and Dr. Arce

*"The stick of honey from Mount workers"*

has been developed a comprehensive training plan based on the detection of training needs divided into four large sections from training aimed at achieving: Group integration, basic principles of administration, development of the organizational culture of the company, and the strategy to break into markets through marketing, in the second phase the group learn the basics about the culture of quality, new product development and management of knowledge

Technological improvement is being carried out gradually through innovation in techniques of harvest of honey, use of wooden boxes whose efficiency is validated with the traditional use of the mud pots.



Photo 2 Totonaca traditional clay pot with stingless bee swarm. Source authors



Photo 3: Experimentalmeliponaryusingwooden boxes. Source authors

The economic improvement is not yet quantifiable since new harvests of honey still not carried out, that the period of adaptation of insects to the boxes has been slow and delayed the harvest period.

#### **5. FINAL COMMENTS**

- The meliponicultura is a promising activity to develop among rural families in the region of Totonaca.
- You need a strong impetus to establish new units of production and a very committed work of the agents of change.
- As a generator of income and jobs it is very attractive because it can be carried by the Totonaca without altering their forms of production.
- Benefiting the conservation of Habitat and the identity of this ethnic group in danger of disappearing.
- Indigenous communities require the creation of new forms of organization, enabling them to integrate into the dynamics of today's markets.
- These new companies should be preserving the principles of ethics and sustainability, to keep the cohesion and conservation of these groups.
- New forms of production and technological innovation should be respecting organizational culture and values of the subjects of change.
- Any action conducive to the peasant communities must include a strategy according to their culture and worldview to facilitate its misappropriation

## **References**

- Abravanel, J. 1992 *Cultura Organizacional*. Colombia: Editorial Legis.
- Acevedo R, Delgado J. 2007. *Los bancos de desarrollo agrícola aparente de miel de abeja 1990-2005* Coordinación General de Ganadería.
- Arce B, MartínezE, 2007 A. *De lo Global a lo Nacional: Propuesta para posicionar a las empresas rurales conservando la diversidad biológica y cultural*. Universidad de Málaga España: Eumed.net.
- Arce B, MartínezE2007 B. *Las Culturas Organizativas y de calidad como elementos básicos en la transformación de las empresas rurales hacia la competitividad* 5: 143-150.
- Arce B, 2008. *Modelo de cambio organizacional para la creación de pequeñas y medianas empresas de productos no tradicionales*. Tesis presentada al grado científico de Doctor en Ciencias Técnicas Instituto Superior Politécnico "José Antonio Echeverría" Facultad de Ingeniería Industrial Departamento de Matemática Aplicada.
- Badia A, Bellido S, 1999 *Técnicas para la Gestión de la Calidad: Tecnos*.
- Basagoiti M, Bru P, Hernán M, 1995 *Investigación-Acción Participativa con los jóvenes de Pradolongo, en Métodos de Investigación Social con los Movimientos Sociales para el Desarrollo Local*. Madrid: Ed. Red Cims.
- Bilancio G, 2000. *Lo esencial en la teoría del conflicto en Portal de los Recursos Humanos*. Buenos Aires, Argentina.
- Braun R, Cervellini J, 2006. *Aprendizaje situado. Una metodología para la enseñanza de adultos en la universidad*. Facultad de Agronomía, UNLPam. Santa Rosa, La Pampa, Argentina.
- Brooks, E. 1980. *Organizational Change The Managerial Dilemma*. London: The MacMillan Press Ltd.
- Bueno E, 2002. *Enfoques principales y tendencias en Dirección del Conocimiento Knowledge Management: En Gestión del conocimiento, desarrollos teóricos y aplicaciones*. Madrid, España: Editorial la Coria Césares.
- Bueno E, 2007. *Organización de empresas: estructuras, procesos y Modelos*. Madrid, España: Ed. Madrid.
- Bustelo, P. *Resultados, interpretaciones y enseñanzas de la reforma económica china (1978-1998)* [<http://www.ucm.es/info/eid/pb/china98.pdf>. 1998]
- Bustos C, 2007. *El desarrollo de competencias en dirección estratégica a través del aprendizaje cooperativo*. España: Universidad de Córdoba.
- Butterfield,G, 1996. *Desarrollo organizacional e inteligencia Organizacional. Organizaciones transnacionales (las influencias transculturales)*. Revista del Instituto Argentino de Ejecutivos de Finanzas. 123.
- Calves S, 2005. *El cambio en la organización*, Centro de Estudios de Administración Pública Universidad de la Habana.

- Calves S, 2007. Cadenas de Valor. Profesor Titular de la Universidad de la Habana 2007.
- Calves S, Calderón L, 2007. Métodos de trabajo creativo en grupos. Universidad de la Habana.
- Chiavenato I, 2007. Gestión Del Talento Humano. Ed. Prentice Hall.
- CNA de miel de abeja 2007. Estadísticas Estimación del consumo nacional.
- Cornejo A, 2007. Complejidad y Caos Guía para la administración del siglo XXI. Universidad de Málaga España: eumed.net.
- Cortese A, Gaynor B, 2004. Modelos de cambio Organizacional en World Congress de D. O. Buenos Aires, Argentina.
- Cuesta A. 2002. Gestión del conocimiento análisis y proyección de los recursos humanos. Facultad de Ingeniería Industrial Universidad tecnológica de la Habana (ISPJAE). Cuba.
- Cunningham W. 1992. Control Self- Assessment Workshop THE University of Texas System.
- D' Iribarne P. 2002. Una gestión moderna o arraigada a la cultura mexicana. Gestión y Política pública 11:187-213
- D' Iribarne P. 2004, Lo universal y lo cultural en el funcionamiento de las organizaciones. Revista \ Iztapalapa, México. 55.
- Dardon J, EnríquezE. 2008. Caracterización fisicoquímica y antimicrobiana de la miel de nueve especies de abejas sin aguijón (Meliponini) de Guatemala. *INCI*, ISSN 0378-1844, vol.33, no.12: 916-922.
- Del Ángel A, Mendoza M, 2002. Cultura y sobrevivencia familiar en la etnia Totonaca a. 32 Universidad Nacional Autónoma del Estado de México.
- Espinoza N, Caracterización de la flora Apícola visitada por cinco especies de abejas sin aguijón en el meliponario Sinaí, aldea San Antonio las Flores, Papajita, San Marcos, Universidad de San Carlos de Guatemala Facultad de Agronomía de Investigaciones Agronómica.
- Fichman M, 1991 Lunas de miel y la responsabilidad de la adolescencia: Una nueva perspectiva en dependencia de la duración en relaciones sociales y de organización. Academia de revisión de la gerencia. USA.
- Gatman, Contreras. 2002. Ecología Organizacional: Documento Disparador. Centro de Estudios Organizacionales del Instituto de Investigaciones administrativas de la Fac. de Ciencias Económicas- UBA.
- Guizar R, 1998. Desarrollo Organizacional. Principios y Aplicaciones. México: McGraw-Hill.
- Kouzmine V, 2000. Organización de las Naciones Unidas. División de Comercio Internacional y Financiamiento para el Desarrollo. Exportaciones no tradicionales latinoamericanas. Un enfoque no tradicional, 7-9.

Martínez E, Rivera R, 2005. Desarrollo de modelos industriales cadena de valor. Universidad Autónoma del Noreste Coahuila.

Moriello, S. 2003. Sistemas Complejos, caos y vida artificial, Red Científica.