THE JERSEY BREED AND CROSSBREEDING

Innovation and Adaptation in Colombian Livestock Farming

In the world of livestock, the Jersey breed has established itself as a benchmark of genetic excellence thanks to its unique attributes: high milk quality, feed efficiency, adaptability, and longevity. But its true potential transcends breed purity. Crossbreeding with Jerseys, both with European and Indian breeds, is bringing about a significant transformation, especially in tropical regions like Colombia, where climatic diversity and production challenges demand innovative and sustainable solutions.

In the Colombian context, with its vast cattle-raising areas encompassing extreme climates, pastures of varying quality, and extensive production systems, crossbreeding with Jersey cattle has become a strategic tool. Integrating this genetic line with other breeds allows for combining the best of each lineage, maximizing productivity and ensuring greater resilience to environmental challenges.

Crossbreeding with European breeds: Improving quality and performance

In Colombia, crossbreeding between Jersey cattle and European breeds such as Holstein, Brown Swiss, and Ayrshire is most common, especially in temperate regions like the Cundiboyacense Plateau, Antioquia, and Nariño. These crossbreedings allow for:

- **Higher milk solids content:** Ideal for making products such as cheeses and butter.
- **Improved feed efficiency and Longevity:** Essential factors in intensive and semi-intensive systems.
- **Increased fertility and health:** Attributes that guarantee greater profitability in the medium and long term.

Jersey x Indicus crosses: The answer for the Colombian tropics

In the warm, humid regions of the country, such as the Caribbean Coast, Cesar, the Eastern Plains, and the Middle Magdalena region, crossbreeding between Jersey cattle and indicus breeds (Brahman, Gyr, Guzerat, and Red Sindhi) is becoming increasingly common and strategic. These hybrids offer:

- **Resistance to heat and diseases:** Indicus breeds provide hardiness and adaptability to adverse climates.
- **High quality milk:** The high fat and protein content characteristic of Jersey is preserved.
- **Increased fertility and longevity:** Shorter calving intervals and longer lifespan for cows.
- **Feed efficiency:** Crucial in systems based on low-quality pastures.

In departments such as Santander, Córdoba, Antioquia, Cesar and Meta, these hybrids have significantly improved the profitability of producers, adapting perfectly to the demands of the low tropics and local markets.

The resilience and versatility of Jersey-indicus hybrids have allowed ranchers to face challenges such as heat stress and food shortages during dry seasons, especially in the Eastern Plains.

A call to action

We invite all dairy farmers in lowland tropical areas to consider the Jersey breed in their crossbreeding programs.
This breed not only brings tangible benefits to the quality and quantity of milk, but also represents a key tool to face the challenges of climate change and sustainability.

Furthermore, we extend an invitation to join the Colombian Association of Jersey Breeders and Crossbreeds. The Association offers the necessary support for genetic monitoring, access to up-to-date technical information, and the opportunity to contribute to the development of a national productivity index for the breed. This index will be a crucial step in positioning Colombia as a leader in the strategic use of Jersey genetics in the tropics.

The bridge between genetics and sustainability

Colombia, with its vast diversity of ecosystems, requires differentiated approaches to achieve sustainable livestock farming. Crossbreeding with Jersey cattle, whether with European or Indicus breeds, represents an ideal balance between productivity and adaptability, opening new opportunities for high-quality milk markets and specialty products. Colombian livestock farming faces significant challenges, but it also has tools like Jersey genetics to overcome them. This is a call to innovate, adapt, and move toward more efficient, resilient, and competitive systems.

Welcome to this edition dedicated to building the future of our livestock industry!

Roberto Páez Muzzulini

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JERSEY X BRAHMAN

THE BEST OF TWO LEADING BREEDS IN ADAPTATION FOR A BETTER TROPICAL DAIRY

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International Buffalo Judge – Asobuffalo Colombia
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> **"In these modern times where everything moves at new speeds and demands, beef and milk production could not be the exception.**

In Colombia, and generally in the countries that make up this tropical zone of influence, we must consider our realities and conditions that frame and define what we can and cannot do. Seeking practical models and products that adapt and produce efficiently under these special conditions, the crossbreeding model always emerges as a practical solution to this environmental and productive challenge. Among these possibilities, today the products of crosses between Bos Taurus x Bos breeds...

Indicus (F1) continue to "reign" due to their performance, adaptability and productivity in our low tropic zones.

Whenever I address these topics of crossbreeding, I always remember the words from a good friend and fellow participant in one of our "livestock gatherings" some years ago, who said: "Our main mistake when planning crossbreeding is that we concentrate too much on the production and indices of the breeds to be used and we put in the background the most important factor to take into account to achieve a good result in the tropics: adaptation!!!"

And this phrase seems to me to summarize well the approach we have been taking for most of the crossbreeding projects and decisions we have undertaken during the last decades, and which, by not taking into account and giving greater weight and importance to this fundamental aspect (adaptation), have encountered great barriers and disappointments when analyzing

> **"The Brahman breed is undoubtedly a leader in Colombia in terms of quality and volume of specimens, and today it enjoys this recognition not only locally but also internationally due to the level and quality that its breeders have achieved in their cattle and the selection processes carried out over more than 80 years."**

Its performance and results. Today I wish to share with you some data and results of a cross that has been showing, within this wide range of possibilities that we currently have, outstanding indices and great performance due to its particular conditions of adaptation, productivity and quality for milk production in the tropical environment: the F1 JERBRAH (Jersey x Brahman).

Currently, I have the opportunity to assist in the selection and production processes of two important companies and herds that are using this crossbreed as an animal model to develop their projects and that are obtaining excellent and promising results: @

haciendadanubio / @f1tropical and @ hacienda_cadiz. Regarding its products and results, we will have the opportunity to observe the first data that the controls and investigations obtained to date and generated by the first F1 JER-BRAH that have entered production in both programs have yielded.

It is also important to mention that the process by which these F1 products are currently obtained for this type of project has undergone significant changes and new possibilities with the current intensified use of reproductive technologies such as in vitro fertilization (IVF) and more recently the use of this type of cryopreserved embryos (IVF). servados for direct transfer (DT).

Thanks to these technologies, some companies and projects, such as those mentioned above (@ haciendadanubio / @f1tropical and @ hacienda_cadiz) have been able to change the structure or way of obtaining these F1 products, going from using conventional models of direct mounting or artificial insemination on commercial or registered Brahman cows, but usually of lower quality, to having the possibility of using the best selection of their elite cows identified and selected by their genetics and parentage (Genetic Evaluation), production (PAD), reproductive ability (IEP), genotyping (A2A2) and more recently even with genomic tests with the support of @asoce-bucol that provide greater information and certainty for characteristics of importance for the production and marketing of their future products (milk and embryos).

Thus, the dynamics of F1 JERBRAH female production with outstanding potential for tropical milk production undergoes a significant change not only in speed but, more importantly, in the quality of the products obtained for milk production at this level by accessing the best maternal lines of the Brahman breed herds with the support of evaluations carried out with greater technical and technological support and

CADIZ ESTATE - JERBRAH	
First calving cows	
Amount	14 Animals
Age at first birth	31 Months
Birth weight	417 kg
Average of	101 days
Average production	12.8 liters
Average CPI	105 days
Projected IEP	390 days
Multiparous cows	
Amount	10 animals
Average number of births	5 animals,
Birth weight	497 kg
Average of	110 days
Average production	14.9 liters
Total lactation production	4025 liters
Average CPI	133 days
Last IEP	400 days
Average Production /IEP	10 liters

F1 TROPICAL JERBRAH	
Cows that have calved:	18 animals
First birth	13 animals
PPE:	30 months
Birth weight:	470 kg
Second Birth:	5 animals
IEP:	384 days
Birth weight:	486 kg
<80 OF THE	10 animals
Average production: 18 Liters	
Peak production:	21.5 Liters
Days of service:	20 days
>80 OF THE	8 animals
Average production: 16 liters. Accumulated	
lactation: 3050 liters	
CPI:	75 days
Projected IEP:	360 days
Projected birth rate:	101%
Dry cows:	7 animals
Days of gestation:	237 days
CPI:	87 days
projected IEP	372 days
Breastfeeding duration	298 days
1a. PJAJ 305d:	4657 liters
Milk/IEP:	12.5 liters

(Image 1). Results obtained to date using this crossbreed in their tropical dairy production projects. (@f1tropical - @hacienda_cadiz).

that do not depend solely on individual herd selection criteria or on the subjectivity that sometimes we criticize so much.

The Brahman breed is undoubtedly a leader in Colombia in terms of both the quality and volume of its stock, and it enjoys this recognition not only locally but also internationally. This is due to the level and quality that its breeders have achieved in their cattle and the selection processes carried out over more than 80 years of using this breed in our country, with the support of a leading technical and industry association such as Aso-cebú Colombia (@asocebucol). This allows us to have valuable tools for selecting and choosing our breeding females to use as donors through the use of genetic evaluation and genomic testing. These tools are invaluable when selecting the future mothers of our F1 Jerbrah crosses.

Alongside this work, and no less importantly, the Jersey breed has been consolidating and growing in volume, use, and importance in recent years, positioning itself internationally as an important option for dairy production thanks to important characteristics such as its hardiness, precocity, medium size, health, excellent legs and hooves, long lifespan (longevity), and a characteristic in which it makes a big difference… milk quality!

Thanks to the results of this work, selection and growth of the breed In recent years, Jersey semen has become available from world-class sires, on par with other specialized dairy breeds, for use in our crossbreeding programs. Its cost becomes a secondary factor when used more efficiently through the aforementioned techniques (IVF-DT) and by using sexed semen.

These outstanding sires allow us to obtain the best F1 Jerbrah females for our projects more quickly and efficiently. All of this sounds great, as is generally the case in theory, but I believe the most important aspect of these crosses, breeds, and projects for the producer is ultimately their numbers and indices. These are what finally take us from theory to practice and reality, allowing us to make decisions or at least form opinions about them.

Below, I share some data provided by these farms (@f1tropical - @ha-cienda_cadiz) regarding some of the results obtained to date with the use of this cross in their tropical dairy production projects. *(Image 1)*

Today, unlike in previous times when the production and efficiency of these types of systems focused mainly on individual cow production, we have shifted to evaluating individual cows based on their milk production per calving interval and the system as a whole based on its production in liters per hectare. This provides us with more reliable and useful indices as system evaluation tools. And it is in this new scenario that our F1 Jerbrah cross transcends its status as a medium-sized cow and becomes a "numbers giant." Its superior adaptability allows us to deliver more liters of milk per calving interval, and its medium size results in lower metabolic and feed requirements, thus enabling a higher stocking rate per hectare on farms compared to other crosses, ultimately yielding a greater quantity of milk per hectare per year.

In the Table (Image 2) we can see some numbers that were used for comparative purposes that have helped us

F1 CROSS SAMPLES 1ST BIRTH	(years) AVERAGE LACTATION LENT LITERS/DAY MILK/LENT				
17	F1 JERBRAH	2.7	381	4488	14.7	11.8
43	CROSSING #2	3.1	415	4153	13.6	10
283	CROSSING #3	2.9	445	3983	13.1	9
8	CROSSING #4	3	410	4086	13.4	10
4	CROSSING #5	3	439	3592	11.8	8.2
8	CROSSING #6	3	469	4296	14.1	9.2

(Image 2).

given the decision to choose and persist with this cross between several used and evaluated under equal conditions to continue in the search for the best results for our projects.

After observing these figures and making the respective comparisons, it is evident through data obtained and not from simple opinions the reasons why we and many other programs have begun to consider the F1 JERBRAH cross as a weighty option to include in their productive projects and programs oriented to milk production in tropical conditions.

We do not seek to compete with or disparage other breeds, crosses, or farms by presenting this data; we simply want to show our own results obtained through of a process and the way we interpret and use it to make our decisions.

In this same way, we hope that this information will be useful to you in generating your own opinions and decisions in your respective projects and operations.

In future installments, we hope to share with you a greater amount of data and experiences obtained in the development of these programs as we generate new figures, lactations, and reproductive indices in these programs to continue supporting the performance of our F1 JERBRAH with data, providing better tools that will be useful to us on the path to finding a better option for our milk production in tropical conditions.

"Thanks to the results of this work, selection and growth of the Jersey breed during these last years, today we can count on semen of world-class breeding stock and on par with other specialized dairy breeds for use in our crossbreeding programs."

JERSEY X GYR

A HIGH-IMPACT REALITY FOR THE COLOMBIAN TROPICS

Wilmar Granada Gómez
Veterinarian and Zootechnician
Specialization in Reproductive Biotechnology
Cattle Breeder and Breeder of Gyr Cattle and its Crosses, La Candelaria Cattle Ranch
Partner and Technical Director of BIOEMBRIO IVF Field
Judge of Dairy Zebu Breeds

The crossbreed composed of the JERSEY and GYR breeds in their different proportions, more commonly known as JERGYR or GYRSEY, is becoming increasingly differentiated, marking milestones and breaking paradigms in the Colombian countryside, becoming a real, viable, functional and above all profitable option for our dairy farms in both low and medium tropics, gaining important ground thanks to the word that best defines it: its VERSATILITY.

CRUCE	n	PROM PESO AL NACER
VACA JERSEY TORO GYR	62	28.6 KG
VACA GYR TORO JERSEY	131	24.1 KG

Table 1.

CRUCE	n	LACTANCIA PROYECTADA A 305 DIAS**
VACA JERSEY TORO GYR	31	4026 KG
VACA GYR TORO JERSEY	94	3997 KG

Table 2.

Average of first, second and third lactation with diet of grass, salt, water and ration according to lactation, all in low tropical dry forest.

Doubts always arise when discussing the Jergyr crossbreeding process, the first being: Do we start with a Jersey cow and a Gyr bull, or vice versa? According to data collected from various farms across the country (Table 1), there is no significant difference in terms of productive characteristics, beyond subtle differences in birth weight (4 to 5 kg more when starting with a Jersey cow) and conformation (greater temperament and dairy conformation when starting with a Jersey cow). However, when it comes to milking and the daily routine of a farm, these differences disappear due to the lack of changes in lactation rates (Table 2), health, or longevity.

Therefore, my recommendation will always be to replace stock with more F1 females, which offer the perfect balance and the greatest hybrid vigor within the crosses. There are important cattle ranches in the country that have turned to Jersey crossbreeding, with compelling arguments and daily proof that combining profitability, sustainability, and functionality is the right mix for a successful business. Ranches like AB&C Inversiones in Caucasia, Antioquia, and Montenegro, Quindío; Agropecuaria Campoalegre in Yarumal, Antioquia, and La Ceja, Antioquia; La Vittoriana in Montería, Córdoba; and Guanacaste in Puerto Boyacá, Boyacá, are living proof that producing with Jersey crosses is an excellent way to be efficient.

Another very common question is: What should I breed my F1 Jersey x Gyr cows with? In my personal opinion, every farm is different, and therefore we must have a clear direction. The greatest hybrid vigor is always achieved in the F1 generation. So much so that if we inseminate with a Bos Taurus bull (Jersey, Holstein, Ayrshire, Brown Swiss) and we don't have the correct management, environment, feeding, and reproduction conditions, these ¾ Bos Taurus females will become additional problems and worries. Conversely, if we inseminate with Bos Indicus bulls, milk production, lactation persistence, and milkability will be compromised.

Today, the Jergyr, within the crossbreeding of dairy breeds, is positioned as the second crossbreed with the highest number of registrations in the different Associations and as the second most milked F1 cross in Colombian herds of low and medium tropics, only behind the Girolando but with marked guidelines that make this a truly attractive option for the cattleman who likes the differentiating points and profitability; the JERGYR we must say, is a cow that reaches sexual precocity quickly of more or less 16 to 18 months when it has good environmental and feeding conditions, the

There are important livestock farms in the country that have turned to crossbreeding with Jersey cattle, with very compelling arguments and which confirm every day the importance of combining profitability, sustainability and functionality, which is the right mix for a successful business.

which allows us to have more births throughout its productive life; due to its size, adult weight and its performance in grazing, it makes it a great option for hillside and mountain areas without major shocks or dangers to its integrity, in addition to optimizing the carrying capacity in our farms by having more cows per unit of area or if we want to obtain more solids (fat and protein) per Hectare; its milk quality makes it a functional and very desirable cow for the transformation of fluid milk into dairy products that will always be in high demand in national and international markets, in our case obtained in pasture and animal welfare; due to its red coat shows us greater adaptation to harsh climates, better thermoregulation and being able to continue grazing in the hottest hours of the day; Due to its greater influence of the A2A2 gene, which allows us to dispel the myth or sometimes hasty diagnoses of lactose intolerance (which is actually difficult digestion of A1A2 or A1A1 milk), we can offer the markets we serve a higher quality milk that is friendly to the digestive, cardiac, and immune systems; in short, there are countless characteristics that make this an increasingly visible alternative.

We can conclude that the Jergyr is an excellent marriage between two breeds that need and complement each other. The Gyr contributes its hardiness, milk production in adverse conditions, longevity, health, adaptability, etc., just as the Jersey provides its conformation, both in body type and system.

mammary, milk production, adult weight, precocity, milk quality, balance, temperament, ease of milking, udder health, ease of calving, vigor of the newborn, persistence of lactation.

Last but not least, when selecting bulls and cows for our breeding and crossbreeding programs, whether Jersey or Gyr, we must always be clear about what we want to raise and what we want to milk. These are cows that, in the best-case scenario, will be with us for their entire lives on our dairy farms. Therefore, it's important to understand that each trait has the value we assign to it, and that genetic correlations can be detrimental when we place too much emphasis on a single characteristic. Balance is always our best ally between production, reproduction, health, and functionality. Grazing conditions increasingly demand stronger cows with healthier and more suitable conformation and better-formed udders. "Miracle" bulls or cows don't exist, but the job of every farmer is to make conscious and judicious matings. For this, we have the invaluable tool of genomic, progeny, and lineage testing. It is our duty to know our cows and make them a profitable and sustainable business, since the costs of producing a liter of milk every day are rising and it has never been more necessary to have efficient cows; and in the end, always remember that genetic improvement is not 100% predictable, because if it were, it wouldn't need mystique.

The JERGYR, within the crosses of dairy breeds, is positioned as the second cross with the highest number of registrations in the different Associations and as the second F1 cross that is most milked in the Colombian herds of low and medium tropics.

It is our duty to know our cows and make them a profitable and sustainable business, since the costs of producing a liter of milk every day are rising and it has never been more necessary to have efficient cows.

JERSEY X RED SINDHI

PRODUCTIVE POTENTIAL AND ADAPTATION

Photographs: Finca Villa del Rio, Ferez Florez in Carrillo - Cordoba

A strategic choice to improve production efficiency in areas where climatic and sanitary conditions may limit the performance of other crops breeds.

One of the biggest incentives for promoting the crossbreeding of these two valuable breeds has been the analysis of field work and information carried out by milk producers and dairy farmers in Brazil.

It is no secret that this country has achieved significant progress in research and production models, focusing on Indicus breeds to achieve efficiency. Promoting dairy farming has been a real challenge for everyone, but even more so in climates as hostile as those of the low tropics. To this must be added the sanitary conditions and ectoparasites that, due to the same environment, make raising livestock a daily struggle.

The Jersey and Red Sindhi Crossbreed: Productive Potential and Adaptatio

In the constant search to improve the productivity and adaptability of dairy production systems, crossbreeding has proven to be an effective strategy.

One of the most promising crossbreeds involves the Jersey breed, known for its high milk production and feed conversion efficiency, and the Indicus Red Sindhi breed, renowned for its adaptability to warm climates and disease resistance. This crossbreeding not only improves milk productivity but also optimizes the animals' resilience and well-being in more extreme environments.

Characteristics of the Breeds

Jersey breed

The Jersey breed originated on the island of Jersey in the United Kingdom and is known for its high production efficiency. Some of its key characteristics are:

- **Milk production:** Jersey cows are known for their excellent milk production. On average, a Jersey cow can produce between 4,000 and 8,000 liters of milk per year.
- **Milk quality:** In addition to its volume, Jersey milk is rich in fat and protein, making it highly valued for the production of cheeses and other dairy products.
- **Weight:** The average weight of a Jersey cow ranges between 400 and 500 kg, making it a medium-sized breed.

Sindhi Red Race

The Red Sindhi is a breed originating from the Indian subcontinent and is known for its hardiness and adaptability. Some of its characteristics include:

- **Climate adaptation:** The Red Sindhi breed is characterized by its ability to thrive in hot and humid climates, making it ideal for tropical and subtropical areas.
- **Disease resistance:** They have greater resistance to common diseases in warm climates, which reduces the costs associated with sanitary management.
- **Milk production:** Although their milk production is not as high as that of specialized breeds such as Jersey, Red Sind-hi cows can produce between 2,500 and 4,000 liters of milk annually.
- **Weight:** The average weight of a Red Sindhi cow is approximately 450 to 500 kg.

Benefits of the Jersey x Red Sindhi Cross = JERSINDHI

Crossbreeding Jersey and Red Sindhi has proven to be an effective strategy for combining the best of both breeds. The most significant benefits are described below.

This intersection:

1. Improvement in Milk Production

Crossing these two breeds results in animals that combine high pro-

Milk production of Jerseys with the adaptability and resistance of the Red Sindhi.

The results have shown that crossbred cows can produce between 4,000 and 6,000 liters of milk per year, which is higher than the average for the Red Sindhi breed, and close to that of Jerseys, but with better adaptability to heat and less than ideal conditions.

2. Increased Resistance to Diseases

One of the main advantages of crossbreeding with Red Sindhi is increased disease resistance. Crossbred cows tend to have improved immunity, allowing them to remain healthy even in warm climates and environments with high pathogen loads.

This can translate into lower healthcare costs and better long-term performance.

3. Climate Adaptability

Jersey cows, while efficient milk producers, are more sensitive to high temperatures. Crossbreeding with Red Sindhi gives them greater resistance to heat stress, improving their well-being and performance in extreme heat. This is especially beneficial in tropical and subtropical regions.

4. Efficiency in the Conversion of Ali-ment

Crossbreeding these breeds can improve feed conversion efficiency, a key indicator of productivity. Crossbred cows tend to optimize the use of feed resources, which can reduce feed costs and increase the profitability of dairy farms.

JERSEY X GUZERAT

AN EFFICIENT ALTERNATIVE FOR DAIRIES IN THE LOW TROPICS

Photo Courtesy: San Rafael Livestock Farm, Caucasia - Antioquia

Crossbreeding cattle has become an effective strategy for improving the productivity and sustainability of the dairy sector. In particular, crossing the Jersey breed with the Guzerat breed presents itself as a promising alternative for addressing the challenges of dairy production in the Colombian lowlands.

Key characteristics of the Guzerat indicus breed

The Guzerat breed originates from India and is recognized for its resistance to adverse climatic conditions, especially heat, and for its ability to adapt to extensive and semi-intensive production systems.
you.

The Guzerat is a large breed with good carrying capacity and excellent resistance to tropical diseases.

Although its milk production does not reach the levels of the Jersey, its adaptability and resistance are key characteristics in hot environments.

Benefits of the Jersey-Guzerat cross

Crossbreeding Jersey and Guzerat cattle aims to combine the best of both breeds, resulting in an animal better adapted to lowland tropical conditions while maintaining good milk production. This crossbreeding can offer several key benefits:

1. **Better adaptation to the tropical climate:** The heat resistance and adaptability of the Guzerat are transferred to the crossbreed, allowing the resulting animal to withstand the high temperatures and humidity typical of the Colombian low tropics, without losing its productive capacity.

2. Increased milk production: Crossbreeding Jersey and Guzerat cattle can result in animals with higher milk production than purebred Guzerats, thanks to the Jersey's high milk production capacity. While the cross may not match the peak production levels of a purebred Jersey, a significant increase compared to purebred Guzerats is expected.

3. Improvement in milk quality: The Jersey is known for its high-quality milk, with a high fat and protein content.

By crossing it with Guzerat, it is possible to improve the quality of milk produced in the low tropics, which can result in a better market price and greater profits for producers.

4. Greater resistance to diseases: The Guzerat is naturally more resistant to common tropical diseases such as tuberculosis and foot-and-mouth disease, so crossbreeding could improve the overall health of the animals and reduce the costs associated with veterinary care.

5. More efficient management: The animals resulting from this cross may be more resistant to poor management and stress conditions, which facilitates the implementation of more efficient and economical management practices on dairy farms.

Considerations for implementing crossbreeding

While crossing Jersey and Guzerat cattle offers several benefits, it is important to consider some key aspects for its successful implementation in the low tropics:

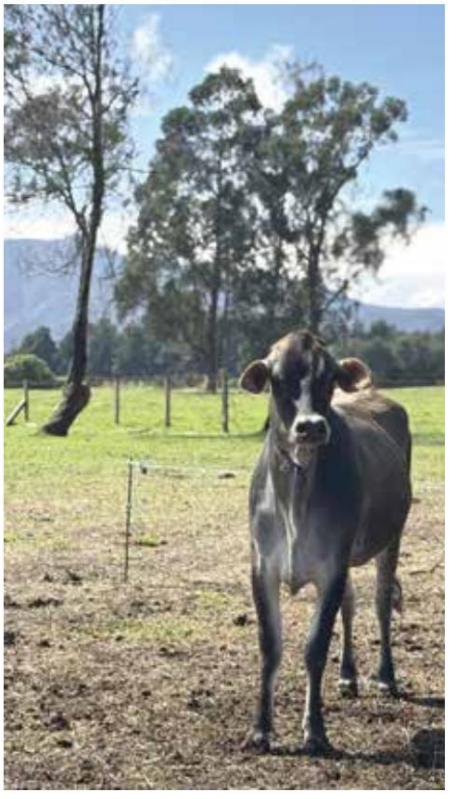
- **Proper selection of animals:** It is crucial to select animals with desirable reproductive and productive characteristics. Jersey animals must be of good genetic quality, and the Guzerat must be individuals with excellent adaptability and heat resistance.
- **Nutritional management:** Crossbred animals may have different nutritional needs compared to purebreds.

  It is essential to provide a balanced diet appropriate to local conditions, allowing for good milk production without compromising the health of the animals.
- **Producer training:** Livestock farmers must be trained in best practices for animal management, feeding, and health to ensure successful crossbreeding and optimize milk production.
- **Continuous evaluation:** It is important to continuously monitor the productivity and behavior of the animals crossbreeding programs will be used to assess whether they meet milk production and quality objectives. This will help adjust crossbreeding and management programs based on the results.

Crossbreeding the Jersey breed with the Guzerat breed offers a viable alternative to improve milk production in the low tropics of Colombia.

This strategy combines the high production and milk quality of the Jersey breed with the heat resistance and adaptability of the Guzerat, creating animals that can thrive in the harsh tropical climate without sacrificing performance. For this strategy to be effective, it is essential that producers implement good management practices, genetic selection, and nutrition, and receive ongoing training.

> “The crossing between the Jersey and Guzerat breeds seek to combine the best of both breeds, achieving an animal that can better adapt to the conditions of the low tropics, while maintaining a good milk production capacity.



The Adaptability of Livestock Pure Jersey to the Low Tropics

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> **"The Jersey breed has proven to be highly adaptable even in challenging conditions such as those of the low tropics.**

Jersey cattle, recognized worldwide for their efficiency and quality in milk production, have proven to be a highly adaptable breed, even in challenging conditions such as those of the low tropics. This adaptability was first demonstrated in Colombia more than four decades ago, thanks to the vision and effort of Santiago Vélez Garcés.

At that time, Santiago Vélez imported the first Jersey cows to the country directly from Ohio, USA. Upon their arrival, they underwent a rigorous quarantine process in Villavicencio under the supervision of the Colombian Institute. Agricultural Institute (ICA). The results were astonishing: not a single animal was lost. This initial success marked the beginning of a story that confirms the adaptability of this breed to the conditions of the low tropics.

An Extraordinary Performance in the Llanero Foothills

Since its introduction, Jersey cattle have faced the adversities of the Llanos foothills, a region characterized by its warm climate, the presence of endoparasites and ectoparasites such as ticks and botflies, and the need for grazing on pastures dominated by Brachiaria grasses.

Despite these challenges, Jersey cows have shown outstanding hardiness and a unique ability to thrive in these conditions.

Efficiency and Dairy Quality

One of the main advantages of Jersey cattle is their efficiency in converting feed into total milk solids. Even in the low tropics, where grazing and minimal supplementation are common, Jersey cows achieve average daily milk production of 12 liters, with a fat content of 4.7% and a protein content of 3.6%. These milk quality levels not only benefit producers but also position the Jersey as an ideal breed for resource-limited regions.

Key Features of Pure Jersey

Compact Size and Efficiency: Being small animals, Jersey cows are able to convert a greater proportion of their feed into milk, optimizing available resources and increasing the carrying capacity of the farm.

Long lactation and reproduction: Jerseys stand out for the length of their lactation periods, compared to hybrid cows, and for their reproductive efficiency and ease of calving, making them ideal for sustainable production systems.

Docility and Nobility: The calm temperament of Jersey cows facilitates their handling and milking without a calf even in adverse conditions.

A Race for the Future

After more than 42 years of presence in the foothills of the Llanos, the Jersey cattle has proven to be a sustainable and efficient option for dairy production in the low tropics.
Their ability to adapt to challenging conditions, along with their efficiency and milk quality, reinforces their role as one of the most valuable breeds for cattle ranchers in Colombia and around the world. The legacy of Santiago Vélez Garcés, who brought this breed to the country, lives on in every Jersey cow that grazes the foothills of the Llanos plains, reminding us of the potential that vision and innovation can have in transforming the livestock sector.

“One of the main advantages of Jersey cattle is their efficiency in converting feed into total milk solids, even in the low tropics where grazing and minimal supplementation are common.