

## DIAGNOSIS OF THE POTENTIAL GEOGRAPHICAL INDICATION OF PINEAPPLE FROM ITABERABA-BAHIA FROM THE PERSPECTIVE OF SEBRAE METHODOLOGY



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### ABSTRACT

Pineapple plays a crucial role in the culture and economy of Itaberaba, a municipality in the State of Bahia, representing a vital source of income for many families involved in family farming. This article aims to analyze the potential registration of the Geographical Indication (GI) of the Pineapple of Itaberaba-Bahia, using the Methodology for the Identification of Potential Brazilian Geographical Indications, developed by the Micro and Small Business Support Service (SEBRAE). The research has an exploratory and qualitative nature and is based on the collection of bibliographic and documentary data and interviews with representatives of the sector. The analysis reveals a strong potential for obtaining the Geographical Indication, with a significant movement towards registration by a production and agro-industrialization cooperative in the municipality, recognizing the local tradition as a product of great economic relevance. The analysis of the nine criteria established by SEBRAE reveals a high potential of the region for the recognition of the

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Indication of Origin, highlighting the economic and cultural importance of pineapple for the region, thus being able to strengthen it as a quality pineapple hub, valuing local identity and boosting sustainable development.

**Keywords:** Pineapple. Itaberaba. Intellectual property.

## INTRODUCTION

According to the Brazilian Agricultural Research Corporation (EMBRAPA), pineapple cultivation permeates all Federation Units in the Brazilian territory. Brazil occupies the fourth place in the world ranking of production, totaling 2.32 million tons from an approximate extension of 68.15 thousand hectares. It is noteworthy that the fruit occupies the fifth position among the most cultivated in the country, generating a significant contribution of about R\$ 2.22 billion to the Gross Domestic Product (GDP) of the agricultural sector. Furthermore, it is noteworthy that domestic demand absorbs almost all of the national production (Matos; Sanches, 2011).

The cultivation of pineapple in the region of Itaberaba has a tradition of approximately five decades, being predominantly conducted in small properties, whose average areas generally do not exceed three hectares. In these units, the use of family labor and, in most cases, of their own resources, both for the implementation and for the maintenance of the crop, is observed. The agricultural sector focused on pineapple has experienced significant growth in recent years, emerging as the main economic pillar of the locality (Matos; Sanches, 2011).

Agricultural activity focused on pineapple cultivation in the Itaberaba region emerges as a catalyst for socioeconomic development and the reduction of social disparities. This locality stands out as the epicenter of pineapple production in Bahia, contributing with about half of the state's production, as reported by Santana (2002). Matos *et al.* (2016) reinforces that pineapple agribusiness has experienced significant progress, positioning itself as the primary driving force of regional development.

It is important to note that there is a long tradition in the designation of products, especially agri-food, by the name of their geographical origin, whether it is a specific country, region or locality where such products are made. It is precisely for this reason that the legislation seeks to regulate the use of geographic names. According to the Brazilian Patent and Trademark Office (BPTO), the Geographical Indication (GI) is a mechanism that aims to identify the geographical origin of a product or service, with the purpose of ensuring its protection, differentiation, appreciation, and preservation of local traditions, in addition to stimulating regional development (INPI, 2023).

Within this context, Law 9.279/96 recognizes two categories of GIs: Indication of Origin (IP), which ensures the protection of the geographical name linked to a product or service, and Denomination of Origin (DO), which certifies the exclusive influence of

geographical characteristics on a product or service (BRASIL, 1996). GIs represent a legally and internationally accepted recognition that certain products or services have an intrinsic connection with a specific region (Bruch, 2008). This relationship is based on natural, historical, cultural, and human factors, conferring unique and distinctive characteristics to the goods produced in that location (Saldanha *et al.*, 2023; Cerqueira, 2024; Silva *et al.* 2023; Saints; Nery, 2024).

This study proposes to analyze the potential of the Geographical Indication of pineapple for the region of Itaberaba, a municipality in the State of Bahia, recognizing its economic and cultural relevance for the local community. This research aims to answer the following question: Does the pineapple from Itaberaba have the necessary conditions to obtain the registration of Geographical Indication?

The article is structured in five sections, starting with this introduction, followed by a contextualization of pineapple and its value to the region. The third section addresses the analysis and diagnosis methodology of the Brazilian Micro and Small Business Support Service (SEBRAE, 2020), which seeks to evaluate the Itaberaba region as to its ability to meet the necessary criteria to obtain such recognition. The fourth section demonstrates the results obtained in this study and, finally, the final considerations.

## RELEVANCE AND NOTORIETY

The ancestral presence of pineapple in Brazil dates back to pre-colonial times, when it was valued by indigenous populations for its food and medicinal properties, as highlighted by Kato and Lima (2006). During the colonial period, pineapple was introduced in various regions of the country, mainly in tropical and subtropical areas, quickly integrating into the Brazilian diet and culinary culture.

Over the centuries, Brazil has established itself as one of the main global producers of pineapple, driven by its favorable climate and fertile soils, according to data from IBGE (2022). Regions such as Bahia, São Paulo, Espírito Santo and Minas Gerais stand out as important production centers for this highly appreciated fruit.

Pineapple has always been an essential part of Itaberaba's economy and agricultural culture, contributing to the region's livelihood and development. Over time, Itaberaba has stood out as one of the main pineapple-producing regions in the State of Bahia, benefiting from the favorable climate and fertile soils of the region (Silva, 2020).

The pineapple from this region has gained recognition for its distinct quality and flavor, gaining prominence in both the regional and national markets. Oliveira (2019) highlights that the tradition of pineapple cultivation and commercialization is transmitted from generation to generation, integrating itself into the local identity and history. This fruit represents not only a source of livelihood for local farmers, but also a symbol of the pride and resilience of the Itaberaba community. Chart 1, below, brings several news and reports about the pineapple in question.

**Chart 1** – News about the proof of the notability of the pineapple from Itaberaba/BA

Title	Source
Pineapples from Itaberaba are sold to various parts of Brazil	<a href="https://globoplay.globo.com/v/3693901/">https://globoplay.globo.com/v/3693901/</a>
Pineapple lace attracts new generations in Itaberaba	<a href="https://atarde.com.br/atardeagro/renda-com-abacaxi-atrai-novas-geracoes-em-itaberaba-1246855">https://atarde.com.br/atardeagro/renda-com-abacaxi-atrai-novas-geracoes-em-itaberaba-1246855</a>
Bahian city is a national reference in the production of pearl pineapple	<a href="https://anba.com.br/cidade-baiana-e-referencia-nacional-na-producao-de-abacaxi-perola/">https://anba.com.br/cidade-baiana-e-referencia-nacional-na-producao-de-abacaxi-perola/</a>
Pineapple producers in Itaberaba have good expectations for the 2018 harvest	<a href="https://globoplay.globo.com/v/6920460/">https://globoplay.globo.com/v/6920460/</a>
Itaberaba prepares for the 1st pineapple festival	<a href="https://www.itaberabanoticias.com.br/itaberaba/itaberaba-se-prepara-para-a-sua-1%C2%AA-festa-do-abacaxi">https://www.itaberabanoticias.com.br/itaberaba/itaberaba-se-prepara-para-a-sua-1%C2%AA-festa-do-abacaxi</a>
The famous pineapple from Itaberaba   Productive Rural	<a href="https://www.youtube.com/watch?v=b4waKwm0UhE">https://www.youtube.com/watch?v=b4waKwm0UhE</a>

**Source:** Prepared by the aAuthors (2024).

The pineapple from Itaberaba is recognized for its high quality and authentic flavor, being sought after by consumers. Its production plays a crucial role in the local economy, generating jobs and promoting sustainable development. In addition, it strengthens the sense of identity and pride of the Itaberaba community. This notoriety is the result of the work of local farmers, the favorable conditions of the region and the commitment to excellence in agricultural production.

## METHODOLOGY

To support this article, a bibliographic, qualitative and exploratory research was carried out. According to Gil (2009), bibliographic research consists of the analysis of previously published references related to the object of study. This allows us to identify gaps in knowledge and understand the ongoing debates in a specific area, such as the relevance and importance of pineapple in the Itaberaba region.

As described by Minayo *et al.* (2012), the qualitative exploratory method aims to capture the essence of events that cannot be quantified, taking into account the perspective of the participants in the situation studied. This method observes sociocultural influences. The qualitative approach, justified by the execution of the work in a reality that is difficult to quantify, allows a deeper and contextualized understanding of the phenomenon under study.

For the preparation of the case study, the methodology developed by SEBRAE for the identification of possible Brazilian Geographical Indications (SEBRAE, 2020) was adopted. This methodology comprises a set of 31 questions, of which 2 are considered critical, aiming to evaluate the potential of both Indication of Origin and Designation of Origin. In addition to the critical questions, the method includes 29 structural questions, distributed in 9 different criteria, namely: a) product; b) territoriality; c) production method/production chain; d) governance; e) identity and sense of belonging; f) economic performance; g) need for protection; h) research involved; and i) vision of the future.

The study involved detailed research on the Itaberaba region, as well as collaboration with the Cooperative of Pineapple Producers of Itaberaba (Coopaita), including interviews with its representative and the application of questionnaires with producers, through the *WhatsApp application*. The conduct of the research waived the submission to the Research Ethics Committee, as stipulated in the legal provisions of article 1, sole paragraph, items II, III, Ve VII of Resolution No. 510/2016 of the National Research Ethics Committee (CONEP) (Brazil, 2016).

To consolidate the results of the questions of the SEBRAE methodology, the radar chart was used. The representation of the results took into account an evaluation scale from 0 to 5, in which 0 indicates that the criterion was not met and 5 indicates that the criterion was fully met.

## RESULTS AND DISCUSSIONS

This section reflects an analysis that seeks to reveal the challenges and opportunities encountered in pineapple production in the Itaberaba region.

### PRODUCT

The Pineapple of Itaberaba is more than a simple fruit, it is a treasure rooted in the fertile lands of Chapada Diamantina, in Bahia. Its history dates back to the traditional



communities of the region, who have been cultivating this fruit on their lands for generations. Among the distinctive characteristics of the Pineapple of Itaberaba (Figure 1), its balanced and juicy flavor stands out, resulting from the harmonious combination between the tropical climate of the region and the composition of the soil. In addition, its soft and sweet pulps, combined with the firm and juicy texture, become irresistible to consumers (Matos *et al.*, 2016).

The fruits produced in the region have their own characteristics, marked by the high quality of the fruit. Producers receive detailed notions about fertilization and nutrition of the crop, the importance and control measures of fusariosis, fruit management and post-harvest. They maintain sustainable agricultural practices, respecting the environment and preserving local biodiversity.

Cultivation is carried out carefully, without excessive use of agrochemicals, ensuring the integrity of the ecosystem and the health of consumers. According to the most recent data from the Brazilian Institute of Geography and Statistics – IBGE (2022), the pineapple of the Pérola variety is the main agricultural product in the municipality, occupying 2.3 thousand hectares of planted area.

**Figure 1** – Pineapple from Itaberaba/BA da Coopaita



**Source:** Coopaita's Instagram page<sup>7</sup>.

<sup>7</sup> Available at: [https://www.instagram.com/p/CviKca8uGQ\\_/?igsh=MzlsOXdnd2tuaDFy](https://www.instagram.com/p/CviKca8uGQ_/?igsh=MzlsOXdnd2tuaDFy). Accessed on: 19 mar. 2024.

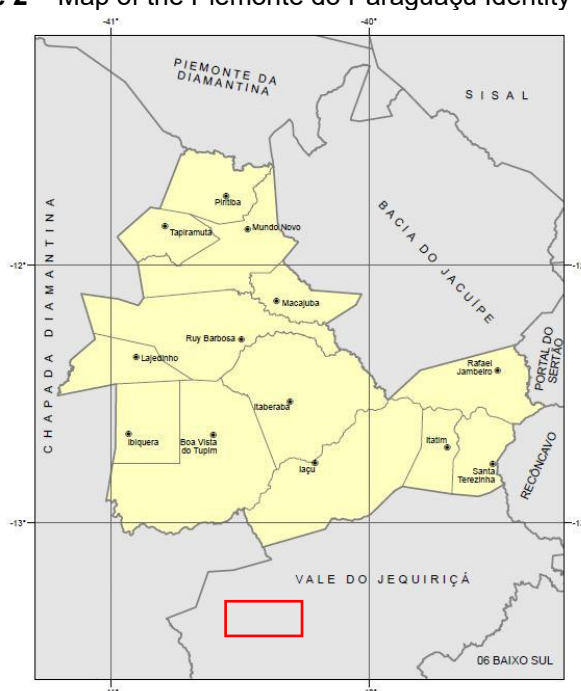
## TERRITORIALITY

The municipality of Itaberaba is part of the Piemonte do Paraguaçu Identity Territory, composed of the municipalities of Boa Vista do Tupim, Iaçú, Ibiquera, Itaberaba, Itatim, Lajedinho, Macajuba, Mundo Novo, Piritiba, Rafael Jambeiro, Ruy Barbosa, Santa Teresinha and Tapiramutá (Figure 2).

The region of Itaberaba is considered a pole of interregional influence with commercial flows of goods, exercising strong leadership over the small cities in its surroundings. Its agriculture is characterized by the presence of beef cattle, with semi-intensive grazing, and by the crops of corn, beans and cassava. But what stands out most in the region is the production of pineapple (SIPAC, 2012). This production sustains the local economy, but also shapes the cultural and social identity of the region. Some municipalities in this Territory of Identity are also related to pineapple cultivation, such as Macajuba and Boa Vista do Tupim, but in smaller proportions.

The fertile fields and favorable climate of the region provide ideal conditions for the cultivation of pineapple, resulting in fruits of excellent quality and distinctive flavor. This product has become not only a source of income for local farmers, but also a symbol of pride for the inhabitants of Itaberaba (Matos *et al.*, 2016).

**Figure 2** – Map of the Piemonte do Paraguaçu Identity Territory



Source: SIPAC (2012).



In this way, the territoriality of Itaberaba is closely intertwined with the production and reputation of the local pineapple, highlighting the importance of agriculture not only as an economic activity, but also as a fundamental element in the construction of identity and sustainable development in the region.

#### PRODUCTION METHOD/PRODUCTION CHAIN

The municipality of Itaberaba is the largest state producer of pineapple of the Pérola variety, with family farming responsible for 80% of production (CAR, 2020). The support offered to farmers covers a full spectrum, starting with meticulous soil collection and analysis to determine specific fertilization and liming needs. This monitoring extends throughout the entire production cycle, culminating in the harvest phase, during which an exhaustive and comprehensive evaluation is conducted, both qualitatively and quantitatively, on agricultural products intended for commercialization.

Pineapple production in Itaberaba (Figure 3) follows a careful method and a well-defined production chain, which begins with soil preparation. Farmers select specific varieties of pineapple that are adapted to the climate and soil of the region. Planting is done through seedlings or shoots taken from mature plants. During the growth cycle, cultural treatments are carried out, such as regular irrigation, pest and disease control, and fertilizer application. The harvest is done manually, ensuring that the fruits are at the ideal point of ripeness (Matos; Sanches, 2011).

**Figure 3** – Pineapple production in the fields of Itaberaba/BA



**Source:** CAR (2024).

After harvesting, the pineapples are selected and classified according to quality criteria. They are then packed in appropriate boxes for protection during transport and storage (Figure 1). Finally, pineapples are marketed at local fairs, supermarkets, and other venues, contributing to the regional economy and strengthening the identity of the local community. This production process not only guarantees the quality of the product, but also reflects the care and commitment of farmers to sustainability and the appreciation of the territory of Itaberaba.

Producers receive support from local, state and government organizations, as well as institutions such as EMBRAPA, linked to the Ministry of Agriculture, Livestock and Supply (MAPA), providing the necessary technical guidance so that cooperative producers can properly manage the fruits. In addition, the entire chain was organized in order to give sustainability to production, even pineapple straw is used to feed cattle, helping the municipality to reduce losses in animal production during the dry season (EMBRAPA, 2016).

## GOVERNANCE

Coopaita has 115 cooperative members and receives support from the State Government, through Bahia Produtiva, with investments of R\$ 2 million, applied in the expansion and modernization of the processing unit for pineapple dehydration (CAR, 2020). The agroindustry has been a model for Brazil due to its local impact and management in the use of fruits discarded by the market.

Pineapple production in Itaberaba is not only an agricultural activity, but also a reflection of efficient and participatory local governance. Governance in this context encompasses not only the formal structures, but also the practices and social interactions that direct and regulate agricultural production in the region. Farmers in Itaberaba are immersed in a network of cooperation and knowledge exchange, where ancestral techniques are mixed with agricultural innovations to ensure the quality and sustainability of production.

In addition, local governance is also manifested in the relationship between farmers and governmental and non-governmental institutions. Technical assistance programs, access to rural credit, and public policies aimed at agricultural development play a crucial role in supporting pineapple production in Itaberaba. Environmental and social sustainability is also a central priority in the governance of pineapple production.

Respondents state that agricultural practices aim at soil conservation, responsible use of water resources and the protection of biodiversity and are encouraged and regulated through local initiatives and government policies.

Therefore, pineapple production in Itaberaba is not only an economic activity, but also an example of local governance that promotes participation, cooperation, and sustainable development of the agricultural community. This holistic and collaborative approach to crop production management is essential to addressing contemporary challenges and building a more prosperous and equitable future for all involved.

## IDENTITY AND SENSE OF BELONGING

Growing pineapples in Itaberaba is more than an agricultural practice, it is a tradition deeply rooted in the history and identity of the community, passed down from generation to generation. According to information from those surveyed, farmers grow this fruit with a deep respect for the land and its natural cycles, following traditional agricultural practices that have been passed down over time. Pineapple is a symbol of local pride known for its exceptional quality. Each fruit not only offers a delicious taste, but also carries with it the history and dedicated effort of the farmers. This sense of belonging is evident in the festivities dedicated to the harvest, in the local markets filled with fresh produce and in the lively conversations that fill the streets of the city, according to reports recorded in the survey.

In addition, the preservation of local biodiversity and respect for natural resources are fundamental values for the inhabitants of Itaberaba. Pineapple cultivation is carried out in a sustainable way, without compromising local ecosystems, which further reinforces the feeling of belonging to the land. Thus, pineapple production is more than a simple economic activity; it is a living expression of the identity and sense of belonging of a community that finds meaning and purpose in the land it calls home, as in Figure 4, which illustrates the World Cup held in Itaberaba.

**Figure 4** – Pineapple canopy of Itaberaba/BA



**Source:** Itaberaba City Hall page on instagram<sup>8</sup>.

The competition not only motivates athletes to develop in sport and as citizens, but also contributes to the economic boost of rural communities. This relationship between sport and economy strengthens the bond with Itaberaba, providing a sense of belonging both physically and spiritually for its inhabitants.

#### ECONOMIC PERFORMANCE AND NEED FOR PROTECTION

According to the questionnaire applied to Coopaita, the economic performance of pineapple cultivation generates an important economic impact for the Itaberaba region. The income that revolves around the cultivation and sale of pineapple provides employment and income for many families in the region through small-scale family farming, hiring labor and selling the product, providing employment and income for the local population.

In addition, the cooperative producers get involved in the work of the dehydrated fruit factory, either in the selection of fruits, or even getting involved with the work in production, allowing the income generated to circulate within the region. According to Coopaita, the products are sold at fairs, local and regional markets and sent to other regions and even outside Brazil, leading the market for its sweetness, juiciness and quality.

In some places of sale, the fruit is offered to the final consumer as being produced in the region of Itaberaba, in order to highlight the quality of the product. Situations like this are difficult to control, since it is a fruit that can be grown in other regions as well. To maintain the high standard of quality, producers receive technical guidance to produce their

<sup>8</sup> Available at [https://www.instagram.com/prefeituradeitaberaba/p/Cv7H8inOQIm/?img\\_index=9](https://www.instagram.com/prefeituradeitaberaba/p/Cv7H8inOQIm/?img_index=9). Accessed on: 19 mar. 2024.

products according to the method that seems best to them, thus maintaining the quality standard of the fruit, capable of distinguishing their product from other regions.

## RESEARCH INVOLVED AND VISION OF THE FUTURE

Pineapple producers in Itaberaba receive from public research and rural extension agencies, together with the Bahia Superintendence of Technical Assistance and Extension (Bahiatel), researchers who act as presenters and instructors in six stations, who focused on information about pineapple agribusiness. The partnership between extension technicians and researchers managed to leverage the pineapple production chain in the municipality of Itaberaba in the semi-arid region of Bahia to the point of transforming the city into the largest state producer of the fruit (EMBRAPA, 2016; Rocha *et al.*, 2019).

The fruit has been exploited for about 40 years in the region (which has different ecological conditions from most traditional cultivation regions), but it was less than 20 years ago that it became established, grew and continues to rise in the State of Bahia (EMBRAPA, 2016).

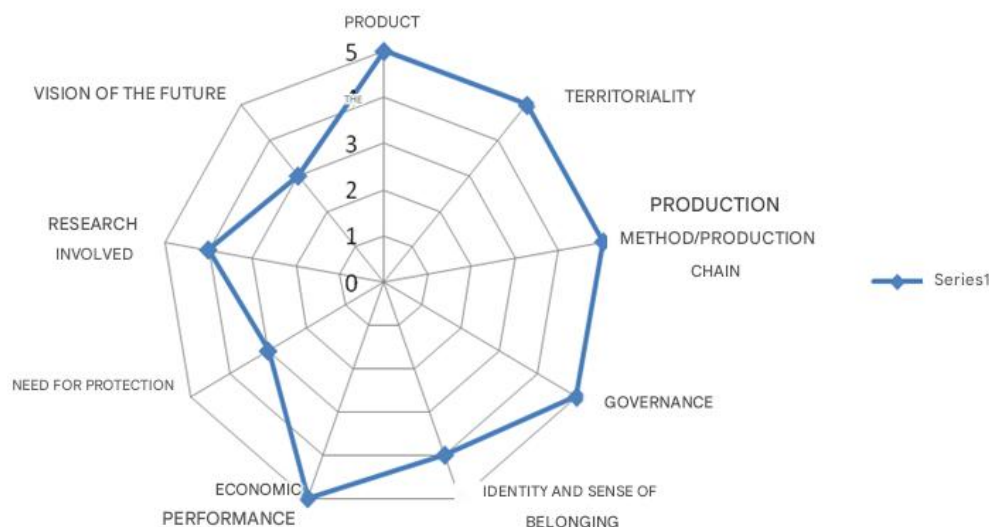
Events are held with future perspectives, such as the Pineapple Technical Day of Itaberaba, which has public agencies and the support of Coopaita, aimed at Pineapple Technicians and Producers from Itaberaba and region, being a space to discuss new techniques and technologies to improve the management and production of the crop in the municipality.

## RADAR CHART FOR GEOGRAPHICAL INDICATION

From the collection of data through directed research, the Radar Graph was built in order to evaluate the potential of the pineapple crop in the region of Itaberaba for Geographical Indication. The score ranges from 1 to 5, with 1 being the value that indicates the lowest potentiality, and 5 the value that indicates the greatest potentiality. Graph 1 indicates the score obtained from the analysis of each criterion.



**Graph 1** – Radar Chart of Geographical Indication of Pineapple cultivation in Itaberaba/BA



**Source:** Prepared by the authors (2024).

After a thorough analysis of the nine established criteria, it becomes evident that the region of Itaberaba has a significantly high potential to obtain the registration of Geographical Indication (GI). The data collected and evaluated in each of these criteria demonstrate not only the excellence of the product grown in the region, but also its strong integration with territorial aspects, a vision of the future oriented towards sustainable development, an efficient and well-integrated production chain, as well as solid governance that supports and promotes activities related to pineapple cultivation.

## CONCLUSION

It was found that the pineapple from the region of Itaberaba fully meets the necessary criteria to apply for the registration of Geographical Indication, thus meeting the requirements established for an Indication of Origin. This product has not only significant economic and social relevance for the municipality of Itaberaba, but also enjoys considerable national notoriety, playing a fundamental role in the livelihood of several families of family farmers.

As indicated in the radar chart, favorable technical conditions are identified that support future requests for registration of Geographical Indication (GI) in the Indication of Origin (IP) modality. Among these conditions, the distinctive production method adopted in the region stands out, which contrasts with the practices employed in other locations, characterized by the more accentuated use of machinery. In addition, its production gives a sense of belonging, contributing to strengthening community and cultural ties in the region.



The potential obtaining of the Geographical Indication (GI) will bring advantages both to the region and to producers and consumers who seek products of excellence, giving them guarantees of protection, expanded visibility and certification. In addition, the granting of the GI will also safeguard the authenticity and distinctive characteristics of the product. Such benefits not only ensure the preservation of cultural heritage in the community, but also enhance the product, expanding its reputation and prestige.

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