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METHODOLOGICAL PROPOSAL WITH DESIGN THINKING TO PROMOTE PEASANT IDENTITY AND SUSTAINABILITY OF AGRICULTURAL PRODUCTION

Propuesta Metodológica con Design Thinking para Fomentar la Identidad Campesina y Sustentabilidad de Producción agrícola
Proposta Metodológica com Design Thinking para Promover a Identidade dos Agricultores e a Sustentabilidade da Produção Agrícola

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ABSTRACT

The design methodology based on the Design Thinking approach for the rescue of the peasant identity in Colombia, not only addresses the challenges linked to the peasant identity, but also establishes a solid foundation for sustainable and equitable development in the country, which is aligned with the following SDGs: zero hunger, food security, decent employment and sustainability, offering a participatory, comprehensive and sustainable approach to address the challenges associated with the peasant identity and thus contribute to the achievement of sustainable and equitable development in the country. This article focuses on proposing a methodology for the promotion of peasant identity in young people, which rescues the relevance and empowerment, contributing to the return to the Colombian countryside and the sustainability of production, based on Design Thinking, to promote skills and design thinking that promote creativity and competitiveness in agricultural sectors, their contribution to the fabric as microentrepreneurs and to the SDGs. The research is applied in terms of its purpose and mixed in terms of its data source, with an explanatory descriptive scope and a triangular approach that brings together literature review and application of qualitative and quantitative techniques.

Keywords: Education, Equity, Strategy, Identity, Innovation, Methodology

RESUMEN

La metodología de diseño basada en el enfoque del Design Thinking para el rescate de la identidad campesina en Colombia, no solo aborda los retos vinculados a la identidad campesina, sino que también establece una base sólida para el desarrollo sostenible y equitativo en el país, la cual este alineada con los siguientes ODS: hambre cero, seguridad alimentaria, empleo digno y sostenibilidad, ofreciendo un enfoque participativo, integral y sostenible para abordar los desafíos asociados con la identidad campesina y contribuir así al logro de un desarrollo sostenible y equitativo en el país. Este artículo se enfoca en proponer una metodología para el fomento de la identidad campesina en los jóvenes, que rescate la pertinencia y empoderamiento, que contribuya al retorno al campo colombiano y la sustentabilidad de la producción, tomando como base el Design Thinking, para promover las habilidades y pensamiento de diseño, que impulsen la creatividad y competitividad en sectores agrícolas, su contribución al tejido como microempresarios y a los ODS. Se acude a una investigación aplicada en función de su propósito y mixta en función de su fuente de datos, con un alcance descriptivo explicativo y un enfoque triangular que reúne revisión de literatura y aplicación de técnicas cualitativas y cuantitativas.
Palabras claves: Educación, Equidad, Estrategia, Identidad, Innovación, Metodología

RESUMO

A metodologia de design baseada na abordagem do Design Thinking para o resgate da identidade camponesa na Colômbia, não só aborda os desafios ligados à identidade camponesa, mas também estabelece uma base sólida para o desenvolvimento sustentável e equitativo no país, que está alinhado com os seguintes ODS: fome zero, segurança alimentar, emprego decente e sustentabilidade, oferecendo uma abordagem participativa, abrangente e sustentável para enfrentar os desafios associados à identidade camponesa e, assim, contribuir para a realização do desenvolvimento sustentável e equitativo no país. Este artigo centra-se na proposta de uma metodologia para a promoção da identidade camponesa nos jovens, que resgata a relevância e o empoderamento, contribuindo para o retorno ao campo colombiano e a sustentabilidade da produção, com base no Design Thinking, para promover competências e pensamento de design, para impulsionar a criatividade e a competitividade nos sectores agrícolas, a sua contribuição para o tecido como microempresários e para os ODS. A investigação é aplicada quanto ao seu objetivo e mista quanto à sua fonte de dados, com um âmbito descritivo explicativo e uma abordagem triangular que reúne a revisão da literatura e a aplicação de técnicas qualitativas e quantitativas.

Palavras-chave: Educação, Equidade, Estratégia, Identidade, Inovação, Metodologia

INTRODUCTION

The methodology for strengthening the rural identity from Design Thinking, must contemplate creative solutions, adjusted to the needs of the Colombian countryside, it must also be aligned with the needs of the population according to their educational level, which is mostly primary and high school and in some cases technicians and technologists, Therefore, a simple and easy to understand language should be used, if the use of new technologies is considered, it should be immersed in a friendly way with such technology, it should be transferable to all regions of the territory, it should adapt to the difficulties and the absence of means or resources, it should aim to take advantage of ancestral knowledge which can be disseminated among regions. The adaptability and scalability of the methodology, allowing its application in different contexts and regions

of Colombia, is aligned with SDG 17 (Partnerships to achieve the Goals), through collaboration and cooperation between different actors involved in the rescue of the peasant identity.

After the crisis experienced by the agricultural sector during the COVID-19 pandemic and the current war in Northern Europe, it is necessary to manage innovative projects that allow agricultural producers to create value and be more competitive, without ignoring their contribution to the SDGs. Figures from the Superintendency of Companies, as of September 2021, reveal that close to 1,000 companies have undergone insolvency proceedings. The figure could climb to 3,000 between 2020 and 2021, due to the economic crisis, according to this entity Londoño [1]. The whole world has been paralyzed by an invisible enemy, which emerged during a series of discussions regarding its origin. In a short period of time, Covid-19 came to affect all processes related to the production of goods and services, as well as the commercial processes of all countries, generating economic crises involving social and economic indicators Chaguay et al [2]. In addition, the economic crisis generated by the high cost of fuel and inflation that leads to price increases, especially in agricultural inputs, which influence agro-industrial production, also adds to this.

One of the challenges for the rural communities, regions or municipalities, is to generate the return of the young technologist or technician, strengthening the labor force in the regions, that considers, as a priority to return to the field to support their families, the opportunity not to lose its essence and to make viable the possibility of developing projects together with clusters or interest groups for the strengthening of their region or municipality, where the knowledge obtained is incorporated and can contribute with them to the sustainability and improvement of production that consequently generates benefits to their community; Therefore, it is considered of great importance to involve young farmers in entrepreneurship and business activities, so that they take action to make their ideas viable to identify specific needs in the community, to establish projects or initiatives that lead to empower young people and develop awareness of the importance of farmers and their work in society, so that they consider field work as a microenterprise with a tendency to be a large company, which generates dignity to the work of the farmer CEPAL [3]. With the above, this document seeks to propose a methodology for the promotion of peasant identity in young people, that rescues relevance and empowerment, that contributes to the return to the Colombian countryside and the sustainability of production, based on Design Thinking, where labor formalization is encouraged, that establishes welfare programs for human talent that consider social security as paramount and that denotes a high commitment to employee growth, which leads to generate strategic alliances that develop business models in order to avoid human exploitation, generating value chains to sustain Fair Trade. Also in response to the SDGs, according to Corredor et al. [4], the aim is to motivate agri-food production, in order to strengthen food security through value chains that generate high impact, according to Madrid [5], the great dilemma at the international level is the lack of production that leads to global shortages, with which a prospective approach must be generated on how to ensure that the young farmer relieves his parents and can give continuity to the work but based on dignity and entrepreneurship, with better

opportunities, leading to improved income and therefore the quality of life of young people, which promote the peasant culture as something altruistic and is reflected to other young people as a great work for the welfare of humanity Lor [6].

The current problem in the Colombian countryside is the migration of young people in search of opportunities. The loss of agricultural identity by the peasant population projects a future abandonment of the rural territory, causing, according to Schaller [7], an increase in migration to the urban territory, generating an uprooting of the territory and decreasing its production. Therefore, this project seeks to generate alternatives for young people to return to the countryside, with better conditions or with the vision of entrepreneurship, because according to Bautista et al. [8], it is necessary to carry out a real transformation of the countryside, with access to health, education and policies that provide better conditions for the farmer. Design Thinking has been applied in various fields and sectors, including sustainable rural development. Among the authors who have addressed this topic are Brown [9]; Mahmoud et al. [10] and Mora et al. [11], who propose it as a methodology for innovation and complex problem solving; Wrigley and Straker [12]; Dorst and Cross [13] and Liedtka [14], present a Design Thinking perspective focused on the development of creative solutions to ill-defined problems; Pigford et al. [15] and Prieto [16], who apply it in the development of solutions for the agricultural sector.

Well-designed and supported innovation methodologies can facilitate the transition to sustainable agricultural futures, which can follow different approaches and paradigms such as agroecology, place-based local food systems, vertical farming, bioeconomy, urban agriculture, and smart or digital agriculture. The application of Design Thinking in the field involves understanding the needs of farmers and generating innovative solutions that fit their needs and constraints. This methodology focuses on the user and the generation of solutions adapted to their needs, which makes it a valuable tool for the strengthening of the peasant identity and the promotion of agricultural production in the Colombian countryside.

Design Thinking is mainly based on designing creative solutions, from a scheme of challenges to be solved by those involved, with which it will be necessary to establish a series of problems, oriented to the territory and its difficulties, so that participants are trained to properly diagnose the common problems that arise in agricultural and peasant issues, Perez and Avendaño [17], emphasize that the path to collective empowerment will be commitment and responsibility, becoming agents of social trans-formation, since according to Kolb [18], the process of transforming experience leads to the creation of new knowledge, resulting from combining actions of perceiving and modifying experience, called experiential learning, which leads to alignment with the level of education of the participants; For Estrada [19], education will be the pillar to revitalize the agricultural activity, strengthening the identity of the place and the community's own love, generating with this added value, a benefit both socially and in terms of job opportunities. It will then be necessary to generate a simple language avoiding technicalities and foreign words, that considers the fundamentals, but incorporates a pleasant and colloquial language based on the search for solutions. Li and Zhan [20], refer to the fact that Design Thinking focuses attention first on the design of the solution and then on the final product, with teams from different disciplines and knowledge.

Quijano and León [21], state that the identity of an area or sector is a process that is constantly under construction, but, at the same time, it is susceptible to lose its essence if these changes are not redirected to benefit its culture and community.

The above assumes the use of new technologies in education and in the model that allows generating practical and creative solutions, on the other hand to involve the use of new technologies it is necessary to train the personnel previously so that they can be incorporated with the use of technology and above all not to lose the common thread for the achievement of the objective according to the applied technology, in other words that such technology is of applicability and generates results in the methodology without generating exclusions. For Pérez and Sánchez [22], the development of technologies has favored the emergence of new forms of social exclusion from different fronts and for various reasons, as well as the case of the regions it is necessary that the implementation of the methodology can be incorporated into the different territories that even with difficulty due to lack or scarcity of means as the case of technological ones. Therefore, a quality and differentiated education is required to generate a solid base that translates into human capital that contributes to community productivity, and that through practice and research on the subject is capable of teaching and transmitting what has been learned in the community.

Aldeanueva and Cervantes [23], should also be considered, since they mention that sustainability is not synonymous with sustainable development and a sustainable company will not only exist because of the recognition of environmental problems; it should strive for the optimization and better use of resources it should ensure good agricultural practices through the awareness of environmental care and that leads to environmental sustainability it should strengthen the peasant and agricultural identity that empowers the rooting of young people in their regions it should highlight the importance of the young farmer as an indispensable subject to society being a micro-entrepreneur of the countryside it should generate awareness of return to the region to promote economic development through entrepreneurship, The farmer must be concerned about innovating in their work so that the products have a differential, teaching the farmer how to apply design thinking in its different stages so that through different challenges they can reach creative solutions that are transformed into solutions for their own use of the community, strengthening the social fabric in the territory; according to Martinez [24] and Leal-Guerrero [25], this will provide the creation of value that generates welfare for the society directed to certain members of the society, in order to subsequently apply this methodology in the environment with the population of young farmers, first immersion workshops should be held for the community to present a variety of creative games that involve young farmers to motivate them to return to the countryside and their peasant identity, events should be scheduled in scenarios that rescue the confidence and security of those involved and that farmers feel more confident about their role in society, and should also generate diagnostic activities of involvement and empowerment to give way to action and to improve in permanent innovation.

There is evidence of the need to promote environmental, social and economic sustainability in rural areas, positions that have been put forward by Pretty [26] and García [27], who propose sustainable agriculture as a strategy for sustainable rural development; Altieri and Nicholls [28], who defend agroecology as an approach for

sustainability in agriculture; Rittel [29] and Lele and Stone [30], who present a critique of traditional approaches to rural development and propose an integrated and participatory approach. For Vivanco and Flores [31], agriculture in developed and developing countries has a series of characteristics and factors that affect both positively and negatively the underdeveloped or third world countries, creating specific problems for each region. This means that the measures applied to facilitate and guide the evolutionary processes towards competitive and sustainable agriculture must be different, depending on the level of development and agricultural dynamics of each country or region. The multifunctionality arguments for Rittel and Webber [32] insist that, in addition to its productive function, agriculture fulfills environmental and social functions, contributing to the viability of rural areas and territorial balance. These assessment criteria or characteristics can help to evaluate the structural process from another point of view. There is a wide debate on whether these points of view (competitive and multifunctional) are linked; some of the less optimistic examples suggest that they contradict each other Cahill and Hill [33]; Curan and Marques [34].

METHOD

The research is applied in terms of its purpose and mixed in terms of the data source, with a triangular approach that brings together literature review and application of qualitative and quantitative techniques, such as direct participant observation, content analysis, and application of surveys. Using primary and secondary sources of information, having as population. 1976 apprentices of the National Learning Service - SENA "Administrative Management Center" with a representative sample of 196 apprentices with agricultural vocation, of the coordination of Human Talent Management, Administrative Management, Documentary Management and Horizontal Property Management of the different days of the Training Center. Obtaining as a result a 95% level of reliability and 6.66% margin of error.

It is also important to highlight some SDGs, such as zero hunger, whose trend is to reduce hunger and improve nutrition, with which, according to Carrión and Vega [35], the permanence of production must be ensured through innovation in products, in the ways of producing and even cultivating, It is also necessary to have new business models that allow exploring new working markets, new consumption trends, new scenarios where it is possible to contemplate fair trade actions, where sustainability in production will be essential, balance with environmental care and, last but not least, it is necessary to ensure that new entrepreneurs enter this model, new entrepreneurs, who generate alternatives to involve existing producers to whom the trends and expectations of customers are transmitted, this in order to improve production or replicate success stories, which are presented in the differential of the product, even in international markets, to generate better opportunities that lead to generational change, or the agricultural activity is legislated to dignify this activity and allow the formalization of these producers and consequently establish improvements in the social aspect in such a way that access to social security for workers is provided, starting with self-employment that sequentially generates improvements and subsequently involves new workers.

Food security is an issue that concerns all countries, given that historically the world has suffered from hunger in some regions of the planet, in the case of Colombia there is an agricultural potential because it is a country with a tropical climate where there is a permanent advantage since the climates are favorable for constant production; although in the last decades global warming has generated severe consequences and has interrupted the climatic cycles by the action of the phenomena of El Niño and La Niña respectively, are disastrous for the destruction of agricultural production, therefore the agricultural producer must be prepared to face the different challenges, Therefore, the agricultural producer must be prepared to face the different challenges, so that he can be linked in value chains that tend to improve the social fabric and add value to create disruptive markets, but also opportunities for the use of crops, since another of the endless struggles of the farmer is the market scheme which does not intervene or regulate or control, The other issue is that if the farmer manages to get a good harvest, avoiding the variability of climates, he exposes himself to overproduction, which generates an oversupply in the market and the lowering of prices, which in many occasions do not even represent the production costs, This leads to not collecting the products and assuming the loss on site, with a very strong mitigating factor for the aforementioned SDG, since there are no programs that encourage the transformation of food and have a longer life cycle to be distributed where they are needed.

Involvement of young people with peasant projection

It will be necessary to involve young people who are studying in the cities so that they return to the countryside Cabrera and Castro [36], where the methodology aims to give relevance to the identity of the farmer and its importance in society, so it is considered essential to involve young farmers in entrepreneurship and business activities, so that they take action to make their ideas viable to identify specific needs in the community, so that they can present projects or initiatives that lead to empower other young people and develop awareness of the importance of the farmer and his work in society, so that they consider the work in the field as a microenterprise with the tendency to be a large company, which generates dignity to the work of the farmer, the method worked on is shown in Figure 1.

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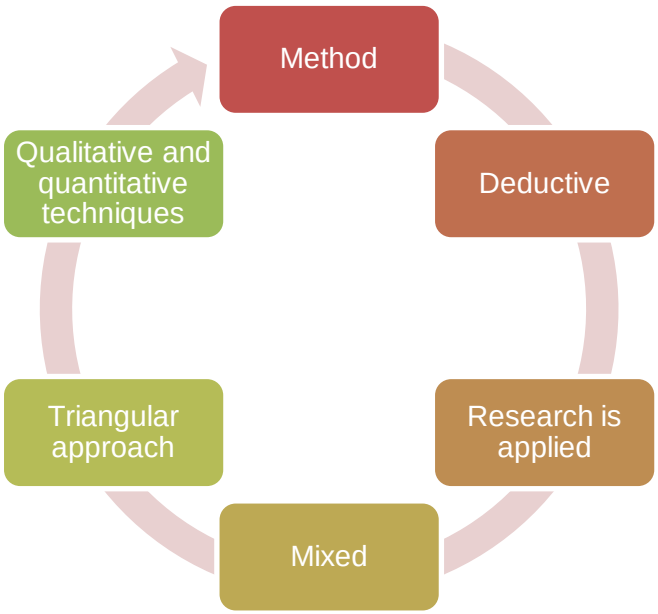

Figure 1. Method. Own source

RESULTS

From the general characterization of the first offer of 2023, where 1976 apprentices entered the training process at the Administrative Management Center, different aspects were identified, with which the social condition was selected, including peasants, displaced or none, with which the filter is made by this variable and yields the following results that are shown in Figure 2 survey application data.

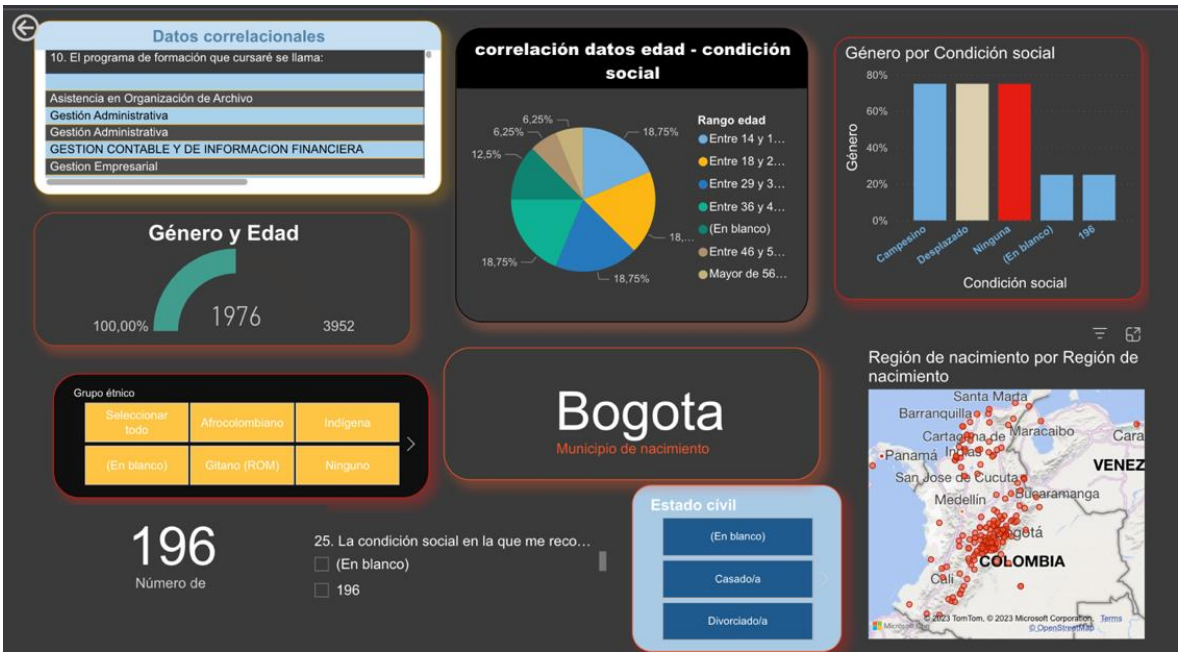

Figure 2. Survey application data. Own source - Power Bi

From the above it is evident that of the total population that entered the CGA in the first quarter of 2023, 90% are not classified in any social condition mentioned, 8% are identified as Displaced by the effect of violence in the place where they resided and 2% are identified as peasants, therefore it was established that the sample for the research are the trainees identified as Displaced and Peasants, which represents 10% of the total population equivalent to 196 trainees which were selected as the significant sample.

It is important to highlight the gender to consider the inclusive environment, where women have a representative role in society and the LGBTI gender is also taken into account; As for the gender, 3 aspects were taken into account as men, women and those who identify themselves in the LGBTI community, from which it was obtained that 76% of the sample corresponds to women; 22% identify themselves as men and 2% LGBTI, highlighting that in this offer and of the selected population the vast majority are women. Regarding the socioeconomic stratum, which is a classification in strata to classify public services according to the location of their residences, strata 1, 2, 3 and 4 were identified in the selected sample, identifying that most of the sample corresponds to stratum 2% with 43%, followed by stratum 1 with 43%, This was followed by stratum 1 with 39%, then stratum 3 with 16% and a minority of 2% for stratum 4, the latter being the highest stratum in the sample and where a higher value is paid for public services, from the above it can be concluded that most of the trainees reside in strata 1 and 2.

The department of birth of the apprentices in the selected sample was selected, with which it was possible to identify that most of the population is from Cundinamarca with 36% of the sample, arguing that the facility due to the proximity to Bogota for apprentices to prefer to study in Bogota, It is also identified that 12% come from the department of Tolima, 7% to the department of Boyacá, 6% to the department of Huila and 6% correspond to the department of Córdoba, with 66% being these 5 departments in which most of the sample was identified, and the remaining 33% corresponds to the different departments of Colombia. All these data lead to determine the methodology proposal as follows:

Proposal of the Methodology

It is required to design a methodology that allows establishing good habits, good customs, change of mentality, new alternatives, that can impact the population in their associativity, production, processes and entrepreneurial mentality, therefore the need of Design Thinking is highlighted as an alternative to propose practical solutions of self-management design in the fields and that through a simple way, new solutions are prioritized and given, adapted to the environment that respond to the needs of the current consumer, where new business schemes are generated, which are designed through research where the tastes, expectations, realities and approach of the new consumer are determined, The new consumer's tastes, expectations, realities and approach are determined in order to design strategies that respond to the different needs and that through the implementation, the results are made known from the new products with which the farmers are careful to take into account all the demands and requirements of that consumer, The implementation of the new products should generate value for both

parties, producers and consumers, who seek to reduce intermediaries to do business with a sustainable and sustainable approach, in order to ensure sustainability, which aims at production and access to food, but with the tendency to strengthen sustainability, given that most farmers ensure their livelihoods but not food sustainability.

According to the Food and Agriculture Organization of the United Nations – FAO [37] and Rodriguez [38], in order to generate food sustainability, different situations must be considered, especially in production that reduces the impact on the environment, respects biodiversity and strives not to deplete natural resources, For Acevedo and Angarita [39], activities should be carried out that lead to production and crop diversification, maintaining soil health, good post-harvest practices, storage, transport and distribution, reflected in an adequate transformation and marketing suitable for consumption, with reference to the aspects presented in Figure 3, methodological proposal.

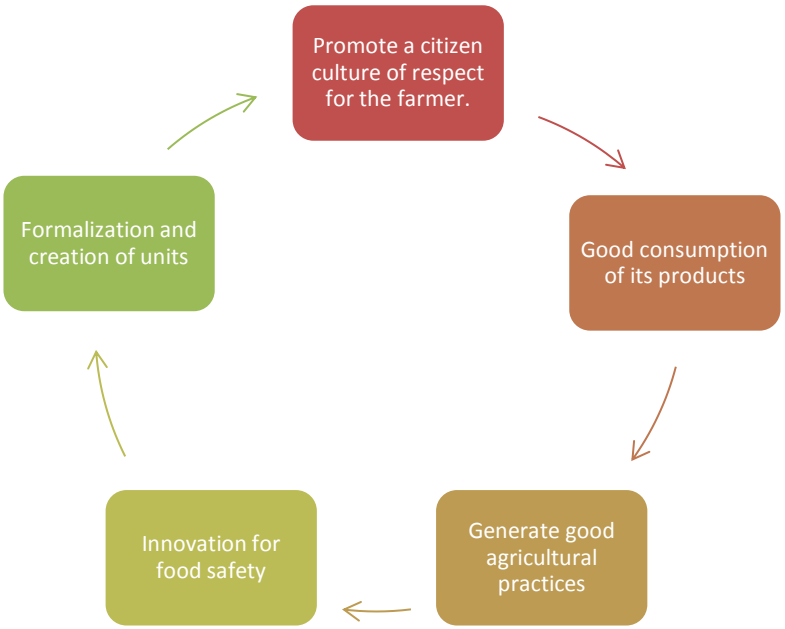

Figure 3. Methodological proposal - Own source

DISCUSSION AND CONCLUSIONS

The final step in the methodological proposal is to use the knowledge gained from the empathic research and analysis to design interventions that promote farmer identity and production sustainability. This involves developing innovative solutions that address identified needs, aspirations, and challenges. For example, designing training programs that provide farmers with the knowledge and skills needed to implement sustainable agricultural practices. The importance of collaborating with local organizations and institutions to create knowledge sharing platforms and support networks for farmers is identified. By employing Design Thinking principles, interventions can be created that are adapted to the specific context and needs of the farmer population, ultimately

promoting their identity and ensuring the sustainability of their production. It also seeks to promote labor formalization, to establish welfare programs for human talent that consider social security as paramount and denotes a high commitment to employee growth, which leads to generate strategic alliances that develop business models to avoid human exploitation, generating value chains to sustain Fair Trade.

In response to the SDGs, the aim is to motivate agri-food production, in order to strengthen food security through value chains that generate high impact, since the great dilemma at the international level is the lack of production that leads to global shortages Lozano [40], which should generate a prospective approach to ensure that young farmers relieve their parents and can give continuity to the work but based on dignity and entrepreneurship, with better opportunities, which will be reflected in the improvement of income and therefore the quality of life of young people, promoting the peasant culture as something altruistic and transmitted to other young people as a great work for the welfare of humanity, being a relevant factor to ensure the generational relay and the rooting of the customs and ancestral knowledge that the young person may possess, but also the new skills and competencies that could be acquired in their training are valued.

The proposed methodological approach of promoting peasant identity and production sustainability using Design Thinking has great potential to address the challenges faced by rural populations. By incorporating principles of empathy, collaboration, and innovative problem solving, this approach can empower farmers to actively participate in decision-making processes regarding their own agricultural practices. Design Thinking provides a framework for understanding the needs and aspirations of farmers, enabling the development of customized solutions that are culturally sensitive and environmentally sustainable. It is established that the relevance of peasant identity is essential to the social and economic cohesion of rural Colombia. This identity not only has cultural implications but is fundamental for the sustainability and competitiveness of the agricultural sector. It is evident that one of the most significant challenges identified was the displacement of young people to urban areas, which represents a threat to the continuity and strengthening of the rural fabric.

This research has shown that Design Thinking is an effective tool to address the challenges of rural identity. By focusing on empathy and creativity, this methodology can generate solutions adapted to local realities, promoting empowerment and innovation in the agricultural sector. A direct correlation was identified between the promotion of farmer identity and the contribution to several Sustainable Development Goals, especially those related to zero hunger, food security, decent employment, and sustainability. Employing both quantitative and qualitative techniques in the research provided a deeper and more nuanced understanding of the phenomenon. Specifically, direct participant observation allowed for an immersion into the realities and challenges faced by young farmers. The active inclusion of youth in the research and design process was essential. This participatory approach ensures that the proposed solutions are relevant, practical, and effective for the target audience.

SOURCES OF FINANCING

The research was the result of a project financed by SENA, through an internal call for projects.

CONFLICT OF INTEREST STATEMENT

There is no conflict of interest.

CONTRIBUTION OF THE ARTICLE TO THE LINE OF RESEARCH

The article presents a significant contribution to the line of technological innovation and organizational processes through the implementation of Design Thinking in the Colombian rural context. By incorporating Design Thinking, a tool typically associated with technological and design fields, the article proposes a fresh and effective approach to solve challenges in the agricultural sector, merging tradition with innovation. Although the focus is on rural identity, the implementation of Design Thinking opens doors for the incorporation of technological solutions that can improve productivity, communication, and management in the agricultural sector. Design Thinking emphasizes the deep understanding of problems before devising solutions. This methodology can lead to a review and improvement of organizational processes in the field, from production to marketing.

STATEMENT OF EACH AUTHOR'S CONTRIBUTION

Jasleidy Prada carried out the construction of the theoretical framework and results. Samir Medina carried out the methodology, application of instruments, discussion, and conclusions.

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