

## **Análisis de personalidad emprendedora en agricultores del municipio de Bahía de Banderas Nayarit**

***Analysis of entrepreneurial personality traits in farmers from the municipality of Bahía de Banderas Nayarit***

***Análise de traços de personalidade empreendedora em agricultores do município de Bahía de Banderas Nayarit***

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### **Resumen**

En México, la agroindustria enfrenta problemas de baja productividad y carece de herramientas para elaborar presupuestos y costos de producción. Además, los agricultores carecen de una visión empresarial y no tienen actitudes ni personalidad emprendedora, lo que dificulta el desarrollo de un modelo de negocios. El objetivo de la investigación fue evaluar los rasgos de personalidad emprendedora en agricultores mediante un estudio cualitativo, transversal y descriptivo. Como resultado, se encontró que los rasgos de personalidad emprendedora con puntajes más altos son autoeficacia, autonomía, locus de control y optimismo. Se observaron diferencias en los rasgos de innovación y motivación por logro. De manera similar, los rasgos con puntajes más bajos, es decir, los que no se destacaron, son: innovación, que implica que el emprendedor crea ideas originales, apoya nuevas ideas, está dispuesto a aprender nuevas formas de trabajo e incorpora ideas nuevas en sus tareas; y

tolerancia al estrés, que implica que el emprendedor pueda controlar sus emociones y concentrarse en situaciones estresantes, además de trabajar bajo presión.

**Palabras clave:** Personalidad emprendedora, agricultor, sector primario.

## Abstract

In Mexico, agribusiness faces problems of low productivity, and they also do not have tools for budgeting and production costs. In this sense, farmers lack an entrepreneurial vision and do not have entrepreneurial attitudes or personality, which makes it difficult to develop a business model. The objective of the research was to evaluate the traits of the entrepreneurial personality in farmers, through a study with a qualitative, cross-sectional approach, of a descriptive type. As a result, it was obtained that the entrepreneurial personality traits with the highest scores are Self-efficiency, Autonomy, Locus of control, optimism, the differences found are in the traits of Innovation and Motivation to achieve. Similarly, the traits with the lowest scores, that is, those that do not appear, are: innovation, this trait consists of the entrepreneur creating original ideas, supporting new ideas, being willing to learn new ways of working and incorporating new ideas. in their tasks; stress tolerance, this trait is that the entrepreneur has control of his emotions, and is able to concentrate in stressful situations, as well as work under pressure.

**Keywords:** Enterprising personality, farmer, primary sector.

## Resumo

No México, a agroindústria enfrenta problemas de baixa produtividade, além de não contar com ferramentas para elaboração de pressupostos e custos de produção. Nesse sentido, os agricultores carecem de uma visão empresarial e não têm atitudes nem personalidade empreendedora, o que dificulta o desenvolvimento de um modelo de negócios. O objetivo da investigação foi avaliar os rasgos da personalidade empreendedora no campo, por meio de um estudo com abordagem qualitativa, transversal, de tipo descritivo. Como resultado obteve-se que os rasgos de personalidade empreendedora com pontuações mais altas são autoeficiência, autonomia, locus de controle e otimismo. As diferenças encontradas estão nos rasgos de Inovação e Motivação ao logro. De maneira semelhante, los rasgos con puntajes más bajos, es decir, los que no figuran, son: innovación, este rasgo consiste en que el emprendedor crea ideas originales, apoya ideas novas, está dispuesto a aprender novas formas de trabajo e

incorpora ideias novas em su tarefas; tolerância ao estresse, este rasgo consiste em que o empreendedor tem controle de suas emoções, e é capaz de se concentrar em situações estrestas, além de trabalhar em baixa pressão.

**Palavras-chave:** Personalidade empreendedora, agricultor, setor primário.

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## Introduction

All economic sectors contribute to the growth of a country; however, the primary sector, and specifically agriculture, plays a unique role in development in all aspects of humanity, including social and environmental. Agricultural activities range from food production, as well as all the actors involved throughout the production chain. It begins with the same producer, goes through the distributor and ends with the marketer to reach the end customer. It even covers agribusiness, which generates added value to the market in which it operates, seeking national and international competitiveness and contributing to the Gross Domestic Product (GDP) (Galván, 2022).

Pérez (2021) argues that the primary objective of agriculture is to eliminate poverty, achieve food security for the entire population and promote organic production as a form of sustainable development. He emphasizes contributing to the food security of poor rural families and those in extreme hunger, since agriculture generates food, savings, and income (Jaramillo, 2018).

In Mexico, the primary sector, according to the National Institute of Statistics and Geography (INEGI, 2019), contemplates the activities of agriculture, breeding and exploitation of animals, forestry, fishing and hunting, and contributes 3.1% of the total economy. from the country. If we also consider the agricultural sector, which includes, in addition to primary activity, transformation activities and production inputs and services, this sector represents approximately 7.5% of the economy (Graziano, 2019).

On the other hand, the agri-food policy developed by the Mexican government prioritizes the economic well-being of all people. In this policy, promoted at the same time by the Food and Agriculture Organization of the United Nations (FAO, 2020), the relevance of small and medium-scale producers stands out, who constitute 85% of the total number of agri-food producers. , generate more than 60% of employment and preserve agrobiodiversity. This has allowed the continued availability of food during 2020. The Agro-Food and Fisheries Information Service (SIAP, 2021) of the Ministry of Agriculture and Rural Development

(SADER) forecasts a 3.2% increase in the production of this sector compared to the previous last year.

As for the agricultural subsector in 2021, the planted area reached 21 million 584 thousand hectares. Mexican farmers achieved a volume of 268.4 million tons, which represents an increase of 1.3% compared to the previous year (SIAP, 2021). This makes this subsector the most important within the primary sector. The increase in volume is due to a higher harvest of grains and oilseeds, industrial products and fodder. Regarding employment, according to figures from the Secretariat of Government of Mexico (SEGOB, 2022), agricultural activities provided 5 million 407 thousand jobs in the first quarter of 2022. This subsector represents 83.4% of all sources of employment in the set of agricultural activities. Of all the production units of the country's primary sector, 3.2 million, that is, 86% of them, are dedicated to agricultural activities. The main characteristic of these economic entities is that they are mostly small and medium-sized producers located at the beginning of the production chain. However, they present low productivity due to their limited access to financial services, technical assistance, Information and Communication Technologies (ICT) and technological innovations (Graziano, 2019).

In terms of agricultural crop production, Mexico ranks 11th worldwide. Its main products include avocado, tomato, red fruits, chili, walnut, cucumber, lemon, onion, pumpkin, wheat and corn (Bustamante, 2020). This makes Mexico an important country in the production of food for the world, with a value that amounts to \$692,828,564.09 pesos (SIAP, 2021).

One of the states with the highest production in the agricultural sector is Nayarit, which is bordered to the north by Sinaloa and Durango, to the east by Durango, Zacatecas and Jalisco, and to the south by Jalisco and the Pacific Ocean. It occupies the 29th place at the national level in terms of its number of inhabitants (INEGI, 2019).

Likewise, the economy of Nayarit depends to a large extent on the productive activities of the primary sector, which represents approximately 25% of the total GDP and employs 40% of its economically active population (Government of Bahía de Banderas, 2018). Table one shows the value of agricultural production in the state.

**Table 1.** Area and value of agricultural production in Nayarit 2021

State	Area		Production value
	Planted	Harvested	
Nayarit	277 484.34	254 973.34	\$11 309 840.36

Source: SIAP (2021).

Within this state, the municipality of Bahía de Banderas has the presence of agricultural activities thanks to the favorable conditions of the terrain, the climate, the workforce and the existing infrastructure, especially in the region of the Banderas Valley. Approximately 60% of the agricultural land is irrigated and wet in nature, while the rest is cultivated on a temporary basis. The main crops in the area include corn, beans, sorghum, tobacco, and fruit trees (Government of Bahía de Banderas, 2018). Below, table two presents agricultural production and its value in the municipality of Bahía de Banderas.

**Table 2.** Agricultural production in Bahía de Banderas Nayarit for the year 2020.

Crop	Performance	Production value in Mexican pesos.
Corn	13.41	198 360.72
Beans	2.06	2 437 600
Corn grain	5.32	25 470 305.82
Cucumber	27.3	1 266 762.67
Watermelon	12.18	32 248 433.9
Beans	1.23	543 300.01
Forage sorghum in green	27.59	547 523.55
Arroz palay	5.22	9 415 799.46
Cucumber	9.61	2 54 254.47
Corn grain	4.11	4 964 501.88
Forage sorgum in green	30.77	1 247 446.57
Avocado	6.33	196 138.34
Lemon	9.08	245 429.19
Mango	11.92	13 107 544.15
Nopalitos	9.14	2 66 961.12
Papaya	17.39	424 415.62
Pineapple	25.85	72 52106.4

Banana	12.96	980 131.36
Lemon	8.44	166 985.06
Mango	9.39	14 502 066.14
Banana	11.33	77 781.81

Source: Elaboration based on open data (SIAP, 2021).

Paradoxically, despite the benefits of the primary sector for Nayarit, in the case of the agricultural sector, the Autonomous University of Nayarit (UAN, 2021) pointed out that it is in the same situation as the rest of the country, with a long history of poverty. among its inhabitants, especially in rural areas. In addition, there is low productivity derived from the existing agricultural systems, lack of innovation and unskilled labor, among other complexities that affect the sector.

Agriculture and food are strategic sectors for any country that seeks to generate economic development conditions for its inhabitants. However, it is recognized that primary activities face difficulties in achieving a high quality production that can supply the entire market, and in rural areas this is especially important for their livelihood. The problems they face are diverse, such as market fluctuations, little impact from agricultural policies, and low remuneration, among others. In this context, Pérez (2021) commented that one of the main challenges in agricultural activities is climate change, which affects planting cycles and, therefore, farmers' production.

On the other hand, Rincón et al., (2004) mentioned that the problems of the primary sector are related to marketing. The producers who have less participation in the marketing process are precisely those who experience problems in this regard. Mainly, they are affected by the low prices they receive for their products, which sometimes do not fully cover production costs. In addition, the strong presence of intermediaries, who obtain the highest profits in the sector, makes prices more expensive for the final consumer and leaves the producer at a disadvantage. Similarly, recent programs aimed at small producers are fragmented and ultimately benefit large agri-food companies, some of them transnational (Ocón, 2016), allocating most of the public budget to producers with production potential, that is, large owners and agro-industrial companies.

Vargas (2018) agrees with Pérez (2021) in that the problems of agricultural activity are the result of climate change, biological processes and market fluctuations, which affect production, crop yields, as well as investments and income. The National Agricultural Survey (ENA, 2020) also identifies a series of problems in this sector that hinder its progress and



competitiveness, such as high costs of inputs and services, difficulty in marketing due to low prices, lack of training and technical assistance, aging, illness or disability of the producer, and excessive intermediation that makes commercialization difficult.

Adding to the above, another problem is the level of technology and mechanization used in agricultural activities. This is due to the lack of machinery, tools and transportation equipment, since most of the producers do not have the economic resources to acquire them due to their situation of poverty or lack of qualification to obtain the necessary loans to acquire the necessary equipment. This has a direct impact on production, since it has been found that the costs of mechanized labor represent the third highest and most important production cost structure per hectare (Garay, 2018).

In addition to the lack of machinery and work equipment, there is the problem of scarcity of financial resources and the increase in prices of agricultural production inputs, such as seeds and improved plants, fertilizers and pesticides. There is also a lack of availability of information and technology for small producers, which causes the abandonment of the field (Mendoza, 2018).

In the administrative field, agricultural economic units face problems such as low proactivity, resource management, integrity, problem solving and decision making (Camacho, 2018). In addition, they lack tools to prepare budgets and production costs, and they do not use computer programs. Producers also lack business vision, and those in charge of these businesses lack managerial skills for data management and decision-making. Bad decisions affect production logic and overall strategy. Therefore, small companies in this sector lack effective strategies to compete in the market. (González, 2019).

In addition, little attention is paid to the development of entrepreneurial skills that allow proper management of an agricultural enterprise. This would contribute to solving problems such as low income, limited access to employment and low competitiveness in the agricultural sector. Educational and socioeconomic policies do not sufficiently support this situation on the part of the state. Entrepreneurial education in the agricultural sector is limited, and young workers in the field lack educational instruction on business management, which leads them to enter the informal economy and have a lack of vision in the field (Canales, 2017 ; Merino, 2022).

Adding to this problem, there are also those related to the advanced age of the farmer, since many of them feel comfortable in their comfort zone and their descendants are not interested in continuing with the business, which makes entrepreneurship difficult (González, 2019).

In addition to the lack of management skills, the personality of the Mexican entrepreneur is added, including the agricultural sector in the agribusiness foundation. Burbano (2019) comments that entrepreneurs do not have entrepreneurial attitudes or personality, since they lack the necessary qualities to develop a business model in most cases. Villafañe (2021) points out that the entrepreneur lacks sufficient personality and attitude to face the risks and uncertainties that being an entrepreneur entails. Instead, an entrepreneur must work to combat aspects such as stress tolerance and risk appetite (Segura, 2018).

Given all the previously mentioned problems that agribusinesses face, it is necessary to involve more and more aspects of entrepreneurship with adequate training, technology and innovative tools to encourage young people to invest in economically profitable and sustainable models, taking advantage of the experience of leaders in the market. Likewise, work must be done in conjunction with public policies that promote the development of agribusiness. In this sense, the entrepreneurial personality will always be important for the success of any business. Therefore, the objective of this study is to evaluate the traits of the entrepreneurial personality in farmers from the municipality of Bahía de Banderas, Nayarit, to design strategies that strengthen agribusiness.

### **Theoretical support**

Actually, undertaking has an action character that is linked to the central features of the administration. Therefore, the success of undertaking depends exclusively on the skills and sense of smell (Urcola, 2019) of people. According to Millán (2021), the entrepreneur is an individual capable of discovering opportunities, appreciating them at their fair value, and gathering and organizing the necessary resources to take advantage of said opportunities. In essence, he is an innovator who disrupts the traditional way of doing things and established routines. He is a person with leadership skills and a knack for identifying the best course of action. He has the ability to see things in a unique way, he is a creative (Basurto, 2020).

For Paz (2020), an entrepreneur is not just someone who develops a company, but also takes advantage of opportunities to create spaces for constant innovation, both inside and outside of economic life. However, there must be a balance between the venture and the development of the community in which it is located, so that it is a success for society and, at the same time, generates economic benefits for him, his family and his employees. . He is that person capable of innovating, understood as the ability to generate goods and services in a different, systematic, ethical, committed and effective way (Paredes, 2020).



Similarly, Murtagh (2017, cited in Arias and Ribe, 2019) comments that social entrepreneurs stand out as heroes in various roles, since they solve community problems. They try to identify gaps and opportunities to grow the business from an altruistic perspective, they not only hope to obtain personal gain, but it is important for them that the communities participate in all the benefits and activities that promote the business, causing economic and social development for all.

From the perspective of the United Nations Food Organization (FAO, 2022), entrepreneurs in the primary and social sectors must have skills to catalyze collective leadership in others, to promote shared decision-making in the community, as well as how to facilitate the exchange and learning between the different disciplines that support these agricultural activities. In addition, they must provide incentives for collaboration among all interested parties, work in networks and associations throughout the production chain that promote added value to farm products. Therefore, they must create high-impact companies with interactive spaces where people who work in this sector develop as human beings and professionals. Entrepreneurs must go beyond their own ideas and benefits.

In the words of Salazar (2019), innovation is an essential characteristic for entrepreneurs, since it allows them to detect ideas or projects and, at the same time, promise results with different characteristics from their competition or solve a complication in the market.

Another characteristic apart from innovation in entrepreneurs is having autonomy, which means having the power to do what they really believe at the right time. It is important for new entrepreneurs to experience entrepreneurial self-efficacy, as it helps them perform better in uncertain environments by compensating for their actual shortfalls in experience (Brandle, Berger, & Kuckertz, 2018). Likewise, they must analyze all the available information and consider the appropriate use of the information to generate strategies that allow their venture to be a success.

For the entrepreneurial personality, without a doubt, self-confidence is a trait that cannot be missing in the future entrepreneur. This value is positive, that is, the individual has the security of his resources and considers all the opportunities to expand his talents and abilities, because owning his own business requires self-confidence to strengthen said capacities, that is, he does not have to despair when things do not work out on the first try (Barajas & Ramírez, 2020).

According to Ramos et al. (2022), responsibility is an intrinsic value of an entrepreneur, that is, it is found in the thought of each individual and gives the opportunity to direct, reflect,

guide and evaluate the effect of his actions always in moral matters. Table number three lists the characteristics of an entrepreneur.

**Table 3.** Characteristics of entrepreneurs

Jácome (2018)	Creativity and innovation. Self-confidence in abilities. Risky in their proposals and actions. Nose for opportunities. Quality and efficiency. Persistent in their goals. Planning. Evaluation based on objectives. Teamwork.
Paredes (2020)	Commitment. Initiative. Resolution. Creativity and innovation. Optimism. Know how to listen Failure tolerance. Vision. .
Adie (2021)	Risk assumption. Bargaining power. Self-confidence. Flexibility and adapt to change. Innovation and creativity. Team leadership Working capacity.

Source: Information based on Jácome (2018), Paredes (2020), Adie (2021).

In table number three, Jácome (2018) identifies as part of the entrepreneurial personality the characteristics of creativity and innovation, self-confidence in abilities, risk taking in their proposals and actions, nose for opportunities, persistent in their objectives, punctuality and commitment, planning, evaluation based on objectives and teamwork. While Paredes (2020) argues that an entrepreneur must also have initiative, vision and tolerance for failure. On the other hand, Adie (2021) adds flexibility and the ability to adapt to change, negotiation skills and risk-taking as part of the entrepreneurial personality.

Every person who wants to start a business has an innate initiative on their own, however, the preparation to develop a business career is achieved through courses, diplomas, business plans, conferences, stays, practices, among others. This helps create the academic-business environment to encourage the creation of companies (Ovalles, 2018).

Entrepreneurs are the basis of business development in any country; their drive is necessary to create innovative business units for the market. In the primary sector, they are a fundamental part of competitiveness. Having trained farmers is essential for the achievement of Mexico's economic objectives. According to the Royal Spanish Academy (RAE, 2022), a farmer is a person who is dedicated to cultivating or tilling the land and exploits one or more agricultural units on their own account, and does so as their usual profession (Leiva, 2020). Regarding the Mexican farmer, the Law of Agricultural, Rural and Sustainable Development of the Federal District of the Government of Mexico (2021) defines it as "people of the land, men and women who have a direct and special relationship with the land and nature through the production of food and other agricultural products, who make the land their own" (p. 2). For all workers in the primary sector, it is necessary to apply tools and methods that contribute to their development, including entrepreneurship.

## Materials and Method

This research was carried out with a qualitative, cross-sectional and descriptive approach, since qualitative data was collected in the same instrument and time. The design was non-experimental, since it is not intended to manipulate the variables, but to study them as they appear in the given context. The sampling was simple random, that is, any farmer could answer the instrument. The participants were 120 farmers, 72 men and 48 women.

The instrument used was the Computerized Adaptive Test questionnaire, prepared and validated by Pedrosa (2015), with adequate psychometric properties and a mainly one-dimensional structure, confirmed by exploratory factor analysis. The questionnaire consists of questions on a Likert scale with response options: Strongly disagree, Disagree, Neither agree nor disagree, Agree and Strongly agree, with the purpose of collecting qualitative data. Data collection was carried out through the questionnaire in the field work with interviews and its analysis was carried out using the SPSS program. However, since it was used in another geographical location, it was submitted to Alpha's one-dimensional reliability analysis, showing coefficients above .80 (see table four).

**Table 4.** One-dimensional reliability analysis

Reliability statistics		
	Alfa de Cronbach	N of elements
Self-efficacy	0.924	6
Autonomy	0.915	6
Innovatios	0.851	3
Control Locus	0.833	5
Achievement Motivation	0.816	4
Optimism	0.828	3
Stress tolerance	0.805	3
Risk taking	0.913	7

Source: self-made

## Results

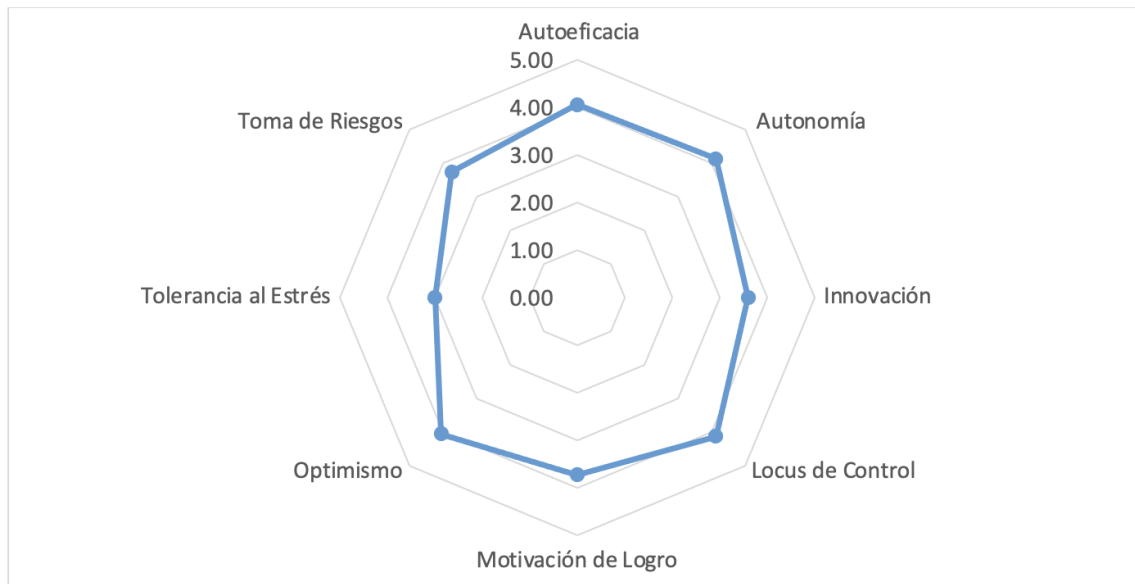
The results of the entrepreneurial personality traits of the farmers in the municipality of Bahía de Banderas were evaluated on a scale from 1 to 5, with 5 being the highest score for each trait and 1 being the lowest. The traits that obtained the highest scores are the Locus of Control, Autonomy, Self-efficacy and Optimism indices, with scores of 4.13, 4.13, 4.06 and 4.06 respectively (see figure one). However, minimum scores of 1 were obtained in the case of the stress tolerance index and 2 in the self-efficacy, autonomy, achievement motivation and risk taking indices (see table five).

**Table 5.** Farmer Entrepreneurial Personality Traits

	Average	Minimum	Maximum
Self-efficacy	4.06	2,00	5,00
Autonomy	4.13	2,00	5,00
Innovation	3.60	3,00	4,00
Control Locus	4.13	3,00	5,00
Achievement Motivation	3.73	2,00	4,00
Optimism	4.06	3,00	5,00
Stres tolerance	3.00	1,00	4,00
Risk taking	3.73	2,00	5,00

Source: self-made

**Figure 1** Entrepreneurial Personality Traits



Source: self-made

An analysis of the entrepreneurial personality was carried out in the women farmers. In this analysis, the traits that obtained the highest scores were Locus of control, with a score of 4, while the other traits obtained an average of 3.33. Only in the risk-taking trait was a low index of 2.67 obtained, as shown in the following table six.

**Table 6.** Entrepreneurial personality traits of women farmers

	Average	Minimum	Maximum
Self-efficacy	3.00	2	4
Autonomy	3.33	2	5
Innovation	3.33	3	4
Control locus	4.00	4	4
Achievement Motivation	3.33	2	5
Optimism	3.33	3	4
Stress tolerance	3.00	3	3
Risk taking	2.67	2	3

Source: self made

Regarding the analysis of the entrepreneurial personality of the male farmers, it was found that the traits that obtained the highest scores were Self-efficacy and Autonomy, both with an average of 4.33. Likewise, a high score was observed in optimism, with 4.25, followed by Locus of control, with a score of 4.17, and risk taking, with a score of 4. The other traits obtained an average below 4, as shown in table seven.

**Table 7.** Entrepreneurial personality traits of male farmers

	Average	Minimum	Maximum
Self efficacy	4.33	4	5
Autonomy	4.33	3	5
Innovación	3.67	3	5
Control locis	4.17	4	5
Achievement motivation	3.83	3	5
Optimism	4.25	3	5
Stress tolerance	3.00	1	4
Risk taking	4.00	2	5

Source: self made

## Discussion

The entrepreneurial personality traits that are representative and with higher factor loads, according to Pedrosa (2015), who created the evaluation instrument, do not differ much from those found in farmers from the municipality of Bahía de Banderas. That is, there are coincidences in the traits with the highest scores, such as Self-efficacy, Autonomy, Locus of control and Optimism. However, differences were found in the Innovation and Achievement Motivation traits. There is also agreement on traits with low but important scores, such as stress tolerance and risk taking.

In general terms and according to the results found, the eight traits showed acceptable coefficients and should be considered when evaluating the entrepreneurial personality.

## Conclusions

In conclusion, farmers from the municipality of Bahía de Banderas show entrepreneurial personality traits with higher scores in the following aspects: Autonomy, which implies the ability to organize work time, make decisions and set goals; Locus of control, which refers to being aware that success depends on one's own effort and taking responsibility for mistakes; Self-efficacy, which involves taking advantage of resources and opportunities, believing in the ability to overcome challenges and deal with problems; and Optimism, which implies believing in achieving goals, seeing challenges as opportunities, and finding positive aspects even in difficult situations. In addition, high achievement motivation, willingness to assume responsibility and extra effort to improve, as well as a willingness to take risks in search of valuable rewards were observed.



In this sense, the entrepreneurial personality traits of the farmers with the lowest scores, that is, those that do not appear and prevail, are: Innovation. This trait is that the entrepreneur creates original ideas, supports new ideas, is willing to learn new ways of working, and incorporates new ideas into their tasks. Stress tolerance. This trait consists of the entrepreneur having control of his emotions and being able to concentrate in stressful situations and work under pressure.

### **Future lines of research**

It is recommended to continue investigating the entrepreneurial personality traits to generate models that contain actions that strengthen them and continue promoting entrepreneurial activities not only in universities, but also in dependencies of the different levels of government.

Lastly, it would also be worth investigating and resuming good entrepreneurial practices carried out by farmers, which will serve as a starting point for new action plans and lines of research.

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