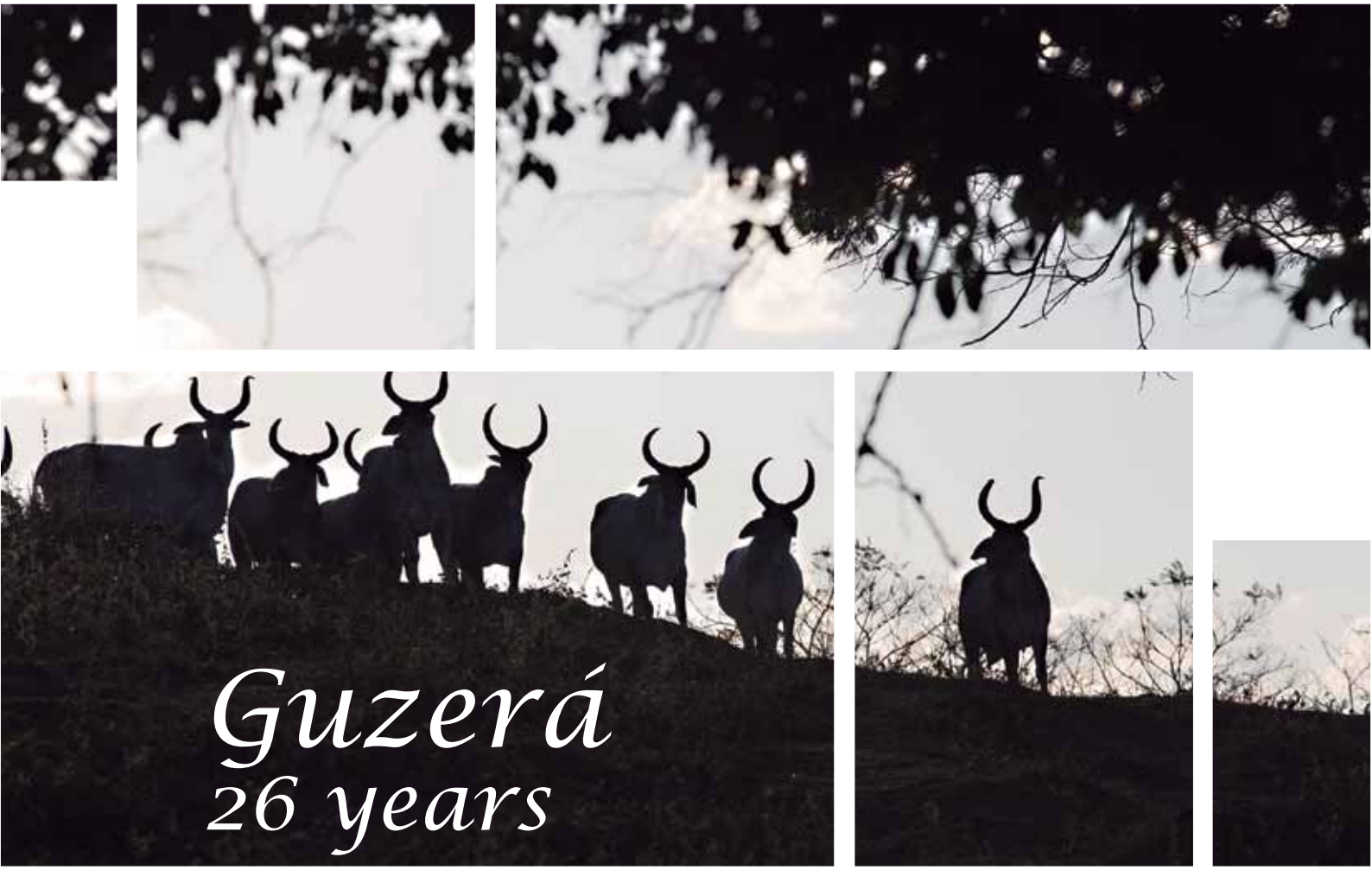
DOCUMENTOS
251

ISSN 1516-7453
July/ 2020

National Breeding Program of Guzerá Cattle for Milk: Progeny Testing, National Zootechnical Archive and MOET Nucleus Results



CBMG

PAGRG

Embrapa

ISSN 1516-7453
July/2020

Brazilian Agricultural Research Corporation
Embrapa Dairy Cattle
Ministry of Agriculture, Livestock and Food Supply
Centro Brasileiro de Melhoramento Genético do Guzerá
Registered in MAPA nº 001

DOCUMENTOS 251

National Breeding Program of Guzerá Cattle for Milk: Progeny Testing, National Zootechnical Archive and MOET Nucleus Results

Frank Angelo Tomita Bruneli
Maria Gabriela Campolina Diniz Peixoto
Mário Luiz Santana Júnior
Rodrigo Junqueira Pereira
Wagner Antônio Arbex
Vânia Maldini Penna
Lenira El Faro Zadra
Rui da Silva Verneque
Raysildo Barbosa Lôbo
Maria Raquel Santos Carvalho

Technical Editors

Brazilian Agricultural Research Corporation
Juiz de Fora, MG
2020

Copies of this document can be obtained at:
Embrapa Dairy Cattle
Rua Eugênio do Nascimento, 610 - Bairro Dom Bosco
36038-330, Juiz de Fora - MG
Fone: +5532 3311-7405
www.embrapa.br
www.embrapa.br/fale-conosco/sac

Editorial Supervision
Frank Angelo Tomita Bruneli and
Maria Gabriela Campolina Diniz Peixoto

Translation
Kerstin Marken

Bibliographic Standardization
Inês Maria Rodrigues

Collection Graphic Design
Carlos Eduardo Felice Barbeiro

Treatment of illustrations and Editing electronics
Warley Stefany Nunes and Adriana Barros Guimarães

Cover illustration
Zzn Peres

Data entry and organization
Dejair Felipe Caetano (Farm Technician at CBMG[2]),

1st edition
Online (2020)

International Cataloging Data in Publication (CIP)
Embrapa Dairy Cattle

National Breeding Program of Guzerá Cattle for Milk: Progeny Testing, National Zootechnical Archive and MOET Nucleus Results/ Frank Angelo Tomita Bruneli ... [et al.]. Juiz de Fora: Embrapa Dairy Cattle, 2020.
94 p. (Brazilian Agricultural Research Corporation Documentos, 251).

ISSN 1516-7453

1. Bovine Dairy Breed 2. Guzerá Breed - Genetic Improvement - Progeny Testing - MOET Nucleus . 3. Molecular Marker I. Bruneli, Frank Angelo Tomita. II. Peixoto, Maria Gabriela Campolina Diniz. III. Santana Júnior, Mário Luiz. IV. Pereira, Rodrigo Junqueira. V. Arbex, Wagner Antônio. VI. Penna, Vânia Maldini. VII. Zadra, Lenira El Faro. VIII. Verneque, Rui da Silva. IX. Lôbo, Raysildo Barbosa.. X. Carvalho, Maria Raquel Santos XI.Série.

CDD 636.2082

Authors

Frank Angelo Tomita Bruneli

Veterinarian, doctor in Zootechny (Animal Production), researcher at Embrapa Dairy Cattle, Juiz de Fora, MG.

Maria Gabriela Campolina Diniz Peixoto

Veterinarian, doctor in Animal Science (Animal Breeding and Genetics), researcher at Embrapa Dairy Cattle, Juiz de Fora, MG.

Mário Luiz Santana Júnior

Zootechnician, doctor in Zootechny (Animal Breeding and Genetics), professor and researcher at Universidade Federal de Rondonópolis, Rondonópolis, MT.

Rodrigo Junqueira Pereira

Zootechnician, doctor in Animal Breeding and Genetics, professor and researcher at Universidade Federal de Rondonópolis, Rondonópolis, MT.

Wagner Antônio Arbex

Mathematician, doctor in Computational Systems Engineering, analyst at Embrapa Dairy Cattle, Juiz de Fora, MG.

Vânia Maldini Penna

Veterinarian, doctor in Biology Science (Genetics), consultant at CBMG^2, Belo Horizonte, MG.

Lenira El Faro Zadra

Zootechnician, doctor in Zootechny, researcher at Instituto de Zootecnia do Governo do Estado de São Paulo, São Paulo, SP.

Rui da Silva Verneque

Zootechnician, doctor in Statistics and Agronomic Experimentation, researcher at Embrapa Dairy Cattle, Juiz de Fora, MG.

Raysildo Barbosa Lôbo

Veterinarian, doctor in Biology Science (Genetics), professor at Faculdade de Medicina de Ribeirão Preto/USP, Ribeirão Preto, SP.

Maria Raquel Santos Carvalho

Doctor, Ph.D. in Human Biology, professor at Instituto de Ciências Biológicas/UFMG, Belo Horizonte, MG.

Collaborators

Cátia Cilene Geraldo
Biologist and Business Administrator, laboratory technician at Embrapa Dairy Cattle, Juiz de Fora, MG.

Daniele Ribeiro de Lima Reis Faza
Biochemist-Pharmacist, specialized in Pharmacology, analyst at Embrapa Dairy Cattle, Juiz de Fora, MG

Dejair Felipe Caetano
Agriculture and Livestock Technician, farm technician at CBMG^2, Juiz de Fora, MG.

Guilherme Ferreira da Costa Lima
Veterinarian, Ph.D. in Agronomy (Forage Cropping), researcher at Embrapa/Emparn, Parnamirim, RN.

Paulo Leonardo Correia Guedes
Zootechnician, master in Zootechny (Forage Cropping), researcher at Embrapa/Emepa, Alagoinha, PB

Paulo Sávio Lopes
Zootechnician, doctor in Zootechny, professor at DZO/UFV, Viçosa, MG

REPILeite
Rede de Pesquisa e Inovação em Leite

www.repileite.com.br

A primeira rede social temática da Embrapa

- palestras ao vivo
- download de publicações
- vídeos
- fóruns de discussão

Isso e muito mais sobre a
Cadeia produtiva do Leite.

Embrapa
Gado de Leite

Se você ainda não é um membro,
venha fazer parte desse grupo
www.repileite.com.br

Presentation of Embrapa Dairy Cattle

A successful partnership! In this year, Embrapa Dairy Cattle and Brazilian Center for Genetic Improvement of Guzerá - CBMG² - present to Brazilian society and other countries under tropical climate conditions the 21st edition of the Guzerá sires and dams summary.

Since 2000, this partnership has been executing the National Breeding Program of Guzerá Cattle for Milk - PNMGuL - with the collaboration of outstanding national and state research institutions, public and private companies focused on agriculture and several dairy herds that contribute to the progeny testing results. Furthermore, we are publishing this document annually, as an important tool for the continuous improvement of this animal genetic resource in the tropics.

Guzerá stands out for its double aptitude, attracting more and more interested producers for using both purebred animals and their crossbreeds, in order to increase profitability in milk, meat and dual-purpose production systems. It has even attracted the eyes of its mother country, India, which has been looking for partnerships and genetic material, a reflection of the commitment and resilience of the breeders and researchers involved with this millennial breed present in Brazil since the 19th century.

PNMGuL, therefore, makes available in the present edition the genetic merit of more than 750 Guzerá sires and more than 520 Guzerá dams by their milk EPD ranking, in addition to other 23 traits of economic relevance for milk production and dual-purpose systems.

Here, technicians and producers have available relevant and impactful technologies for the advancement of tropical livestock.

Paulo do Carmo Martins
Head of Embrapa Dairy Cattle

Este anúncio é uma homenagem a esta palavra que sempre nos faz acreditar que juntos somos mais fortes.

O ano de 2020 começou com a sede do CBMG sendo assaltada, de onde foram levados equipamentos e muito da nossa história de dedicação ao Guzerá. Mas graças ao apoio e a ajuda de parceiros fiéis, conseguimos nos reestruturar para continuar o trabalho de melhoramento genético da raça. Então, fica aqui o nosso profundo agradecimento àqueles que nos apoiaram e acima de tudo confiam na seriedade e na qualidade do nosso trabalho.

Muito obrigado:

Guzera da Juzz · Fazenda Escola Uniube · Fazenda Taboquinha · meta · Guzerá Ibituruna · Guzerá JF Fazenda Ygarapés · NF guzerá

CBMG
CENTRO BRASILEIRO DE MELHORAMENTO GENÉTICO DO GUZERÁ

MAGNO IBITURUNA

Nova geração aprimorando nosso trabalho!

É filho de Nápole TE JF e neto de Nepal TE JF, escolhido para fazer avançar nossa seleção de animais estruturados, precoces, eficientes na reprodução e na produção de leite saudável e queijeiro... a pasto!

Touro em Teste de Progênie - Sêmen disponível na Alta Genetics

www.guzeraibituruna.com.br (31) 99953 9812 (31) 99984 9812 (31)999136787 **guzeraibituruna**

Uniube

www.fazendaescolauniube.com.br

Guzerá Uniube 15 anos de Seleção
muito + LEITE com resultados

Venda permanente de Touros e Novilhas Guzerá Leiteiro e Guzolando

Whats App (34) 9 9689-2836 ou pelo (34) 9 9695-3608

Fixo (34) 3319-8818 e (34) 3319-8834

Evolution of Zootechnical Indexes of the National Breeding Program of Guzerá Cattle for Milk

Maria Gabriela Campolina Diniz Peixoto - Embrapa Dairy Cattle
Frank Angelo Tomita Bruneli - Embrapa Dairy Cattle
Lenira El Faro Zadra - Instituto de Zootecnia de São Paulo

A genetic improvement program, regardless of the species involved, requires continuous monitoring and evaluation of the advances obtained with its selection objectives, as well as of the structure and genetic diversity of the population. This monitoring permits to assess the path taken and to outline new projects for the future. Therefore, we, the technicians involved, are always keeping an eye on the population.

What is the current situation of the genetic variability of the Guzera herds?

To answer this question, we use many tools and indexes that allow us to assess how the population is doing: if there is much consanguineous mating (inbreeding) and substantial circulation or introduction of animals (migration), and if some families are being privileged by selection, etc. This monitoring is called the study of the structure and genetic diversity of the population. The indexes commonly used for this monitoring are the inbreeding coefficient (popularly, consanguinity) and the average relatedness of the animals (which measures the intensity of use of a given animal in the population). These indexes permit to verify the degree of genetic variability, which is fundamental for the selection process since the absence of variation in a given trait of interest in a population suggests that its selection or genetic improvement is not possible.

What we have seen over these 25 years of the National Breeding Program of Guzerá Cattle for Milk (PNMGuL) is somewhat encouraging. Evaluation of the inbreeding coefficient revealed important events for the population under selection for milk production. Although the average population inbreeding coefficient (Fp) of this population varies over the years, its average value is 0.013 or 1.3%, oscillating between 1 and 2%, which is an acceptable level, showing only a minor increase (Figure 1). This fact reveals the breeder's concern in avoiding mating between related individuals. Figure 1 also shows the impact of the release of the first sire summary in 2000 (arrow), which resulted in an expressive reduction of Fp in 2003 and 2004. The opportunity given to breeders to use animals from other farms based on accurate information about the genetic merit of the animals probably contributed to the birth of less inbred (consanguineous) animals during this period. It's so refreshing!

In Figure 1, we can observe the trend of the average inbreeding coefficients (dotted line) only for inbred individuals (Fe). The average inbreeding coefficient for this group of animals throughout the period was estimated at 3%, a value that is within acceptable limits. In addition, there was a trend towards Fe decreasing significantly every year. This result again encouraged program and herd leaders since, although the frequency of inbred individuals has increased in this population (reaching 464 inbred animals in 2010), the trend is that mating of closely related individuals (inbreeding or consanguinity) is avoided.

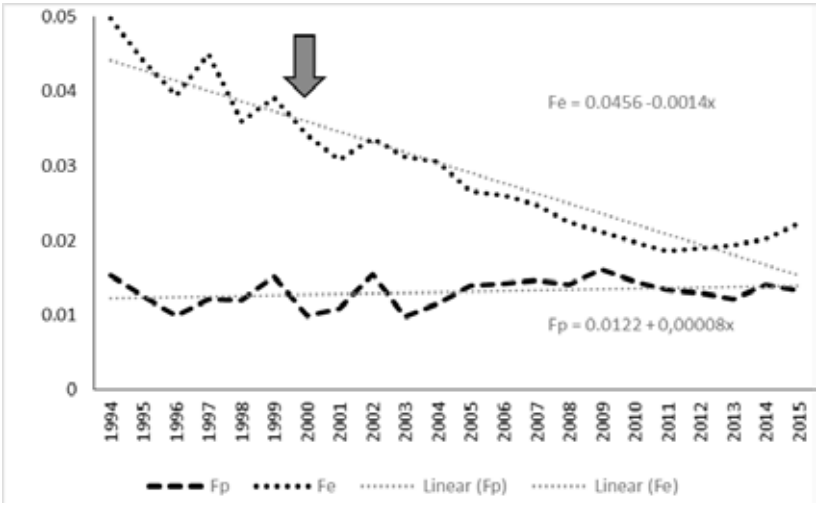


Figure 1. Trend of population (Fp) and individual (Fe) inbreeding coefficients in Guzera herds throughout the breeding program for milk production. The arrow indicates the year when the first sire summary was published.

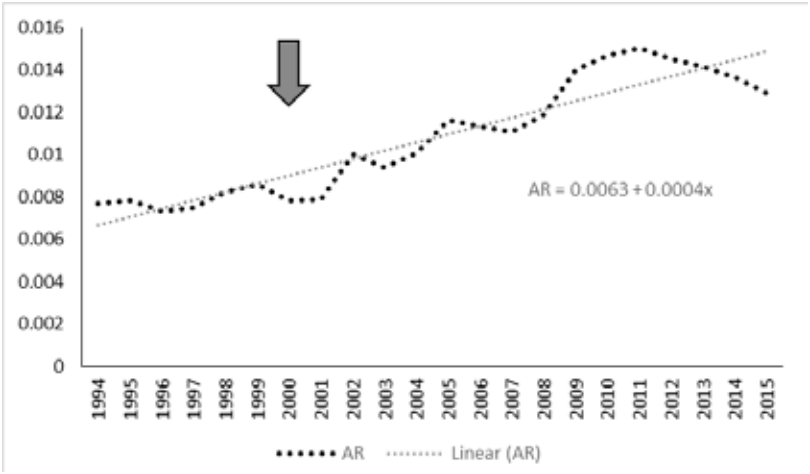


Figure 2. Trend of the average relatedness coefficient (AR) of the population in the Guzera herds throughout the breeding program for milk production. The arrow indicates the year when the first sire summary was published.

It is also interesting to note that during the 20 generations detected in the genealogical data, only 0.02% of matings occurred between full-sibs and 1.18% between half-sibs. However, the effective size of the base or founder population (342 animals) that considers only the number of different genomes that contributed to its formation reveals that caution in conducting the matings must continue since the genetic basis of this population is narrow.

When we evaluate the average relatedness coefficient (which reflects the intense use of some animals in the population) over the years (Figure 2), we can clearly note how individuals from a few families are intensely disseminated in the population; hence, there are many relatives of the same or of few animals in the different herds.

This is result will be a matter of concern in the coming years since it indicates the risk of bottlenecks, i.e., losses in the contribution of some families to the next generation and the consequent loss of genetic variability (which is fundamental for genetic improvement) and increased likelihood of mating between related individuals (with possible reductions in survival and fertility).

Furthermore, there a range of traits that have not yet been addressed by breeding programs and that could be targets of selection in the future. Losses of genetic variability in these traits may be occurring if some are genetically correlated with the traits under current selection, i.e., if genes that influence the current selection targets also have an unfavorable influence on future targets of selection. This may indicate the impossibility of future selection for these traits in a scenario in which they become relevant for the production system.

Now let us take a look at the traits under selection.

Milk yield is the main trait selected in dairy cattle herds in Brazil. Evaluation of milk yield at 305 days of lactation (MY305) shows an annual increase of approximately 50 kg of milk (Figure 3).

This trend (dotted line) was also observed for the average EPDs (or predicted transmitting ability, which has the same meaning) of this trait, with an increase of about 7 kg of milk per year. We can therefore conclude that the herds participating in the PNMGuL have obtained positive genetic and phenotypic progress. The trends shown in this figure reveal that part of this advance was due to genetic improvement, although more expressive gains could be achieved if a higher selection intensity were employed. The breeding objective of a large part of these herds is dual purpose, a fact that contributes to the result obtained since the larger the number of traits in the selection objectives, considering that the traits of interest are not favorably correlated, the smaller the gains in each of them. The selection objectives must be well chosen, always keeping an eye on the conditions of the production system, the market, and the economic return.

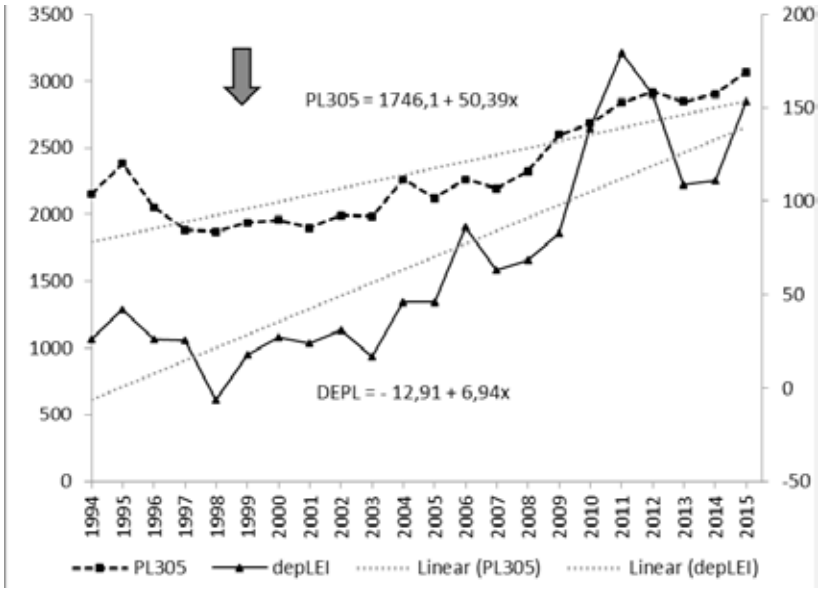


Figure 3. Trend of average EPDs (kg) of Guzera cows for milk yield throughout the National Breeding Program of Guzerá Cattle for Milk. The arrow indicates the year when the first sire summary was published.

Although milk yield continues to be the main selected traits, it can be observed that, except for fat yield (-1.34 kg per year), the phenotypic trend, although small, was positive for the yield of protein (250 g per year) and total solids (100 g per year) (Figures 4, 5 and 6).

However, when we evaluate the genetic progress, there is a positive genetic trend for all milk components (dotted line). Genetic gains of 240, 180 and 730 g were estimated for fat, protein and total solid yield, respectively. The advances in these components are probably due to their positive correlation with milk yield, i.e., they are influenced by the same genes as milk yield, the target trait of selection. Thus, there is the potential for the production of these components and good management, health and nutrition conditions of the animals are necessary for its expression, especially because the effect of the environment is very important for the expression of the desired phenotypes of dairy traits.

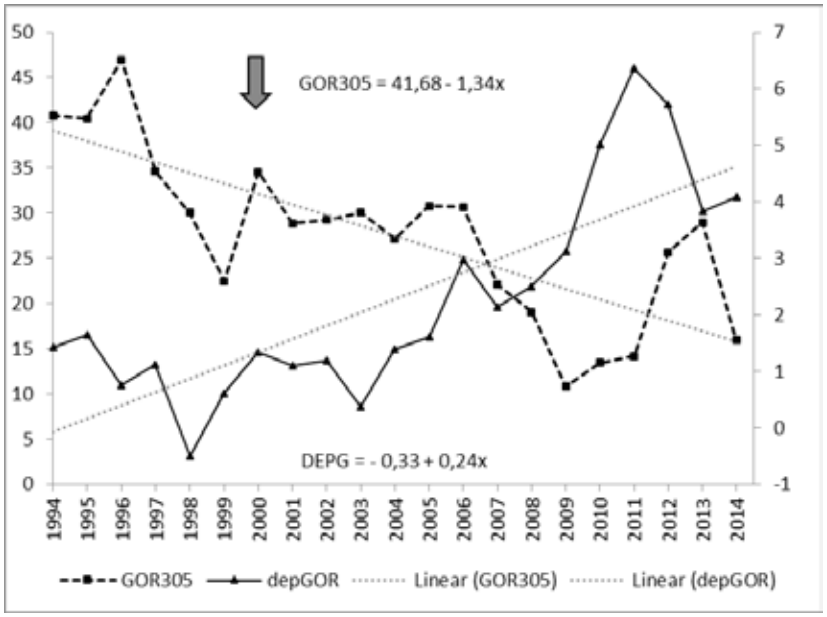


Figure 4. Trend of average EPDs (kg) of Guzera cows for fat yield throughout the National Breeding Program of Guzerá Cattle for Milk. The arrow indicates the year when the first sire summary was published.

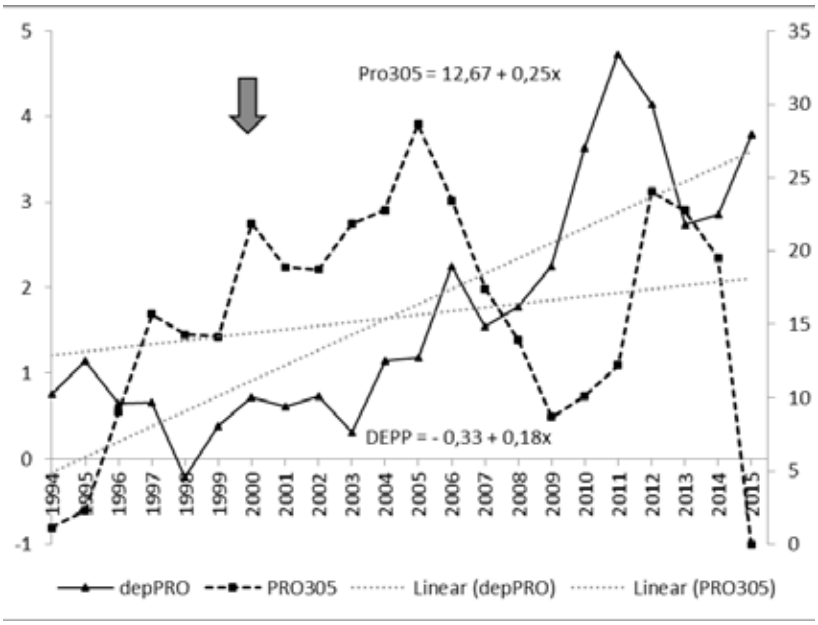


Figure 5. Trend of average EPDs (kg) of Guzera cows for protein yield throughout the National Breeding Program of Guzerá Cattle for Milk. The arrow indicates the year when the first sire summary was published.

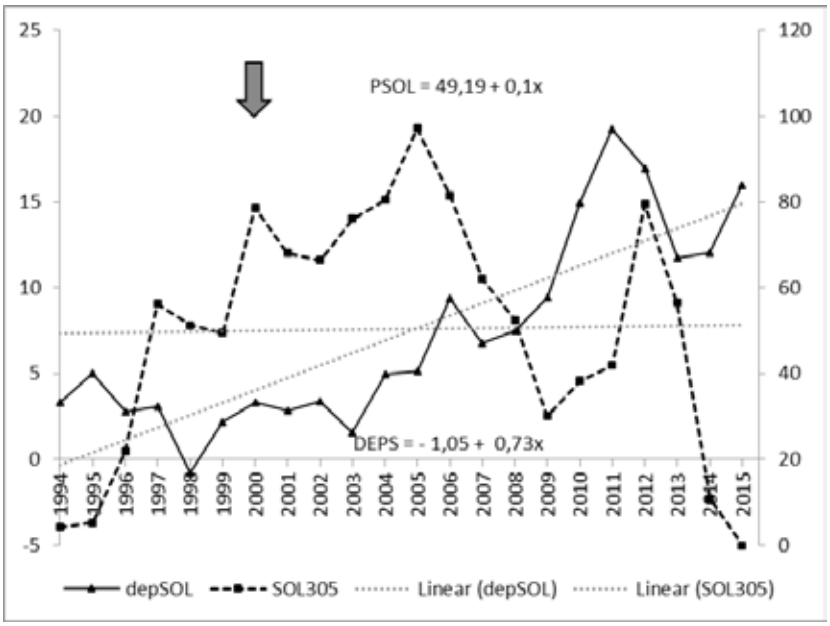


Figure 6. Trend of average EPDs (kg) of Guzera cows for total solid yield throughout the National Breeding Program of Guzerá Cattle for Milk. The arrow indicates the year when the first sire summary was published.

Despite these indirect advances, we should reflect on the selection objectives defined for the Guzera breed. The dairy farming scenario started to change in recent years. The industry is now considering the quality of the milk it buys from the producer and consumers are increasingly concerned about what they eat. Is it not time to review the selection objectives of dairy Guzera herds? Volume is important but the yield or content of milk components, as well as the somatic cell count (SCC) that reflects the health of the mammary gland, are becoming more important every day. Why? Because the dairy industry wants to be more efficient in producing milk products and in meeting consumer demands. Therefore, focusing selection decisions on these traits is necessary, even strategic, in dairy herds in order to achieve better product prices and greater profitability of the activity. Regarding the perspective of including SCC in genetic evaluations, like for milk components, it is necessary to increase the information available in the PNMGuL database. This requires the participation and commitment of all parties involved, which should send test-day milk samples to the laboratories for the analysis of milk components and SCC.

Figure 7 shows the phenotypic and genetic trends for age at first calving (AFC). This trait was recently included in the summary and reflects the productive precocity of the animals, which is of great economic importance. Breeding animals with more sexual precocity provides faster return on investment. Although recent, advances occurred in the phenotypic means of this trait, which have declined expressively (-40 days per year) over the years of PNMGuL. This result largely reflects the efforts of breeders in promoting changes in the environment, including health and nutrition actions as well as the use of modern reproduction technologies. Indirectly, although not the target of selection, a genetic change also occurred in the herd that may even be greater from now on because of the availability of the genetic merit of the animals for this trait in the summary. The peak years when AFC increased generally correspond to years of feed shortage due to prolonged and intense dry periods. We also included productive efficiency, which associates milk yield and precocity, as another trait in the last summary (2018) for the combined improvement of these traits. However, the time was not sufficient to evaluate its trend.

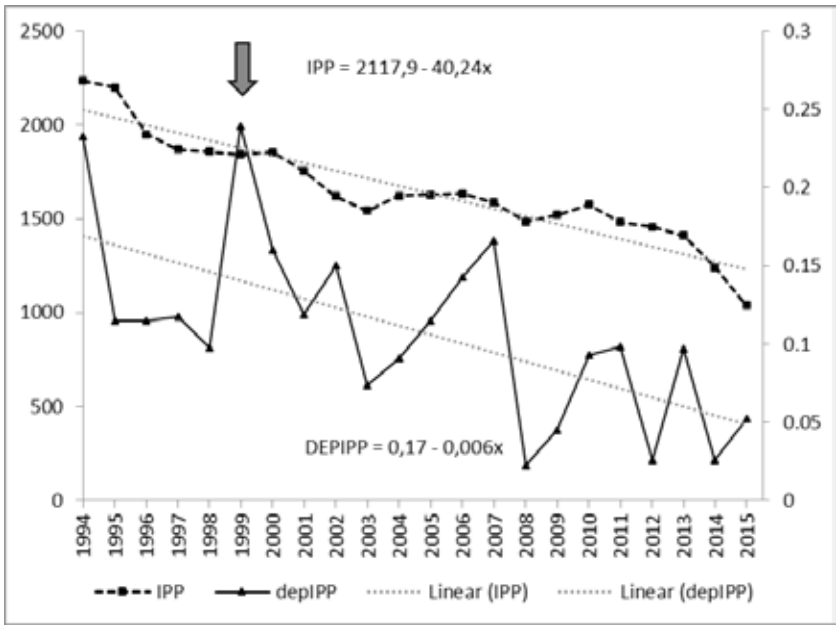


Figure 7. Trend of average EPDs (kg) of Guzera cows for age at first calving throughout the National Breeding Program of Guzerá Cattle for Milk. The arrow indicates the year when the first sire summary was published.

Where are we heading? What do we need?

We will now comment on the direction to be taken in the PNMGuL. We need to obtain quantitative and qualitative measurements, i.e., accuracy. We need to evolve, or resume, the measurements of the linear system, focusing on functional morphological traits that will allow animals to produce efficiently, an initiative that was started but was lost over time. Our registry needs to assume and commit to this task. Research also needs to identify new phenotypes (traits of interest) and the joint project should start to check them (phenotyping) in order to establish their potential for improvement and for the definition of the most appropriate criterion for their selection. We will thus be preparing to face the future demands of the herds, the industry, and the consumer.

One example of a trait that could be included in the official milk recording system is the body condition score of cows during their lactation, or at least up to 90 days of lactation. Its measurement is easy and inexpensive and the trait can be easily included in the official milk recording system, along with other functional traits. Changes in the body condition score of cows at the beginning of lactation may be associated with a negative energy balance, which occurs in animals with high production levels but with inadequate energy intake. If very severe, a negative energy balance results in production

and fertility losses of dairy cows. A scoring system ranging from 1 (very thin) to 5 (very obese) may be easily used by test-day technicians after training of the team.

Taking advantage of what is already available, such as milk yield, we can use slightly more complex models in the evaluations that allow us to detail the environmental effects (management, nutrition) that are inherent to milk recording scheme. These models, called random regression models, are being adopted in many countries for genetic evaluations of productive traits in dairy cattle. Among other aspects, such models permit to increase the accuracy of the breeding values of animals for milk yield, as well as to model certain parameters related to the shape of the animals' lactation curve, such as lactation persistency, a trait widely studied in Zebu cattle. Because of their greater complexity, these models require a larger number of production records of the animals during milk recording scheme, as well as a more detailed description of the management conditions on each test-day milk recording (feeding, type of milking, calf death, cow diseases during milk recording scheme, etc.). These data can be included in the definitions of the contemporary groups, which are so important for genetic evaluations.

Furthermore, the implementation of a broad DNA database is necessary to take advantage of new molecular and genomic tools for the characterization of genotypes of interest (QTL). In addition, the application of statistical tools to genomic and genetic evaluations will ensure greater accuracy and, consequently, genetic gain in the populations under selection.

It continues to be our commitment, as researchers of PNMGuL, to provide the program with scientific tools that will allow its sustainable development, and permit breeders and milk producers to proceed with the efficient selection of their herd in response to market demands so that they will be able to maintain this very important activity.

Guzerá in the Science

Maria Raquel Santos Carvalho – Departamento de Genética, Ecologia e Evolução, ICB, UFMG
Carolina Ramos Matosinho – Departamento de Genética, Ecologia e Evolução, ICB, UFMG
Pablo Augusto de Souza Fonseca – University of Guelph
Izinara Rosse da Cruz – Universidade Federal de Ouro Preto
Raphael Steinberg da Silva – Instituto Federal de Educação Ciência e Tecnologia de Minas Gerais, Campus Bambuí
Maria de Fátima Ávila Pires - Embrapa Dairy Cattle
Marco Antônio Sundfeld da Gama – Embrapa Dairy Cattle
Frank Angelo Tomita Bruneli – Embrapa Dairy Cattle
Ricardo Vieira Ventura – Facultad de Medicina Veterinaria e Zootecnia, USP
Maria Gabriela Campolina Diniz Peixoto - Embrapa Dairy Cattle

An adapted breed is an asset. It is a heritage conquered by animals in the environment in which they evolved and by the daily effort of many breeders, over generations. Part of this value comes from how well a breed is scientifically known. The 26 years of the program developed by the Brazilian Center for Genetic Improvement of Guzerá (CBMG^2), with Progeny Testing, the MOET Nucleus and genetic evaluations, brought the Guzerá breed to a new production level. Today, it is possible to select for the purpose of the animals in your herd using genetic information and, soon, genomic tools.

It has been an honor to participate in this effort. Here, we will highlight some of the work developed in the Guzerá research and discuss some of the future perspectives.

Molecular Genetic Studies

Milk for the human health

Over the past few decades, the consumption of milk and dairy products has been the subject of many questions, generating wide debates and a new research agenda. Two aspects have been investigated when talking about milk for human health: proteins and the fatty acid profile.

Proteins

Although milk and its derivatives are important sources of protein in our diet, the association of milk with autoimmune diseases has been described in the medical literature. In particular, a variant of beta-casein has been implicated in these conditions. There is an allele (that is, a genetic variant) that is considered healthy (the beta-casein A2 allele). The other beta-casein alleles are collectively called “A1” and give rise to a degradation product, BCM-7 (beta-caseomorphine 7), which crosses the gut barriers to blood and from the blood to the brain, what would cause autoimmune reactions. A2 milk does not give rise to BCM7. Digestion of beta-casein A2 is therefore easier. Some cows naturally produce A2 milk. The good news is that most Guzerá animals produce A2 milk.

In addition to beta-casein, there are many other important proteins in cow’s milk and these proteins also have genetic variants that can cause reactions in the human body or affect milk production. We are using data from the complete sequencing of the Guzerá genome to discover the typical variants of the breed in the various proteins that make up milk.

We analyzed seven genes, which encode the main milk proteins: beta-casein (CSN2), kappa-casein (CSN3), alpha-S1 casein (CSN1S1), alpha-S2 casein (CSN1S2), alpha-lactalbumin (LALBA), lactoferrin (LTF) and beta-lactoglobulin (LGB). The LALBA protein is one of the proteins responsible for the synthesis of lactose. LTF is a protein present in various fluids besides milk, such as tears, saliva, seminal plasma, and nasal discharge. It is a highly interesting protein, as it has antimicrobial, anti-inflammatory, antibacterial, antiviral, antifungal, antiparasitic and anticancer activities. There are

studies associating LTF with resistance to mastitis. In milk, LTF is part of the immune protection system transmitted by the cow to the calf through the colostrum and milk.

Among the seven genes listed above, we found out 13 genetic variants, which may have repercussions or functional impact. Of these variants, two affect LALBA and LTF proteins, one in each gene. Now, we need to investigate whether these variants actually affect milk production or composition. Initially, we will investigate the association of variants in the LTF gene _ some discovered by us and some from the literature_ with traits of Guzerá milk production. For this study, production data and individual milk samples were collected and we have already developed a method to genotype the variants. We will have news on these topics soon.

Fats

For decades, milk and milk products have been unfairly criticized because they contain a high content of saturated fats. However, fats, including saturated fats and the so-called cholesterol, play quite a number of important roles in our body. Cholesterol, for example, is so important that our own body produces it. Without cholesterol, it would not be possible, for example, to synthesize vitamin D, steroid hormones, important for reproduction, and bile acids. In fact, cholesterol and other classes of fats are present in the membranes of all our cells. Our brain is composed mainly of fats. A very important class of fats is fatty acids. They are molecules that, in addition to providing energy (2 times more than carbohydrates and proteins), regulate a series of metabolic functions through the modulation or control of gene expression; an area of knowledge known as nutrigenomics. In addition, the generation of energy from fatty acids causes less damage to the cells than that obtained from carbohydrates (sugars). Some fatty acids also modulate the immune system, exerting anti-inflammatory action as in the case of omega-3 fatty acids. Milk and dairy products with regular levels of fat, such as whole milk, cheeses and butter provide numerous biologically active fatty acids, which have properties beneficial to health, some not found in appreciable quantities or even absent in other dietary sources, as in the case of acid conjugated linoleic acid (CLA) and butyric acid, respectively.

Although milk fat is in fact a significant source of saturated fatty acids in the human diet, increasing evidence indicates that eating dairy products with regular levels of fat is not associated with an increased risk of cardiovascular disease, and may further reduce the risk obesity and type 2 diabetes. The fatty acid profile of milk (proportion of different fatty acids in the fat) varies mainly depending on the diet provided to the animals, but there is also considerable variation between animals, consuming the same diet, due to its genetic origin. This individual variation has been extensively studied in Taurine dairy breeds, but very little is known about this issue in Zebu breeds. On this issue, studies conducted by our research group have sought to answer some questions:

Is there an individual variation in the fatty acid profile of the milk of Guzerá cows? A pilot study has shown us that it is true, and that this variation is considerable for some fatty acids of interest to human and animal health. What are the genetic bases behind these individual variations? Recently, a study with a large number of Guzerá cows from different Brazilian herds allowed us to identify genetic variants in key genes of the lipids metabolism, some of them already described in the literature and some new ones. This information may be incorporated into the selection and improvement programs of the Guzerá breed in the future, aiming at the production of milk with high nutraceutical value, that is, value for human health. These promising results will be available soon. In addition, an association study on a genomic scale (that is, another GWAS – Genome-Wide Association Study) will be developed to find out which genes influence these traits.

Probiotics in Guzerá milk

The use of beneficial or probiotic bacteria has become a common practice in human and animal nutrition. More than this, these healthy microorganisms are powerful allies in the prevention and treatment of many diseases that affect human and farm animals' health. In recent years, it has been shown that there is a diversity of bacteria in the udder of cows, which end up being excreted in milk. These bacteria are important for both the development of the calf and for the processing of dairy products. Some of these bacteria appear to have promising effects in combating other disease-causing bacteria, particularly mastitis. The good news is that, in animals of the Guzerá breed, we have been able to isolate several beneficial bacterial strains, such as Lactobacillus and Lactococcus, which seem to protect the udder of these animals from the attack of these vile bacteria. The presence of these probiotics helps to explain the low rate of mastitis observed in the Guzerá breed, as well as the low means of somatic cell counts (SCC) found in the Guzerá herds. It is worth remembering that SCC values are directly related to the occurrence of subclinical mastitis, which causes enormous economic losses to the milk chain.

The temperament

Among other issues, we investigated the genetic component of reactivity (a component of temperament) in Guzerá. We developed a GWAS, which allowed us to identify a region in the genome associated with reactivity in Guzerá. In this region is the dopamine 3 receptor (DRD3) gene, which encodes a protein expressed in the central nervous system. In humans, it was already known that this gene is associated with temperament traits and the results found in Guzerá make a lot of sense. In order to continue this study, we need to sequence a larger number of individuals, whose temperament has been assessed, in the search for the variants that cause the most nervous temperament. Here, it is important to note that, if this gene is involved in the reactivity of Guzerá and humans, it can also contribute to this trait in other breeds. This study then proceeds.

(Re)telling the story of Guzerá

As for many other breeds, there are some tales about Guzerá evolution in Brazil. In conversations with the Guzerá breeders, it is frequently heard that a relatively small number of animals were brought from India to Brazil, and that there were some specific moments when the number of purebred animals decreased, due to their contribution to the creation of crossbreds or other breeds. This brought up the question about the genetic diversity in Guzerá. In fact, this is a very common question in studies about any breed and also about wildlife animals.

When sampling livestock animals in the field, it is not known whether the animals collected are related, or how closely related they are. The collection of related individuals gives the impression that genetic diversity is less than it actually is. Using data from Guzerá SNPs, we have developed a method to correct this problem. The method worked very well. How we know? We managed to recover the moments in which, according to the breeders' reports, there was a reduction in genetic diversity. In other words, those Guzerá stories are not folklore, they are history!

As a result, this article was published in one of the most important journals in the area of Ecology and Biodiversity Conservation. Therefore, it is not Science helping Guzerá, it is Guzerá helping Science. Great, isn't it?

And after all, what about the genetic diversity of Guzerá? Correcting for the presence of close relatives in the samples, Guzerá breed conserved a good amount of genetic diversity. Genetic diversity is the

best guarantee that a breed can have to go through prolonged droughts, emerging viruses or other forms of environmental stress.

Therefore, molecular research in Guzerá continues. These results reflect the efforts of many students and researchers. They also reflect the support of funding agencies, such as CAPES, CNPq and, mainly, FAPEMIG. However, nothing would have been achieved without the support of CBMG[2] and the breeders. Thank you very much.

Some of the scientific papers on Guzerá

FONSECA, P.A.S.; LEAL, T.P.; SANTOS, F.C.; GOUVEIA, M.H.; ID-LAHOUCINE, S.; ROSSE, I.C.; VENTURA, R.V.; BRUNELI, F.A.T.; MACHADO, M.A.; PEIXOTO, M.G.C.D.; TARAZONA-SANTOS, E.; CARVALHO, M.R.S. Reducing cryptic relatedness in genomic data sets via a central node exclusion algorithm. Molecular Ecology Resources, v.18, p.435-447, 2018. DOI: 10.1111/1755-0998.12746

DOS SANTOS, F.C.; PEIXOTO, M.G.C.D.; FONSECA, P.A.S.; PIRES, M.F.Á.; VENTURA, R.V.; ROSSE, I.C.; BRUNELI, F.A.T.; MACHADO, M.A.; CARVALHO, M.R.S. Identification of Candidate Genes for Reactivity in Guzerat (Bos indicus) Cattle: A Genome-Wide Association Study. Plos One, v.12, p.e0169163, 2017. DOI:10.1371/journal.pone.0169163

FONSECA, P.A.s.; DOS SANTOS, F.C.; ROSSE, I.C.; VENTURA, R.V.; BRUNELLI, F.Â.T.; PENNA, V.M.; VERNEQUE, R.S.; MACHADO, M.A.; DA SILVA, M.V.G.B.; CARVALHO, M.R.S.; PEIXOTO, M.G.C.D. Retelling the recent evolution of genetic diversity for Guzerá: inferences from LD decay, runs of homozygosity and Ne over the generations. Livestock Science, v.193, p.110-117, 2016. DOI:10.1016/j.livsci.2016.10.006

ROSSE, I.C.; ASSIS J.G.; OLIVEIRA, F.S.; LEITE, L.R.; ARAUJO, F.; ZERLOTINI, A.; VOLPINI, A.; DOMINITINI, A.J.; LOPES, B.C.; ARBEX, W.A; MACHADO, M.A.; PEIXOTO, M.G.C.D.; VERNEQUE, R.S.; MARTINS, M.F.; COIMBRA, R.S.; SILVA, M.V. G.B.; OLIVEIRA, G.; CARVALHO, M.R.S. Whole genome sequencing of Guzerá cattle reveals genetic variants in candidate genes for production, disease resistance, and heat tolerance. Mammalian Genome, v.28, p.66-80, 2016. DOI: 10.1007/s00335-016-9670-7

PEIXOTO, M.G.C.D.; BRUNELI, F.A.T.; BERGMANN, J.A.G.; SANTOS, G.G.; CARVALHO, M.R.S.; BRITO, L.F.; PEREIRA, M.C.; PIRES, M.F.A. Environmental and genetic effects on the temperament variability of Guzerá (Bos indicus) females. Livestock Research for Rural Development, v.28, paper 159, 2016.

Quantitative studies

Maria Gabriela Campolina Diniz Peixoto, Embrapa Dairy Cattle
Mário Luiz Santana Jr., Universidade Federal de Rondonópolis
Rodrigo Junqueira Pereira, Universidade Federal de Rondonópolis
Lenira El Faro Zadra, Instituto de Zootecnia de Sertãozinho
Ricardo Guimarães Andrade, Embrapa Dairy Cattle
Frank Angelo Tomita Bruneli, Embrapa Dairy Cattle
Maria de Fátima Ávila Pires, Embrapa Dairy Cattle
Annaiza Braga Bignardi, Universidade Federal de Rondonópolis
Ricardo Vieira Ventura, Universidade de São Paulo
Júlio César Carvalho Balieiro, Universidade de São Paulo
Bruno da Costa Perez, Universidade de São Paulo
Raimundo Nonato Braga Lobo, Embrapa Goats & Sheep
Glaucyana Gouvêa dos Santos, Embrapa Dairy Cattle
Roberta Polyana de Araújo, Universidade Federal do Ceará
Paulo Sávio Lopes, Universidade Federal de Viçosa
Fabyano Fonseca e Silva, Universidade Federal de Viçosa
Eula Regina Carrara, Universidade Federal de Viçosa
Laís Brito, Universidade Federal de Viçosa

Any trait that can be evaluated is called a phenotype. Phenotypes can be qualitative or quantitative. Qualitative are the traits that are described with adjectives, such as the shape of the horns (ex: in lyre) or coat pattern (ex: spotted). The quantitative ones are those expressed in numbers, such as production traits (days of lactation, percentage of fat in milk, croup height). The expression of a production trait is determined by the action of several factors, classified as genetic and environmental. In breeding, environment is everything that is not genetic (climate, nutrition, hygiene, health, general management etc.). The term genotype is used to describe everything that is determined by genes. In addition to genotype and environment, there is another factor known as genotype-environment interaction. What would this factor be? In fact, the genome is like a box of Lego pieces. These parts can be used differently, as needed. That is, the genotype is expressed differently according to the environment in which the animal is. The genotype-environment interaction means that the full expression of the genetic potential of an animal is not observed when their genotype (genetic material) is in certain environments. Thus, in each environment the genotype will interact with the existing conditions and result in different phenotypes. Heritability seeks to measure how much of the variation in a quantitative trait is conditioned by genes. Imagine a completely standardized breeding condition, that is, all animals receiving exactly the same treatment (temperature, nutrition, everything the same). Any difference between individuals would be caused by genetic differences between them. In the real world, however, this does not happen. The environment always varies and interacts with the genotype. Thus, there is no certain and fixed heritability value, there is the heritability calculated for a population in a given environmental condition in a given time. In a country the size of Brazil, the environmental variation is enormous. Consequently, preserving the adaptability of the breed becomes a fundamental value, since changes in the environment can represent an additional expense in production.

Resistance to thermal stress

Over the past few decades, we have seen important environmental changes, with increased temperatures and prolonged droughts in some regions of Brazil. As a result, resistance to thermal stress, a characteristic present in Guzerá, becomes even more important.

To assess the response pattern of Guzerá cattle to thermal stress, we at the Federal University of Rondonópolis and Embrapa Dairy Cattle used historical milk production data on the test-day from the database of the National Guzerá for Milk Improvement Program and climatic data from the

National Meteorological Institute. The climatic variable used was the Temperature and Humidity Index (THI), obtained from the maximum daily temperature and humidity averages. It was observed that the increase in THI causes a reduction in the amount of milk produced. The impacts were -0.037, -0.019 and -0.006 kg of milk/day per unit of change in the THI, for the initial, intermediate and final stages of lactation. This suggests that the genotype-environment interaction can negatively affect milk production.

Heritability estimates ranged from 0.16 to 0.35 over lactation for different values of THI, suggesting the possibility of genetic gains with the selection for milk production at a given THI (environmental conditions of temperature and humidity) and obtaining animals more tolerant to thermal stress. The estimated genetic values for the Guzerá bulls in response to changes in the THI values varied month by month, confirming that the genotype-environment interaction due to thermal stress has an effect on milk production on the test-day. Despite the high dairy performance of Guzerá cattle under thermal stress, as verified in this study, the genetic trend, which evaluated the genetic progress that has occurred for milk production in function of the THI over the years, has shown a progressive reduction in heat tolerance. Therefore, new breeding strategies should be considered to avoid future negative impacts of thermal stress on milk production in Guzerá animals.

We need to improve Guzerá's productive performance without losing its differential in important traits such as adaptive ones, mainly because we are in the tropics, where the environment has extreme and even adverse conditions of temperature and humidity, and Guzerá is able to cope with them very well.

Does it make sense to make selection for milk and beef?

Some breeds proved to be good meat producers, or good milk producers, and others stood out with their double capacity: producing meat and milk (dual purpose). Animal specialization for the production of one or another product was a necessity to meet the growing demand of the world population for food. Genetic improvement tools have evolved, allowing selection based on the genetic values of animals for production to lead to a rapid increase in animal performance to produce meat or milk. Other breeders followed the path of jointly producing meat and milk, based on the potential of some breeds for dual purpose. This issue has always been controversial and many criticize the option of selecting meat and milk production characteristics at the same time, which goes against the specialization model of many countries. The research then decided to check whether this selection is indeed viable, to clarify and guide the breeders.

Guzerá is considered in Brazil as a Zebu breed of dual purpose and performance data on dairy and beef traits have been measured for years in several herds collaborating in the breeding programs of the breed. From this database, researchers and professors at the Department of Animal Sciences at the Federal University of Viçosa and Embrapa Dairy Cattle carried out a comprehensive study to estimate the genetic correlations between beef, milk and reproduction traits, using the database from the National Genetic Improvement Program of Guzerá for Milk and the Zebu Genetic Improvement Program.

The results were very interesting. Heritabilities, as usual, were high for beef traits and moderate for dairy traits, showing, as everyone knows, that direct selection for these traits is possible. The novelty was the genetic correlations between weight, dairy and reproductive traits, which were also favorable and allowed us to verify that, yes, joint selection is possible for these traits. The genetic correlations of weight at weaning, year and yearling with age at first birth ranged from -0.58 to -0.62 (that means, the greater the weight gain, the earlier the animal), showing that the selection for one

trait it will bring favorable and expressive changes in the other. The genetic correlation of weight at different ages with milk production in 305 days, which ranged from 0.25 to 0.36, also showed a favorable relationship between these traits, which allows direct or joint selection for gains in both traits. Likewise, the correlation of milk production in 305 days with age at first delivery was favorable (-0.14).

Therefore, in the Guzerá breed, there is no antagonism that makes concomitant selection for beef, milk and reproduction traits unfeasible. The option to specialize the breed for milk or beef, or to keep selection for both traits, is up to each breeder. Certainly, the genetic gains in each of these traits will not be the same as that of direct selection for only one of them, but it will be possible.

Somatic cell count (SCC)

Another study was carried out with the somatic cell count (SCC) of the milk from Guzerá cows. SCC is related to the occurrence of subclinical mastitis, which brings enormous economic losses to dairy herds. Thus, in order to estimate the relationship of somatic cell counts (SCC) with milk production traits, a study was conducted with the information available in the database of the National Genetic Improvement Program of Guzerá for Milk. In this study, it was found, first, that the average SCC in lactations was 214.5 ± 436.4 thousand cells/mL, a satisfactory average when considering the value of 500 thousand cells/mL defined by IN76 (MAPA, 2018) as the upper limit of quality milk for processing and consumption.

On the other hand, the estimate of heritability for SCC was low (0.08). Low heritability values for SCC have also been found in studies with other breeds. This indicates that SCC has a large contribution from the environment and a small contribution from genetics. This result is also good, because it is easier to improve sanitary management and adopt good hygiene practices for lactating cows than trying to make a genetic improvement so that the cows have less SCC and are more resistant to mastitis. The genetic gain would be small with direct selection to reduce SCC and, consequently, the occurrence of mastitis. On the other hand, the increase in SCC is a defense mechanism of the animal against the presence of infectious agents. As the immune system is closely interconnected, it would not be possible to reduce SCC in milk without affecting other aspects of the animal's defenses, with a great risk to the health of the herd.

In addition, practically null genetic correlations between the milk production traits and SCC were observed, indicating that it would not be possible to improve the SCC through direct selection for the productive traits. This was an initial study, which needs to be carried over with a larger volume of data and other tools and methods of genetic analysis for its definitive conclusion. We reinforce, therefore, that until now, environmental factors, such as adequate nutrition and hygiene when milking lactating animals, are the most important factors and must be worked on in herds to ensure the reduction of the occurrence of mastitis.

Some of the scientific papers on Guzerá quantitative traits

BRITO, L.; PEIXOTO, M.G.C.D.; CARRARA, E.; FONSECA E SILVA, F.; VENTURA, H.T.; BRUNELI, F.A.T.; LOPES, P.S. Genetic parameters for milk, growth, and reproductive traits in Guzerá cattle under tropical conditions. Tropical Animal Health and Production, 2020. DOI: 10.1007/s11250-020-02255-0

SANTANA JR, M.L.; PEREIRA, R.J.; BIGNARDI, A.B.; EL FARO, L.; PIRES, M.F.Á.; ANDRADE, R.G.; PEREZ, B.C.; BRUNELI, F.A.T.; PEIXOTO, M.G.C.D. Dualpurpose Guzerá cattle exhibit high dairy performance under heat stress. Journal of Animal Breeding and Genetics, jbg.12450-9, 2019. DOI: 10.1111/jbg.12450

SILVA, R.P.A.; LOBO, R.N.B.; EL FARO, L.; SANTOS, G.G.; BRUNELI, F.A.T.; PEIXOTO, M.G.C.D. Genetic parameters for somatic cell count (SCC) and milk production traits of Guzerá cows using data normalized by different procedures.

Tropical Animal Health and Production, 2020. DOI: 10.1007/s11250-020-02277

Future perspectives

The inclusion of Guzerá in the context of production efficiency and quality in the international livestock sector: How precision farming and phenotyping, together with systems biology, can assist in this process

Pablo Augusto de Souza Fonseca[1]

[1]Centre for Genetic Improvement of Livestock, Department of Animal Biosciences, University of Guelph, Guelph, ON N1G 2W1, Canada

The Brazilian agriculture has great international prominence, with Brazil being responsible for 8% of all world agricultural trade and making a fundamental contribution to the resources and raw materials to the sectors involved. The accumulated values in goods and services reached values around 200 billion US dollars, which corresponds to ~20% of the Brazilian Gross Domestic Product (https://www.cnabrasil.org.br/cna/panorama-do-agro). It is estimated an increase of 70% in the consumption of products of animal origin in 2050 due to the global population growth (FAO, 2009). In parallel, the international agricultural sector is going through a period of intense changes and the creation of new demands aimed at improving the quality of products, animal welfare and environmental care. Therefore, the development of methodologies, which allow the achievement of these demands, is a crucial step for the success and maintenance of the market.

Guzerá, because it is a dual-purpose breed, demands an even more caution due to possible correlations between traits, whether they are antagonistic or not. The investigation of the biological causes of this relationship between multiple traits should be prioritized in order to assist the more guided and specialized selection for traits of economic interest, as well as reducing the frequency of undesired responses in the selection process. However, to make this possible, a level of precision in measuring traits of interest, as well as an increasing in the frequency of measurement must occur.

In this context, precision farming/phenotyping is a strategic area for the sector. Data from precision phenotyping methodologies have gained considerable prominence due to the wide variety of information that can be obtained precisely. Sensors such as pedometers and collars equipped with accelerometers, imaging systems, and online phenotyping systems on automated milking platforms using proximal infrared (NIR) are clear examples of this technological diversity. The level of animal's activity, the time spent lying down, distinction and counting of feeding and ruminating events, breeding events etc., are examples of activities detectable by 3-axis accelerometers. This information can be integrated into statistical models for the prediction of events such as the number of days required for the animal to reach slaughter weight, feed efficiency calculations, detection of estrus events and detection of animals affected by health changes.

In swine and bovine, the use of image processing obtained using low-cost and non-invasive equipment, such as Kinect® (Microsoft, Redmond, WA), for the measurement of traits such as body weight, carcass yield, thermal stress, septic pododermatitis, behavior and reproduction have already been reported. This type of procedure can assist in optimizing the monitoring of growth, production and behavior of animals in a cost-efficient manner.

The recognition of animals through image and sound systems is also an extremely promising area. These systems may allow, in a near future, the replacement, or even the joint use, of radio frequency identification (RFID). The use of electronic earrings, although extremely useful, can present limitations and flaws when reading the signal emitted by the earring and data storage, which result in loss of information or inconsistent data.

Values such as total yield, percentage of protein and milk fat can be predicted and assessments such as somatic cell count and analysis of biomarkers for mastitis (beta-hydroxybutyrate) and meta-

bolic states, such as ketosis, can be performed using data from NIR and other biosensors on automated milking platforms. In addition, sensors internal to the animal, such as ruminal biosensors, can monitor changes in rumen temperature, pressure and acidity in a continuous and accurate manner, being extremely useful for assessing animal health and production levels. Finally, levels of hormones present in milk, such as progesterone, can be assessed. Consequently, the use of precision farming/phenotyping tools allows generating important information regarding the animal's reproductive status. Pasture assessment and herd monitoring through unmanned aerial vehicles (UAVs) and satellite systems can also strongly assist some sectors due to the common use of open feeding systems based on grazing.

These are just some examples of areas in which precision farming/phenotyping can act and assist the breed's production efficiency and quality. Precision farming has the main objective of increasing production efficiency as well as raising animal and human well-being through the application of advanced information and communication technologies, aiming at the use of resources and the precise control of the production process (BANHAZI et al, 2012). The variety of information generated through precision phenotyping methodologies, in a more homogeneous and high-yield system, can meet the demands present in the evaluation of traits of economic interest for the livestock sector. However, one of the main bottlenecks witnessed in the area of precision phenotyping is the selection of phenotypes with high precision and accuracy in the measurement, as well as the integration of several sources of information in a comprehensive system (GONZALEZ et al, 2018).

Bioinformatics and systems biology can assist in the identification of those phenotypes, which present greater evidence of biological contribution, when interpreting the results. However, it is necessary to weigh the cost / efficiency ratio of adding each of the phenotypes in breeding programs, in order to select those with greater efficiency in selection response and biological representativeness. Thus, it is essential to unravel the different levels of biological information, whether at the level of DNA, gene expression and its regulation, proteins involved in processes of interest, the metabolites generated and used in complex metabolic systems, or even the relationship between microorganisms and the host for production (for example, rumen microbiota and feed efficiency).

Despite its prominent position, the national livestock sector still produces below what its real potential is capable to produce. This can be explained by a reduced application of precision phenotyping technologies for measuring production characteristics, breeding schemes and advanced management strategies (VENTURA et al, 2020). The application of precision phenotyping and systems biology in the agricultural sector has the capacity to raise this potential and help the national livestock sector to better adapt to the current and future demands of the national and international market.

References

BANHAZI, T.M. et al. Precision Livestock Farming: An international review of scientific and commercial aspects. International Journal of Agricultural and Biological Engineering, v.5, n.3, p. 1–9, 2012.

FAO. HOW TO FEED THE WORLD IN 2050. Insights from an expert meeting at FAO, 2009.

GONZALEZ, L.A.; KYRIAZAKIS, I.; TEDESCHI, L.O. Review: Precision nutrition of ruminants: Approaches, challenges and potential gains. Animal, v.12, n.s2, p.S246–S261, 2018.

Confederação da agricultura e pecuária do Brasil (CNA). PANORAMA DO AGRO. 2020. Disponivel em: <https://www.cnabrasil.org.br/cna/panorama-do-agro>. Acesso em: 16 de Junho, 2020.

VIEIRA VENTURA, R. et al. Opportunities and challenges of phenomics applied to livestock and aquaculture breeding in South America. Animal Frontiers, v.10, n.2, p45-52, 2020

Summary

Introduction

The National Breeding Program of Guzerá Cattle for Milk (PNMGuL) is a joint program of Embrapa Dairy Cattle and the Brazilian Center for the Genetic Improvement of Guzera Cattle (CBMG²/ACGB). Several public and private bodies participate in this program, including semen processing centers, state research companies, the Federal University of Minas Gerais, the National Breeder and Researcher Association, breeders of purebred Guzera cattle, and collaborating farms that use the Guzera breed for crosses. The program received financial support from Embrapa, CBMG², ACGB, ABCZ, CNPq, Fapemig, the Ministry of Agriculture, Livestock and Food Supply, and Guzera cattle breeders.

This program is based on the integration of modern animal breeding tools to confer rapidity and reliability to selection and consists of three integrated information-generating schemes. The first consists of selection carried out by Guzera breeders on farms, who gather information on animals produced by directed breeding using non-selective official test-day milking records. The second, the Multiple Ovulation and Embryo Transfer (MOET) Nucleus, is a scheme characterized by conferring high intensity and rapidity to selection through the evaluation of offspring of cows that are genetically superior for milk production, multiplied by the transfer of embryos. The main goal of the Nucleus is the early identification of genetically superior sires for milk, which will be used directly in herds of the breed and in crosses. These sires can subsequently be included in progeny tests for reassessment and for obtaining additional accuracy. The evaluation of these young sires is based on the performance of their full sisters, paternal and maternal half-sisters, and other relatives. The third scheme is based on the productive performance of the daughters of progeny-tested sires produced by random mating. Although slower than the previous one, this method is the most accurate to evaluate the true genetic potential of a sire for milk production. The data originating from the different sources are genetically connected and are combined in a single archive, the database of Embrapa/CBMG²/NZA. The genetic evaluation for milk traits is therefore integrated, unique, and comparative.

Since Guzera is a dual-purpose breed, both the MOET Nucleus and various partner herds of the dairy breeding program also participate in the Genetic Evaluation Program of the Guzera Breed for Beef Production (PAGRG) of ANCP and GEMAC. Consequently, several sires are “double proven”, i.e., they are genetically evaluated for dairy and beef traits. This summary reports for the 11th consecutive year the results of genetic evaluations of beef and reproductive traits in different proven sires for milk.

Conformation and management traits can help the breeder to obtain a herd with better production and economic efficiency. Several of these traits are being measured in the Guzera breed and this summary presents the evaluations of sires that met the accuracy requirements for some of them.

Molecular markers are promising tools that can be used complementarily in selection programs. Caution in the use of these marker in Zebu cattle is necessary since they are still being tested for validation. Since various molecular markers have already been studied in Guzera cattle, the genotypes of different proven sires are presented in the summary, particularly in an attempt to preserve some rare alleles and to assist in selection with due caution.

The economic importance of the different traits evaluated and presented in this summary varies widely across different niche markets and systems in which the breed is used. We decided to present the evaluations for the largest possible number of traits so that producers can choose those that are most appropriate and important for their particular objective and use reliable data in their selectin work and breeding schemes. The main goal of the program is to generate technology and to produce

improved animals for production systems that take advantage of the qualities of Guzera cattle and their crossbreeds in order to obtain high production at low cost.

Traits Evaluated

Dairy traits

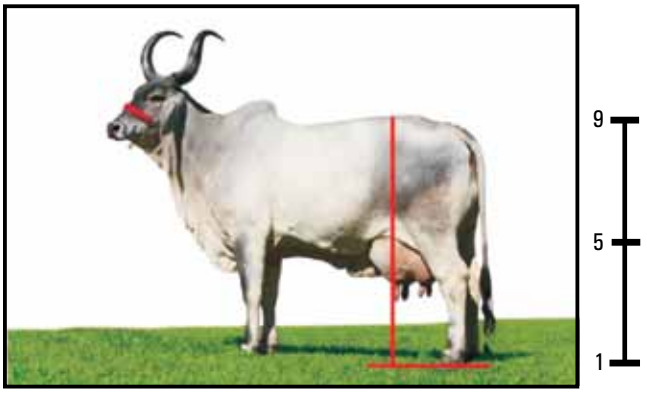
- **305-day milk yield:** the cumulative milk yield at 305 days of lactation. It should be noted that, if lactation has ceased before 305 days, milk yield regardless of the lactation length is assumed as 305-day milk yield.
- **Yield and content of fat, protein and total solids during lactation:** these are the main milk components whose yield is obtained by the laboratory analysis of milk samples collected from tested cows. Total solids, or dry extract, represent the set of milk components without water. Content is a way of expressing the relationship between milk yield and milk component yield in percentage units. The genetic correlation between milk yield and milk component yield is positive and, although high, is not equal to 1 or 100%, i.e., the increase in milk yield is always higher than the increase in milk component yield. Consequently, the genetic correlation between milk yield (kg) and milk component content (%) is negative. Thus, selection focusing only on milk yield may negatively affect the content of milk components.
- **Age at first calving:** the pursuit of reproductive efficiency of the herd is essential to ensure the economic viability of milk production. A cow that conceives at a younger age, i.e., that is precocious, has a longer useful life, reproducing more often in the herd and leaving a larger number of offspring and heifers necessary for replacement in the herd. The main economic consequence of reproductive precocity is the faster return on investment due to the increase in the milk volume produced during the period that cows remain in the herd. Hence, knowing the genetic potential of sires and dams for age at first calving is an important additional information for the genetic improvement of herds in which cows are late.
- **Milk production efficiency:** this trait is defined as the ratio between milk yield (kg) and age at calving (months). The trait reflects the early capacity of milk production of an animal and, indirectly, the economic return associated with the production costs of a replacement female in the herd. Milk production efficiency is also a preliminary indicator of useful life, i.e., it provides information about the probability of extending the productive herd life of an animal, reducing the risk of premature culling. Since it combines two traits, this information should be used when simultaneous selection for precocity and milk yield is desired, i.e., when both traits need to be improved in the herd. The positive expected progeny difference (EPD) thus indicates that the animal is able to leave daughters with a higher milk production potential at younger ages.
- **Response of breeding values for 305-day milk yield to the productive environment:** the breeding value of sires are estimated according the overall management level of the farms. The management level is determined based on the performance of the contemporary groups. This approach considers a genetically different response of animals to different environmental conditions (genotype x environment interaction). Sires whose response achieves reliability of 40% or higher for this trait are then classified as negative sensitive (-), positive sensitive (+), and robust (=). Negative sensitive (-) sires transmit to their daughters genes that favor milk production in herds of low management level (low input use, low-quality feed, basic general management).

Positive sensitive (+) sires transmit to their daughters genes that favor milk production in herds of high management level (high input use, high-quality feed, excellent general management). On the other hand, robust (=) sires transmit to their daughters milk production genes that are relatively indifferent to changes in the management level of the herds.

Conformation and management traits

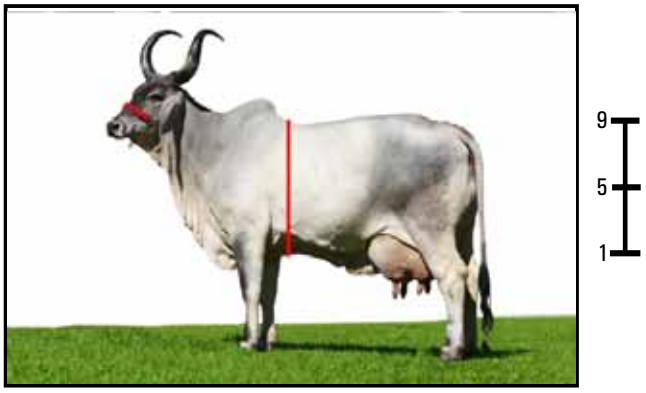
Morphological or linear type traits measured by the program were included according to their functional importance for survival, reproduction, udder health and animal production. So far, it was possible to publish the genetic evaluation for eight of these traits. The traits measured and figures illustrating the positions or sites where these linear measurements are taken are shown below for the traits that have already been evaluated genetically.

- Rump height



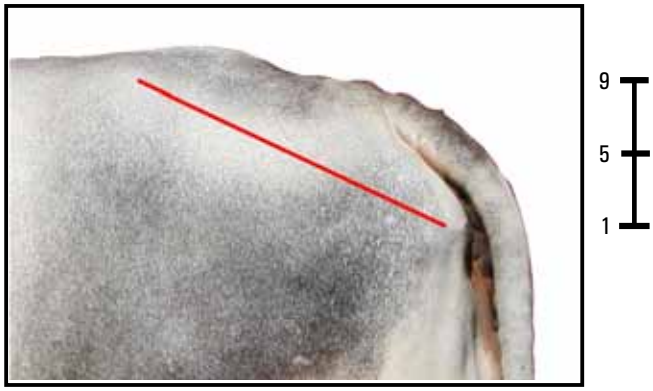
For this trait, it is desired that the hip is sufficiently high to keep the udder away from the ground.

- Heart girth



The heart girth is related to the cardiac, pulmonary and digestive capacity of the animal..

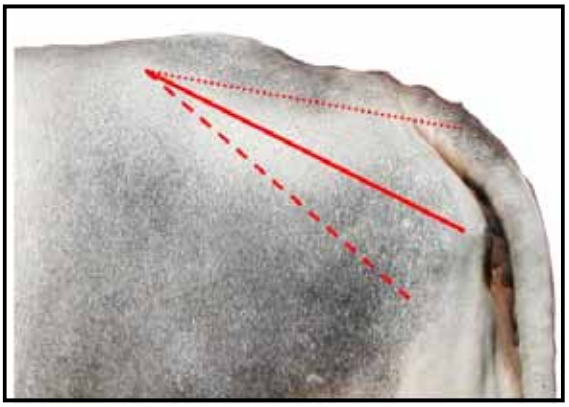
- Body length
- Rump length



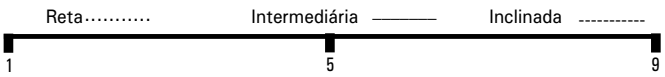
This trait is related to dorsal support of the udder.

- Pin bones width
- Hook bones width

- Rump angle



It is measured by means of the inclination between pin and hook. A score above 5 indicates a drained croup and below 5, a flat rump. Extreme values (high or low) are undesired since they can cause calving problems.



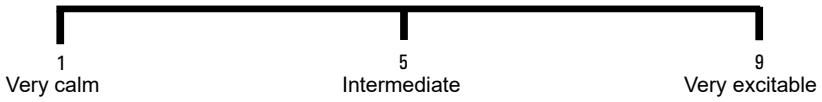
- Foot angle
- Rear legs (side view)
- Rear legs (rear view)
- Fore udder attachment
- Rear udder width
- Udder depth
- Teat length

The ideal teat length to facilitate milking is about 7.5 cm. Very long teats impair colostrum feeding by the calf, make milking difficult, and are related to an increased incidence of teat loss and mastitis. Very short teats are also undesired since they impair feeding and milking.

- Teat diameter

Teats with an intermediate to small diameter (3.8 cm) are desirable. Excessively thick teats impair milking and feeding and are therefore undesirable for the breed..

- Navel length
- Milking ease
- Temperament



This trait is related to docility and ease of handling of animals. Scores range from 1 to 5 and values close to 5 are desirable.

Beef and reproductive traits

- **Age at first calving (AFC):** This trait is an indicator of sexual precocity. Sires with negative EPDs (expressing fewer days to first calving) are desirable.
- **Gestation length (GL):** This trait has economic impacts since it is related to birth weight and calving ease. Negative EPDs indicate a shorter GL and smaller size of the calf at birth.
- **Scrotal circumference at 365 and 450 days (SC365 and SC450):** These traits show a favorable correlation with fertility and sexual precocity. Higher EPDs are associated with more precious animals and higher fertility.
- **Weight at 120 days (W120):** This trait expresses the preweaning growth potential of animals. Higher EPDs indicate greater growth.
- **Maternal ability at 120 days (MA120):** This trait expresses the maternal ability of the cow during the preweaning period.
- **Weights at 365 and 450 days (W365 and W450):** These traits express the growth potential during the postweaning period. Higher EPDs indicate greater growth.
- **Mature weight (MW):** This trait is defined as weight from 4 to 12 years of age and is related to the maintenance costs and growth rate of the animal. Very high EPDs are associated with high maintenance requirements.
- **Accumulated productivity (ACP):** This trait indicates cow productivity in kg of weaned calves per year while the cow remains in the herd.
- **Rib eye area (REA):** An ultrasound-measured trait related to carcass yield. Medium to high EPDs are desirable.
- **Carcass finishing (ACAB):** Ultrasound-measured traits related to precocity and carcass finishing. High values indicate greater fat accumulation at these sites.
- **Longevity (STAY):** This trait, also known as stayability, expresses the ability of females to remain productive in the herd for a longer period of time. This EPD indicates the probability of a sire to leave daughters that stay in the herd up to 76 months of age and calve at least three times. Higher EPDs are preferable.
- **Percentile (TOP %):** This trait permits the breeder to rank the genetic material used in the list of animals evaluated. The values indicate the rank of the chosen animal within the percentage

range (from best to worst). Thus, a TOP 10% animal is located within the 10% superior animals for that trait.

Molecular Markers

Molecular markers are variations (or **polymorphisms** or **variants**) in the DNA sequence. They are the result of mutations and are common in all species studied. As a consequence, many genetic differences exist between individuals of any breed or species of interest. Some of these variations occur near or within the sequence of **genes** and may be used to investigate whether a certain gene influences any trait of interest, for example, milk production; hence, the term molecular marker. The variation is “marking” the region of interest that influences that trait.

There are two possibilities of how a molecular marker can influence any trait: 1) the variant directly modifies the function of a gene, or 2) the allele is located near another variant that modifies the function of the gene.

The majority of molecular markers developed so far has been described for taurine breeds. It is important to emphasize that great differences exist between taurine and Zebu breeds not only in their racial characterization, but also in their DNA. Thus, if a molecular marker was identified by “marking” a particular trait in one breed, the same marker may not “mark” this trait in another breed. Molecular markers must therefore be validated for each breed before they can be used in marker-assisted selection of genetically superior animals.

Kappa-casein: Kappa-casein is one of the coagulable proteins in milk. This protein stabilizes the casein micelles and determines the quality of the curd. During cheese production, kappa-casein is the main protein responsible for the retraction rate and clot firmness. In taurine cattle, allele **B** has been associated with more efficient clotting and higher cheese yields, which is the most desirable when the milk is destined for the cheese industry. This allele has also been associated with higher milk protein concentration.

Beta-casein: Beta-caseins form a group of highly polymorphic milk proteins. The A1 and A2 variants are the most common variants found in cattle herds. The A2 allele has been associated with higher protein content, lower fat content, and higher cheese yields. These proteins are also precursors of opioids produced by the animal itself. Opioids are substances that minimize the effects of animal stress. The A1 allele has been associated with autoimmune diseases, diabetes, heart diseases, autism, schizophrenia, and milk allergy in humans. The A2 allele is therefore considered the most favorable for human health.

Beta-lactoglobulin: Beta-lactoglobulin is a milk serum protein. In taurine breeds, allele **A** is related to higher milk production, higher protein content, and lower milk casein concentration. Allele **B** is associated with higher casein concentration, greater fat retention in the clot, higher thermal stability of milk, a higher dry matter content in cheese and, consequently, higher yields of industrial cheese. Thus, the “best” genotype depends on the destination of milk: allele **B** is more desirable if the milk is destined for cheese production and allele **A** if the milk is destined for milk production. It is important to maintain both alleles in the breed as a whole.

DGAT1 (K232A): In taurine breeds, allele **A** is associated with higher milk production, higher protein content, a lower content of trans fats, and a higher content of unsaturated fats (healthier). This allele is also associated with lower intramuscular fat deposition (marbling) in the carcass. On the other

hand, allele **K** is associated with lower production of milk with a higher fat percentage and a higher degree of marbling in the carcass.

Thyroglobulin: This protein is a precursor of thyroid hormones that regulate the metabolism, growth and development of animals, including the development of the mammary glands. Studies suggest that animals carrying the **T** allele have greater intramuscular fat deposition and consequently a higher degree of marbling in meat.

Prolactin: This hormone regulates mammary gland development and the onset and maintenance of lactation, as well as milk production. In addition, prolactin influences the activity of genes that encode milk proteins. Genetic variants have been identified in the prolactin gene, which affect variations in milk production and composition. One of these gene variants produces the AA, AG and GG genotypes.

Concepts

Expected progeny difference (EPD) (or predicted transmitting ability): This measure describes the transmission of the genetic potential from a given animal to its offspring and is expressed as the measurement unit of the trait (e.g., kg for milk and weight, days or months for age at first calving). It has a positive or negative sign in relation to a given genetic basis. The EPD is measured based on the expected performance of the sire's daughters in relation to the basis used and is therefore an estimate of half the breeding value of a sire. For example, an EPD of 300 kg for milk yield indicates that, if the sire is used in a population with a genetic level equal to that of the basis, his daughters will produce an average of 300 kg per lactation more than the average of the herd where they produces. Considering two sires, one with an EPD of 300 kg and the other with an EPD of -100 kg, it is expected that in random mating the daughters of the first sire produce an average of 400 kg more than the daughters of the second sire (given that they are contemporaneous herd-mates).

Standardized expected progeny difference (or standard transmitting ability, STA): This measure refers to the standardized EPD of a trait, i.e., instead of being expressed as a measurement unit (kg, cm, days, months, etc.), it is expressed as standard deviation units from a normal standard curve. This transformation is done to facilitate visualization and comparison between traits measured in different units. For example, presentation of the EPDs for traits such as milk and fat yield, expressed in the same unit (kg), in the same graph will be very difficult because of the difference in values (+300 kg vs +10 kg). The inclusion of other conformation traits in the graphs, expressed in different units (cm or scores from 1 to 9), is practically impossible. Thus, the logical solution for combining several traits in the same graph is to standardize each of them so that all traits can be presented in the same standard graph. Standardization is obtained by dividing the EPD of the sire by the standard deviation of the EPD of the trait obtained for sires evaluated for conformation and management. The STA thus allow us to know the deviations of the same sire for different traits.

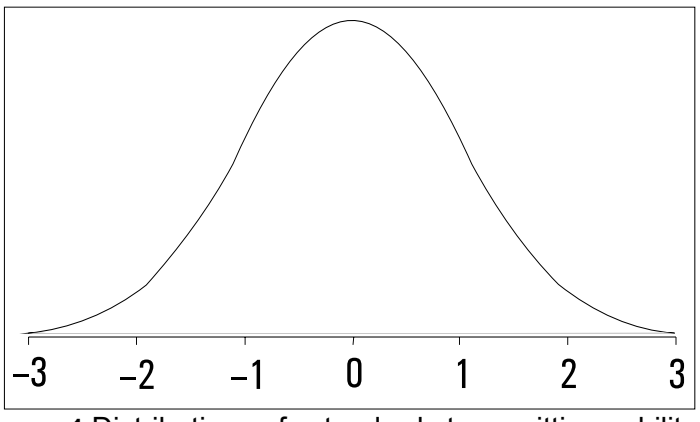


Figura 1. Distribution of standard transmitting ability (STA).

When STA is used, the variation is the same for all traits, while the same is not observed for the variation of EPDs. Thus, 68% of the

STA values are between -1.0 and +1.0 for any trait; 95% are between -2.0 and +2.0, and 99% are between -3.0 and +3.0. Figure 1, called “Distribution of standard transmitting ability”, is also called a “standard normal distribution” or bell-shaped curve.

Many traits, including production traits, can be represented in this way. In this curve, information for most sires are found at the midpoint (STA = 0). As the value of STA deviates from the average (either to the right or to the left), there are progressively fewer sires. Only 1% of the sires are found at the extremes (-3.0 and +3.0). At point zero, the STA represents the average of the breed for that trait. Knowledge of a sire’s STA permits to predict how far will be his offspring from the average.

Genetic basis: The genetic basis is assumed to be “zero”; above this values, animals are classified as positive and, below this value, as negative. As a rule, it is an arbitrarily chosen reference that meets coherent and practical technical criteria, which facilitate the understanding and reasoning of producers for their selection work. The genetic basis can be fixed or flexible. In the case of dairy, conformation and management traits, the genetic basis used is the average of the breeding values in the year studied, i.e., a flexible basis. The genetic basis used in the evaluations of beef traits is formed by founder animals, i.e., those without information from ancestors. Thus, animals with average values for dairy traits in a given year and animals without ancestor information about beef traits have a zero EPD.

Heritability: It is a measure of the degree to which a sire or cow is able to genetically influence the expression of traits in their offspring. Greater genetic progress can be achieved for traits that are more heritable. Consequently, for the same selection intensity, much greater genetic progress is expected in matings involving highly heritable traits. Not only the heritability of a trait but also its economic importance in relation to overall economic performance must be taken into account when choosing traits to be included in a selection program. Consequently, breeders can concomitantly change production averages and increase the economic efficiency of the herd for these traits.

Accuracy or reliability: This is a measure of association between the estimated breeding value of an animal and its true breeding value. The higher the reliability, the greater the confidence that must be placed in the estimated breeding value of the animal. The degree of reliability depends on the amount of information used to evaluate the animal, including data of the animal itself, its daughters and other relatives, and on the distribution of these data in different environments or herds. In addition, the heritability of a trait is related to the reliability of the information about the animal. High heritabilities of a trait indicate that the information of the individual itself is more reliable for estimating its breeding value. On the other hand, low values indicate the need of including information from relatives in the estimation of breeding values of individuals to improve reliability

Average coefficient of relationship (AR): This coefficient is an estimate of the genetic relationship between individuals (animals) of a population because they have one or more common ancestors, i.e., they are related. This information reflects the intensity at which each individual contributes or has contributed genetically to the population and permits to describe its dynamics and structure. Together with knowledge of the inbreeding coefficient (consanguinity), the CR is of great practical utility by assisting in the appropriate selection of animals for breeding in the herd, in minimizing inbreeding and its undesired consequences for the population such as the loss of genetic variability, and in identifying lineages of interest for preservation. High CR values indicate that the individual (sire or dam) has been widely used in the population and that the chance of the sire/dam mating with a relative in this population (herd) is very high. Small or zero values do not necessarily indicate that the individual is little related or unrelated to the population, as they may reflect the lack of knowledge of its complete genealogy or origin (founders and ancestors).

Response to the production environment: This measure represents the expected performance of daughters of a sire in a given management environment (environmental gradient), from more to less intensive, in terms of the adoption of technologies, infrastructure, diet, hygiene practices, grazing regime, confinement, etc. The results of this assessment are presented in an easy visual manner. Sires will have only one management column filled out in the case of prediction of satisfactory performance of their offspring in only one management condition (low or high). In the case of prediction of satisfactory performance of their offspring in all managements, i.e., regardless of whether the management is high or low, both management columns will be filled out. See the diagram shown in Figure 2.

Sire name	Sire ID	Environmental gradient *		Reaction**
		Low-input management	High-input management	
Fulano do Zebu	ZEBU1			SENSITIVE (-)
Sicrano do Zebu	ZEBU2			SENSITIVE (+)
Beltrano do Zebu	ZEBU3			ROBUST (=)

*Environmental gradient: Classification of the management level or pattern

****Reaction: sensitive (-) = underdemanding animal in environmental conditions, i.e., able to produce in simple environments (low-input management); sensitive (+) = overdemanding animal in environmental conditions, i.e., able to produce in refined environments; Robust (=) animal able to produce in any environment, unregardless of the environment pattern.

Figure 2. Schematic representation of the response to the production environment

Genetic Evaluation

Every selection process implies differential reproduction, with greater multiplication of genetically superior animals and lower multiplication of inferior animals. Thus, the starting point for any selection process is the estimation of the animals' breeding values for decision-making on reproduction and culling. Genetic evaluation comprises a series of statistical analyses that allow us to assess the breeding value of animals, a factor that, together with environmental effects, determines the animal's phenotype. Genetic evaluations of milk production traits, in particular, permit to estimate the breeding value of animals from their own phenotypes in cases of females and/or from ancestors (mother, grandparents), collaterals (sisters, cousins) and offspring in the case of females and males.

Methodology

The mixed model methodology permits to obtain best linear unbiased predictions (BLUP) of breeding values based on the EPDs of each animal for the different traits measured. The BLUP animal model used in these evaluations is a modern and robust method that produces EPD estimates based on the performance measures of each animal and its relatives, ancestors, collaterals and offspring included in a relationship matrix. In this assessment, all relatives of an animal identified affect its evaluation. Similarly, each individual influences the evaluations of its relatives. The level of influence depends on the degree of relationship between individuals. Offspring, parents and full-sibs (same father and same mother) exert a greater effect on the evaluation of the individual than grandparents, half-sibs, cousins, uncles, and other more distant relatives.

Dataset, Methodology and Analyses Used in Genetic Evaluations

For genetic evaluation, all lactations at first calving and lactations up to the fifth order were considered given that the first test-day lactation of the cows had terminated due to natural causes. Ongoing lactations lasting more than 140 days were extrapolated to 278 days (average lactation length in the breed) using adjustment factors of the breed and considering the time of calving and average yield of the herd.

To estimate the genetic capacity of an individual, the environment where the cow produced must be taken into consideration, for example, the year and season of calving. Thus, the allocation of test sires to several herds is important so that the performance of their offspring is evaluated under different environmental and management conditions. The offspring of the sires evaluated are therefore distributed across the southeast, northeast, and mid-west regions of Brazil. In addition, their milk production should be adjusted for the effect of age at calving to permit the comparison of cows. For this purpose, milk yields are standardized for two milkings and at 305 days of lactation. Adjusting for non-genetic factors or effects will permit to obtain reliable estimates of the genetic merit of the animal.

The data used originated from **130** herds (**69** purebred and **61** crossbred) participating in the NZA, progeny testing, and MOET Nucleus. The progeny test already includes **188** sires divided into **20** groups that represent the existing genetic lineages in Brazil. The offspring of the sires evaluated are distributed across the southeast, northeast and mid-west regions of the country. In this year, the first-lactation milk yields of offspring of sires from the first to the **14th** group were evaluated. From the MOET nucleus, information of **178** families derived from elite donor cows was used, whose offspring completed their first lactation under standardized conditions on the Taboquinha farm, which hosts the nucleus. The age at first calving data used were obtained from **115** herds (**59** purebred and **56** crossbred) participating in the NZA, progeny testing, and MOET Nucleus.

In this year, milk yield records from **18,032** lactations of **11,189** multiparous cows were initially analyzed. After depuration, **12,912** lactations were used in the genetic evaluations, including 8,605 first-lactation records of **82%** purebred cows and **18%** crossbred cows. Data from **12,912** lactations were used for the genetic evaluation of milk production efficiency. For age at first calving, records of **8,448** lactations were analyzed, **83%** from purebred cows and **17%** from crossbred cows.

The statistical model used for genetic evaluation of the animals included the fixed effects of herd-year of calving, season of calving, breed composition of the sire's daughter, and age of cow at calving. In addition to the error, the effect of the animal (cow, sire, and dam) and of the environment were included as random effects. The genetic evaluations of fat, protein and total solids yields were performed in two-trait analysis with milk yield as anchor trait using animal model procedures. The data were analyzed using the MTDFREML package, which evaluates an individual under an animal model and estimates variance components using the derivative-free restricted maximum likelihood (DFREML) method. A complete relationship matrix that included **28,082** individuals was added for the prediction of the breeding values or EPDs of each animal. The heritability of milk yield was **0.31 ± 0.003**. The genetic basis used, estimated to be zero, corresponds to the average breeding values of all animals evaluated (males and females). The heritability of milk production efficiency was **0.54 ± 0.023.** The heritability of age at first calving was **0.12 ± 0.022** using the complete relationship matrix.

The overall means of the traits evaluated based on the PNMGuL database are reported below. The average lactation length was **278 ± 64** days. The average 305-day milk yield in the Guzera database, adjusted for mature age, was estimated at **2,409 ± 1,260** kg. The average production were 9**7 ± 48** kg for fat, **69 ± 39** kg for protein, and **246 ± 112** kg for total solids. An average fat content of **4.4**

± 1.1%, protein content of **3.3 ± 0.8**%, and total solid content of **12.0 ± 2.0**% were obtained. The average milk production efficiency was **44 ± 27** kg/month. The average age at first calving was **44 ± 9** months (**1,339 ± 274** days), ranging from **24 to 71** months (**731 to 2,161** days)

Analysis of the response to the production environment is the result of a partnership between Embrapa Dairy Cattle and the Animal Breeding Group at the Federal University of Rondonopolis – GMAT/UFR. The database used for this analysis consisted of 41,782 test-day milking records from 5,663 first lactations of purebred Guzera cows. The reaction norm approach was used to determine the response of breeding values for 305-day milk yield to the production environment, which is well described and consolidated in the scientific literature. In the second step of analysis, this approach permitted to obtain the breeding values of animals as a function of the effects of contemporary groups derived by the conventional BLUP procedure in official genetic evaluation. Once the solutions of the contemporary group effect were obtained by the conventional BLUP procedure, a reaction normal model was fitted to the data. The same effects as used in the model of official genetic evaluation were considered in the reaction norm model, which only differed in terms of breeding values that were regressed on the solutions of the contemporary group effect.

Table 1 shows the overall means of the conformation and management traits and their respective STA and heritability. The figures illustrate the results of the linear evaluation system obtained for sires that had at least five daughters measured in order to ensure higher accuracy of the estimates.

Table 1. - Overall means of the conformation and management traits evaluated by the linear system and their respective STA and heritability..

Traits	Mean	STA	h^2
Rump height	143.5	< 0.00	0.43
Heart girth	180.1	0.04	0.29
Rump length	43.1	0.08	0.24
Rump angle	26.0	-0.03	0.11
Fore teat diameter	3.8	-0.07	0.17
Rear teat diameter	3.4	-0.01	0.28
Teat length	7.3	0.14	0.25
Temperament	2.2	-0.02	0.29

The following illustrates the presentation of the results for the different traits using STA. The first column, “Trait”, shows the names of the traits and the column “STA” reports their predicted standardized capacity of transmission. The line in front of each trait indicates its confidence interval, a measure related to the mean and reliability of the STA estimate. The point above the line corresponds to the STA estimate and the length of the line to the confidence interval, i.e., the shorter the line, the higher the reliability of STA, and vice-versa. It also indicates the expected extent to which the average STA estimates in future matings will be within those limits in 95% of cases (Table 2).

Table 2. Example for interpretation of the results.

XXXX
Bull's name
Average rel: xxx

Sire: ID and name
Dam: ID and name

Milk PTA	=	140 kg	REL	0.90
Fat PTA	=	7 kg	REL	0.89
Protein PTA	=	6 kg	REL	0.90
T.Solids PTA	=	17 kg	REL	0.90

Traits	STA		-3 -2 -1 0 1 2 3	
Rump height	-1.4666	Short		Tall
Heart girth	1.2692	Shallow		Deep
Rump length	0.0235	Short		Long
Rump angle	-0.2600	Flatted		Sloped
Teat length	-0.5366	Short		Long
Fore teat diameter	0.8465	Thin		Thick
Rear teat diameter	-0.3625	Thin		Thick
Temperament	1.3360	Calm		Excitable

It is important to note that these data should be used as complementary information in the matings. Deviations of the conformation and management traits to the right or left indicate genetic progress in the chosen direction. For example, if a cow has very large teats (above the average), it is desirable to expose her to a sire with a negative STA for teat length in order to correct this defect in the future generation. However, if the cow has very small teats, the desirable will be exposing her to a sire with a positive STA. The same logic applies to the other traits.

The database possesses approximately 285,200 weight records, 51,500 records of scrotal circumference, and 54,100 animals are registered in the relationship matrix, which belong to 77 herds evaluated. In addition to animals for dairy cattle evaluation, this database also include animals for exclusive evaluation of beef traits.

The EPDs are estimated by the mixed model methodology under an animal model, which allows to use all available information of the animal (pedigree, own performance and that of its parents), as well as to obtain the best non-biased predictors (BLUP) for all EPDs. Accuracy is calculated following the norms of the Beef Improvement Federation (BIF), which indicates the relationship between the estimated and the true breeding value of each animal, i.e., it is related to the degree of confidence in the EPD.

The single-step genomic BLUP method (ssGBLUP) is used for this evaluation, employing a multitrait animal model. The method permits the inclusion of molecular data in conjunction with all available information on the animal. In ssGBLUP, all molecular markers and phenotypic data of genotyped and non-genotyped animals are considered simultaneously, permitting their inclusion in the prediction of genomic breeding values for direct and maternal effects for all animals involved in the analysis, with or without a production record.

The following table shows the equivalence of true accuracies (used in the dairy evaluations) and BIF accuracies (used in the beef evaluations).

Equivalence of Real and BIF reliabilities - (%).

Real	20	30	40	50	60	70	80	90	95	99	100
BIF	2	5	8	13	20	29	40	56	69	86	100

Results of Genetic Evaluation

Table 3 shows the results of genetic evaluation of milk yield, age at first calving and milk production efficiency for the groups of sires undergoing progeny testing, young sires of the MOET Nucleus, and sires whose data on the production of their daughters are included in the database of Embrapa/CBMG²/NZA. This publication includes only sires that, when evaluated by progeny testing for milk production, had a reliability greater than 0.50 and first-lactation daughters in at least three herds that, when evaluated based on their siblings in the MOET, also had a reliability greater than 0.50 and at least one full-sib with lactation measured in the nucleus.

Table 4 shows the results of new sires and MOET families included in the 2020 genetic evaluation.

Table 5 shows the results of genetic evaluation of yields and content of fat, protein and total solids for the groups of sires undergoing progeny testing, young sires of the MOET Nucleus, and sires whose data on the production of their daughters are included in the database of Embrapa/CBMG²/NZA.

Table 6 shows the genotyping results of some genetic markers for Guzerá breed sires.

Table 7 shows the results of genetic evaluation of cows used in the genetic evaluation of sires up to the fifth lactation given that they had been evaluated in the first lactation, obtained in the habitual management of the farms in contemporary groups within the minimal requirements of the program, i.e., three contemporaneous cows of at least two sires.

Table 8 shows the results of genetic evaluation of Guzera sires for milk production according to the management level of the herds, i.e., the response to the productive environment.

Table 9 shows the results of the performance of double proven sires in genetic evaluations for growth, carcass and functional traits.

Table 10 shows the results of the performance of double proven sires in genetic evaluations for reproductive traits.

Table 11 shows the partner farms of purebred cattle.

Table 12 shows the partner farms of crossbred cattle.

Table 13 shows the batteries of sires in the progeny testing.

Table 3. Results of genetic evaluation for milk yield, age at first calving (AFC) and milk production efficiency (MPE) in the progeny testing (PT), MOET Nucleus and NZA performed in 2020 and coordinated by Embrapa/CBMG².

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD										ND	NH	FS	HS	AR %	Database
				MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.						
1	HumaitáxGuerra	**REMANSO TE TABOQUINHA**	18 / 8 / 2004	524	**632**	740	92	383	37	80	10	16	96	57	11	4	147	2,5	MOET/NZA
2	**SulfoxTentativa**	Cabal, Caboje, Changai e Chui FIV TABOQUINHA	25 / 5 / 2014	301	**540**	779	61	294	18	50	25	14	66			1	71	2,1	MOET
3	ÉdipoxVanusa	**HUMAITÁ TE TABOQUINHA**	20 / 6 / 1996	441	**518**	595	96	400	51	90	16	15	98	141	34	1	183	2,3	MOET/PT
4	**HumaitáxGuiana**	Bandung, Bem e Bem-Belo FIV TABOQUINHA	28 / 10 / 2013	258	**491**	724	63	351	28	55	19	15	66			3	146	2,3	MOET
5	AbaetéxHungria	**SULFO TE TABOQUINHA**	5 / 5 / 2006	379	**480**	581	93	291	18	82	2	19	96	69	6	3	119	2,3	MOET/NZA
6	JFT3102	**CABO FIV JF**	28 / 9 / 2009	244	**461**	678	68	240	10	58	12	16	75	4	3			2,5	PT
7	**ÓbusxNaira**	Sabre, Sacho, Saibro e Sulco TE TABOQUINHA	19 / 3 / 2006	213	**449**	685	62	342	26	53	33	13	65			2	62	2,2	MOET
8	**SulfoxRéstia**	Acádio, Ageu, Alecrim, Alfeu, Alpino e Alpos FIV TABOQUINHA	11 / 4 / 2012	199	**435**	671	62	246	10	53	18	15	66			4	75	2,0	MOET
9	**SulfoxQueratina**	Abaeté, Almirante, Audacioso e Bretão FIV da META, Ambicioso TABO e Bambu, Belize, Bicudo e Búzio FIV TABOQUINHA	19 / 4 / 2011	202	**432**	662	64	293	18	54	13	16	67			2	88	2,4	MOET
10	**TronoxQuiborana**	Ajax FIV TABOQUINHA	13 / 4 / 2012	193	**429**	665	62	333	24	53	14	16	66			6	46	1,8	MOET
11	TABO1776	**RABI TE TABOQUINHA**	6 / 7 / 2004	214	**413**	612	73	309	20	62	17	15	79	7	3			2,4	PT
12	JFPA222	**URIEL IBITURUNA**	21 / 3 / 2008	239	**382**	525	86	99	-9	69	1	20	92	35	6			1,9	PT
13	**OuriçoxLavanda**	Troféu TE TABOQUINHA	23 / 12 / 2006	146	**373**	600	65	178	2	55	62	10	68			2	46	1,9	MOET
14	EstiloxHester	**OURIÇO TE TABOQUINHA**	4 / 11 / 2001	223	**350**	477	89	190	4	76	96	8	93	32	11	3	77	1,9	MOET/PT
15	**HumaitáxFlecha**	Quartel TE TABOQUINHA	25 / 8 / 2003	113	**349**	585	62	382	36	56	93	9	65			2	146	2,2	MOET
16	**HumaitáxLegião**	Rami, Ravelo, Recife, Reino e Reno TE TABOQUINHA	15 / 8 / 2004	109	**345**	581	62	324	22	56	67	10	65			2	146	2,5	MOET
17	PacíficoxÍndia	**QUIMÃO TE TABOQUINHA**	27 / 2 / 2004	186	**344**	502	83	278	16	66	76	9	89	19	8	3	75	2,1	MOET/NZA
18	**HumaitáxGuerra**	Ramadã e Rei TE TABOQUINHA	17 / 8 / 2004	116	**343**	570	65	366	31	59	128	7	67			4	147	2,4	MOET
19	**NepalxParma**	Zen FIV DAS FLORES	1 / 11 / 2011	100	**336**	572	62	289	17	51	44	12	66			2	58	2,3	MOET
20	OsascoxNuvem	**OBUS TE TABOQUINHA**	28 / 11 / 2001	227	**335**	443	92	298	19	81	47	11	96	55	14	3	69	2,7	MOET/PT
21	LKW223	**GARI BOA LEMBRANÇA**	8 / 11 / 2008	151	**335**	519	77	263	13	64	8	17	84	12	3			2,3	PT
22	PEAC28	**CRAVO PEAC**	17 / 2 / 1997	199	**332**	465	88	174	2	77	22	14	92	17	10			2,2	NZA
23	JFT2351	**NEPAL TE JF**	27 / 8 / 2004	216	**331**	446	91	286	17	80	20	14	95	53	11			2,4	PT
24	**AbaetéxNona**	Aires FIV TABOQUINHA	10 / 2 / 2012	108	**331**	554	66	217	7	59	51	11	69			2	119	2,4	MOET
25	**PerseuxTaba**	Baguari, Balbo e Bem-Dele FIV TABOQUINHA	28 / 10 / 2013	94	**330**	566	62	109	-8	53	40	12	66			1	45	2,2	MOET
26	**PacíficoxJangada**	Quermes, Quicuio e Quitute TE TABOQUINHA	26 / 12 / 2003	99	**326**	553	65	321	22	56	107	8	68			4	71	2,4	MOET
27	EstiloxPrimazia	**NAQUE TE TABOQUINHA**	29 / 9 / 2000	202	**323**	444	90	30	-22	77	55	10	94	39	15	3	74	1,4	MOET/PT
28	PequixNona	**TRONO TE TABOQUINHA**	30 / 10 / 2006	196	**323**	450	89	389	40	77	3	18	93	38	9	6	111	2,3	MOET/PT
29	**AbaetéxHungria**	Samurai, Sândalo, Sarrafo, Solar e Soveu TE TABOQUINHA	13 / 4 / 2006	103	**323**	543	67	218	7	61	52	11	69			3	119	2,3	MOET
30	TABO1099	**NAIRÓBI TABOQUINHA**	30 / 8 / 2000	193	**320**	447	89	339	26	77	95	8	94	34	4			2,3	NZA
31	**CálicexVirtude**	Bastardo e Bem-Só FIV TABOQUINHA	28 / 10 / 2013	82	**315**	548	63	177	2	52	23	14	68			3	29	2,5	MOET
32	A1462	**PACÍFICO DE ALAGOINHA**	8 / 6 / 1998	216	**310**	404	94	395	46	83	46	11	97	66	18			3,1	PT
33	8301	**CUBITO G.I DA ND**	17 / 11 / 1971	222	**308**	394	95	1	-52	87	35	12	97	114	20			0,9	NZA
34	**PerseuxNona**	Álbum, Atento, Ático, Ativo, Atlas e Átomo FIV TABOQUINHA	29 / 2 / 2012	79	**306**	533	65	176	2	57	31	13	68			1	60	2,6	MOET
35	PerseuxUrtiga	**HUM SONHO ARGEU**	25 / 9 / 2006	133	**304**	475	80	59	-16	66	7	17	86	11	2	3	48	2,6	MOET/NZA

(to be continued...)

w(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.	ND	NH	FS	HS	AR %	Database
36	**AghaKhanxSuma**	Bloco FIV TABOQUINHA	10 / 11 / 2012	66	**302**	538	62	130	-5	51	43	12	66			6	46	1,4	MOET
37	**AbaetéxLacínia**	Tabule TE TABOQUINHA	19 / 7 / 2006	66	**302**	538	62	149	-2	55	68	10	65			1	103	1,8	MOET
38	JFT3311	**ÓPIO FIV JF**	27 / 12 / 2010	101	**300**	499	73	194	4	61	9	17	80	7	3			2,4	PT
39	**NaquexItuipava**	Valoroso ALAGOINHA TE	28 / 4 / 2004	57	**296**	535	61	197	4	50	166	6	66			1	42	1,3	MOET
40	**PacíficoxNinhada**	Argos FIV TABOQUINHA	3 / 12 / 2010	56	**292**	528	62	266	13	49	87	9	66			1	72	2,3	MOET
41	**CubitoxUralita**	Belzebu, Bem-Ativo, Bem-Feliz, Bem-Querer, Benzão e Brongo FIV TABOQUINHA	28 / 10 / 2013	52	**288**	524	62	16	-32	53	41	12	66			1	118	1,5	MOET
42	**HumaitáxJazida**	Diamante, Ouro, Rubi e Topásio da VIC, e Radial, Tango, Tupi, Ubi, Urso, Xangô, Xaxado e Xodó TE TABOQUINHA	13 / 7 / 2004	58	**285**	512	65	282	16	58	84	9	67			5	155	2,2	MOET
43	**ÓbusxRabeca**	Barbante, Beirute e Brasão FIV META, e Bene, Beijo e Brasil FIV TABOQUINHA	11 / 1 / 2013	59	**282**	505	66	292	18	57	53	11	68			4	78	2,6	MOET
44	**EstiletexQueratina**	Blindado FIV META, e Besse, Boato e Boêdo FIV TABOQUINHA	13 / 1 / 2013	45	**278**	511	63	171	1	52	42	12	66			6	47	1,8	MOET
45	**ÓbusxNagóia**	Soto e Turbo TE TABOQUINHA	18 / 6 / 2006	42	**275**	508	63	288	17	54	91	9	66			3	59	2,5	MOET
46	**NovaSeitaxSuma**	Abu, Amado e Amerino FIV TABOQUINHA	9 / 4 / 2012	33	**272**	511	61	328	23	50	110	8	66			1	39	1,6	MOET
47	**PacíficoxRabeca**	Árabe FIV TABOQUINHA	4 / 12 / 2010	47	**270**	493	66	371	32	58	60	10	69			2	89	2,8	MOET
48	**ÉdipoxVanusa**	Huno TE TABOQUINHA	17 / 6 / 1996	39	**269**	499	64	322	22	58	85	9	67			1	183	1,9	MOET
49	**AlopradoxOpção**	Uxi TE TABOQUINHA	2 / 2 / 2008	32	**265**	498	63	295	18	54	111	8	66			4	89	1,5	MOET
50	**OrientexHungria**	Simi e Sion TE TABOQUINHA	31 / 12 / 2005	31	**264**	497	63	268	13	55	90	9	66			1	52	2,4	MOET
51	**NairóbixÍndia**	Sapoti, Saque, Sopro,Tabaco e Tacape TE TABOQUINHA	4 / 5 / 2006	27	**263**	499	62	233	9	52	192	5	66			2	43	1,6	MOET
52	**NavegantexLavanda**	Quarteto, Quelóide, Querosene, Querubim e Quiabeiro TE TABOQUINHA	30 / 5 / 2004	32	**262**	492	64	211	6	55	157	6	67			2	48	1,4	MOET
53	**PacíficoxÍndia**	Quinante TE TABOQUINHA	27 / 2 / 2004	29	**259**	489	64	305	19	55	159	6	67			3	75	2,0	MOET
54	**QuilatexBohemia**	Gibraltar TE DE SADERE	5 / 10 / 2007	11	**259**	507	58	67	-15	48	71	10	63			1	25	1,8	MOET
55	**FaroxParma**	Zetta, Zeus e Zumbi FIV DAS FLORES	6 / 11 / 2011	22	**258**	494	62	245	10	52	63	10	67			1	50	2,2	MOET
56	**FaroxNapa**	Sashimi, Serão, Sushi, Tabu, Tapuia e Tatu TE TABOQUINHA	9 / 6 / 2006	18	**257**	496	61	137	-4	53	113	8	65			4	51	1,8	MOET
57	**PerseuxOpção**	Bem-Dito, Bem-Você, Blande, Bodega e Boro FIV TABOQUINHA	31 / 10 / 2013	20	**253**	486	63	232	9	56	54	11	67			2	49	2,4	MOET
58	**InstintoxImersa**	Oriéao, Ormuz, Para e Paxal TE TABOQUINHA	20 / 5 / 2002	25	**252**	479	65	283	16	58	156	6	67			4	102	1,9	MOET
59	**NairóbixPrimazia**	Quepe, Quiasma e Quindim TE TABOQUINHA	27 / 11 / 2003	18	**248**	478	64	242	10	55	158	6	67			2	47	1,6	MOET
60	**CorsárioxNaira**	Sarango, Sarapatel, Saruê, Sovado e Surrel TE TABOQUINHA	27 / 5 / 2006	2	**247**	492	59	235	9	50	69	10	64			2	24	1,9	MOET
61	**HumaitáxOca**	Fabuloso, Faiadam, Falenus e Fano TE SADE, Galileu, Garoto, Gentil TE CIPO, e Sarará, Seguro, Sósia, Suaçuí e Skol TE TABOQUINHA	4 / 6 / 2006	6	**245**	484	61	393	44	54	133	7	64			6	148	2,3	MOET
62	CNS4995	**ABAETÉ S**	22 / 4 / 1996	166	**243**	320	96	111	-7	89	72	9	97	101	17			2,5	NZA
63	LabradorxHungria	**ÓLEO TE TABOQUINHA**	10 / 6 / 2002	104	**242**	380	87	54	-17	72	56	10	92	27	10	5	148	2,1	MOET/NZA
64	**AcarixLagoa**	Banto e Berilo FIV TABOQUINHA	10 / 11 / 2012	6	**242**	478	62	169	1	52	162	6	66			3	39	1,1	MOET
65	A1463	**QUILATE DE ALAGOINHA**	14 / 2 / 1999	103	**241**	379	87	363	31	72	97	8	92	26	9			2,2	PT
66	**AcarixQueratina**	Xênio, Xico, Xingu e Xuku TE TABOQUINHA	11 / 10 / 2009	8	**241**	474	63	147	-2	53	86	9	67			6	43	1,8	MOET
67	CNS6629	**PAPADO S**	28 / 7 / 2004	41	**240**	439	73	65	-15	57	50	11	81	10	3			1,9	NZA

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD										ND	NH	FS	HS	AR %	Database
				MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.						
68	**FaroxSulipa TE**	Bem-Achado e Bem-Bonito FIV TABOQUINHA	29 / 10 / 2013	-5	**240**	485	59	200	4	51	70	10	63			1	48	2,2	MOET
69	**CubitoxNação**	Sedenho e Tirol TE TABOQUINHA	8 / 6 / 2006	8	**238**	468	64	61	-16	55	108	8	67			1	126	1,3	MOET
70	**CálicexVirgem**	Bem-Lindo FIV TABOQUINHA	2 / 11 / 2013	-1	**238**	477	61	38	-20	49	32	13	66			1	25	2,1	MOET
71	A2389	**ESTILO DE ALAGOINHA**	27 / 5 / 1988	143	**237**	331	94	33	-21	86	120	7	96	61	14			1,7	PT
72	MDVG6318	**METEORO II D**	30 / 5 / 2002	24	**237**	450	69	303	19	54	179	5	76	3	3			0,8	NZA
73	**OuriçoxJusta**	Relevo e Susto TE TABO, e Zico FIV TABOQUINHA	25 / 5 / 2005	3	**236**	469	63	180	2	52	164	6	66			5	48	1,7	MOET
74	**CubitoxVioleta**	Bato, Bem-Amor, Bem-Dizer, Bem-Seu e Borinka FIV TABOQUINHA	30 / 10 / 2013	-3	**236**	475	61	27	-24	53	45	12	65			4	119	1,3	MOET
75	**OdrexHungria**	Retiro TE TABOQUINHA	12 / 6 / 2005	4	**234**	464	64	118	-7	55	83	9	68			1	39	2,1	MOET
76	**EstiloxRabeca**	Zeno, Zero, Zeus, Zine e Zóide FIV TABOQUINHA	21 / 11 / 2010	13	**233**	453	67	156	-1	59	105	8	69			4	84	2,1	MOET
77	**PequixNona**	Tejo, Tel, Teseu, Tibet, Togo,Trunfo, Tudor e Tupina TE TABOQUINHA	25 / 10 / 2006	9	**232**	455	66	281	16	59	61	10	68			6	111	2,2	MOET
78	**OrientexNapa**	Sael TABOQUINHA	25 / 3 / 2006	-7	**232**	471	61	140	-3	52	134	7	64			2	40	2,0	MOET
79	JFT2452	**ADONAI TE JF**	26 / 1 / 2005	58	**229**	400	80	41	-19	66	37	12	86	12	8			1,9	PT
80	CALG133	**ÚMIDO DA CALCIOLÂNDIA**	31 / 7 / 2005	26	**229**	432	72	254	12	60	101	8	79	4	4			2,4	PT
81	AbaetéxHungria	**SALOIO TE TABOQUINHA**	20 / 5 / 2006	46	**222**	398	79	161	0	68	38	12	85	10	1	3	119	2,3	MOET/NZA
82	**NairóbixJusta**	Tufo TE TABOQUINHA	15 / 12 / 2006	-6	**221**	448	65	265	13	55	155	6	68			5	50	1,8	MOET
83	**CubitoxJacutinga**	Timão, Túnel, Turco, Turfe, Tutano e Tzar TE TABOQUINHA	26 / 11 / 2006	-9	**221**	451	64	14	-33	57	92	9	66			4	127	1,7	MOET
84	**LabradorxHungria**	Atômico CAL, e Olé, Olhar, Organdi, Xoco e Xuu TE TABOQUINHA	7 / 6 / 2002	-3	**220**	443	66	74	-13	60	82	9	68			5	148	2,0	MOET
85	**CubitoxTuia**	Bem-Nosso FIV TABOQUINHA	3 / 11 / 2013	-17	**219**	455	62	46	-19	54	65	10	65			2	119	1,6	MOET
86	FNFA960	**HIDRANTE FIV NF**	17 / 6 / 2010	42	**218**	394	79	215	7	62	28	13	85	12	6			1,4	PT
87	A2687	**ALOPRADO D**	18 / 8 / 1991	123	**217**	311	94	163	1	82	94	8	97	82	7			1,2	NZA
88	JFT2488	**ATLAS TE JF**	3 / 3 / 2005	74	**217**	360	86	85	-11	71	36	12	92	27	12			2,5	PT
89	**CubitoxJusta**	Turu TE TABOQUINHA	2 / 12 / 2006	-15	**215**	445	64	25	-25	55	109	8	67			1	130	1,2	MOET
90	UrutuxPrimazia	**QUIEVE TABOQUINHA**	29 / 8 / 2003	22	**214**	406	75	183	3	64	100	8	80	4	2	4	109	1,5	MOET/NZA
91	**OpusxGaiolall**	Tropel TE TABOQUINHA	30 / 12 / 2006	-41	**213**	467	56	159	-1	46	115	8	62			2	28	1,3	MOET
92	UNIU439	**ESCOTEIRO FIV UNIUBE**	1 / 3 / 2011	24	**212**	400	76	35	-21	62	4	18	84	11	4			1,1	PT
93	TABO1716	**QUILATE TABOQUINHA**	15 / 1 / 2004	53	**211**	369	83	87	-11	64	75	9	89	21	6			1,6	PT
94	MDVG6511	**ORÓ D**	19 / 8 / 2004	17	**209**	401	75	193	4	56	79	9	83	9	3			0,7	NZA
95	**AcarixQuadriga**	Xare, Xaréu e Xopotó TE TABOQUINHA	22 / 11 / 2009	-27	**209**	445	62	148	-2	51	112	8	66			4	33	1,7	MOET
96	A5873	**OSASCO 4M**	4 / 11 / 1995	114	**208**	302	94	299	19	86	170	5	96	53	15			2,7	PT
97	**TrigueiroxItuipava**	Raio e Soberbo ALAGOINHA TE	7 / 7 / 2000	-28	**208**	444	62	284	16	51	248	3	66			1	58	1,3	MOET
98	**NaquexHetéia**	Rateio e Recuo TE TABOQUINHA	8 / 11 / 2004	-31	**208**	447	61	119	-7	51	191	5	66			2	43	1,7	MOET
99	**EstiloxPrimazia**	Nanquim e Navegante TE TABOQUINHA	19 / 9 / 2000	-14	**206**	426	67	73	-13	60	184	5	69			3	74	1,3	MOET
100	A1437	**ÉDIPO DE ALAGOINHA**	29 / 8 / 1988	139	**205**	271	97	392	44	92	141	6	98	181	30			3,0	PT
101	LKW319	**IPÊ FIV BOA LEMBRANÇA**	13 / 3 / 2010	-5	**205**	415	70	369	32	58	81	9	77	6	3			2,5	PT
102	AlopradoxOpção	**URZAL TE TABOQUINHA**	2 / 2 / 2008	-16	**204**	424	67	319	22	56	102	8	72	2	1	4	89	1,6	MOET/NZA
103	**HortoxPlatina**	Olente, Olor, Oriental, Órion e Ouvinte TE TABOQUINHA	20 / 11 / 2001	-33	**200**	433	63	306	19	54	190	5	66			5	105	1,3	MOET
104	**RussoxRabeca**	Al Capone FIV DA META	12 / 12 / 2012	-28	**199**	426	65	160	0	1	15	15	1			6	187	0,0	MOET
105	TABO1467	**PÓLO TE TABOQUINHA**	21 / 11 / 2002	34	**197**	360	82	279	16	69	173	5	88	15	4			2,4	PT
106	**HortoxJamaica**	Quarty, Quartzo, Relator, Rubi e Sertão ALAGOINHA TE	21 / 3 / 1999	-16	**197**	410	69	381	36	61	183	5	72			2	106	1,9	MOET
107	**HortoxTravessia**	Jataí, Jatobá e Javali D	16 / 10 / 2000	-35	**195**	425	64	256	12	53	267	2	68			3	102	1,2	NZA

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.	ND	NH	FS	HS	AR %	Database
108	**NepalxNega**	Xauim TABOQUINHA	25 / 11 / 2009	-44	**195**	434	61	206	5	50	131	7	65			1	56	2,1	MOET
109	**NeroSxSalema**	Caíque, Calote, Câmbio e Cáspio FIV TABOQUINHA	24 / 5 / 2014	-62	**195**	452	55	103	-9	44	116	8	60			2	8	2,1	MOET
110	5800	**PERSEU S**	23 / 9 / 1994	93	**194**	295	93	48	-18	85	26	13	96	42	9			2,8	NZA
111	**EstiloxHester**	Opaco e Oxum TE TABOQUINHA	27 / 10 / 2001	-29	**194**	417	66	231	9	59	239	3	68			3	77	1,9	MOET
112	**PerseuxVedelia**	Bem-Ti-Vi, Bem-Vosso e Butan FIV TABOQUINHA	5 / 11 / 2013	-42	**194**	430	62	170	1	52	64	10	66			1	45	2,2	MOET
113	**OsascoxManágua**	Sagrado DE ALAGOINHA	22 / 12 / 2001	-42	**194**	430	62	267	13	53	165	6	66			2	57	2,1	MOET
114	**AlopradoxNação**	Ufo, Urau, Uste e Utar TE TABOQUINHA	2 / 2 / 2008	-40	**193**	426	63	243	10	53	161	6	67			2	94	1,5	MOET
115	ÉdipoxGaita JP	**CIGANO PEAC**	19 / 1 / 1997	44	**192**	340	85	270	14	71	123	7	90	32	15	7	189	2,1	MOET/PT
116	**CálicexRabeca**	Bacharel, Baguari e Boleto FIV META, e Benito e Babaçu FIV TABOQUINHA	25 / 8 / 2013	-45	**191**	427	62	205	5	52	24	14	66			2	47	2,5	MOET
117	A1443	**HORTO DE ALAGOINHA**	9 / 4 / 1991	102	**188**	274	95	394	46	86	169	5	97	98	19			1,6	PT
118	**NairóbixJazida**	Quinino, Quino e Quiton TE TABOQUINHA	28 / 1 / 2004	-37	**186**	409	66	184	3	57	154	6	69			1	48	2,1	MOET
119	**AlopradoxOsa**	Uai, Unica e Urai TE TABOQUINHA	31 / 1 / 2008	-51	**185**	421	62	341	26	53	193	5	66			3	86	1,5	MOET
120	LabradorxHungria	**ÓPUS TE TABOQUINHA**	11 / 6 / 2002	41	**184**	327	86	139	-3	73	98	8	91	24	6	5	148	2,1	MOET/PT
121	A6119	**CAPITÃO-MOR D**	10 / 7 / 1993	82	**183**	284	93	22	-28	82	143	6	96	59	13			1,2	PT
122	MAPZ74	**NEON SANTA CECÍLIA**	4 / 8 / 2009	-16	**183**	382	73	220	8	59	59	10	80	6	3			1,6	PT
123	OsascoxVassoura	**RESPLENDOR TE DA NOVA FLORESTA**	8 / 7 / 2005	-20	**179**	378	73	308	20	59	175	5	80	5	3	3	62	2,0	MOET/NZA
124	**Capitão-MorxLegião**	Ramal TE TABOQUINHA	4 / 1 / 2005	-61	**178**	417	61	57	-17	52	167	6	65			2	64	1,9	MOET
125	JFT2433	**NÁPOLE TE JF**	25 / 12 / 2004	33	**176**	319	86	164	1	72	27	13	91	28	8			2,5	PT
126	**Capitão-MorxNação**	Sinai TE TABOQUINHA	31 / 12 / 2005	-57	**176**	409	63	136	-4	54	187	5	67			3	71	1,5	MOET
127	LDCV391	**FARO TE DA MORUMBI**	7 / 12 / 1996	54	**175**	296	90	181	3	79	73	9	94	45	11			2,2	NZA
128	JFT3157	**CAIM JF**	20 / 12 / 2009	-17	**175**	367	75	142	-2	60	11	16	83	10	3			2,2	PT
129	ÉdipoxGaliléia	**INSTINTO TE TABOQUINHA**	30 / 4 / 1997	80	**174**	268	94	219	8	86	118	7	97	92	23	3	188	2,1	MOET/PT
130	PerseuxUrtiga	**HUM SONHO AMON**	22 / 9 / 2006	-46	**174**	394	67	101	-9	58	103	8	71	1	1	3	48	2,6	MOET/NZA
131	**QuilatexLauda**	Uísque e Umbral TE TABOQUINHA	14 / 9 / 2007	-71	**174**	419	59	131	-5	47	137	7	64			4	28	1,4	MOET
132	DSM3371	**ESTILETE DA MS**	5 / 5 / 1996	30	**173**	316	86	58	-16	71	48	11	92	28	7			1,2	NZA
133	**AlopradoxOrilha**	Urutai, Uruxi e Uybaci TE TABOQUINHA	31 / 1 / 2008	-62	**171**	404	63	244	10	53	213	4	67			3	87	1,5	MOET
134	UrutuxBanqueta	**RUSSO TE JF**	31 / 10 / 2003	92	**169**	246	96	36	-20	89	34	12	98	164	18	4	101	2,6	MOET/NZA
135	**InstintoxMedalha**	Salém, Samba, Sandrine, Sargom e Surate TE TABOQUINHA	8 / 12 / 2005	-54	**169**	392	66	128	-5	59	124	7	69			5	104	2,4	MOET
136	TamarindoxLisboa	**HUM SONHO BASSEIN**	2 / 9 / 2007	-67	**169**	405	62	66	-15	50	104	8	69	2	1	1	33	1,2	MOET/NZA
137	**PerseuxElegância**	Bragam FIV TABOQUINHA	22 / 10 / 2013	-71	**168**	407	61	122	-6	54	66	10	65			2	45	2,6	MOET
138	CNS6391	**NGAÔ TE S**	23 / 8 / 2003	-14	**166**	346	78	42	-19	66	49	11	85	11	6			2,2	NZA
139	PacíficoxÍndia	**QUASAR TE TABOQUINHA**	15 / 5 / 2004	-26	**166**	358	75	264	13	63	202	4	82	7	5	3	75	2,0	MOET/NZA
140	973	**ALBATROZ**	17 / 12 / 1959	-19	**165**	349	77	126	-5	47	201	4	85	13	3			0,6	NZA
141	JFPA465	**CAMBUCI IBITURUNA**	9 / 12 / 2009	6	**164**	322	83	4	-40	68	6	17	89	21	3			2,4	PT
142	**PerseuxUrtiga**	Hum Sonho Abad, e Mandarim e Mandim FIV JF	20 / 9 / 2006	-65	**162**	389	65	82	-12	57	106	8	68			3	48	2,6	MOET
143	**NepalxQueimada**	Beethoven FIV META, e Balac e Bangui FIV TABOQUINHA	9 / 4 / 2013	-76	**160**	396	62	329	23	54	88	9	66			7	76	1,6	MOET
144	**OpusxLauda**	Trismo TE TABOQUINHA	31 / 12 / 2006	-82	**160**	402	60	158	-1	49	130	7	65			2	32	1,6	MOET
145	LVPS98	**NOTÁVEL DA NOVA FLORESTA**	1 / 6 / 2001	-10	**157**	324	81	396	46	65	149	6	88	21	9			2,1	PT

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.	ND	NH	FS	HS	AR %	Database
146	**FaroxJacutinga**	Safari, Sagu, Salol e Sapê TE TABOQUINHA	25 / 3 / 2006	-73	**154**	381	65	129	-5	58	126	7	68			1	58	2,3	MOET
147	**AbaetéxIlha**	Decreto FIV DO ROSÁRIO	17 / 5 / 2007	-79	**154**	387	63	315	21	56	163	6	66			2	103	1,9	MOET
148	**NotávelxAbaíba**	Bisturi FIV META, e Ituano FIV BOA FAMÍLIA	15 / 6 / 2013	-88	**154**	396	60	123	-6	49	132	7	64			3	53	1,5	MOET
149	JFT3094	**CÁLICE FIV JF**	25 / 9 / 2009	10	**153**	296	86	104	-8	71	5	17	91	24	7			2,6	PT
150	MS EmenthalxBohemia	**GOTHAR FIV DE SADERE**	1 / 10 / 2007	-108	**152**	412	55	226	8	45	117	8	59	1	1	2	10	1,6	MOET/NZA
151	PacíficoxPalma	**NAQUE TE JF**	14 / 2 / 2004	-7	**151**	309	83	300	19	67	74	9	89	16	5	2	73	1,9	MOET/PT
152	**MSEmenthalxBohemia**	Globo, Helíaco e Netuno FIV DE SADERE	1 / 10 / 2007	-108	**149**	406	55	214	6	45	140	7	61			2	10	1,9	MOET
153	A2633	**TRIGUEIRO D**	31 / 12 / 1989	47	**148**	249	93	173	2	83	220	3	96	55	12			1,4	PT
154	**TamarindoxEstrela**	Ugli, Ulmo,Umari , Umbu, Umiri, Urucum e Uxi FIV IBITURUNA	22 / 1 / 2008	-95	**147**	389	60	124	-6	50	136	7	64			3	42	1,4	MOET
155	**PequixGaiolaII**	Tupã TE TABOQUINHA	29 / 11 / 2006	-101	**144**	389	59	212	6	50	135	7	64			2	97	1,3	MOET
156	A6181	**GARANTIDO D**	24 / 6 / 1997	-61	**142**	345	72	359	30	48	204	4	80	9	3			0,6	NZA
157	**UrutuxPrimazia**	Quadro, Quartil e Quieto TE TABOQUINHA	16 / 8 / 2003	-82	**138**	358	67	107	-8	60	206	4	69			4	109	1,5	MOET
158	UrutuxPrimazia	**QUEBEC TE TABOQUINHA**	20 / 8 / 2003	-62	**137**	336	73	90	-11	64	177	5	78	4	2	4	109	1,5	MOET/NZA
159	**OsascoxNuvem**	Obi e Ornato TE TABOQUINHA	27 / 11 / 2001	-86	**137**	360	66	273	14	60	210	4	67			3	69	2,6	MOET
160	**GuririxPrimazia**	Níquel TE TABOQUINHA	27 / 5 / 2001	-94	**136**	366	64	203	5	57	208	4	67			3	53	1,7	MOET
161	**AlopradoxJazida**	Seul TE TABOQUINHA	27 / 4 / 2006	-95	**135**	365	64	102	-9	55	186	5	67			1	96	1,6	MOET
162	**UrutuxMedalha**	Refen, Rupestre, Ruste e Rústico TE TABOQUINHA	29 / 11 / 2004	-87	**133**	353	67	69	-14	60	153	6	70			2	108	2,4	MOET
163	NairóbixJusta	**TUCO TE TABOQUINHA**	18 / 12 / 2006	-74	**132**	338	71	276	15	58	180	5	76	4	2	5	50	1,8	MOET/PT
164	**UrutuxBanqueta**	Capitão do Mato, Cobra Norato, Sucuri, Urutu FIV da VIC, Marechal FIV GUAMA, e Ruivo TE JF	26 / 10 / 2003	-92	**131**	354	66	44	-19	61	125	7	68			4	101	2,4	MOET
165	A1453	**LORD DE ALAGOINHA**	13 / 9 / 1994	-46	**130**	306	79	280	16	60	337	-1	86	7	3			1,3	NZA
166	**ÉdipoxGaliléia**	Ianque, Iaque e Ímpio TE TABOQUINHA	14 / 7 / 1996	-101	**129**	359	64	224	8	59	245	3	66			3	188	1,9	MOET
167	**OrientexDiva**	Vacu TE DO ROSÁRIO	11 / 2 / 2006	-110	**129**	368	61	297	18	53	217	4	65			3	39	2,3	MOET
168	LKW225	**GARBO BOA LEMBRANÇA**	27 / 11 / 2008	-106	**127**	360	63	168	1	45	39	12	72	4	3			1,1	NZA
169	9957	**NAVEGANTE**	20 / 12 / 1986	5	**126**	247	90	260	13	80	285	1	94	34	6			0,9	NZA
170	OsascoxNuvem	**ORIENTE TE TABOQUINHA**	28 / 11 / 2001	-1	**126**	253	89	201	5	77	147	6	93	34	11	3	69	2,7	MOET/PT
171	**GuririxLapa**	Redator, Sabre e Sândalo ALAGOINHA TE	23 / 10 / 2000	-106	**124**	354	64	314	21	53	242	3	67			4	46	2,1	MOET
172	**OrientexJusta**	Sertão e Sinal TE TABOQUINHA	6 / 9 / 2005	-106	**124**	354	64	185	3	54	207	4	68			2	50	2,0	MOET
173	**ÉdipoxJarra**	Inquieto, Jacuí, Jaipur , Jaú, Jarro, Jato e Jogo TE TABOQUINHA	30 / 4 / 1997	-90	**123**	336	69	375	33	64	265	2	71			7	190	2,0	MOET
174	**ParedãoxOrilha**	Xantum e Xiré TABOQUINHA	15 / 11 / 2009	-123	**122**	367	59	125	-6	47	277	2	64			1	21	1,8	MOET
175	**Capitão-MorxUsura**	Jaborandi, Jaguane, Jaguaribano, Japu, Jaraguá e Jargão D	1 / 10 / 2000	-109	**121**	351	64	75	-13	54	238	3	68			2	66	0,8	MOET
176	5799	**PAREDÃO S**	14 / 7 / 1994	-33	**120**	273	84	20	-29	66	227	3	90	16	6			1,8	NZA
177	IHL146	**ELETRO**	11 / 11 / 2006	-64	**120**	304	77	403	55	62	150	6	84	10	3			1,9	NZA
178	WEME73	**DOM FIV BOA FAMÍLIA**	24 / 2 / 2009	-74	**118**	310	75	100	-9	61	99	8	82	9	4			0,8	NZA
179	**Capitão-MorxJazida**	Sadraque, Sharon, Siroco e Sundare TE TABOQUINHA	12 / 12 / 2005	-112	**118**	348	64	26	-24	55	211	4	67			3	73	1,6	MOET
180	**QuilatexHorda**	Quioto TE TABOQUINHA	17 / 9 / 2003	-121	**118**	357	61	188	3	51	194	5	65			1	34	2,5	MOET
181	**OsascoxHonrosa**	Oásis, Oboé e Ogum TE TABOQUINHA	20 / 9 / 2001	-110	**117**	344	65	187	3	58	209	4	67			4	58	2,1	MOET
182	**NaquexVassoura**	Sinhô TE TABOQUINHA	28 / 3 / 2005	-123	**116**	355	61	157	-1	51	216	4	65			3	48	1,4	MOET
183	TamarindoxHaste	**HUM SONHO BARUC**	18 / 8 / 2007	-69	**115**	299	77	31	-22	62	29	13	85	14	3	1	34	1,3	MOET/PT

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.	ND	NH	FS	HS	AR %	Database
184	Capitão-MorxJaula	**SAROM TE TABOQUINHA**	24 / 12 / 2005	-96	**114**	324	70	91	-11	59	182	5	75	4	1	6	73	1,8	MOET/NZA
185	UNIU52	**AGHA KHAN FIV**	21 / 10 / 2007	-15	**112**	239	89	2	-52	75	21	14	94	37	5			0,7	PT
186	**RussoxOra**	Acre, Ameno, Apolo e Zopo FIV TABOQUINHA	21 / 11 / 2010	-118	**112**	342	64	186	3	58	127	7	67			5	169	2,6	MOET
187	**Capitão-MorxNara**	Olivedo TE TABOQUINHA	22 / 1 / 2002	-121	**112**	345	63	250	11	53	271	2	66			1	65	1,4	MOET
188	**AcarixOrilha**	Xerez e Xinxim TE TABOQUINHA	23 / 11 / 2009	-130	**112**	354	60	150	-2	48	250	3	65			1	29	1,5	MOET
189	TrigueiroxDerramada	**ÍNDIO TE DO ROSÁRIO**	10 / 3 / 2000	-88	**111**	310	73	239	10	60	205	4	80	9	1	3	58	1,3	MOET/NZA
190	EstiloxAraponga	**JOIO TE TABOQUINHA**	13 / 11 / 1997	-95	**111**	317	71	51	-18	60	233	3	76	4	1	4	67	1,1	MOET/NZA
191	**AcarixJusta**	Abrigo e Afeito FIV TABOQUINHA	22 / 2 / 2011	-125	**111**	347	62	98	-10	50	189	5	66			2	40	1,3	MOET
192	JFT2422	**NOTÁVEL TE JF**	17 / 12 / 2004	-7	**108**	223	91	84	-11	80	144	6	95	47	15			2,6	PT
193	**GuririxEmboaba**	Palco e Pilsen TE TABOQUINHA	17 / 6 / 2003	-131	**108**	347	61	198	4	51	214	4	65			4	48	1,6	MOET
194	SAV94	**GIM FIV DE SADERE**	20 / 3 / 2007	-111	**106**	323	68	272	14	52	178	5	76	8	6			1,7	PT
195	**LabradorxLegião**	Sabor e Sabujo TE TABOQUINHA	19 / 3 / 2006	-124	**106**	336	64	23	-27	57	185	5	67			1	135	2,4	MOET
196	ROS522	**OURO TE DO ROSÁRIO**	7 / 9 / 2005	-62	**105**	272	81	202	5	65	228	3	88	21	3			1,6	PT
197	**TrigueiroxDerramada**	Marte e Mava TE TABOQUINHA	10 / 3 / 2000	-140	**105**	350	59	249	10	52	253	3	62			3	58	1,3	MOET
198	**LabradorxNação**	Zambi FIV TABOQUINHA	13 / 8 / 2010	-126	**104**	334	64	70	-14	56	188	5	67			3	142	1,9	MOET
199	**EstiloxAraponga**	Jaó, Japão, Jasão, Jogral, Judô e Jungo TE TABOQUINHA	10 / 11 / 1997	-127	**103**	333	64	45	-19	56	269	2	67			4	67	1,1	MOET
200	A6104	**ALMA DE GATO D**	8 / 11 / 1991	-82	**102**	286	77	358	30	52	338	-1	85	8	4			0,5	PT
201	AbaetéxIlha	**DICK FIV DO ROSÁRIO**	7 / 7 / 2007	-86	**102**	290	76	352	29	61	174	5	83	10	5	2	103	1,9	MOET/PT
202	**NairóbixColombina**	Batoque e Batuque FIV JF, Boêmio FIV IBIT, e Topo e Torilo TE TABOQUINHA	20 / 3 / 2007	-131	**102**	335	63	304	19	54	241	3	67			2	46	2,2	MOET
203	1389	**URUTU**	18 / 8 / 1983	24	**101**	178	96	94	-10	88	195	4	97	96	18			2,0	NZA
204	OsascoxHonrosa	**ODRE TE TABOQUINHA**	25 / 9 / 2001	-42	**101**	244	86	10	-34	73	171	5	91	21	8	4	58	2,1	MOET/PT
205	HUM51	**HUM SONHO BALBECK**	18 / 11 / 2008	-136	**100**	336	62	60	-16	45	30	13	71	4	4			1,5	PT
206	5295	**ACARI RF**	24 / 1 / 1987	-34	**99**	232	88	34	-21	73	146	6	93	24	6			1,1	NZA
207	**Capitão-MorxJaula**	Salim, Sardes, Sargão e Solon TE TABOQUINHA	6 / 12 / 2005	-131	**99**	329	64	76	-13	55	212	4	67			6	73	1,7	MOET
208	ÉdipoxJarra	**JEQUIÁ TE TABOQUINHA**	17 / 12 / 1997	-23	**98**	219	90	316	22	79	199	4	94	47	20	7	190	2,0	MOET/PT
209	**PequixHester**	Súdito TE TABOQUINHA	31 / 5 / 2006	-125	**98**	321	66	332	24	58	237	3	69			3	109	2,1	MOET
210	**InstintoxHarmônica**	Sumário e Suez TE TABOQUINHA	8 / 12 / 2005	-138	**98**	334	62	204	5	52	243	3	67			1	96	1,6	MOET
211	**ÉdipoxAçucena**	Xiru e Xoa FIV TABOQUINHA	15 / 1 / 2010	-141	**98**	337	61	338	25	52	251	3	65			2	184	1,7	MOET
212	**JequiáxHaia**	Piauí e Quimo TE TABOQUINHA	26 / 5 / 2003	-144	**98**	340	60	335	24	52	252	3	64			2	51	2,1	MOET
213	**HábilxLimeira**	Rebate, Rincão, Rodes e Rumo TE TABOQUINHA	24 / 9 / 2004	-142	**97**	336	61	199	4	52	274	2	65			1	76	2,5	MOET
214	SeridóxMarítima	**GURIRI TE TABOQUINHA**	30 / 5 / 1995	-19	**96**	211	91	274	15	81	197	4	95	40	9	4	126	2,5	MOET/NZA
215	HortoxHorda	**OCRE TE TABOQUINHA**	9 / 3 / 2002	-107	**96**	299	72	271	14	62	176	5	78	5	5	3	106	2,2	MOET/PT
216	**TrigueiroxJarra**	Direito, Jirau, Líber e Lual TE TABOQUINHA	10 / 5 / 1999	-123	**94**	311	68	255	12	60	298	1	70			2	64	1,1	MOET
217	**AcarixVeia**	Elixir e Embalado TE RF	27 / 6 / 2010	-160	**94**	348	56	63	-16	44	139	7	62			1	26	1,0	MOET
218	**HábilxJamaica**	Ubaldo, Urocrôa e Vaticano ALAGOINHA TE	7 / 12 / 2003	-134	**93**	320	65	196	4	57	268	2	68			1	82	2,6	MOET
219	GUZA365	**ASTRAL**	7 / 9 / 1999	-84	**92**	268	79	80	-12	56	335	-1	86	16	3			0,6	NZA
220	TamarindoxHaste	**HUM SONHO BECOR**	18 / 8 / 2007	-150	**92**	334	60	39	-20	49	89	9	66	1	1	1	34	1,3	MOET/NZA
221	**HortoxHorda**	Orinoco, Osmã, Oviedo e Oxumaré TE TABOQUINHA	9 / 3 / 2002	-139	**91**	321	64	251	11	56	247	3	66			3	106	2,2	MOET
222	**PequixJacutinga**	Tuiuiu TE TABOQUINHA	14 / 12 / 2006	-141	**89**	319	64	146	-2	56	160	6	67			2	106	2,2	MOET
223	8182	**NAVARRO S**	30 / 7 / 1993	-55	**88**	231	86	6	-36	70	225	3	91	29	3			0,9	NZA
224	**ÉdipoxGaita**	Champion, Clero e Combate PEAC, e Ray e Reto TE DA CALCIOLÂNDIA	8 / 6 / 2002	-142	**88**	318	64	323	22	57	244	3	66			7	189	2,1	MOET

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.	ND	NH	FS	HS	AR %	Database
225	A6430	**DANDI JP**	16 / 2 / 1996	-111	**84**	279	74	367	32	64	315	0	80	6	3			3,0	NZA
226	**TamarindoxHaste**	Hum Sonho Bandor	1 / 9 / 2007	-165	**83**	331	58	40	-20	48	114	8	62			1	34	1,3	MOET
227	**FaroxQueimada**	Barão FIV META, e Beni e Bilbao FIV TABOQUINHA	12 / 1 / 2013	-154	**82**	318	62	285	16	53	129	7	65			5	68	1,5	MOET
228	A5843	**OLENTE 4M**	30 / 8 / 1965	-102	**78**	258	78	95	-10	56	292	1	86	17	4			0,0	NZA
229	A989	**IBÉRICO JP**	15 / 10 / 1990	-51	**76**	203	89	399	47	78	222	3	93	17	6			1,1	NZA
230	MDVG6822	**RAPA PÉ D**	10 / 5 / 2007	-116	**76**	268	75	97	-10	54	78	9	84	14	6			0,6	NZA
231	HUM4	**HUM SONHO ABSOLUTO**	4 / 9 / 2006	-131	**72**	275	72	68	-14	61	80	9	78	4	3			2,6	NZA
232	OrientexDiva	**VELUDO DO ROSÁRIO**	12 / 2 / 2006	-142	**71**	284	69	277	15	58	234	3	76	4	1	3	39	2,4	MOET/NZA
233	HomeroxDiva	**OCIDENTE DO ROSÁRIO**	1 / 1 / 2005	-163	**70**	303	63	230	9	53	236	3	70	2	1	1	20	2,4	MOET/NZA
234	9974	**JÓQUEI TE JP**	22 / 11 / 1991	-123	**69**	261	75	386	38	58	342	-1	81	4	4			1,4	PT
235	A1449	**JAGUNÇO DE ALAGOINHA**	16 / 9 / 1993	-116	**64**	244	78	331	24	62	312	0	84	7	4			1,8	PT
236	**CubitoxAlmofada**	Exame e Executivo TE DO CIPÓ	1 / 6 / 2004	-169	**64**	297	63	24	-27	54	270	2	66			3	127	0,7	MOET
237	**CorsárioxTulha**	Acari e Aloés FIV TABOQUINHA	11 / 4 / 2012	-182	**63**	308	59	172	1	48	168	6	64			2	20	2,1	MOET
238	ÉdipoxJarra	**JONAS TE TABOQUINHA**	26 / 12 / 1997	-126	**58**	242	77	377	34	67	314	0	82	6	2	7	190	2,0	MOET/NZA
239	**UrutuxJaula**	Tropo, Trote, Trovão, Truste, Tubel e Tucano TE TABOQUINHA	30 / 12 / 2006	-169	**58**	285	65	134	-4	58	240	3	68			5	110	2,2	MOET
240	**OdrexHarmônica**	Semita, Sensor e Sultão TE TABOQUINHA	22 / 8 / 2005	-185	**57**	299	60	62	-16	46	272	2	66			1	25	1,6	MOET
241	A336	**FOGO RF**	8 / 6 / 1992	-123	**53**	229	79	337	25	64	310	0	86	14	4			1,2	NZA
242	MDVG6458	**NOVA SEITA D**	12 / 11 / 2003	-86	**52**	190	87	189	4	73	121	7	93	30	6			0,9	NZA
243	**PequixGazela**	Truque e Tucho TE TABOQUINHA	15 / 12 / 2006	-188	**51**	290	61	290	17	54	219	4	63			2	96	2,1	MOET
244	Capitão-MorxNara	**ORÓS TE TABOQUINHA**	19 / 1 / 2002	-153	**50**	253	72	275	15	58	262	2	79	4	3	1	65	1,4	MOET/PT
245	UrutuxNara	**OFURÔ TE TABOQUINHA**	23 / 4 / 2002	-147	**48**	243	74	208	6	62	261	2	80	5	3	4	102	1,8	MOET/NZA
246	**SeridóxNóbrica**	Haiti, Halo, Hangar, Haras, Harém, Havaí e Hereu TE TABOQUINHA	21 / 8 / 1995	-172	**48**	268	67	354	29	58	347	-1	70			4	123	2,2	MOET
247	**CassinoxBalalaica**	Mestre TE TABOQUINHA	15 / 9 / 1999	-188	**48**	284	62	356	29	53	246	3	66			5	70	1,4	MOET
248	**HomeroxManágua**	Vadio ALAGOINHA TE	20 / 4 / 2004	-198	**47**	292	59	152	-2	48	278	2	63			1	19	2,2	MOET
249	**MaranhãoxJusta**	Remã, Remido, Remo, Remoto e Repuxo TE TABOQUINHA	29 / 3 / 2005	-193	**46**	285	61	162	0	50	249	3	65			1	54	1,9	MOET
250	InstintoxImersa	**PEQUI TE TABOQUINHA**	19 / 8 / 2002	-49	**45**	139	94	236	10	85	119	7	97	93	19	4	102	2,1	MOET/PT
251	**FundadorxCoroa**	Jafar, Jamais e Justo TE TABOQUINHA	16 / 9 / 1997	-200	**45**	290	59	151	-2	47	326	0	64			3	30	0,7	MOET
252	ÉdipoxJarra	**DUNGA TE DO ROSÁRIO**	20 / 12 / 1997	-125	**42**	209	81	376	34	70	290	1	86	12	2	7	190	2,0	MOET/NZA
253	**CorsárioxHester**	Faisla TE de SADERE e Taco TE TABOQUINHA	27 / 7 / 2006	-198	**41**	280	61	258	12	51	273	2	65			3	33	2,1	MOET
254	**HeteuxJamaica**	Urso e Útil ALAGOINHA TE	18 / 8 / 2003	-198	**41**	280	61	296	18	51	325	0	65			1	27	2,1	MOET
255	CNS4923	**TAMARINDO S**	18 / 7 / 1995	-93	**40**	173	88	17	-30	74	122	7	93	32	6			1,3	NZA
256	HUM24	**HUM SONHO ABADON**	24 / 9 / 2006	-113	**40**	193	84	11	-34	71	58	10	90	21	6			2,0	PT
257	TABO866	**LABRADOR TABOQUINHA**	27 / 9 / 1998	-38	**39**	116	96	3	-47	88	142	6	97	130	30			2,0	PT
258	MDVG5360	**GIBÃO D**	21 / 5 / 1997	-119	**39**	197	83	379	35	63	148	6	90	22	6			0,5	NZA
259	NESZ2	**GUZERÁ DA BARRA 2**	14 / 8 / 1998	-221	**39**	299	54	28	-24	40	138	7	63	3	3			1,0	NZA
260	FNF4392	**JOVEM TE NF**	26 / 6 / 1993	-115	**38**	191	84	387	39	71	331	-1	90	23	3			1,0	NZA
261	UrutuxAcauã	**NEHERU TE JF**	23 / 8 / 2004	-146	**38**	222	77	365	31	64	260	2	84	10	5	3	103	2,0	MOET/NZA
262	LVPS59	**JOÁ DA NOVA FLORESTA**	1 / 4 / 1998	-151	**37**	225	76	353	29	62	151	6	83	12	6			2,1	PT
263	TABO637	**IAGO TE TABOQUINHA**	7 / 7 / 1996	-194	**36**	266	64	223	8	55	264	2	71	3	3			2,1	NZA
264	Capitão-MorxUsura	**JANARI D**	10 / 10 / 2000	-75	**33**	141	92	83	-11	80	198	4	95	47	12	2	66	0,9	MOET/PT
265	CNS5319	**CABUL III S**	9 / 5 / 1998	-62	**32**	126	94	47	-18	84	196	4	96	90	14			2,6	NZA
266	7655	**NAMBU JP**	4 / 9 / 1971	-89	**32**	153	90	362	31	78	352	-2	93	17	10			1,1	NZA
267	**OrósxJaula**	Relento TE TABOQUINHA	12 / 5 / 2005	-222	**32**	286	56	225	8	46	280	2	60			1	18	1,8	MOET
268	ROS614	**VERNIZ TE DO ROSÁRIO**	19 / 3 / 2006	-149	**31**	211	78	114	-7	62	231	3	85	16	5			2,2	PT
269	A6134	**DESENGASGO D**	11 / 9 / 1994	-110	**23**	156	88	113	-7	65	307	0	93	28	11			0,4	PT

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD MIN	EPD Milk kg	EPD MAX	EPD Rel.	EPD Rank.	EPD AFC Days	EPD Rel.	EPD Rank.	EPD MPE kg/month	EPD Rel.	ND	NH	FS	HS	AR %	Database
270	**HomeroxDiva**	Lacre, Latino e Lítio TE DO ROSÁRIO	3 / 5 / 2004	-225	**23**	271	58	248	10	50	305	1	62			1	20	2,4	MOET
271	SeridóxMarítima	**DEDAL TE DO ROSÁRIO**	23 / 3 / 1997	-99	**22**	143	90	325	23	81	254	2	94	60	4	4	126	2,5	MOET/NZA
272	BarbantexGaliléia	**DECOTE TE DO ROSÁRIO**	19 / 11 / 1997	-149	**22**	193	80	18	-30	70	229	3	85	11	2	2	85	2,1	MOET/NZA
273	**JequiáxIlharga**	Objeto e Pitu TE TABOQUINHA	23 / 5 / 2003	-226	**22**	270	58	269	13	49	304	1	63			2	50	1,8	MOET
274	9956	**PALÁCIO**	2 / 10 / 1988	-123	**20**	163	86	79	-12	69	288	1	91	22	4			0,5	NZA
275	**OpusxRoma**	Urais e Uttar FIV IBITURUNA	25 / 8 / 2008	-222	**20**	262	60	110	-8	49	276	2	64			4	32	1,7	MOET
276	**NavegantexRelva**	Mar e Motor TE TABOQUINHA	3 / 5 / 2000	-217	**19**	255	62	334	24	54	303	1	65			4	40	1,4	MOET
277	EstiloxAraponga	**JABUTI TE TABOQUINHA**	10 / 8 / 1997	-117	**16**	149	88	19	-29	75	255	2	93	36	11	4	67	1,1	MOET/PT
278	CassinoxBalalaica	**MATIPÓ TE TABOQUINHA**	4 / 9 / 1999	-214	**16**	246	64	355	29	54	266	2	69	1	1	5	70	1,4	MOET/NZA
279	JFT3045	**CAIO FIV JF**	16 / 4 / 2009	-180	**15**	210	74	50	-18	62	152	6	80	5	3			2,5	PT
280	ÉdipoxAlmofada	**ENREDO TE DO CIPÓ**	23 / 3 / 2004	-210	**13**	236	66	320	22	57	320	0	70	1	1	3	194	1,7	MOET/NZA
281	BarbantexBabilônia	**HIFEM TE TABOQUINHA**	3 / 2 / 1996	-191	**12**	215	72	127	-5	61	316	0	77	2	1	4	83	2,1	MOET/NZA
282	A2731	**GAVIÃO DA NOVA FLORESTA**	28 / 4 / 1995	-116	**11**	138	89	373	33	75	286	1	93	38	10			1,6	PT
283	9346	**TRICÔ**	4 / 11 / 1982	-238	**10**	258	58	92	-11	36	382	-4	67	3	3			0,2	NZA
284	**BarbantexBabilônia**	Hertz, Hilo, Hindu, Hino, Hípico e Hirto TE TABOQUINHA	3 / 2 / 1996	-205	**8**	221	69	144	-2	58	345	-1	73			4	83	2,1	MOET
285	**UrutuxAcauã**	Natan JF	19 / 8 / 2004	-224	**6**	236	64	257	12	56	302	1	66			3	103	2,0	MOET
286	A6120	**CABO DE GUERRA D**	4 / 6 / 1993	-175	**5**	185	78	120	-6	58	359	-2	85	11	6			0,8	PT
287	**NobrexJamaica**	Rabino e Rebelde ALAGOINHA TE	26 / 12 / 2000	-222	**5**	232	65	241	10	56	299	1	69			1	59	2,2	MOET
288	**SeridóxJeitosa**	Hélios TE TABOQUINHA	2 / 12 / 1995	-228	**5**	238	63	312	20	57	366	-2	66			4	121	2,0	MOET
289	GUZA522	**ACAIACA TE**	31 / 5 / 2002	-167	**4**	175	80	385	38	65	289	1	87	15	4			0,8	NZA
290	**CassinoxEmboaba**	Mombaça TABOQUINHA	17 / 3 / 2000	-235	**4**	243	61	313	20	52	275	2	64			1	73	1,6	MOET
291	**CassinoxPrimazia**	Jaguar, Jalão, Jalo, Jambo, Mascate e Mordomo TE TABOQUINHA	7 / 8 / 1997	-238	**4**	246	60	388	39	50	367	-2	64			4	71	1,3	MOET
292	**CassinoxCoroa**	Nago, Nero e Nitro TE TABOQUINHA	6 / 11 / 2000	-232	**1**	234	63	247	10	55	322	0	66			2	73	1,4	MOET
293	CNS6135	**MARABÁ S**	29 / 7 / 2002	-148	**0**	148	85	9	-34	68	57	10	91	25	6			1,2	NZA
294	FNF5873	**PLEBEU NF**	7 / 5 / 1998	-149	**-1**	147	85	55	-17	69	256	2	91	31	12			1,6	PT
295	**MaranhãoxMedusa**	Raio, Raptor, Rasgo, Rebolo, Recato e Reduta TE TABOQUINHA	31 / 10 / 2004	-243	**-1**	241	60	77	-13	51	215	4	65			6	44	2,0	MOET
296	**HábilxJaula**	Rito, Rival, Roque, Rosto, Rubi, Rude e Sino TE TABOQUINHA	28 / 2 / 2005	-232	**-2**	228	64	108	-8	56	301	1	67			2	88	2,6	MOET
297	5465	**MAGNUM S**	22 / 4 / 1982	-185	**-5**	175	78	89	-11	56	291	1	86	8	3			1,0	NZA
298	UNIU236	**CAIRO**	11 / 6 / 2009	-174	**-7**	160	81	15	-32	67	77	9	88	16	6			2,1	PT
299	**UrutuxColombina**	Ben, Big FIV JF, Boiru FIV IBITURUNA, e Gramado e Hífen FIV do CIPÓ	1 / 2 / 2007	-237	**-7**	223	64	179	2	57	300	1	67			3	108	2,1	MOET
300	HQB258	**MARCA SOL EMENTHAL**	16 / 1 / 2002	-221	**-8**	205	69	370	32	53	232	3	77	5	3			1,7	NZA
301	**Heteuxlara**	Cururu DER e Oslo TE TABOQUINHA	20 / 5 / 2002	-256	**-8**	240	58	213	6	50	327	0	63			4	24	2,0	MOET
302	CassinoxBalalaica	**INGLÊS TE DO ROSÁRIO**	29 / 4 / 2000	-179	**-12**	155	81	364	31	67	257	2	88	18	3	5	70	1,4	MOET/PT
303	**HomeroxFlorença**	Real TE TABOQUINHA	11 / 11 / 2004	-254	**-12**	230	60	93	-11	51	324	0	65			2	18	2,3	MOET
304	**HeteuxJade**	Pejo, Poente e Proteu TE TABOQUINHA	7 / 3 / 2003	-260	**-12**	236	58	153	-2	49	328	0	62			3	24	1,6	MOET
305	7866	**SERIDÓ JA**	24 / 8 / 1982	-80	**-14**	52	97	391	43	92	281	1	98	118	24			3,8	NZA
306	FNF5697	**PATRONO NF**	1 / 11 / 1997	-199	**-15**	169	77	238	10	64	339	-1	83	10	3			2,1	NZA
307	JFPA92	**MAESTRO IBITURUNA**	7 / 6 / 2006	-196	**-16**	164	78	182	3	63	230	3	85	15	4			1,9	PT
308	SeridóxChinesa	**FENOMENAL PEAC**	5 / 9 / 2000	-219	**-16**	187	72	318	22	61	294	1	78	5	1	2	120	2,4	MOET/NZA

(to be continued...)

((continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD										ND	NH	FS	HS	AR %	Database
				MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.						
309	JFT2077	**PREFEITO JF**	22 / 9 / 2001	-236	**-16**	204	67	21	-29	53	181	5	75	4	3			1,7	NZA
310	VirtualxJacutinga	**QUARUP TE TABOQUINHA**	18 / 8 / 2003	-223	**-17**	189	71	121	-6	57	296	1	77	3	1	2	28	1,6	MOET/NZA
311	**SeridóxMarítima**	Dólar ROS, e Hiper e Hippus TE TABOQUINHA	19 / 3 / 1997	-239	**-19**	201	67	311	20	62	363	-2	68			4	126	2,4	MOET
312	BarbantexTarawall	**HÁBIL TE TABOQUINHA**	15 / 7 / 1995	-114	**-20**	74	94	53	-17	86	283	1	96	74	15	5	84	3,0	MOET/PT
313	CassinoxCoroa	**NEPAL TE TABOQUINHA**	10 / 11 / 2000	-234	**-21**	192	69	209	6	58	317	0	75	3	2	2	73	1,5	MOET/NZA
314	A2118	**DESPACHO S**	21 / 7 / 1989	-210	**-22**	166	76	72	-13	62	360	-2	83	4	3			1,6	NZA
315	**BarbantexTarawall**	Hoje, Holos, Hobby e Honor TE TABOQUINHA	15 / 5 / 1996	-237	**-24**	189	69	56	-17	63	321	0	70			5	84	2,8	MOET
316	CNS5614	**DELITO S**	6 / 8 / 1999	-257	**-24**	209	63	195	4	45	235	3	74	7	3			1,0	NZA
317	A337	**FUNDADOR TE RF**	29 / 12 / 1992	-188	**-25**	138	82	317	22	65	357	-2	88	22	9			1,1	PT
318	JFPA20	**ALINHADO TE IBITURUNA**	21 / 10 / 2005	-226	**-27**	172	73	307	20	58	203	4	81	9	6			1,9	PT
319	BarbantexGaliléia	**DEGRAU TE DO ROSÁRIO**	15 / 11 / 1997	-237	**-27**	183	70	43	-19	63	319	0	73	1	1	2	85	2,1	MOET/NZA
320	SeridóxChinesa	**MARANHÃO TE PEAC**	28 / 2 / 2001	-158	**-31**	96	89	154	-1	76	223	3	93	38	11	2	120	2,5	MOET/PT
321	A2664	**GITANO DE ALAGOINHA**	20 / 1 / 1990	-159	**-32**	95	89	347	28	67	384	-5	94	41	9			1,4	PT
322	A2621	**SACADO D**	26 / 2 / 1988	-151	**-36**	79	91	259	13	77	284	1	95	32	10			0,9	PT
323	A6121	**CANDEEIRO D**	18 / 2 / 1993	-174	**-36**	102	87	138	-3	69	200	4	92	25	6			0,6	NZA
324	5736	**ACARAJÉ S**	10 / 6 / 1986	-209	**-38**	133	80	261	13	65	386	-5	87	11	4			1,7	NZA
325	A739	**JAVANÊS NF**	15 / 4 / 1993	-251	**-38**	175	69	302	19	53	375	-3	77	7	3			1,2	NZA
326	A914	**BURGUÊS S**	30 / 10 / 1987	-245	**-39**	167	71	117	-7	58	374	-3	77	4	3			1,9	NZA
327	**CassinoxDica**	Maceió e Quiron TE TABOQUINHA	11 / 8 / 2003	-280	**-41**	198	61	378	34	53	350	-1	64			4	70	1,8	MOET
328	5088	**DRAKAR S**	31 / 10 / 1979	-186	**-43**	100	86	141	-2	70	353	-2	91	16	8			1,7	NZA
329	BarbantexGaliléia	**DEVOTO TE DO ROSÁRIO**	20 / 11 / 1997	-184	**-46**	92	87	133	-4	75	287	1	92	35	14	2	85	2,2	MOET/PT
330	CNS7293	**BEIJIM S**	7 / 6 / 2007	-282	**-46**	190	62	167	1	45	297	1	73	7	3			1,2	NZA
331	**DestaquexUralita**	Alce e Amostra FIV TABOQUINHA	13 / 4 / 2012	-291	**-46**	199	59	357	29	47	218	4	64			1	20	2,3	MOET
332	5892	**VAIDOZO**	1 / 5 / 1995	-192	**-49**	94	86	71	-13	71	354	-2	91	30	4			1,0	NZA
333	**NobrexBabilônia**	Negal TE TABOQUINHA	22 / 4 / 2001	-285	**-49**	187	62	135	-4	49	365	-2	67			1	56	1,4	MOET
334	5769	**LEITEIRO JP**	26 / 7 / 1992	-258	**-52**	154	71	368	32	56	379	-4	78	5	3			1,3	PT
335	A2033	**VIRTUAL DA TEOTÔNIO**	31 / 12 / 1994	-206	**-58**	90	85	252	12	67	330	-1	91	15	7			0,9	PT
336	SeridóxMarítima	**DARDO TE DO ROSÁRIO**	21 / 3 / 1997	-202	**-59**	84	86	227	9	76	309	0	91	26	2	4	127	2,4	MOET/NZA
337	**NaquexUruguaiana**	Fael, Falcão e Foguete FIV GUGA, e Imã, Insbruck e Iziah FIV BOA FAMÍLIA	3 / 2 / 2013	-308	**-60**	188	58	78	-13	49	279	2	62			2	19	2,0	MOET
338	**ImperialxNóbrica**	Galego RF	17 / 6 / 1993	-292	**-62**	168	64	327	23	54	381	-4	67			2	48	1,0	MOET
339	5735	**ALADIM S**	11 / 7 / 1986	-216	**-63**	90	84	7	-36	73	332	-1	89	12	5			2,2	NZA
340	**SeridóxColombina**	Afinado, Alagoano FIV PEAC e Galeto CIPO, Midas TE IBIT, e Seiko TE TABOQUINHA	22 / 6 / 2005	-291	**-64**	163	65	350	28	59	348	-1	68			3	129	2,9	MOET
341	AFGF184	**HAITI TE S CLARAMAR**	14 / 8 / 2004	-282	**-65**	152	68	166	1	59	318	0	74	4	3			1,9	NZA
342	**SeridóxChinesa**	Faro e Martelo TE PEAC	11 / 12 / 2000	-299	**-66**	167	63	234	9	56	323	0	65			2	119	2,4	MOET
343	4790	**CAIRO JP**	12 / 6 / 1995	-205	**-67**	71	87	384	37	71	308	0	92	27	9			1,0	PT
344	HANC311	**CORSÁRIO DA VEREDA**	7 / 11 / 2001	-222	**-69**	84	84	64	-15	69	172	5	90	17	8			2,0	PT
345	**NobrexUsura**	Lampeão, Legação, Lenhador, Louvado e Luzeiro D	1 / 3 / 2001	-302	**-69**	164	63	145	-2	52	364	-2	67			3	58	1,3	MOET
346	5775	**RADIAL TE**	24 / 3 / 1994	-267	**-72**	123	74	115	-7	60	344	-1	80	10	5			1,0	PT
347	CassinoxCoroa	**CASSINO DO CIPÓ**	13 / 1 / 2002	-250	**-74**	102	79	262	13	66	336	-1	86	14	6	2	73	1,5	MOET/PT
348	5563	**VAIDOSO JP**	4 / 2 / 1980	-170	**-76**	18	94	343	27	83	282	1	97	68	15			1,3	NZA
349	GUZA454	**CASSINO**	5 / 10 / 2001	-221	**-78**	65	86	340	26	71	224	3	92	27	5			2,1	NZA
350	NobrexCoroa	**MARACATU TABOQUINHA**	22 / 7 / 1999	-273	**-78**	117	74	29	-23	60	343	-1	81	7	1	1	59	1,3	MOET/NZA
351	JFT1619	**NAVAL JF**	1 / 11 / 1994	-256	**-80**	96	79	344	27	67	258	2	86	9	4			1,8	NZA
352	9940	**BARBANTE JF**	15 / 12 / 1987	-159	**-82**	-5	96	132	-4	91	306	0	98	78	17			3,5	PT
353	BarbantexTarawall	**HOMERO TE TABOQUINHA**	7 / 5 / 1996	-244	**-86**	72	83	88	-11	72	358	-2	88	15	2	5	84	2,9	MOET/NZA

(to be continued...)

(continuation...)

Milk Rank.	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD										ND	NH	FS	HS	AR %	Database
				MIN	Milk kg	MAX	Rel.	Rank.	AFC Days	Rel.	Rank.	MPE kg/month	Rel.						
354	TABO2122	**SERENO TABOQUINHA**	4 / 9 / 2005	-220	**-93**	34	89	361	31	76	145	6	94	39	6			1,5	PT
355	A1447	**IMPULSIVO DE ALAGOINHA**	10 / 10 / 1992	-210	**-95**	20	91	336	25	78	221	3	95	45	13			1,4	PT
356	4610	**HUMAYAN**	21 / 1 / 1969	-308	**-95**	118	69	32	-22	51	295	1	78	6	3			0,3	NZA
357	8341	**TRIGUEIRO JA**	15 / 8 / 1972	-308	**-105**	98	72	349	28	48	399	-8	80	5	3			0,5	NZA
358	UrutuxColombina	**TINO TE TABOQUINHA**	1 / 2 / 2007	-330	**-107**	116	66	175	2	57	346	-1	71	1	1	3	108	2,1	MOET/NZA
359	9491	**FALATÓRIO DE NAVIRA**	2 / 10 / 1987	-363	**-109**	145	56	52	-18	37	349	-1	66	3	3			0,8	NZA
360	9951	**CASSINO JF**	26 / 12 / 1988	-206	**-112**	-18	94	398	47	86	329	-1	96	65	13			2,5	NZA
361	ImperialxNóbrica	**ÊXITO TE**	23 / 6 / 1993	-265	**-112**	41	84	326	23	68	369	-3	90	20	7	2	48	1,0	MOET/PT
362	9323	**QUERO QUERO**	27 / 1 / 1979	-261	**-113**	35	85	155	-1	72	394	-6	89	8	5			1,7	NZA
363	9754	**PARAÍSO JF**	27 / 6 / 1991	-245	**-124**	-3	90	372	33	79	351	-2	94	34	11			2,9	PT
364	7962	**EMBORNAL D**	9 / 7 / 1977	-263	**-125**	13	87	374	33	62	385	-5	92	22	5			0,4	NZA
365	SeridóxJeitosa	**HETEU TE TABOQUINHA**	2 / 12 / 1995	-292	**-125**	42	81	237	10	70	371	-3	88	19	2	4	122	2,0	MOET/NZA
366	A2804	**HORIZONTE NF**	9 / 1 / 1992	-293	**-130**	33	82	253	12	68	334	-1	88	15	8			2,5	PT
367	ImperialxMarítima	**QUARTZO TE**	6 / 12 / 1993	-344	**-131**	82	69	221	8	58	392	-5	75	2	1	3	51	1,2	MOET/NZA
368	NavegantexRelva	**MIRADOR TE TABOQUINHA**	11 / 5 / 2000	-317	**-137**	43	78	301	19	63	373	-3	85	13	6	4	40	1,4	MOET/PT
369	A6174	**LAGO DE ALAGOINHA**	2 / 3 / 1994	-282	**-144**	-6	87	348	28	72	376	-4	92	42	4			2,1	NZA
370	5558	**CADUCEU S**	5 / 6 / 1978	-336	**-144**	48	75	5	-37	60	341	-1	81	6	4			1,5	NZA
371	A6719	**EDITOR**	2 / 9 / 1993	-341	**-153**	35	76	96	-10	53	311	0	85	18	3			0,3	NZA
372	MVB20	**MABROUK DA VIC**	15 / 1 / 2002	-349	**-154**	41	74	12	-34	54	313	0	83	10	6			1,3	NZA
373	GUZA264	**ÚNICO TE**	20 / 5 / 1997	-335	**-155**	25	78	397	46	64	388	-5	84	8	3			1,6	NZA
374	9737	**CABUL S**	17 / 5 / 1978	-338	**-158**	22	78	106	-8	59	387	-5	84	7	4			1,5	NZA
375	OPTZ119	**IRIL POI OT**	10 / 10 / 2008	-390	**-163**	64	65	37	-20	45	263	2	76	6	3			0,2	PT
376	A1056	**LOUVADO D**	6 / 9 / 1983	-393	**-170**	53	66	222	8	42	393	-5	73	2	3			0,4	NZA
377	7402	**PROFETA 140**	22 / 5 / 1968	-335	**-172**	-9	82	192	4	57	404	-26	88	12	3			0,2	NZA
378	JAJ2994	**RANCHO JA**	28 / 11 / 2000	-396	**-173**	50	66	210	6	51	380	-4	73	3	3			1,5	NZA
379	CNS5827	**FUÁ S**	3 / 11 / 2000	-350	**-179**	-8	80	165	1	61	356	-2	88	17	6			0,9	NZA
380	GUZA834	**HOTEL TE**	12 / 10 / 2005	-340	**-187**	-34	84	86	-11	68	226	3	90	25	5			1,7	NZA
381	CNS6042	**MAGO TE S**	23 / 5 / 2002	-416	**-189**	38	65	143	-2	48	361	-2	74	5	3			1,2	NZA
382	JAJA2755	**DINAMARQUÊS TE JA**	30 / 1 / 1997	-349	**-191**	-33	83	105	-8	71	333	-1	88	10	3			2,8	NZA
383	5791	**NOBRE JF**	14 / 12 / 1994	-305	**-197**	-89	92	112	-7	82	368	-3	95	51	12			2,2	PT
384	4899	**JACUÍ NF**	8 / 4 / 1993	-392	**-197**	-2	74	81	-12	56	400	-9	83	11	3			1,2	NZA
385	A2726	**PINCEL JA**	27 / 7 / 1992	-417	**-214**	-11	72	380	35	58	390	-5	79	3	3			1,7	NZA
386	PEAC491	**NATURALISMO TE PEAC**	30 / 12 / 2003	-450	**-217**	16	63	310	20	48	362	-2	71	3	3			2,1	NZA
387	7963	**GENTIL JA**	5 / 9 / 1977	-321	**-227**	-133	94	402	54	81	401	-10	97	73	8			2,0	NZA
388	7556	**ADORNO**	12 / 8 / 1989	-437	**-227**	-17	70	116	-7	47	391	-5	78	5	3			0,6	NZA
389	A5255	**MORENO**	26 / 5 / 1988	-492	**-227**	38	52	330	23	33	403	-10	64	4	3			0,0	NZA
390	A133	**IMPERIAL JA**	28 / 5 / 1985	-349	**-234**	-119	91	360	31	79	383	-5	95	42	15			1,4	PT
391	JAJ3188	**JUAZEIRO JA**	25 / 8 / 2003	-422	**-238**	-54	77	404	64	60	372	-3	85	10	3			1,8	NZA
392	JAR5726	**ADVENTO TE JA**	8 / 2 / 2005	-450	**-251**	-52	73	216	7	48	293	1	82	10	4			0,9	NZA
393	A951	**CABUL II S**	20 / 6 / 1988	-426	**-263**	-100	82	13	-33	66	397	-7	88	13	6			1,8	PT
394	JFT2049	**PSIU JF**	23 / 6 / 2001	-467	**-264**	-61	72	346	27	58	395	-6	79	6	4			2,2	PT
395	ITG1235	**GOBBO IT**	1 / 9 / 1998	-474	**-282**	-90	75	390	42	55	378	-4	83	11	3			0,5	NZA
396	SeridóxChinesa	**FUSO TE PEAC**	2 / 12 / 2000	-446	**-288**	-130	83	207	6	69	377	-4	89	21	3	2	120	2,4	MOET/NZA
397	CNS5027	**ACASO S**	23 / 6 / 1996	-456	**-293**	-130	82	8	-35	57	355	-2	89	20	4			1,1	NZA
398	FAFM792	**SIGNO AM**	16 / 8 / 1999	-487	**-295**	-103	75	287	17	57	340	-1	83	7	7			1,5	NZA
399	NobrexMarítima	**JECA TE TABOQUINHA**	26 / 5 / 1998	-497	**-305**	-113	75	49	-18	62	402	-10	81	8	1	2	60	1,6	MOET/NZA
400	A5230	**SAPUCAÍ JA**	21 / 1 / 1987	-455	**-307**	-159	85	191	4	71	370	-3	90	12	8			2,4	PT
401	ROES1	**BESOURO ROE**	31 / 8 / 1999	-526	**-309**	-92	68	229	9	48	396	-6	78	6	3			0,4	NZA
402	IMPO1	**GANGES IMPORTADO**	17 / 9 / 2010	-512	**-320**	-128	75	228	9	53	259	2	85	14	5			0,1	NZA
403	A2708	**TAITI JA**	29 / 8 / 1989	-571	**-387**	-203	77	401	52	60	398	-7	84	5	3			1,9	NZA
404	A119	**DESAFIO JA**	16 / 3 / 1981	-587	**-388**	-189	73	345	27	50	389	-5	81	8	3			0,5	NZA

*Birthdate: to MOET Families, birthdate was referred as the first-born among full siblings.

Table 4. List of new sires and MOET families of the Guzera breed with the results of genetic evaluation for milk yield, age at first calving (AFC) and milk production efficiency (MPE) in the progeny testing (PT), MOET Nucleus and NZA performed in 2020 and coordinated by Embrapa/CBMG².

Milk Rank	Sire's ID or MOET Families	Sire's Name	Birthdate*	EPD										ND	NH	FS	HS	AR %	Database
				MIN	Milk kg	MAX	Rel.	Rel.	AFC Days	Rel	Rank.	MPE kg/month	Rel.						
2	**SulfoxTentativa**	Cabal, Caboje, Changai e Chui FIV TABOQUINHA	25 / 5 / 2014	301	**540**	779	61	294	18	50	25	14	66			1	71	2,1	MOET
6	JFT3102	**CABO FIV JF**	28 / 9 / 2009	244	**461**	678	68	240	10	58	12	16	75	4	3			2,5	PT
10	**TronoxQuiborana**	Ajax FIV TABOQUINHA	13 / 4 / 2012	193	**429**	665	62	333	24	53	14	16	66			6	46	1,8	MOET
24	**AbaetéxNona**	Aires FIV TABOQUINHA	10 / 2 / 2012	108	**331**	554	66	217	7	59	51	11	69			2	119	2,4	MOET
36	**AghaKhanxSuma**	Bloco FIV TABOQUINHA	10 / 11 / 2012	66	**302**	538	62	130	-5	51	43	12	66			6	46	1,4	MOET
38	JFT3311	**ÓPIO FIV JF**	27 / 12 / 2010	101	**300**	499	73	194	4	61	9	17	80	7	3			2,4	PT
41	**CubitoxUralita**	Belzebu, Bem-Ativo, Bem-Feliz, Bem-Querer, Benzão e Brongo FIV TABOQUINHA	28 / 10 / 2013	52	**288**	524	62	16	-32	53	41	12	66			1	118	1,5	MOET
44	**EstiletexQueratina**	Blindado FIV META, e Besse, Boato e Boêdo FIV TABOQUINHA	13 / 1 / 2013	45	**278**	511	63	171	1	52	42	12	66			6	47	1,8	MOET
46	**NovaSeitaxSuma**	Abu, Amado e Amerino FIV TABOQUINHA	9 / 4 / 2012	33	**272**	511	61	328	23	50	110	8	66			1	39	1,6	MOET
57	**PerseuxOpção**	Bem-Dito, Bem-Você, Blande, Bodega e Boro FIV TABOQUINHA	31 / 10 / 2013	20	**253**	486	63	232	9	56	54	11	67			2	49	2,4	MOET
85	**CubitoxTuia**	Bem-Nosso FIV TABOQUINHA	3 / 11 / 2013	-17	**219**	455	62	46	-19	54	65	10	65			2	119	1,6	MOET
92	UNIU439	**ESCOTEIRO FIV UNIUBE**	1 / 3 / 2011	24	**212**	400	76	35	-21	62	4	18	84	11	4			1,1	PT
102	AlopradoxOpção	**URZAL TE TABOQUINHA**	2 / 2 / 2008	-16	**204**	424	67	319	22	56	102	8	72	2	1	4	89	1,6	MOET/NZA
109	**NeroSxSalema**	Caíque, Calote, Câmbio e Cáspio FIV TABOQUINHA	24 / 5 / 2014	-62	**195**	452	55	103	-9	44	116	8	60			2	8	2,1	MOET
112	**PerseuxVedelia**	Bem-Ti-Vi, Bem-Vosso e Butan FIV TABOQUINHA	5 / 11 / 2013	-42	**194**	430	62	170	1	52	64	10	66			1	45	2,2	MOET
128	JFT3157	**CAIM JF**	20 / 12 / 2009	-17	**175**	367	75	142	-2	60	11	16	83	10	3			2,2	PT
141	JFPA465	**CAMBUCI IBITURUNA**	9 / 12 / 2009	6	**164**	322	83	4	-40	68	6	17	89	21	3			2,4	PT
205	HUM51	**HUM SONHO BALBECK**	18 / 11 / 2008	-136	**100**	336	62	60	-16	45	30	13	71	4	4			1,5	PT
219	GUZA365	**ASTRAL**	7 / 9 / 1999	-84	**92**	268	79	80	-12	56	335	-1	86	16	3			0,6	NZA
237	**CorsárioxTulha**	Acari e Aloés FIV TABOQUINHA	11 / 4 / 2012	-182	**63**	308	59	172	1	48	168	6	64			2	20	2,1	MOET
331	**DestaquexUralita**	Alce e Amostra FIV TABOQUINHA	13 / 4 / 2012	-291	**-46**	199	59	357	29	47	218	4	64			1	20	2,3	MOET
375	OPTZ119	**IRIL POI OT**	10 / 10 / 2008	-390	**-163**	64	65	37	-20	45	263	2	76	6	3			0,2	PT

*Birth date: to MOET Families, birth date was referred as the first-born among full siblings

Table 5. Results of genetic evaluation for fat, protein and total solids yield and content in the progeny testing (PT), MOET Nucleus and NZA performed in 2020 and coordinated by Embrapa/CBMG².

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
CNS4995	**ABAETÉ S**	74	8,939	41	0,145	24	8,033	29	0,067	91	24,019	270	-0,065	62
AbaetéxHungria	**SALOIO TE TABOQUINHA**	133	6,682	85	0,116	91	4,824	210	-0,053	119	20,728	383	-0,262	81
AbaetéxHungria	**SULFO TE TABOQUINHA**	10	15,480	14	0,191	5	10,936	341	-0,123	7	47,935	404	-0,442	5
AbaetéxHungria	Samurai, Sândalo, Sarrafo, Solar e Soveu TE TABOQUINHA	47	10,701	31	0,154	37	7,189	286	-0,083	42	31,980	379	-0,251	29
AbaetéxIlha	**DICK FIV DO ROSÁRIO**	212	3,563	196	0,056	168	2,490	130	-0,011	222	9,257	298	-0,098	201
AbaetéxIlha	Decreto FIV DO ROSÁRIO	157	5,640	124	0,095	117	4,130	120	-0,003	162	15,081	257	-0,058	147
AbaetéxLacínia	Tabule TE TABOQUINHA	39	11,008	29	0,155	27	7,719	166	-0,033	41	32,044	307	-0,109	37
AbaetéxNona	Aires FIV TABOQUINHA	20	13,040	19	0,179	8	10,375	51	0,045	25	35,772	158	0,016	24
GUZA522	**ACAIACA TE**	276	0,498	267	0,019	236	0,754	124	-0,006	281	1,075	125	0,042	289
5736	**ACARAJÉ S**	332	-2,008	330	-0,017	249	0,141	91	0,015	321	-4,452	117	0,048	324
5295	**ACARI RF**	214	3,452	218	0,041	175	2,243	186	-0,044	208	10,745	182	0,005	206
AcarixJusta	Abrigo e Afeito FIV TABOQUINHA	218	3,397	238	0,033	173	2,301	252	-0,070	204	11,238	358	-0,192	191
AcarixLagoa	Banto e Berilo FIV TABOQUINHA	55	10,096	60	0,131	55	6,207	224	-0,058	62	27,628	180	0,006	64
AcarixOrilha	Xerez e Xinxim TE TABOQUINHA	201	4,016	227	0,038	212	1,473	226	-0,059	193	11,979	213	-0,027	188
AcarixQuadriga	Xare, Xaréu e Xopotó TE TABOQUINHA	108	7,637	137	0,090	115	4,185	310	-0,103	98	23,416	238	-0,042	95
AcarixQueratina	Xênio, Xico, Xingu e Xuku TE TABOQUINHA	75	8,917	118	0,101	109	4,275	302	-0,096	60	28,280	186	0,001	66
AcarixVeia	Elixir e Embalado TE RF	221	3,261	254	0,025	194	1,859	188	-0,045	215	9,782	220	-0,032	217
CNS5027	**ACASO S**	397	-11,805	400	-0,147	393	-7,230	49	0,046	397	-32,346	60	0,107	397
JFT2452	**ADONAI TE JF**	63	9,651	44	0,144	233	0,844	396	-0,267	87	24,422	354	-0,178	79
7556	**ADORNO**	387	-8,964	384	-0,092	384	-6,134	21	0,084	388	-25,676	77	0,088	388
JAR5726	**ADVENTO TE JA**	391	-10,024	393	-0,125	394	-7,484	133	-0,013	391	-28,235	122	0,044	392
UNIU52	**AGHA KHAN FIV**	192	4,383	104	0,105	82	4,948	54	0,042	186	12,635	108	0,057	185
AghaKhanxSuma	Bloco FIV TABOQUINHA	29	12,063	23	0,165	13	9,456	125	-0,007	31	34,722	98	0,069	36
5735	**ALADIM S**	326	-1,870	314	-0,007	381	-5,579	335	-0,116	344	-8,737	263	-0,062	339
973	**ALBATROZ**	124	7,115	154	0,080	90	4,831	129	-0,011	126	19,526	120	0,045	140
JFPA20	**ALINHADO TE IBITURUNA**	307	-0,659	313	-0,007	213	1,455	19	0,086	314	-3,158	24	0,161	318
A6104	**ALMA DE GATO D**	181	4,822	159	0,076	131	3,596	36	0,059	195	11,687	30	0,147	200
A2687	**ALOPRADO D**	71	9,134	80	0,119	60	5,959	260	-0,074	74	25,823	173	0,009	87
AlopradoxJazida	Seul TE TABOQUINHA	171	5,101	166	0,073	147	3,194	229	-0,060	175	13,574	300	-0,098	161
AlopradoxNação	Ufo, Urau, Uste e Utar TE TABOQUINHA	112	7,446	52	0,135	105	4,349	287	-0,084	114	21,211	246	-0,048	114
AlopradoxOpção	**URZAL TE TABOQUINHA**	88	8,541	53	0,134	77	5,188	193	-0,045	78	25,226	49	0,122	102
AlopradoxOpção	Uxi TE TABOQUINHA	41	10,893	33	0,153	47	6,705	217	-0,055	45	31,760	54	0,113	49
AlopradoxOrilha	Urutai, Uruxi e Uybaci TE TABOQUINHA	130	6,857	161	0,076	140	3,331	264	-0,074	127	19,518	211	-0,025	133
AlopradoxOsa	Uai, Unica e Urai TE TABOQUINHA	114	7,416	101	0,107	120	4,085	221	-0,057	121	20,322	177	0,007	119
GUZA365	**ASTRAL**	217	3,411	127	0,093	184	2,006	152	-0,025	224	9,093	253	-0,055	219
JFT2488	**ATLAS TE JF**	97	8,179	78	0,121	186	1,989	371	-0,166	93	23,995	292	-0,088	88
9940	**BARBANTE JF**	361	-4,713	359	-0,051	373	-5,159	316	-0,108	362	-13,974	363	-0,202	352
BarbantexBabilônia	**HIFEM TE TABOQUINHA**	304	-0,641	301	-0,001	311	-1,695	256	-0,072	302	-1,339	286	-0,080	281
BarbantexBabilônia	Hertz, Hilo, Hindu, Hino, Hípico e Hirto TE TABOQUINHA	309	-0,776	303	-0,001	315	-1,788	254	-0,071	304	-1,770	285	-0,080	284
BarbantexGaliléia	**DECOTE TE DO ROSÁRIO**	299	-0,360	316	-0,008	306	-1,537	306	-0,100	299	-0,979	328	-0,142	272
BarbantexGaliléia	**DEGRAU TE DO ROSÁRIO**	336	-2,233	340	-0,022	338	-2,784	291	-0,087	334	-6,268	345	-0,168	319
BarbantexGaliléia	**DEVOTO TE DO ROSÁRIO**	345	-3,198	350	-0,035	346	-3,332	304	-0,098	343	-8,473	374	-0,232	329
BarbantexTarawall	**HÁBIL TE TABOQUINHA**	340	-2,463	346	-0,031	351	-3,773	355	-0,138	332	-6,084	367	-0,218	312
BarbantexTarawall	**HOMERO TE TABOQUINHA**	360	-4,315	364	-0,055	368	-4,835	319	-0,109	357	-12,075	349	-0,172	353
BarbantexTarawall	Hoje, Holos, Hobby e Honor TE TABOQUINHA	328	-1,880	329	-0,016	337	-2,721	272	-0,078	330	-5,408	316	-0,121	315

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
CNS7293	**BEIJIM S**	329	-1,940	342	-0,024	318	-1,905	146	-0,021	328	-5,010	168	0,010	330
ROES1	**BESOURO ROE**	400	-12,371	398	-0,140	397	-8,706	73	0,029	400	-34,884	152	0,020	401
A914	**BURGUÊS S**	333	-2,057	302	-0,001	250	0,134	63	0,035	327	-4,913	134	0,034	326
A6120	**CABO DE GUERRA D**	249	1,789	248	0,028	246	0,184	116	-0,001	277	1,748	162	0,013	286
JFT3102	**CABO FIV JF**	6	16,693	3	0,218	134	3,521	400	-0,314	6	48,077	395	-0,304	6
A951	**CABUL II S**	390	-9,939	383	-0,091	389	-7,073	75	0,029	392	-28,395	39	0,140	393
CNS5319	**CABUL III S**	244	2,140	245	0,029	341	-2,913	361	-0,146	266	3,069	280	-0,073	265
9737	**CABUL S**	375	-6,581	371	-0,068	361	-4,205	105	0,005	374	-18,167	113	0,052	374
5558	**CADUCEU S**	364	-4,986	355	-0,044	372	-5,133	87	0,017	368	-16,284	88	0,081	370
JFT3157	**CAIM JF**	137	6,508	129	0,092	247	0,181	285	-0,083	141	18,030	281	-0,074	128
JFT3045	**CAIO FIV JF**	275	0,593	236	0,035	303	-1,426	330	-0,112	288	0,394	293	-0,090	279
UNIU236	**CAIRO**	272	0,850	279	0,015	259	-0,081	88	0,017	280	1,170	37	0,141	298
4790	**CAIRO JP**	331	-1,947	331	-0,018	309	-1,635	78	0,027	339	-7,744	165	0,011	343
JFT3094	**CÁLICE FIV JF**	138	6,452	143	0,086	380	-5,533	404	-0,350	148	16,326	255	-0,057	149
CálicexRabeca	Bacharel, Baguari e Boleto FIV META, e Benito e Babaçu FIV TABOQUINHA	129	6,895	116	0,101	324	-2,150	397	-0,277	132	19,037	335	-0,152	116
CálicexVirgem	Bem-Lindo FIV TABOQUINHA	52	10,239	87	0,115	199	1,756	385	-0,190	61	27,723	109	0,055	70
CálicexVirtude	Bastardo e Bem-Só FIV TABOQUINHA	23	12,636	17	0,183	216	1,359	398	-0,286	34	33,768	315	-0,117	31
JFPA465	**CAMBUCI IBITURUNA**	152	5,876	208	0,048	326	-2,267	395	-0,243	152	16,063	260	-0,060	141
A6121	**CANDEEIRO D**	311	-0,785	309	-0,004	243	0,312	7	0,113	312	-2,687	62	0,103	323
A6119	**CAPITÃO-MOR D**	78	8,754	92	0,113	68	5,504	71	0,030	84	24,642	4	0,270	121
Capitão-MorxJaula	**SAROM TE TABOQUINHA**	163	5,389	183	0,063	127	3,910	68	0,033	154	16,051	36	0,142	184
Capitão-MorxJaula	Salim, Sardes, Sargão e Solon TE TABOQUINHA	180	4,830	190	0,059	133	3,535	62	0,036	169	14,357	32	0,144	207
Capitão-MorxJazida	Sadraque, Sharon, Siroco e Sundare TE TABOQUINHA	176	4,911	174	0,070	153	2,967	127	-0,007	181	12,983	136	0,033	179
Capitão-MorxLegião	Ramal TE TABOQUINHA	115	7,408	150	0,082	110	4,266	157	-0,026	115	21,174	106	0,063	124
Capitão-MorxNação	Sinai TE TABOQUINHA	120	7,255	56	0,132	118	4,121	164	-0,031	120	20,620	85	0,084	126
Capitão-MorxNara	**ORÓS TE TABOQUINHA**	235	2,354	257	0,024	224	1,122	109	0,004	240	6,566	59	0,109	244
Capitão-MorxNara	Olivedo TE TABOQUINHA	182	4,778	195	0,057	167	2,582	134	-0,013	174	13,596	79	0,088	187
Capitão-MorxUsura	**JANARI D**	245	2,059	251	0,027	169	2,456	31	0,062	260	4,046	176	0,007	264
Capitão-MorxUsura	Jaborandi, Jaguane, Jaguaribano, Japu, Jaraguá e Jargão D	158	5,582	121	0,098	128	3,866	92	0,014	164	14,902	170	0,010	175
GUZA454	**CASSINO**	351	-3,633	360	-0,052	298	-1,288	55	0,042	347	-9,237	150	0,021	349
9951	**CASSINO JF**	365	-5,104	369	-0,066	379	-5,529	279	-0,081	365	-14,738	272	-0,065	360
CassinoxBalalaica	**INGLÊS TE DO ROSÁRIO**	305	-0,645	263	0,021	302	-1,419	163	-0,029	307	-2,241	118	0,047	302
CassinoxBalalaica	**MATIPÓ TE TABOQUINHA**	279	0,394	273	0,017	275	-0,579	147	-0,021	286	0,599	179	0,006	278
CassinoxBalalaica	Mestre TE TABOQUINHA	253	1,635	237	0,033	257	0,001	208	-0,052	256	4,327	204	-0,017	247
CassinoxCoroa	**CASSINO DO CIPÓ**	349	-3,483	356	-0,046	357	-4,027	270	-0,076	353	-10,799	352	-0,176	347
CassinoxCoroa	**NEPAL TE TABOQUINHA**	319	-1,391	318	-0,010	333	-2,479	267	-0,075	326	-4,871	332	-0,150	313
CassinoxCoroa	Nago, Nero e Nitro TE TABOQUINHA	303	-0,520	315	-0,008	321	-1,977	288	-0,085	306	-2,186	342	-0,163	292
CassinoxDica	Maceió e Quiron TE TABOQUINHA	320	-1,418	349	-0,033	317	-1,875	145	-0,020	329	-5,112	138	0,031	327
CassinoxEmboaba	Mombaça TABOQUINHA	283	0,172	306	-0,002	280	-0,693	162	-0,028	295	-0,634	196	-0,012	290
CassinoxPrimazia	Jaguar, Jalão, Jalo, Jambo, Mascate e Mordomo TE TABOQUINHA	294	-0,103	297	0,003	277	-0,596	149	-0,021	298	-0,823	155	0,019	291
HANC311	**CORSÁRIO DA VEREDA**	347	-3,364	344	-0,029	385	-6,153	357	-0,143	337	-7,335	195	-0,011	344
CorsárioxHester	Faisla TE de SADERE e Taco TE TABOQUINHA	255	1,621	231	0,036	287	-0,842	206	-0,052	238	6,810	52	0,118	253
CorsárioxNaira	Sarango, Sarapatel, Saruê, Sovado e Surrel TE TABOQUINHA	89	8,498	103	0,106	148	3,173	377	-0,177	65	26,920	323	-0,130	60

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
CorsárioxTulha	Acari e Aloés FIV TABOQUINHA	246	1,975	217	0,042	291	-1,017	318	-0,109	239	6,714	261	-0,060	237
PEAC28	**CRAVO PEAC**	18	13,450	37	0,148	63	5,857	393	-0,225	20	37,699	326	-0,139	22
8301	**CUBITO G.I DA ND**	36	11,373	32	0,153	46	6,762	346	-0,127	44	31,831	359	-0,198	33
CubitoxAlmofada	Exame e Executivo TE DO CIPÓ	236	2,346	219	0,041	209	1,482	155	-0,026	242	6,222	271	-0,065	236
CubitoxJacutinga	Timão, Túnel, Turco, Turfe, Tutano e Tzar TE TABOQUINHA	100	8,072	95	0,111	95	4,675	271	-0,077	105	22,862	311	-0,113	83
CubitoxJusta	Turu TE TABOQUINHA	117	7,358	140	0,089	100	4,561	328	-0,112	110	21,781	393	-0,293	89
CubitoxNação	Sedenho e Tirol TE TABOQUINHA	87	8,565	35	0,152	92	4,750	321	-0,110	90	24,215	334	-0,151	69
CubitoxTuia	Bem-Nosso FIV TABOQUINHA	101	8,047	136	0,090	87	4,878	298	-0,092	106	22,586	336	-0,153	85
CubitoxUralita	Belzebu, Bem-Ativo, Bem-Feliz, Bem-Querer, Benzão e Brongo FIV TABOQUINHA	45	10,813	38	0,146	74	5,326	356	-0,142	48	29,873	299	-0,098	41
CubitoxVioleta	Bato, Bem-Amor, Bem-Dizer, Bem-Seu e Borinka FIV TABOQUINHA	79	8,720	90	0,114	114	4,189	351	-0,133	77	25,561	324	-0,135	74
A6430	**DANDI JP**	229	2,632	234	0,036	251	0,119	326	-0,112	217	9,663	319	-0,123	225
CNS5614	**DELITO S**	316	-1,076	288	0,011	281	-0,697	81	0,022	313	-2,768	124	0,043	316
A119	**DESAFIO JA**	404	-15,353	402	-0,161	401	-9,971	18	0,089	404	-43,607	81	0,087	404
A6134	**DESENGASGO D**	290	-0,043	328	-0,014	232	0,846	103	0,006	268	2,946	181	0,006	269
A2118	**DESPACHO S**	314	-0,909	317	-0,010	274	-0,574	140	-0,018	310	-2,644	164	0,012	314
DestaquexUralita	Alce e Amostra FIV TABOQUINHA	321	-1,595	322	-0,011	308	-1,633	123	-0,005	324	-4,640	105	0,063	331
JAJA2755	**DINAMARQUÊS TE JA**	370	-6,105	367	-0,060	347	-3,505	13	0,100	371	-17,906	17	0,183	382
WEME73	**DOM FIV BOA FAMÍLIA**	185	4,739	162	0,075	166	2,622	196	-0,046	185	12,720	279	-0,072	178
5088	**DRAKAR S**	334	-2,072	335	-0,019	178	2,160	58	0,039	317	-3,373	21	0,171	328
A1437	**ÉDIPO DE ALAGOINHA**	159	5,538	144	0,086	270	-0,445	399	-0,287	134	18,859	402	-0,406	100
ÉdipoxAçucena	Xiru e Xoa FIV TABOQUINHA	225	2,878	242	0,031	256	0,006	350	-0,132	223	9,185	343	-0,164	211
ÉdipoxAlmofada	**ENREDO TE DO CIPÓ**	302	-0,507	293	0,007	323	-2,094	315	-0,106	291	-0,086	347	-0,169	280
ÉdipoxGaita	**CIGANO PEAC**	144	6,223	139	0,089	198	1,760	381	-0,183	135	18,728	386	-0,269	115
ÉdipoxGaita	Champion, Clero e Combate PEAC, e Ray e Reto TE DA CALCIOLÂNDIA	242	2,163	274	0,017	278	-0,630	364	-0,153	234	7,457	385	-0,265	224
ÉdipoxGaliléia	**INSTINTO TE TABOQUINHA**	167	5,344	105	0,104	252	0,103	394	-0,225	158	15,361	398	-0,335	129
ÉdipoxGaliléia	Ianque, Iaque e Ímpio TE TABOQUINHA	220	3,372	205	0,049	260	-0,153	378	-0,181	198	11,500	387	-0,273	166
ÉdipoxJarra	**DUNGA TE DO ROSÁRIO**	273	0,697	326	-0,014	319	-1,923	392	-0,214	263	3,534	399	-0,345	252
ÉdipoxJarra	**JEQUIÁ TE TABOQUINHA**	224	3,108	170	0,072	248	0,180	348	-0,128	218	9,631	331	-0,150	208
ÉdipoxJarra	**JONAS TE TABOQUINHA**	261	1,348	269	0,018	273	-0,571	331	-0,112	252	4,510	355	-0,179	238
ÉdipoxJarra	Inquieto, Jacuí, Jaipur , Jaú, Jarro, Jato e Jogo TE TABOQUINHA	205	3,891	191	0,058	231	0,858	359	-0,144	192	12,028	369	-0,221	173
ÉdipoxVanusa	**HUMAITÁ TE TABOQUINHA**	7	16,338	2	0,219	29	7,649	403	-0,344	3	51,865	403	-0,439	3
ÉdipoxVanusa	Huno TE TABOQUINHA	99	8,080	93	0,112	150	3,081	390	-0,211	70	26,322	397	-0,329	48
A6719	**EDITOR**	369	-6,094	366	-0,056	353	-3,905	10	0,108	369	-17,275	41	0,132	371
IHL146	**ELETRO**	234	2,448	198	0,054	245	0,224	363	-0,149	212	10,565	361	-0,200	177
7962	**EMBORNAL D**	366	-5,650	373	-0,073	327	-2,323	15	0,091	363	-14,522	244	-0,046	364
UNIU439	**ESCOTEIRO FIV UNIUBE**	105	7,796	112	0,102	97	4,648	273	-0,078	108	21,973	310	-0,111	92
DSM3371	**ESTILETE DA MS**	134	6,630	149	0,082	163	2,692	261	-0,074	129	19,215	231	-0,037	132
EstiletexQueratina	Blindado FIV META, e Besse, Boato e Boêdo FIV TABOQUINHA	51	10,506	79	0,121	102	4,500	324	-0,111	39	32,514	208	-0,020	44
A2389	**ESTILO DE ALAGOINHA**	65	9,414	48	0,137	107	4,330	339	-0,122	56	28,532	119	0,047	71
EstiloxAraponga	**JABUTI TE TABOQUINHA**	277	0,485	246	0,029	292	-1,084	255	-0,071	274	2,411	157	0,016	277
EstiloxAraponga	**JOIO TE TABOQUINHA**	190	4,418	182	0,065	189	1,925	241	-0,065	177	13,290	133	0,036	190
EstiloxAraponga	Jaó, Japão, Jasão, Jogral, Judô e Jungo TE TABOQUINHA	200	4,067	185	0,063	200	1,687	238	-0,063	190	12,287	131	0,037	199
EstiloxHester	**OURIÇO TE TABOQUINHA**	16	13,949	7	0,207	22	8,105	214	-0,054	13	42,494	14	0,207	14
EstiloxHester	Opaco e Oxum TE TABOQUINHA	102	8,010	81	0,119	104	4,400	180	-0,041	83	24,743	31	0,147	111
EstiloxPrimazia	**NAQUE TE TABOQUINHA**	26	12,357	34	0,152	58	6,006	383	-0,187	22	36,624	321	-0,128	27

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
EstiloxPrimazia	Nanquim e Navegante TE TABOQUINHA	103	7,922	107	0,104	122	4,011	340	-0,122	96	23,656	267	-0,063	99
EstiloxRabeca	Zeno, Zero, Zeus, Zine e Zóide FIV TABOQUINHA	92	8,377	69	0,127	159	2,781	367	-0,163	79	25,140	302	-0,100	76
9491	**FALATÓRIO DE NAVIRA**	353	-4,003	347	-0,033	344	-3,257	33	0,061	359	-12,828	71	0,095	359
LDCV391	**FARO TE DA MORUMBI**	123	7,166	126	0,094	71	5,364	66	0,033	101	22,971	15	0,203	127
FaroxJacutinga	Safari, Sagu, Salol e Sapê TE TABOQUINHA	149	5,968	151	0,081	123	3,975	111	0,003	138	18,432	80	0,088	146
FaroxNapa	Sashimi, Serão, Sushi, Tabu, Tapuia e Tatu TE TABOQUINHA	56	10,061	71	0,126	50	6,590	191	-0,045	47	30,565	104	0,063	56
FaroxParma	Zetta, Zeus e Zumbi FIV DAS FLORES	43	10,841	67	0,127	30	7,620	84	0,020	38	32,606	26	0,160	55
FaroxQueimada	Barão FIV META, e Beni e Bilbao FIV TABOQUINHA	207	3,773	188	0,060	160	2,702	74	0,029	199	11,489	47	0,124	227
FaroxSulipa	Bem-Achado e Bem-Bonito FIV TABOQUINHA	86	8,585	72	0,125	61	5,887	161	-0,028	69	26,527	212	-0,027	68
A336	**FOGO RF**	262	1,313	241	0,031	221	1,251	128	-0,009	251	4,801	247	-0,049	241
CNS5827	**FUÁ S**	379	-7,311	385	-0,095	369	-4,899	126	-0,007	380	-19,822	153	0,019	379
A337	**FUNDADOR TE RF**	322	-1,624	341	-0,024	301	-1,372	175	-0,039	325	-4,653	268	-0,064	317
FundadorxCoroa	Jafar, Jamais e Justo TE TABOQUINHA	265	1,221	283	0,014	253	0,102	239	-0,064	270	2,857	341	-0,162	251
IMPO1	**GANGES IMPORTADO**	401	-12,413	399	-0,145	403	-12,087	235	-0,063	401	-35,990	65	0,100	402
A6181	**GARANTIDO D**	147	6,139	123	0,096	89	4,858	45	0,049	149	16,269	107	0,059	156
LKW225	**GARBO BOA LEMBRANÇA**	194	4,265	167	0,073	214	1,386	314	-0,105	189	12,320	313	-0,114	168
LKW223	**GARI BOA LEMBRANÇA**	21	12,960	25	0,163	35	7,254	313	-0,104	24	36,038	296	-0,093	21
A2731	**GAVIÃO DA NOVA FLORESTA**	259	1,471	249	0,028	204	1,613	24	0,077	267	2,999	56	0,112	282
7963	**GENTIL JA**	392	-10,340	386	-0,100	388	-7,058	100	0,007	390	-27,873	301	-0,099	387
MDVG5360	**GIBÃO D**	226	2,851	213	0,044	279	-0,660	112	0,002	243	6,064	34	0,144	258
SAV94	**GIM FIV DE SADERE**	204	3,972	212	0,046	170	2,451	218	-0,056	206	11,063	229	-0,036	194
A2664	**GITANO DE ALAGOINHA**	330	-1,942	308	-0,004	290	-0,967	79	0,026	322	-4,550	254	-0,055	321
ITG1235	**GOBBO IT**	396	-11,248	397	-0,136	392	-7,152	64	0,035	396	-31,398	91	0,078	395
GuririxEmboaba	Palco e Pilsen TE TABOQUINHA	189	4,419	226	0,038	149	3,123	90	0,016	194	11,935	145	0,026	193
GuririxLapa	Redator, Sabre e Sândalo ALAGOINHA TE	168	5,318	210	0,046	161	2,701	173	-0,038	163	14,996	167	0,011	171
GuririxPrimazia	Níquel TE TABOQUINHA	177	4,909	216	0,043	157	2,897	225	-0,058	167	14,590	288	-0,082	160
NESZ2	**GUZERÁ DA BARRA**	260	1,401	291	0,010	258	-0,037	199	-0,048	259	4,123	187	-0,001	259
HábilxJamaica	Ubaldo, Urocrôa e Vaticano ALAGOINHA TE	243	2,145	240	0,032	289	-0,955	370	-0,165	233	7,620	373	-0,231	218
HábilxJaula	Rito, Rival, Roque, Rosto, Rubi, Rude e Sino TE TABOQUINHA	310	-0,779	325	-0,013	293	-1,104	200	-0,049	300	-1,006	303	-0,101	296
HábilxLimeira	Rebate, Rincão, Rodes e Rumo TE TABOQUINHA	239	2,230	285	0,013	268	-0,390	358	-0,143	231	7,731	366	-0,213	213
AFGF184	**HAITI TE S CLARAMAR**	344	-3,019	305	-0,002	282	-0,713	32	0,062	346	-9,078	174	0,007	341
HeteuxIara	Cururu DER e Oslo TE TABOQUINHA	313	-0,837	299	0,002	304	-1,471	198	-0,048	293	-0,458	243	-0,045	301
HeteuxJade	Pejo, Poente e Proteu TE TABOQUINHA	292	-0,092	292	0,009	272	-0,497	104	0,006	284	0,685	40	0,138	304
HeteuxJamaica	Urso e Útil ALAGOINHA TE	264	1,283	253	0,027	264	-0,241	205	-0,051	246	5,329	190	-0,004	254
FNFA960	**HIDRANTE FIV NF**	68	9,360	27	0,158	34	7,292	35	0,060	82	24,743	224	-0,033	86
HomeroxDiva	**OCIDENTE DO ROSÁRIO**	248	1,796	252	0,027	266	-0,305	317	-0,108	248	5,273	333	-0,151	233
HomeroxDiva	Lacre, Latino e Lítio TE DO ROSÁRIO	291	-0,058	289	0,011	305	-1,516	307	-0,100	292	-0,098	329	-0,144	270
HomeroxFlorença	Real TE TABOQUINHA	298	-0,354	321	-0,011	314	-1,762	232	-0,061	305	-2,134	277	-0,071	303
HomeroxManágua	Vadio ALAGOINHA TE	247	1,822	224	0,040	265	-0,284	284	-0,082	257	4,278	287	-0,080	248
A2804	**HORIZONTE NF**	359	-4,293	361	-0,052	332	-2,456	23	0,081	356	-11,970	43	0,131	366
A1443	**HORTO DE ALAGOINHA**	49	10,585	77	0,122	86	4,911	230	-0,060	72	26,153	18	0,180	117
HortoxHorda	**OCRE TE TABOQUINHA**	174	4,934	175	0,070	190	1,903	189	-0,045	200	11,440	95	0,072	215

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
HortoxHorda	Orinoco, Osmã, Oviedo e Oxumaré TE TABOQUINHA	184	4,749	180	0,066	197	1,808	183	-0,042	202	11,294	123	0,044	221
HortoxJamaica	Quarty, Quartzo, Relator, Rubi e Sertão ALAGOINHA TE	83	8,669	100	0,108	138	3,387	347	-0,127	95	23,738	221	-0,032	106
HortoxPlatina	Olente, Olor, Oriental, Órion e Ouvinte TE TABOQUINHA	62	9,651	68	0,127	45	6,769	96	0,010	75	25,731	10	0,210	103
HortoxTravessia	Jataí, Jatobá e Javali D	64	9,606	58	0,131	94	4,712	259	-0,074	81	24,933	84	0,085	107
GUZA834	**HOTEL TE**	385	-8,254	380	-0,086	358	-4,048	43	0,054	383	-22,069	156	0,017	380
HUM24	**HUM SONHO ABADON**	250	1,761	232	0,036	116	4,155	2	0,179	255	4,385	64	0,101	256
HUM4	**HUM SONHO ABSOLUTO**	237	2,321	235	0,036	222	1,237	153	-0,025	235	7,439	178	0,006	231
HUM51	**HUM SONHO BALBECK**	216	3,420	221	0,041	211	1,473	242	-0,065	209	10,670	252	-0,055	205
HumaitáxFlecha	Quartel TE TABOQUINHA	30	11,951	42	0,145	48	6,680	376	-0,176	21	36,929	356	-0,185	15
HumaitáxGuerra	**REMANSO TE TABOQUINHA**	1	22,501	1	0,302	19	8,434	402	-0,342	1	65,496	400	-0,371	1
HumaitáxGuerra	Ramadã e Rei TE TABOQUINHA	33	11,600	24	0,165	83	4,932	387	-0,197	29	34,799	368	-0,221	18
HumaitáxGuiana	Bandung, Bem e Bem-Belo FIV TABOQUINHA	4	17,112	6	0,213	10	10,227	374	-0,174	5	51,455	372	-0,230	4
HumaitáxJazida	Diamante, Ouro, Rubi e Topásio da VIC, e Radial, Tango, Tupi, Ubi, Urso, Xangô, Xaxado e Xodó TE TABOQUINHA	82	8,703	76	0,123	121	4,039	386	-0,195	68	26,595	396	-0,322	42
HumaitáxLegião	Rami, Ravelo, Recife, Reino e Reno TE TABOQUINHA	37	11,201	51	0,135	72	5,338	391	-0,213	30	34,786	392	-0,292	16
HumaitáxOca	Fabuloso, Faiadam, Falenus e Fano TE SADE, Galileu, Garoto, Gentil TE CIPO, e Sarará, Seguro, Sósia, Suaçuí e Skol TE TABOQUINHA	109	7,550	113	0,102	146	3,229	368	-0,163	88	24,243	364	-0,204	61
4610	**HUMAYAN**	348	-3,384	348	-0,033	300	-1,369	34	0,060	348	-9,781	66	0,100	356
TABO637	**IAGO TE TABOQUINHA**	286	0,096	290	0,010	310	-1,677	353	-0,134	276	2,119	365	-0,212	263
A989	**IBÉRICO JP**	203	3,997	209	0,047	156	2,930	65	0,035	228	8,214	188	-0,001	229
A133	**IMPERIAL JA**	395	-11,038	396	-0,135	396	-8,033	179	-0,041	393	-28,580	265	-0,062	390
ImperialxMarítima	**QUARTZO TE**	377	-6,658	365	-0,055	382	-5,711	151	-0,024	373	-18,153	223	-0,033	367
ImperialxNóbrica	**ÊXITO TE**	367	-5,972	379	-0,086	370	-4,988	248	-0,068	361	-13,662	159	0,016	361
ImperialxNóbrica	Galego RF	352	-3,792	363	-0,055	345	-3,292	207	-0,052	342	-8,168	201	-0,015	338
A1447	**IMPULSIVO DE ALAGOINHA**	324	-1,857	343	-0,025	331	-2,416	121	-0,003	345	-8,739	193	-0,010	355
InstintoxHarmônica	Sumário e Suez TE TABOQUINHA	230	2,615	199	0,054	263	-0,228	369	-0,164	227	8,501	375	-0,238	210
InstintoxImersa	**PEQUI TE TABOQUINHA**	282	0,273	294	0,006	316	-1,832	365	-0,154	278	1,529	390	-0,286	250
InstintoxImersa	Orfeão, Ormuz, Pará e Pakar TE TABOQUINHA	80	8,720	94	0,112	125	3,954	373	-0,168	73	25,993	382	-0,262	58
InstintoxMedalha	Salém, Samba, Sandrine, Sargom e Surate TE TABOQUINHA	150	5,958	133	0,091	172	2,356	334	-0,115	151	16,158	353	-0,177	135
LKW319	**IPÊ FIV BOA LEMBRANÇA**	131	6,752	130	0,092	93	4,717	167	-0,033	112	21,615	317	-0,121	101
OTPZ119	**IRIL POI OT**	371	-6,196	362	-0,054	349	-3,704	38	0,058	375	-18,337	44	0,129	375
4899	**JACUÍ NF**	381	-7,413	374	-0,078	364	-4,505	37	0,059	381	-20,778	72	0,095	384
A1449	**JAGUNÇO DE ALAGOINHA**	263	1,303	243	0,030	296	-1,281	349	-0,131	250	5,002	350	-0,175	235
A739	**JAVANÊS NF**	296	-0,224	334	-0,019	261	-0,167	85	0,020	311	-2,680	75	0,091	325
JequiáxHaia	Piauí e Quimo TE TABOQUINHA	209	3,673	197	0,055	206	1,536	231	-0,060	196	11,667	183	0,005	212
JequiáxIlharga	Objeto e Pitu TE TABOQUINHA	278	0,415	239	0,033	286	-0,802	243	-0,066	273	2,444	240	-0,043	273
LVPS59	**JOÁ DA NOVA FLORESTA**	228	2,634	295	0,003	164	2,663	47	0,047	230	7,800	96	0,071	262
9974	**JÓQUEI TE JP**	233	2,481	250	0,028	208	1,504	137	-0,016	241	6,360	284	-0,079	234
FNF4392	**JOVEM TE NF**	288	-0,012	258	0,023	283	-0,721	250	-0,069	265	3,073	217	-0,030	260
JAJ3188	**JUAZEIRO JA**	388	-8,989	389	-0,116	377	-5,507	22	0,082	387	-25,634	61	0,106	391
TABO866	**LABRADOR TABOQUINHA**	199	4,088	194	0,057	229	0,884	98	0,009	221	9,292	2	0,303	257
LabradorxHungria	**ÓLEO TE TABOQUINHA**	72	9,065	30	0,154	113	4,217	276	-0,079	63	27,306	233	-0,040	63
LabradorxHungria	**ÓPUS TE TABOQUINHA**	126	7,014	70	0,126	137	3,393	265	-0,075	117	20,935	226	-0,035	120

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
LabradorxHungria	Atômico CAL, e Olé, Olhar, Organdi, Xoco e Xuu TE TABOQUINHA	93	8,275	97	0,110	130	3,614	325	-0,112	85	24,616	274	-0,068	84
LabradorxLegião	Sabor e Sabujo TE TABOQUINHA	172	5,075	200	0,053	187	1,955	170	-0,037	176	13,499	90	0,079	195
LabradorxNação	Zambi FIV TABOQUINHA	175	4,922	106	0,104	196	1,811	184	-0,042	182	12,945	67	0,100	198
A6174	**LAGO DE ALAGOINHA**	380	-7,377	375	-0,083	390	-7,115	323	-0,110	379	-19,129	376	-0,243	369
5769	**LEITEIRO JP**	337	-2,300	320	-0,011	312	-1,714	107	0,004	336	-6,935	235	-0,040	334
A1453	**LORD DE ALAGOINHA**	143	6,273	189	0,060	145	3,251	216	-0,055	157	15,614	269	-0,064	165
A1056	**LOUVADO D**	376	-6,587	377	-0,084	354	-3,908	26	0,074	378	-18,750	129	0,038	376
MVB20	**MABROUK DA VIC**	373	-6,421	387	-0,100	352	-3,899	67	0,033	370	-17,306	83	0,086	372
JFPA92	**MAESTRO IBITURUNA**	312	-0,825	255	0,025	340	-2,901	141	-0,018	318	-4,047	93	0,075	307
5465	**MAGNUM S**	289	-0,020	276	0,016	143	3,263	11	0,106	287	0,567	73	0,094	297
CNS6042	**MAGO TE S**	382	-7,729	376	-0,083	378	-5,527	72	0,030	382	-21,276	163	0,013	381
CNS6135	**MARABÁ S**	308	-0,691	310	-0,006	335	-2,566	275	-0,079	285	0,618	94	0,072	293
MaranhãoxJusta	Remã, Remido, Remo, Remoto e Repuxo TE TABOQUINHA	257	1,577	259	0,023	235	0,811	168	-0,035	245	5,627	337	-0,153	249
MaranhãoxMedusa	Raio, Raptor, Rasgo, Rebolo, Recato e Reduta TE TABOQUINHA	287	0,049	280	0,015	276	-0,584	131	-0,011	289	0,108	194	-0,010	295
HQB258	**MARCA SOL EMENTHAL**	315	-0,977	311	-0,006	288	-0,925	165	-0,033	316	-3,325	175	0,007	300
MDVG6318	**METEORO II D**	61	9,778	57	0,132	51	6,578	202	-0,049	66	26,873	273	-0,066	72
A5255	**MORENO**	386	-8,893	392	-0,120	386	-6,308	52	0,044	385	-24,457	308	-0,110	389
MSEmenthalxBohemia	**GOTHAR FIV DE SADERE**	145	6,200	220	0,041	108	4,300	197	-0,046	144	17,800	236	-0,041	150
MSEmenthalxBohemia	Globo, Helíaco e Netuno FIV DE SADERE	165	5,359	163	0,075	174	2,260	293	-0,088	153	16,053	248	-0,049	152
TABO1099	**NAIRÓBI TABOQUINHA**	27	12,325	63	0,130	21	8,246	290	-0,086	28	34,931	304	-0,105	30
NairóbixColombina	Batoque e Batuque FIV JF, Boêmio FIV IBIT, e Topo e Torilo TE TABOQUINHA	208	3,753	206	0,049	210	1,477	297	-0,092	207	10,964	259	-0,059	202
NairóbixÍndia	Sapoti, Saque, Sopro,Tabaco e Tacape TE TABOQUINHA	50	10,562	74	0,125	28	7,676	219	-0,056	52	29,332	282	-0,074	51
NairóbixJazida	Quinino, Quino e Quiton TE TABOQUINHA	132	6,697	156	0,079	106	4,338	244	-0,066	140	18,128	338	-0,154	118
NairóbixJusta	**TUCO TE TABOQUINHA**	195	4,252	211	0,046	151	3,062	253	-0,071	184	12,738	357	-0,192	163
NairóbixJusta	Tufo TE TABOQUINHA	104	7,833	157	0,077	75	5,303	299	-0,092	99	23,331	377	-0,247	82
NairóbixPrimazia	Quepe, Quiasma e Quindim TE TABOQUINHA	67	9,377	120	0,100	59	5,969	312	-0,104	67	26,856	327	-0,139	59
7655	**NAMBU JP**	227	2,758	268	0,019	183	2,069	60	0,037	262	3,653	202	-0,016	266
JFT2433	**NÁPOLE TE JF**	76	8,889	82	0,118	25	7,999	46	0,048	97	23,574	51	0,120	125
NaquexHetéia	Rateio e Recuo TE TABOQUINHA	91	8,386	99	0,109	98	4,642	258	-0,073	76	25,678	206	-0,019	98
NaquexItuipava	Valoroso ALAGOINHA TE	31	11,900	61	0,131	52	6,522	337	-0,120	35	33,477	290	-0,086	39
NaquexUruguaiana	Fael, Falcão e Foguete FIV GUGA, e Imã, Insbruck e Iziah FIV BOA FAMÍLIA	338	-2,351	260	0,023	356	-3,962	174	-0,039	340	-7,794	112	0,053	337
NaquexVassoura	Sinhô TE TABOQUINHA	188	4,509	171	0,071	154	2,959	158	-0,026	173	13,630	184	0,003	182
PEAC491	**NATURALISMO TE PEAC**	389	-9,168	388	-0,114	391	-7,145	176	-0,039	386	-25,386	151	0,021	386
JFT1619	**NAVAL JF**	346	-3,347	339	-0,022	193	1,868	3	0,167	349	-9,839	11	0,210	351
8182	**NAVARRO S**	211	3,574	145	0,086	201	1,651	266	-0,075	214	9,794	55	0,113	223
9957	**NAVEGANTE**	160	5,534	169	0,072	81	4,991	135	-0,014	165	14,854	230	-0,036	169
NavegantexLavanda	Quarteto, Quelóide, Querosene, Querubim e Quiabeiro TE TABOQUINHA	48	10,683	50	0,135	39	7,113	177	-0,039	57	28,409	250	-0,051	52
NavegantexRelva	**MIRADOR TE TABOQUINHA**	363	-4,979	323	-0,013	342	-2,921	30	0,064	366	-15,261	128	0,038	368
NavegantexRelva	Mar e Motor TE TABOQUINHA	269	1,068	229	0,037	226	1,070	94	0,011	275	2,158	146	0,024	276
MAPZ74	**NEON SANTA CECÍLIA**	116	7,374	138	0,089	85	4,918	187	-0,044	113	21,292	205	-0,019	122
JFT2351	**NEPAL TE JF**	15	14,179	8	0,204	4	11,278	41	0,056	17	39,828	13	0,209	23
NepalxNega	Xauim TABOQUINHA	106	7,739	62	0,131	54	6,416	99	0,008	107	22,088	20	0,174	108
NepalxParma	Zen FIV DAS FLORES	14	14,348	18	0,183	7	10,577	69	0,032	16	41,034	23	0,163	19

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
NepalxQueimada	Beethoven FIV META, e Balac e Bangui FIV TABOQUINHA	119	7,279	86	0,115	66	5,659	57	0,040	122	19,917	46	0,127	143
NeroSxSalema	Caíque, Calote, Câmbio e Cáspio FIV TABOQUINHA	96	8,195	132	0,091	103	4,460	201	-0,049	102	22,955	127	0,038	109
CNS6391	**NGAÔ TE S**	141	6,380	146	0,085	111	4,257	132	-0,013	147	17,056	239	-0,043	138
5791	**NOBRE JF**	384	-8,064	382	-0,088	402	-11,062	382	-0,185	389	-26,094	388	-0,275	383
NobrexBabilônia	Negal TE TABOQUINHA	339	-2,451	337	-0,020	367	-4,740	320	-0,109	341	-7,830	314	-0,116	333
NobrexCoroa	**MARACATU TABOQUINHA**	350	-3,505	368	-0,060	383	-6,062	372	-0,168	354	-11,684	401	-0,374	350
NobrexJamaica	Rabino e Rebelde ALAGOINHA TE	306	-0,655	296	0,003	365	-4,600	384	-0,189	309	-2,385	381	-0,259	287
NobrexMarítima	**JECA TE TABOQUINHA**	402	-12,782	395	-0,131	404	-12,441	301	-0,096	402	-38,151	362	-0,200	399
NobrexUsura	Lampeão, Legação, Lenhador, Louvado e Luzeiro D	342	-2,827	307	-0,003	363	-4,418	300	-0,094	351	-10,466	384	-0,262	345
LVPS98	**NOTÁVEL DA NOVA FLORESTA**	179	4,834	244	0,030	227	1,050	380	-0,182	156	15,644	391	-0,288	145
JFT2422	**NOTÁVEL TE JF**	187	4,623	192	0,057	329	-2,377	389	-0,198	180	13,081	160	0,015	192
NotávelxAbaíba	Bisturi FIV META, e Ituano FIV BOA FAMÍLIA	146	6,195	181	0,065	220	1,281	338	-0,121	143	17,802	191	-0,006	148
MDVG6458	**NOVA SEITA D**	240	2,194	223	0,040	179	2,149	113	0,002	237	7,062	115	0,048	242
NovaSeitaxSuma	Abu, Amado e Amerino FIV TABOQUINHA	40	10,968	55	0,132	23	8,057	160	-0,027	43	31,935	100	0,065	46
ÓbusxNagóia	Soto e Turbo TE TABOQUINHA	42	10,886	47	0,138	43	6,871	280	-0,081	46	30,768	264	-0,062	45
ÓbusxNaira	Sabre, Sacho, Saibro e Sulco TE TABOQUINHA	3	18,065	4	0,218	2	12,084	289	-0,086	4	51,838	200	-0,015	7
ÓbusxRabeca	Barbante, Beirute e Brasão FIV META, e Bene, Beijo e Brasil FIV TABOQUINHA	34	11,554	28	0,156	53	6,451	282	-0,082	40	32,125	199	-0,014	43
OdrexHarmônica	Semita, Sensor e Sultão TE TABOQUINHA	251	1,739	256	0,025	241	0,353	281	-0,082	249	5,106	309	-0,111	240
OdrexHungria	Retiro TE TABOQUINHA	110	7,535	115	0,102	135	3,488	360	-0,144	104	22,887	380	-0,257	75
A5843	**OLENTE 4M**	223	3,166	164	0,075	141	3,287	44	0,053	220	9,447	7	0,243	228
JFT3311	**ÓPIO FIV JF**	35	11,553	45	0,144	6	10,825	53	0,042	33	33,922	222	-0,032	38
OpusxGaiolall	Tropel TE TABOQUINHA	95	8,232	83	0,117	112	4,226	263	-0,074	92	24,010	241	-0,044	91
OpusxLauda	Trismo TE TABOQUINHA	156	5,799	141	0,088	162	2,695	305	-0,100	145	17,491	318	-0,122	144
OpusxRoma	Urais e Uttar FIV IBITURUNA	274	0,595	282	0,015	234	0,822	142	-0,019	269	2,939	70	0,095	275
OrientexDiva	**VELUDO DO ROSÁRIO**	210	3,605	148	0,083	119	4,099	12	0,102	225	8,679	12	0,209	232
OrientexDiva	Vacu TE DO ROSÁRIO	154	5,820	117	0,101	73	5,331	27	0,073	159	15,207	25	0,160	167
OrientexHungria	Simi e Sion TE TABOQUINHA	59	9,951	43	0,145	31	7,602	110	0,003	53	29,238	189	-0,001	50
OrientexJusta	Sertão e Sinal TE TABOQUINHA	162	5,391	165	0,075	67	5,609	28	0,070	160	15,133	147	0,024	172
OrientexNapa	Sael TABOQUINHA	53	10,198	46	0,141	20	8,338	39	0,057	59	28,347	19	0,180	78
MDVG6511	**ORÓ D**	77	8,800	88	0,114	65	5,770	178	-0,040	89	24,243	58	0,109	94
OrósxJaula	Relento TE TABOQUINHA	254	1,630	281	0,015	217	1,344	80	0,023	247	5,319	103	0,063	267
A5873	**OSASCO 4M**	73	8,985	89	0,114	62	5,871	93	0,013	103	22,940	69	0,098	96
OsascoxHonrosa	**ODRE TE TABOQUINHA**	202	4,007	204	0,051	207	1,532	236	-0,063	216	9,755	289	-0,082	204
OsascoxHonrosa	Oásis, Oboé e Ogum TE TABOQUINHA	186	4,652	173	0,070	185	1,998	209	-0,053	197	11,565	242	-0,045	181
OsascoxManágua	Sagrado DE ALAGOINHA	90	8,472	75	0,124	79	5,069	150	-0,022	109	21,785	111	0,055	113
OsascoxNuvem	**OBUS TE TABOQUINHA**	9	15,770	12	0,195	3	11,670	59	0,039	12	42,501	9	0,219	20
OsascoxNuvem	**ORIENTE TE TABOQUINHA**	113	7,440	73	0,125	15	8,859	1	0,237	137	18,536	1	0,436	170
OsascoxNuvem	Obi e Ornato TE TABOQUINHA	118	7,310	91	0,114	40	7,083	5	0,122	139	18,295	5	0,263	159
OsascoxVassoura	**RESPLENDOR TE DA NOVA FLORESTA**	107	7,675	147	0,084	57	6,074	40	0,057	118	20,842	82	0,087	123
OuriçoxJusta	Relevo e Susto TE TABO, e Zico FIV	84	8,645	84	0,116	76	5,232	268	-0,075	64	27,112	295	-0,091	73
OuriçoxLavanda	Troféu TE TABOQUINHA	13	14,890	9	0,202	17	8,670	228	-0,059	15	42,228	97	0,071	13
ROS522	**OURO TE DO ROSÁRIO**	193	4,323	160	0,076	225	1,083	294	-0,090	205	11,140	161	0,014	196
A1462	**PACÍFICO DE ALAGOINHA**	38	11,113	40	0,146	49	6,596	295	-0,090	27	34,998	214	-0,028	32

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
PacíficoxÍndia	**QUASAR TE TABOQUINHA**	142	6,342	155	0,080	101	4,541	213	-0,053	128	19,336	227	-0,035	139
PacíficoxÍndia	**QUIMÃO TE TABOQUINHA**	19	13,304	13	0,195	14	9,191	251	-0,069	18	38,795	278	-0,071	17
PacíficoxÍndia	Quinante TE TABOQUINHA	58	9,956	54	0,133	44	6,851	222	-0,057	51	29,365	228	-0,035	53
PacíficoxJangada	Quermes, Quicuio e Quitute TE TABOQUINHA	24	12,523	22	0,168	36	7,249	249	-0,069	19	38,073	101	0,065	26
PacíficoxNinhada	Argos FIV TABOQUINHA	46	10,782	96	0,110	38	7,175	233	-0,062	37	32,697	256	-0,058	40
PacíficoxPalma	**NAQUE TE JF**	161	5,500	102	0,106	223	1,208	247	-0,067	150	16,225	87	0,081	151
PacíficoxRabeca	Árabe FIV TABOQUINHA	70	9,226	59	0,131	126	3,914	362	-0,147	58	28,373	325	-0,138	47
9956	**PALÁCIO**	266	1,168	264	0,021	237	0,720	83	0,022	272	2,660	74	0,091	274
CNS6629	**PAPADO S**	66	9,379	153	0,081	42	6,889	148	-0,021	54	28,984	99	0,069	67
9754	**PARAÍSO JF**	368	-5,977	370	-0,066	371	-5,012	156	-0,026	367	-15,553	166	0,011	363
5799	**PAREDÃO S**	196	4,247	186	0,063	88	4,868	139	-0,017	179	13,116	210	-0,025	176
ParedãoxOrilha	Xantum e Xiré TABOQUINHA	191	4,414	207	0,048	158	2,785	194	-0,046	178	13,164	237	-0,042	174
FNF5697	**PATRONO NF**	327	-1,874	312	-0,006	348	-3,514	343	-0,124	319	-4,110	360	-0,199	306
PequixGaiolall	Tupã TE TABOQUINHA	178	4,861	193	0,057	203	1,614	332	-0,114	170	14,307	346	-0,169	155
PequixGazela	Truque e Tucho TE TABOQUINHA	258	1,533	284	0,013	254	0,102	240	-0,064	244	5,660	276	-0,070	243
PequixHester	Súdito TE TABOQUINHA	215	3,439	201	0,053	219	1,319	223	-0,058	203	11,242	207	-0,020	209
PequixJacutinga	Tuiuiu TE TABOQUINHA	232	2,522	228	0,037	240	0,378	296	-0,091	232	7,712	339	-0,157	222
PequixNona	**TRONO TE TABOQUINHA**	25	12,407	49	0,137	41	7,016	327	-0,112	26	35,270	351	-0,175	28
PequixNona	Tejo, Tel, Teseu, Tibet, Togo,Trunfo, Tudor e Tupina TE TABOQUINHA	81	8,707	98	0,110	70	5,443	245	-0,066	86	24,527	297	-0,095	77
5800	**PERSEU S**	111	7,458	110	0,103	191	1,897	333	-0,115	111	21,771	209	-0,022	110
PerseuxElegância	Bragam FIV TABOQUINHA	127	6,955	131	0,092	176	2,240	246	-0,067	123	19,866	137	0,033	137
PerseuxNona	Álbum, Atento, Ático, Ativo, Atlas e Átomo FIV TABOQUINHA	28	12,300	26	0,158	33	7,307	195	-0,046	32	34,648	130	0,037	34
PerseuxOpção	Bem-Dito, Bem-Você, Blande, Bodega e Boro FIV TABOQUINHA	57	10,055	39	0,146	96	4,674	269	-0,076	49	29,734	68	0,098	57
PerseuxTaba	Baguari, Balbo e Bem-Dele FIV TABOQUINHA	22	12,937	15	0,186	16	8,786	169	-0,036	23	36,163	219	-0,031	25
PerseuxUrtiga	**HUM SONHO AMON**	139	6,442	122	0,097	144	3,255	283	-0,082	136	18,663	266	-0,063	130
PerseuxUrtiga	**HUM SONHO ARGEU**	32	11,648	36	0,151	12	9,484	101	0,007	36	33,393	251	-0,055	35
PerseuxUrtiga	Hum Sonho Abad, e Mandarim e Mandim FIV JF	151	5,949	128	0,093	155	2,937	277	-0,080	146	17,279	262	-0,061	142
PerseuxVedelia	Bem-Ti-Vi, Bem-Vosso e Butan FIV TABOQUINHA	125	7,051	152	0,081	165	2,640	303	-0,097	116	21,033	275	-0,069	112
A2726	**PINCEL JA**	383	-8,060	381	-0,086	359	-4,093	8	0,113	384	-22,629	42	0,132	385
FNF5873	**PLEBEU NF**	293	-0,097	300	0,001	297	-1,281	182	-0,042	296	-0,692	171	0,010	294
TABO1467	**PÓLO TE TABOQUINHA**	140	6,392	109	0,103	171	2,359	345	-0,125	131	19,087	344	-0,167	105
JFT2077	**PREFEITO JF**	317	-1,081	304	-0,001	294	-1,239	185	-0,043	315	-3,230	192	-0,008	309
7402	**PROFETA 140**	374	-6,472	357	-0,049	366	-4,655	97	0,010	377	-18,653	126	0,040	377
JFT2049	**PSIU JF**	394	-10,993	394	-0,128	400	-9,716	257	-0,073	395	-30,637	249	-0,051	394
9323	**QUERO QUERO**	356	-4,201	354	-0,041	355	-3,918	61	0,037	360	-12,987	110	0,055	362
A1463	**QUILATE DE ALAGOINHA**	69	9,272	65	0,129	78	5,073	309	-0,102	71	26,219	291	-0,087	65
TABO1716	**QUILATE TABOQUINHA**	85	8,615	108	0,104	99	4,575	342	-0,123	94	23,933	312	-0,114	93
QuilatexBohemia	Gibraltar TE DE SADERE	54	10,155	64	0,129	80	5,010	352	-0,133	50	29,681	306	-0,109	54
QuilatexHorda	Quioto TE TABOQUINHA	198	4,093	176	0,069	192	1,889	237	-0,063	201	11,327	294	-0,090	180
QuilatexLauda	Uísque e Umbral TE TABOQUINHA	135	6,599	158	0,077	142	3,286	344	-0,124	133	18,990	340	-0,161	131
TABO1776	**RABI TE TABOQUINHA**	17	13,898	16	0,185	32	7,416	388	-0,198	11	42,579	378	-0,248	11
5775	**RADIAL TE**	357	-4,217	372	-0,070	350	-3,771	278	-0,081	350	-9,845	322	-0,129	346
JAJ2994	**RANCHO JA**	378	-7,082	390	-0,117	360	-4,157	48	0,047	376	-18,494	92	0,077	378
MDVG6822	**RAPA PÉ D**	222	3,196	203	0,053	188	1,926	136	-0,014	226	8,509	172	0,010	230
RussoxOra	Acre, Ameno, Apolo e Zopo FIV TABOQUINHA	155	5,813	135	0,091	267	-0,383	329	-0,112	187	12,591	121	0,044	186

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
RussoxRabeca	Al Capone FIV DA META	121	7,240	270	0,018	84	4,930	336	-0,119	124	19,802	371	-0,224	104
A2621	**SACADO D**	285	0,135	277	0,016	244	0,290	4	0,143	297	-0,739	3	0,300	322
A5230	**SAPUCAÍ JA**	399	-11,969	401	-0,159	395	-7,683	14	0,093	398	-32,405	57	0,112	400
TABO2122	**SERENO TABOQUINHA**	362	-4,719	358	-0,051	362	-4,388	117	-0,002	364	-14,525	234	-0,040	354
7866	**SERIDÓ JA**	268	1,097	287	0,012	177	2,203	6	0,118	258	4,181	6	0,255	305
SeridóxChinesa	**FENOMENAL PEAC**	281	0,313	265	0,020	262	-0,188	114	0,001	279	1,498	48	0,123	308
SeridóxChinesa	**FUSO TE PEAC**	393	-10,428	391	-0,119	387	-6,954	17	0,090	394	-29,379	16	0,194	396
SeridóxChinesa	**MARANHÃO TE PEAC**	295	-0,188	261	0,023	284	-0,737	77	0,027	294	-0,476	86	0,083	320
SeridóxChinesa	Faro e Martelo TE PEAC	323	-1,644	333	-0,018	295	-1,243	56	0,041	323	-4,584	33	0,144	342
SeridóxColombina	Afinado, Alagoano FIV PEAC e Galeto CIPO, Midas TE IBIT, e Seiko TE TABOQUINHA	325	-1,861	319	-0,011	307	-1,545	95	0,011	320	-4,412	50	0,121	340
SeridóxJeitosa	**HETEU TE TABOQUINHA**	355	-4,188	352	-0,041	328	-2,344	16	0,091	352	-10,666	8	0,235	365
SeridóxJeitosa	Hélios TE TABOQUINHA	270	0,920	271	0,018	228	1,023	42	0,055	261	3,978	22	0,163	288
SeridóxMarítima	**DARDO TE DO ROSÁRIO**	335	-2,120	351	-0,040	325	-2,186	122	-0,004	331	-5,647	141	0,029	336
SeridóxMarítima	**DEDAL TE DO ROSÁRIO**	267	1,129	225	0,039	230	0,880	20	0,085	271	2,793	185	0,001	271
SeridóxMarítima	**GURIRI TE TABOQUINHA**	219	3,390	275	0,016	181	2,103	106	0,005	213	10,399	169	0,010	214
SeridóxMarítima	Dólar ROS, e Hiper e Hippus TE TABOQUINHA	301	-0,499	298	0,002	271	-0,497	50	0,046	303	-1,533	78	0,088	311
SeridóxNóbrica	Haiti, Halo, Hangar, Haras, Harém, Havaí e Hereu TE TABOQUINHA	238	2,276	266	0,019	195	1,826	76	0,027	229	8,213	35	0,144	246
FAFM792	**SIGNO AM**	398	-11,965	403	-0,162	399	-9,373	211	-0,053	399	-33,162	102	0,065	398
SulfoxQueratina	Abaeté, Almirante, Audacioso e Bretão FIV da META, Ambicioso TABO e Bambu, Belize, Bicudo e Búzio FIV TABOQUINHA	12	14,931	20	0,175	18	8,622	354	-0,135	9	46,875	370	-0,223	9
SulfoxRéstia	Acádio, Ageu, Alecrim, Alfeu, Alpino e Alpos FIV TABOQUINHA	11	15,033	21	0,170	11	10,089	322	-0,110	10	46,017	389	-0,283	8
SulfoxTentativa	Cabal, Caboje, Changai e Chui FIV TABOQUINHA	2	19,520	5	0,214	1	12,709	366	-0,157	2	57,052	394	-0,301	2
A2708	**TAITI JA**	403	-15,000	404	-0,193	398	-9,346	9	0,110	403	-42,251	45	0,128	403
CNS4923	**TAMARINDO S**	241	2,170	262	0,022	242	0,337	171	-0,037	253	4,426	149	0,021	255
TamarindoxEstrela	Ugli, Ulmo,Umari , Umbu, Umiri, Urucum e	136	6,539	178	0,069	64	5,822	118	-0,002	142	17,892	142	0,028	154
TamarindoxHaste	**HUM SONHO BARUC**	183	4,752	214	0,043	182	2,084	227	-0,059	183	12,943	203	-0,017	183
TamarindoxHaste	**HUM SONHO BECOR**	206	3,844	222	0,040	205	1,597	220	-0,056	211	10,601	198	-0,014	220
TamarindoxHaste	Hum Sonho Bandor	213	3,481	233	0,036	215	1,374	215	-0,055	219	9,600	197	-0,013	226
TamarindoxLisboa	**HUM SONHO BASSEIN**	128	6,915	114	0,102	129	3,671	212	-0,053	130	19,182	154	0,019	136
9346	**TRICÔ**	284	0,146	336	-0,019	238	0,606	86	0,020	282	1,032	143	0,028	283
A2633	**TRIGUEIRO D**	98	8,114	134	0,091	124	3,961	172	-0,037	125	19,586	76	0,090	153
8341	**TRIGUEIRO JA**	354	-4,057	345	-0,030	336	-2,688	70	0,031	355	-11,692	132	0,036	357
TrigueiroxDerramada	**ÍNDIO TE DO ROSÁRIO**	148	6,011	142	0,086	136	3,468	89	0,017	168	14,588	28	0,149	189
TrigueiroxDerramada	Marte e Mava TE TABOQUINHA	153	5,836	172	0,070	139	3,352	108	0,004	171	14,279	53	0,117	197
TrigueiroxItuipava	Raio e Soberbo ALAGOINHA TE	60	9,778	119	0,100	69	5,500	190	-0,045	80	24,958	148	0,023	97
TrigueiroxJarra	Direito, Jirau, Líber e Lual TE TABOQUINHA	170	5,179	187	0,061	152	3,061	143	-0,019	188	12,392	144	0,026	216
TronoxQuiborana	Ajax FIV TABOQUINHA	5	16,832	11	0,197	9	10,279	311	-0,104	8	47,109	330	-0,147	10
CALG133	**ÚMIDO DA CALCIOLÂNDIA**	44	10,833	66	0,128	26	7,855	119	-0,002	55	28,972	38	0,141	80
GUZA264	**ÚNICO TE**	372	-6,389	378	-0,085	374	-5,238	144	-0,019	372	-17,929	140	0,031	373
JFPA222	**URIEL IBITURUNA**	8	15,958	10	0,201	56	6,117	379	-0,181	14	42,309	283	-0,076	12
1389	**URUTU**	197	4,203	179	0,067	269	-0,400	159	-0,027	210	10,667	89	0,080	203
UrutuxAcauã	**NEHERU TE JF**	252	1,691	215	0,043	285	-0,748	82	0,022	264	3,124	27	0,151	261

(to be continued...)

(continuation...)

Sire's ID or MOET Families	Sire's Name	EPD												Milk Rank.
		Rank.	Fat kg	Rank.	Fat %	Rank.	Protein kg	Rank.	Protein %	Rank.	T.Solids kg	Rank.	T.Solids %	
UrutuxAcauã	Natan JF	280	0,386	247	0,029	320	-1,966	115	0,000	290	0,074	63	0,102	285
UrutuxBanqueta	**RUSSO TE JF**	122	7,180	111	0,103	376	-5,494	401	-0,328	161	15,120	348	-0,169	134
UrutuxBanqueta	Capitão do Mato, Cobra Norato, Sucuri, Urutu FIV da VIC, Marechal FIV GUAMA, e Ruivo TE JF	173	5,049	184	0,063	334	-2,518	375	-0,175	191	12,029	305	-0,108	164
UrutuxColombina	**TINO TE TABOQUINHA**	358	-4,254	338	-0,020	375	-5,394	192	-0,045	358	-12,424	116	0,048	358
UrutuxColombina	Ben, Big FIV JF, Boiru FIV IBITURUNA, e Gramado e Hífen FIV do CIPÓ	297	-0,308	272	0,017	339	-2,846	234	-0,062	301	-1,169	135	0,034	299
UrutuxJaula	Tropo, Trote, Trovão, Truste, Tubel e Tucano TE TABOQUINHA	231	2,554	230	0,037	239	0,584	102	0,007	236	7,370	114	0,049	239
UrutuxMedalha	Refen, Rupestre, Ruste e Rústico TE TABOQUINHA	164	5,387	168	0,073	180	2,105	138	-0,016	172	13,811	139	0,031	162
UrutuxNara	**OFURÔ TE TABOQUINHA**	256	1,587	286	0,012	299	-1,336	204	-0,051	254	4,399	215	-0,029	245
UrutuxPrimazia	**QUEBEC TE TABOQUINHA**	166	5,356	202	0,053	218	1,328	308	-0,100	155	15,894	320	-0,124	158
UrutuxPrimazia	**QUIEVE TABOQUINHA**	94	8,258	125	0,095	132	3,552	292	-0,087	100	23,121	258	-0,058	90
UrutuxPrimazia	Quadro, Quartil e Quieto TE TABOQUINHA	169	5,316	177	0,069	202	1,646	262	-0,074	166	14,724	245	-0,047	157
5563	**VAIDOSO JP**	300	-0,413	332	-0,018	255	0,028	25	0,075	333	-6,138	29	0,148	348
5892	**VAIDOZO**	343	-2,849	327	-0,014	330	-2,415	154	-0,025	335	-6,926	218	-0,030	332
ROS614	**VERNIZ TE DO ROSÁRIO**	271	0,918	278	0,016	322	-2,010	274	-0,079	283	0,759	216	-0,029	268
A2033	**VIRTUAL DA TEOTÔNIO**	341	-2,827	353	-0,041	343	-2,947	203	-0,051	338	-7,494	225	-0,034	335
VirtualxJacutinga	**QUARUP TE TABOQUINHA**	318	-1,123	324	-0,013	313	-1,740	181	-0,041	308	-2,335	232	-0,037	310

* Sire's Name: results are presented in alphabetical order from sire's name or families' name

Table 6. Results of genotyping of some genetic markers for Guzera breed sires.

Sire's identification	Sire's Name	Molecular Markers					
		KCS	BCS	LGB	DGAT1 K232A	PRL	TG
METG8	ABAETÉ FIV DA META	AA	A2A2	.	.	.	.
JFPA1174	ABARÉ IBITURUNA	AA	A2A2	.	.	.	.
TABO3711	ABU FIV TABOQUINHA	.	A2A2	.	.	.	.
TABO3714	ACAJU FIV TABOQUINHA	.	A2A2	.	.	.	.
JFT2452	ADONAI TE JF	AB	A2A2	BB	KK	BB	.
UNIU52	AGHA KHAN FIV	AA	.	BB	.	.	.
JFPA20	ALINHADO TE IBITURUNA	AA	.	BB	KK	AB	.
JFT2518	ALMIRANTE JF	AA	.	.	.	.	.
A2687	ALOPRADO D	AA	.	BB	KK	AB	.
TABO3716	ALPINO FIV TABOQUINHA	.	A2A2	.	.	.	.
JFPA1136	AMON IBITURUNA	BB	A1A2	.	.	.	.
JFPA1182	AQUILES IBITURUNA	AB	A1A2	.	.	.	.
DTOO65	ASCRI FIV PEIXE BRANCO	BB	.	BB	KK	BB	.
TABO3689	ATIVO FIV TABOQUINHA	.	A2A2	.	.	.	.
JFT2488	ATLAS TE JF	AB	A2A2	BB	KK	AB	.
DTOO67	AZIZ FIV PEIXE BRANCO	.	A1A2	.	.	.	.
CNS7275	BAÇÃO S	AA	.	AB	.	.	.
METG40	BACHAREL FIV DA META	AA	A2A2	.	.	.	.
METG66	BALANCETE FIV DA META	AB	A2A2	.	.	.	.
DTOO70	BALIFAX FIV PEIXE BRANCO	AB	A1A2	AB	KK	BB	.
9940	BARBANTE JF	AB	.	BB	KK	BB	CC
METG36	BEETHOVEN FIV DA META	AA	A2A2	.	.	.	.
METG44	BEMENTHAL FIV DA META	AA	A2A2	.	.	.	.
DTOO111	BERILO FIV PEIXE BRANCO	AA	A2A2	.	.	.	.
TABO3835	BICUDO FIV TABOQUINHA	.	A2A2	.	.	.	.
METG50	BISTURI FIV DA META	AA	A2A2	.	.	.	.
METG77	BIZANTINO FIV DA META	AB	A2A2	.	.	.	.
METG18	BLINDADO FIV DA META	AA	A2A2	.	.	.	.
METG83	BLOG FIV DA META	AA	A2A2	.	.	.	.
JFPA184	BOIEIRO IBITURUNA	AB	A2A2	AB	.	.	.
A6120	CABO DE GUERRA D	AA	.	BB	KK	BB	.
JFT3102	CABO FIV JF	.	A2A2	.	.	.	.
5558	CADUCEU S	AA	.	BB	KK	AB	.
JFT3157	CAIM JF	.	A2A2	.	.	.	.
JFT3045	CAIO FIV JF	AB	A2A2	BB	.	.	.
JFT3094	CÁLICE FIV JF	AA	A2A2	AB	.	.	.
JFPA465	CAMBUCI IBITURUNA	AA	A2A2	.	.	.	.
A6119	CAPITÃO-MOR D	AA	.	BB	KK	BB	CC
CIPO41	CASSINO DO CIPÓ	AA	.	AB	KK	AB	.
9951	CASSINO JF	AA	.	BB	KK	BB	CC
HANC311	CORSÁRIO DA VEREDA	AB	.	.	KK	BB	.
PEAC28	CRAVO PEAC	AB	.	.	KK	AB	.
8301	CUBITO G.I DA ND	AB	.	AB	KK	AB	CC
ROS18	DEDAL TE DO ROSÁRIO	AB	.	BB	KK	.	.
JCGU50	DENIS CAMARÃO	AA	.	BB	.	.	.
ROS34	DEVOTO DO ROSÁRIO	AB	.	AB	KK	BB	CC
ROS780	DICK FIV DO ROSÁRIO	AA	.	BB	.	.	.
METG92	DIVIDENDO FIV DA META	AA	A2A2	.	.	.	.
FCGP604	DÓLAR TE DA EMPARN	AA	A2A2	BB	.	.	.
WEME73	DOM FIV BOA FAMÍLIA	AB	A2A2	.	.	.	.
ROS39	DUNGA TE DO ROSÁRIO	AB	.	BB	KK	AA	CC
A1437	ÉDIPO A	AA	.	AB	KK	AB	CC
IVAG1823	ENDEREÇO VILLEFORT	.	A2A2	.	.	.	.
CIPO121	ENREDO TE DO CIPÓ	AB	.	.	KK	AB	.
IVAG2053	ESMINGO VILLEFORT	.	A2A2	.	.	.	.
A2389	ESTILO A	AA	.	BB	KK	BB	CC
IVAG2074	ESTRAVO VILLEFORT	.	A2A2	.	.	.	.
IVAG2022	EVEREST VILLEFORT	.	A2A2	.	.	.	.
IVAG2269	EXBAIANO VILLEFORT	.	A2A2	.	.	.	.
5762	ÊXITO TE	AA	.	AB	KK	AB	CC

(to be continued...)

(continuation...)

Sire's identification	Sire's Name	Molecular Markers					
		KCS	BCS	LGB	DGAT1 K232A	PRL	TG
IVAG2818	FABULOSO VILLEFORT	.	A1A2	.	.	.	.
IVAG2735	FAGUEIRO VILLEFORT	.	A2A2	.	.	.	.
IVAG2342	FALANTE VILLEFORT	.	A2A2	.	.	.	.
DTO5054	FANTÁSTICO DA BARRA	AA	A2A2	.	.	.	.
FCGP679	FANTOCHE DA EMPARN	.	A2A2	.	.	.	.
A337	FUNDADOR RF	AA	.	AB	KK	AB	CC
LKW223	GARI BOA LEMBRANÇA	AA	.	BB	.	.	.
A2731	GAVIÃO DA NOVA FLORESTA	AA	.	AB	KK	AB	.
JON130	GENUÍNO DA J NATAL	AA	A2A2	.	.	.	.
IVAG3206	GIBA VILLEFORT	.	A2A2	.	.	.	.
SAV105	GIBRALTAR TE DE SADERE	AA	.	AB	KK	AB	TC
SAVI94	GIM FIV DE SADERE	AA	.	BB	.	.	.
FCGP707	GIRASSOL DA EMPARN	.	A2A2	.	.	.	.
A2664	GITANO A	AA	.	BB	KK	BB	.
FCGP719	GLADIADOR DA EMPARN	.	A2A2	.	.	.	.
SAV104	GLOBO FIV DE SADERE	AA	.	BB	KK	AB	CC
FCGP715	GOLEIRO DA EMPARN	.	A2A2	.	.	.	.
IVAG3205	GOLFO VILLEFORT	.	A2A2	.	.	.	.
FCGP696	GORILA DA EMPARN	.	A2A2	.	.	.	.
SAV103	GOTHAR FIV DE SADERE	AA	.	BB	KK	BB	CC
LKW219	GREGO BOA LEMBRANÇA	AA	A2A2	BB	.	.	.
IHL178	GULOSO	AB	.	AB	.	.	.
5882	GURIRI TE TABOQUINHA	BB	.	BB	KK	AB	CC
5883	HÁBIL TE TABOQUINHA	AB	.	BB	KK	BB	CC
FCGP727	HADRON DA EMPARN	.	A2A2	.	.	.	.
FNFA753	HAMAL NF	AA	A2A2	.	.	.	.
FCGP746	HAMON DA EMPARN	.	A2A2	.	.	.	.
FCGP747	HARMON DA EMPARN	.	A2A2	.	.	.	.
FCGP729	HEBREU DA EMPARN	.	A2A2	.	.	.	.
FCGP735	HEBRON DA EMPARN	.	A2A2	.	.	.	.
SAV120	HELÍACO FIV SADERE	AA	.	BB	KK	AB	TC
FCGP748	HÉRCULES DA EMPARN	.	A2A2	.	.	.	.
FCGP743	HERDEIRO DA EMPARN	.	A2A2	.	.	.	.
FCGP752	HEREDITÁRIO DA EMPARN	.	A2A2	.	.	.	.
GZF77	HERMES FIV DO GUGA	BB	A2A2	.	.	.	.
TABO538	HETEU TE TABOQUINHA	AA	.	BB	KK	AB	CC
FNFA960	HIDRANTE FIV NF	AA	A2A2	.	.	.	.
TABO618	HOMERO TE TABOQUINHA	AA	.	BB	KK	.	.
FCGP749	HONESTO DA EMPARN	.	A2A2	.	.	.	.
A2804	HORIZONTE NF	AA	.	BB	KK	BB	.
FNFA878	HORTÊNCIO FIV NF	AA	A2A2	.	.	.	.
A1443	HORTO A	AA	.	AB	KK	AB	CC
FCGP728	HORTO DA EMPARN	.	A2A2	.	.	.	.
FENG96	HOTAN DO BRAVO	AA	A1A2	.	.	.	.
FCGP741	HUGO DA EMPARN	.	A2A2	.	.	.	.
HUM24	HUM SONHO ABADON	AA	A2A2	AA	KK	BB	.
HUM51	HUM SONHO BALBECK	AB	.	BB	.	.	.
HUM34	HUM SONHO BARÃO	AB	.	BB	.	.	.
HUM38	HUM SONHO BARUC	AA	.	AB	.	.	.
TABO636	HUMAITÁ TE TABOQUINHA	AA	A2A2	BB	KK	AB	CC
LKW243	HUMORISTA FIV	AB	A1A2	BB	.	.	.
FCGP756	ÍDOLO DA EMPARN	.	A2A2	.	.	.	.
A133	IMPERIAL JA	AA	.	AB	KK	BB	CC
ROS128	ÍNDEX DO ROSÁRIO	AA	.	.	KK	AB	.
ROS108	ÍNDIO TE DO ROSÁRIO	AA	.	BB	KK	AB	CC
FCGP761	ÍNDIO DA EMPARN	.	A2A2	.	.	.	.
ROS116	INGLÊS TE DO ROSÁRIO	AA	.	BB	KK	AB	.
TABO727	INSTINTO TABOQUINHA	AB	.	AB	KK	BB	CC
OTPZ119	IRIL POI OT	AA	A2A2	BB	.	.	.
TABO747	JABUTI TE TABOQUINHA	AA	.	BB	KK	.	.
A1449	JAGUNÇO A	AA	.	AB	KK	AB	.

(to be continued...)

(continuation...)

Sire's identification	Sire's Name	Molecular Markers					
		KCS	BCS	LGB	DGAT1 K232A	PRL	TG
MDVG6066	JANARI D	AA	.	BB	KK	BB	CC
TABO812	JEQUIÁ TE TABOQUINHA	AA	.	BB	KK	AB	CC
DTO5278	JOAZEIRO DA BARRA	AA	A1A2	.	.	.	.
TABO785	JOIO TE TABOQUINHA	AA	.	BB	KK	AB	.
TABO818	JONAS TE TABOQUINHA	AA	.	.	KK	AB	.
9974	JÓQUEI TE JP	AA	.	BB	KK	AB	.
TABO866	LABRADOR TE TABOQUINHA	AA	A2A2	AB	KK	BB	CC
FNFA2161	LAURINO FIV NF	AA	A2A2	.	.	.	.
WEME313	LAZIO BOA FAMÍLIA	BB	A2A2	.	.	.	.
WEME305	LEITEIRO BOA FAMÍLIA	BB	A2A2	.	.	.	.
FNFA2156	LEVIANO FIV NF	AA	A2A2	.	.	.	.
JUZZ73	LOBO DA JUZZ	.	A2A2	.	.	.	.
MABI1096	MAAB AGUERRIDO FIV	AA	A2A2	.	.	.	.
JFPA92	MAESTRO IBITURUNA	AA	.	BB	KK	AB	.
JFPA1248	MAGNO IBITURUNA	AB	A2A2	.	.	.	.
FNFA2577	MANANCIAL NF	AA	A2A2	.	.	.	.
JFPA1284	MANGANO IBITURUNA	BB	A1A2	.	.	.	.
FNFA2547	MANSO FIV NF	AA	A2A2	.	.	.	.
PEAC211	MARANHÃO TE PEAC	AB	.	BB	KK	BB	CC
IVAG4552	MARRONE VILLEFORT	.	A2A2	.	.	.	.
JFT3864	MEXICANO JF	.	A2A2	.	.	.	.
TABO1058	MIRADOR TE TABOQUINHA	AA	.	BB	KK	BB	CC
TABO1099	NAIROBI TABOQUINHA	AA	A2A2	AB	KK	BB	CC
JFT2433	NÁPOLE TE JF	BB	A2A2	BB	KK	AA	.
IVAG4829	NÁPOLE VILLEFORT	.	A2A2	.	.	.	.
JFT2302	NAQUE TE JF	AA	.	BB	KK	BB	.
TABO1117	NAQUE TE TABOQUINHA	AA	A2A2	BB	KK	BB	.
TAL5966	NATALINO DA TEOTÔNIO	BB	A2A2	BB	.	.	.
MDVG6472	NECESSÁRIO D	.	A2A2	.	.	.	.
JFT2349	NEHERU TE JF	AA	A2A2	.	KK	AB	.
MAIA1306	NEÓFITO MAIA	AB	A2A2	.	.	.	.
JFT2351	NEPAL TE JF	AA	A2A2	.	.	BB	.
TABO1132	NEPAL TE TABOQUINHA	AA	.	.	KK	BB	.
IVAG4823	NERO VILLEFORT	.	A2A2	.	.	.	.
JFPA1043	NICOLA IBITURUNA	AA	A2A2	.	.	.	.
5791	NOBRE JF	AA	.	BB	KK	AA	CC
IVAG4836	NORTON VILLEFORT	.	A2A2	.	.	.	.
LVPS98	NOTÁVEL DA NOVA FLORESTA	AA	.	BB	KK	BB	.
JFT2422	NOTÁVEL TE JF	AA	A2A2	BB	KK	BB	.
TABO1301	OBUS TE TABOQUINHA	AB	A2A2	BB	KK	BB	CC
TABO1345	OCRE TE TABOQUINHA	AA	.	BB	KK	BB	CC
TABO1231	ODRE TE TABOQUINHA	AA	.	AB	KK	BB	CC
TABO1364	ÓLEO TE TABOQUINHA	AA	A2A2	AB	KK	.	TC
JFT3311	ÓPIO FIV JF	.	A2A2	.	.	.	.
TABO1367	OPUS TE TABOQUINHA	AA	.	AB	KK	BB	CC
TABO1302	ORIENTE TE TABOQUINHA	AB	.	BB	KK	BB	CC
JFPA560	ÓRION IBITURUNA	BB	A2A2	.	.	.	.
TABO1329	OROS TE TABOQUINHA	AA	.	BB	KK	BB	CC
MMMMA5873	OSASCO 4M	AA	.	BB	KK	BB	CC
TABO1272	OURIÇO TE TABOQUINHA	AA	A2A2	BB	KK	BB	CC
ROS522	OURO TE DO ROSÁRIO	AB	.	BB	KK	AA	.
A1462	PACÍFICO A	AB	.	AB	KK	BB	CC
JFT3343	PAIOL FIV JF	.	A1A2	.	.	.	.
LKW1008	PANAMÁ FIV BOA LEMBRANÇA	.	A2A2	.	.	.	.
9754	PARAÍSO JF	AA	.	AB	KK	BB	.
TABO1406	PEQUI TE TABOQUINHA	AA	A2A2	AB	KK	BB	CC
FNF5873	PLEBEU NF	AA	A2A2	.	KK	AA	.
TABO1467	PÓLO TE TABOQUINHA	AA	A2A2	.	KK	BB	.
JUZZ110	PREFERIDO FIV DA JUZZ	.	A2A2	.	.	.	.
IVAG5461	PRESIDENTE VILLEFORT	.	A2A2	.	.	.	.
ROS206	PUPILO DO ROSÁRIO	AA	.	.	KK	AB	.
TABO1745	QUASAR TE TABOQUINHA	.	A1A2	.	.	.	.

(to be continued...)

(continuation...)

Sire's identification	Sire's Name	Molecular Markers					
		KCS	BCS	LGB	DGAT1 K232A	PRL	TG
A1463	QUILATE A	AA	.	BB	KK	AB	TC
TABO1716	QUILATE TABOQUINHA	AA	.	BB	KK	AB	.
TABO1726	QUIMÃO TE TABOQUINHA	AB	A2A2	AB	KK	BB	CC
TABO1678	QUINDIM TE TABOQUINHA	AA	.	BB	KK	AB	CC
TABO1608	QUIOTO TABOQUINHA	AA	.	AB	KK	AA	.
JAJ3652	QUITO FIV JA	AA	.	AA	.	.	.
TABO1776	RABI TE TABOQUINHA	AA	A2A2	BB	KK	AA	.
5775	RADIAL TE	AB	.	AB	KK	BB	.
TABO1780	RADIAL TE TABOQUINHA	AB	.	AB	KK	BB	CC
JUZZ151	REFLEXO DA JUZZ	.	A2A2	.	.	.	.
JFT2230	REINO TE JF	AA	.	.	KK	AB	.
TABO1836	REINO TE TABOQUINHA	AA	.	AB	KK	AB	.
TABO1835	REMANSO TE TABOQUINHA	AA	A2A2	BB	KK	AB	CC
JFT2261	RUSSO TE JF	.	A2A2	.	.	.	.
TABO2343	SALOIO TE TABOQUINHA	AA	A2A2	.	.	AB	.
A5230	SAPUCAÍ JA	AA	.	BB	KK	AB	.
TABO2124	SENTIDO TABOQUINHA	.	A2A2	.	.	.	.
TABO2122	SERENO TABOQUINHA	AA	A2A2	BB	KK	BB	.
7866	SERIDÓ JA	AB	.	BB	KK	BB	CC
TABO2145	SINO TE TABOQUINHA	AA	.	.	KK	.	.
TABO2308	SULCO TE TABOQUINHA	AA	.	AB	.	.	.
TABO2333	SULFO TE TABOQUINHA	.	A2A2	.	.	.	.
JCRK17	SUMAÚMA EURO FIV	.	A2A2	.	.	.	.
CNS9789	TENENTE S	.	A2A2	.	.	.	.
DTO5989	TREZNO DA BARRA	AB	A1A2	.	.	.	.
A2633	TRIGUEIRO D	AA	.	BB	KK	BB	CC
TABO2510	TRONO TE TABOQUINHA	AA	A1A2	AB	KK	BB	.
TABO2624	TUCO TE TABOQUINHA	AA	A2A2	BB	KK	AB	.
TABO2567	TUISTE TE TABOQUINHA	BB	A2A2	AB	.	.	.
TABO2547	TUTTI TABOQUINHA	BB	.	.	KK	AA	.
ROS342	UÍSQUE DO ROSÁRIO	AA	.	BB	KK	AA	.
JFPA255	ULANO IBITURUNA	AA	A2A2	.	.	.	.
DTO6123	UMBRO DA BARRA	AA	A2A2	.	.	.	.
CALG133	ÚMIDO CAL	AB	A2A2	BB	KK	BB	.
JFPA222	URIEL IBITURUNA	AA	A2A2	BB	.	.	.
EMGA983	URSO-A (TE)	AA	.	AB	KK	AB	.
A2656	URUGUAI-D	AA	.	BB	.	.	.
1389	URUTU	AA	.	AB	KK	AB	TC
MVB953	URUTU FIV DA VIC	.	A2A2	.	.	.	.
5563	VAIDOSO JP	AA	.	AB	KK	AB	.
TABO2935	VALENTE TABOQUINHA	AA	.	BB	KA	BB	.
A2029	VALOR DA TEOTÔNIO	AA	.	AA	.	.	.
ROS614	VERNIZ TE DO ROSÁRIO	AA	.	BB	.	.	.
A2033	VIRTUAL DA TEOTÔNIO	AA	.	AB	KK	AA	TT
TABO3245	XAXIM FIV TABOQUINHA	.	A2A2	.	.	.	.

Table 7. List of Guzera cows with EPDs for milk yield greater than +300 kg, age at first calving (AFC, in days), and milk production efficiency (MPE, in kg/month) among participants in the 2020 genetic evaluation of sires.

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
1	LKW395	LAJE FIV BOA LEMBRANÇA	6 / 1 / 2011	TABO1835	REMANSO TE TABO	LKW85	CUBANA B LEMB	977	77	-11	59	32	88
2	TABO3452	ARAXÁ FIV TABOQUINHA	4 / 12 / 2010	TABO1835	REMANSO TE TABO	TABO947	LAGOA TE TABO	839	79	34	60	20	90
3	TABO3390	ZORRA FIV TABOQUINHA	10 / 11 / 2010	TABO1835	REMANSO TE TABO	TABO947	LAGOA TE TABO	799	78	28	59	20	90
4	LKW378	JURUÁ FIV BOA LEMBRANÇA	17 / 11 / 2010	TABO1835	REMANSO TE TABO	LKW106	CIRANDA B LEMB	790	72	17	58	27	81
5	LKW774	NADIRA BOA LEMBRANÇA	1 / 11 / 2013	LKW436	LICOR FIV B LEMB	LKW395	LAJE FIV B LEMB	770	75	-9	55	25	87
6	TABO3679	ATLÂNTIDA TABOQUINHA	4 / 3 / 2012	TABO2333	SULFO TE TABO	TABO2685	TENTATIVA TABO	743	75	18	55	22	86
7	TABO3364	ZACA TABOQUINHA	19 / 10 / 2010	TABO1835	REMANSO TE TABO	TABO2218	SINDA TE TABO	684	76	15	56	17	89
8	TABO3972	BEM-BEM FIV TABOQUINHA	28 / 10 / 2013	JFT3094	CÁLICE FIV JF	TABO2900	VIRTUDE TABO	675	76	8	57	26	87
9	LKW380	JAQUEIA FIV BOA LEMBRANÇA	19 / 11 / 2010	TABO1835	REMANSO TE TABO	LKW106	CIRANDA B LEMB	653	72	21	58	19	81
10	TABO4103	COVILHA TABOQUINHA	8 / 12 / 2013	JFT2351	NEPAL TE JF	TABO3023	VISÃO TE TABO	651	75	12	56	23	86
11	AVPG146	CAIÇARA 4 MENINOS	14 / 11 / 2011	JFT2261	RUSSO TE JF	IHL108	DONDOCA	649	77	-4	62	24	87
12	METG74	BROA-DE-LEITE FIV DA META	14 / 11 / 2013	TABO636	HUMAITÁ TE TABO	TABO1749	QUERATINA TE TABO	649	73	34	58	25	81
13	IHL108	DONDOCA	6 / 11 / 2005	TABO636	HUMAITÁ TE TABO	LVPS90	MOCINHA N FLOR	620	85	35	70	18	91
14	TABO3735	ALMA FIV TABOQUINHA	13 / 4 / 2012	TABO2510	TRONO TE TABO	TABO1760	QUIBORANA TE TABO	611	71	26	58	24	81
15	TABO3402	ZABAI FIV TABOQUINHA	17 / 11 / 2010	TABO1835	REMANSO TE TABO	TABO947	LAGOA TE TABO	604	78	23	59	15	90
16	TABO3422	ZINA FIV TABOQUINHA	19 / 11 / 2010	TABO1835	REMANSO TE TABO	TABO1410	PÁDUA TE TABO	603	78	29	59	15	90
17	JFT3257	ORQUÍDEA FIV JF	10 / 11 / 2010	TABO1835	REMANSO TE TABO	JFT2263	BÁRBARA TE JF	602	74	28	58	15	85
18	TABO3405	ZANGA FIV TABOQUINHA	18 / 11 / 2010	TABO1835	REMANSO TE TABO	TABO947	LAGOA TE TABO	600	73	46	59	14	81
19	TABO2685	TENTATIVA TABOQUINHA	25 / 6 / 2007	TABO1099	NAIROBI TABO	TABO1760	QUIBORANA TE TABO	599	80	18	58	9	92
20	TABO4148	CATANGA TABOQUINHA	9 / 2 / 2014	HUM28	HUM SONHO ARGEU	CIPO354	GUIANA FIV CIPÓ	597	74	-14	55	25	86
21	EMGA1377	GARÇA-A	10 / 3 / 2011	A1437	ÉDIPO A	EMGA1111	ALEMANHA-A	592	78	35	56	14	89
22	MAPZ644	XERETA FIV STA CECÍLIA	2 / 3 / 2016	TABO636	HUMAITÁ TE TABO	MAPZ327	PORCELANA FIV S C	590	72	36	58	31	81
23	HUM32	HUM SONHO AMBUÁ	16 / 9 / 2006	TABO1301	OBUS TE TABO	TFS224	HARMALA TF	588	74	5	54	16	86
24	TABO2735	UFANIA TABOQUINHA	9 / 9 / 2007	TABO1726	QUIMÃO TE TABO	TABO1842	REDOMA TE TABO	587	81	12	57	10	92
25	LKW460	LIGA FIV BOA LEMBRANÇA	1 / 2 / 2011	TABO1835	REMANSO TE TABO	IHL46	CAMURÇA	586	74	40	56	15	86
26	TABO3976	BEM-CÁ FIV TABOQUINHA	28 / 10 / 2013	TABO636	HUMAITÁ TE TABO	CIPO354	GUIANA FIV CIPÓ	585	72	32	59	19	81
27	TABO3722	ALOA FIV TABOQUINHA	13 / 4 / 2012	TABO2510	TRONO TE TABO	TABO1760	QUIBORANA TE TABO	583	71	25	58	23	81
28	TABO4018	BEM-LÁ FIV TABOQUINHA	2 / 11 / 2013	TABO636	HUMAITÁ TE TABO	CIPO354	GUIANA FIV CIPÓ	582	75	19	59	22	87
29	TABO3992	BEM-MINHA FIV TABOQUINHA	31 / 10 / 2013	TABO636	HUMAITÁ TE TABO	CIPO354	GUIANA FIV CIPÓ	582	72	28	59	21	81
30	TABO4207	CAMALHA TABOQUINHA	2 / 6 / 2014	TABO1835	REMANSO TE TABO	TABO2355	SAÚVA TE TABO	582	75	5	58	21	87
31	AVPG213	DINÁ 4 MENINOS	30 / 6 / 2012	MDVG6511	ORO D	IHL108	DONDOCA	579	73	19	51	18	86
32	TABO4262	DEDICADA TABOQUINHA	15 / 7 / 2014	TABO1301	OBUS TE TABO	TABO2751	UBATINGA TABO	577	74	6	56	21	86
33	LKW1035	NANY FIV BOA LEMBRANÇA	1 / 8 / 2014	TABO636	HUMAITÁ TE TABO	FNFA649	GRANA FIV NF	574	75	11	60	26	86
34	TABO3741	ANSIOSA TABOQUINHA	13 / 4 / 2012	TABO2333	SULFO TE TABO	TABO1293	ÓTICA TE TABO	574	72	16	58	20	81
35	LKW540	MIRRA FIV BOA LEMBRANÇA	4 / 1 / 2012	JFT2488	ATLAS TE JF	LKW154	DOCERA B LEMB	574	75	-16	56	23	87
36	EMGA1111	ALEMANHA-A	10 / 10 / 2005	5563	VAIDOSO JP	I7661	MUSA A	574	79	26	58	17	90
37	FNFA877	HOSPEDEIRA FIV NF	3 / 7 / 2010	TABO1835	REMANSO TE TABO	FNF7139	UBÁ NF	566	76	22	58	12	87
38	TABO1154	NAIRA TABOQUINHA	22 / 12 / 2000	TABO636	HUMAITÁ TE TABO	TABO691	ÍNDIA TABO	564	81	33	68	15	88
39	JFPA617	PINK FIV IBITURUNA	22 / 3 / 2011	TABO1364	ÓLEO TE TABO	JFT2473	ATENA TE JF	551	75	1	56	18	87
40	TABO2626	TRIGA TE TABOQUINHA	19 / 12 / 2006	TABO1272	OURIÇO TE TABO	TABO886	LAVANDA TABO	549	79	-1	60	10	90
41	TABO3184	XÁTRIA TABOQUINHA	25 / 11 / 2009	TABO2333	SULFO TE TABO	TABO1349	OPA TE TABO	546	77	11	57	11	90
42	LKW324	IRONIA BOA LEMBRANÇA	29 / 4 / 2010	MDVG6066	JANARI D	LKW85	CUBANA B LEMB	544	75	-32	57	20	86
43	GNEL3	ÁGATHA FIV DA BOMAR	20 / 11 / 2009	TABO1835	REMANSO TE TABO	JFT2258	RENA TE JF	543	70	7	56	23	79
44	METG65	BACIA DE LEITE FIV DA META	2 / 11 / 2013	TABO636	HUMAITÁ TE TABO	TABO1749	QUERATINA TE TABO	543	73	29	61	20	81
45	TABO3704	ALVARÁ FIV TABOQUINHA	7 / 4 / 2012	TABO2510	TRONO TE TABO	TABO1760	QUIBORANA TE TABO	541	75	23	58	20	87
46	LKW85	CUBANA DA BOA LEMBRANÇA	22 / 1 / 2004	8301	CUBITO G.I DA ND	JBP416	MARIALVA JBP	538	81	-42	64	15	89
47	TABO1760	QUIBORANA TE TABOQUINHA	3 / 6 / 2004	9957	NAVEGANTE	TABO886	LAVANDA TABO	534	80	8	65	14	88
48	EMGA1422	GURIA-A	11 / 10 / 2011	8301	CUBITO G.I DA ND	I7661	MUSA A	533	73	-5	60	17	81
49	LKW400	LUMA FIV BOA LEMBRANÇA	14 / 1 / 2011	TABO1835	REMANSO TE TABO	LKW85	CUBANA B LEMB	532	72	-2	58	14	81
50	WSPV1972	1972 DO MINEIRÃO	16 / 4 / 2011	DSM3371	ESTILETE DA MS	TABO1797	ROLETA TABO	529	70	-22	49	25	82

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
51	TABO3596	ARGENTINA TABOQUINHA	8 / 10 / 2011	TABO2333	SULFO TE TABO	TABO2900	VIRTUDE TABO	529	73	18	60	18	82
52	TABO3673	ÁRTICA FIV TABOQUINHA	10 / 2 / 2012	CNS4995	ABAETÉ S	TABO1178	NONA TABO	526	74	3	63	24	82
53	AVPG365	DICA 4 MENINOS	5 / 11 / 2012	8301	CUBITO G.I DA ND	CIPO324	GRAVIOLA FIV CIPO	523	77	-43	58	22	90
54	LKW415	LIDA FIV BOA LEMBRANÇA	27 / 1 / 2011	TABO1835	REMANSO TE TABO	IHL46	CAMURÇA	523	77	42	56	12	89
55	TABO3436	ZUNDA FIV TABOQUINHA	23 / 11 / 2010	TABO1364	ÓLEO TE TABO	TABO1293	ÓTICA TE TABO	521	77	2	55	13	90
56	ESEJ1195	RIFA TE ESJ	27 / 5 / 2014	TABO2333	SULFO TE TABO	TABO2292	SEDNA TE TABO	520	67	15	54	17	75
57	TABO3970	BÉLGICA FIV TABOQUINHA	27 / 10 / 2013	5800	PERSEU S	TABO2444	TULIPA TE TABO	520	71	3	58	24	81
58	TABO4153	CHAVIANA TABOQUINHA	15 / 2 / 2014	HUM28	HUM SONHO ARGEU	TABO2375	TABA TE TABO	518	73	-10	52	21	86
59	TABO3224	XANDANGA TABOQUINHA	26 / 12 / 2009	TABO2124	SENTIDO TABO	TABO1056	MÁGICA TE TABO	518	72	36	51	14	86
60	TABO3261	XUVA TABOQUINHA	1 / 4 / 2010	TABO2333	SULFO TE TABO	TABO2006	RÉSTIA TE TABO	516	77	11	57	14	89
61	LKW228	GARAPA BOA LEMBRANÇA	29 / 11 / 2008	A1437	ÉDIPO A	LKW85	CUBANA B LEMB	515	81	-10	69	15	88
62	IVAG1963	EQUAÇA VILLEFORT	6 / 9 / 2010	5295	ACARI RF	IVAG1	ABAÍBA DO VILLE	514	67	3	51	22	78
63	JFPA542	ONDA FIV IBITURUNA	17 / 11 / 2010	TABO1835	REMANSO TE TABO	TABO947	LAGOA TE TABO	514	77	33	60	12	87
64	TABO3727	ALSÁCIA FIV TABOQUINHA	13 / 4 / 2012	JFT2351	NEPAL TE JF	TABO2787	URUPEMA TABO	514	74	4	55	19	86
65	TABO4363	DENSA FIV TABOQUINHA	26 / 6 / 2015	TABO2333	SULFO TE TABO	TABO1178	NONA TABO	513	72	17	59	22	81
66	IVAG1747	EDEMACIAR VILLEFORT	11 / 6 / 2010	DSM3371	ESTILETE DA MS	IVAG1	ABAÍBA DO VILLE	513	63	13	50	18	73
67	TABO3736	ALMADA FIV TABOQUINHA	13 / 4 / 2012	TABO2333	SULFO TE TABO	TABO2006	RÉSTIA TE TABO	506	71	8	57	21	81
68	I7661	MUSA DE ALAGOINHA	14 / 4 / 1995	7866	SERIDÓ JA	F5549	CIGANA A	505	87	34	71	8	95
69	VMP444	VEREDA DAS FLORES	1 / 11 / 2012	TABO2333	SULFO TE TABO	VMP388	QUINTANA DAS FLORES	503	71	35	56	14	81
70	TABO3376	ZOADA TABOQUINHA	29 / 10 / 2010	TABO2333	SULFO TE TABO	TABO1703	QUITINA TE TABO	502	78	18	57	15	91
71	UNIU1077	HAMA UNIUBE	25 / 12 / 2014	LKW444	LUXO FIV B LEMB	BAGA137	SAFADINHA FIV 2MS	502	64	5	50	22	77
72	SULA1801	ROMILDA ILHA FUNDA	9 / 12 / 2012	TABO1301	OBUS TE TABO	SULA643	INVOCADA I FUN	498	68	20	55	15	79
73	TABO3882	BIRMÂNIA TABOQUINHA	19 / 12 / 2012	TABO1301	OBUS TE TABO	TABO1639	QUANTIA TABO	497	76	-9	56	21	89
74	AVPG153	CORNETA 4 MENINOS	19 / 11 / 2011	JFT2261	RUSSO TE JF	IHL108	DONDOCA	497	73	11	62	19	82
75	I8013	DOMADORA D	10 / 11 / 1994	A2687	ALOPRADO D	G9513	TAREFA D	496	81	25	55	2	94
76	JFPA1259	MALU IBITURUNA	10 / 5 / 2016	JFPA222	URIEL IBITURUNA	JFPA617	PINK FIV IBIT	496	69	-5	52	23	80
77	AVPG467	FANTASIA 4 MENINOS	1 / 1 / 2014	LKW436	LICOR FIV B LEMB	CIPO324	GRAVIOLA FIV CIPÓ	494	68	-3	51	19	79
78	TABO4287	DIRETORA TABOQUINHA	18 / 11 / 2014	TABO2854	URZAL TE TABO	TABO3452	ARAXÁ FIV TABO	493	67	32	51	16	79
79	EMGA873	SERVILHA-A	12 / 11 / 2001	A1443	HORTO A	I7661	MUSA A	492	81	46	63	12	91
80	TABO2312	SUMA TE TABOQUINHA	25 / 3 / 2006	TABO1301	OBUS TE TABO	TABO1154	NAIRA	491	83	42	65	10	92
81	AVPG150	CINEMA 4 MENINOS	16 / 11 / 2011	JFT2261	RUSSO TE JF	IHL108	DONDOCA	491	73	-7	62	27	81
82	TABO4069	BIBIANA FIV TABOQUINHA	6 / 11 / 2013	5800	PERSEU S	TABO1266	OPÇÃO TE TABO	490	72	9	60	22	81
83	JFT2981	UTA FIV JF	20 / 8 / 2008	PEAC28	CRAVO PEAC	CNS5266	BIBA S	488	75	-17	56	14	86
84	JFT3729	ESPIGA FIV JF	18 / 1 / 2012	TABO1364	ÓLEO TE TABO	JFT2263	BÁRBARA TE JF	487	73	-14	56	19	84
85	LKW650	MIRAGEM BOA LEMBRANÇA	15 / 12 / 2012	LKW245	HADOQUE FIV B LEMB	MRM346	FRANCESA MRM	487	64	53	49	15	77
86	TABO3731	ANAJA FIV TABOQUINHA	13 / 4 / 2012	TABO2510	TRONO TE TABO	TABO1760	QUIBORANA TE TABO	487	71	23	58	20	81
87	EMGA1429	GELÉIA-A	20 / 10 / 2011	8301	CUBITO G.I DA ND	I7661	MUSA A	484	73	-14	60	16	81
88	METG41	BILIRRUBINA FIV DA META	2 / 9 / 2013	TABO2333	SULFO TE TABO	TABO1749	QUERATINA TABO	484	72	12	59	20	81
89	TABO3761	ARDÓSIA TABOQUINHA	22 / 6 / 2012	TABO1776	RABI TE TABO	TABO1724	QUERENA TE TABO	484	67	18	52	19	79
90	TABO4152	CENOBITA TABOQUINHA	15 / 2 / 2014	HUM28	HUM SONHO ARGEU	TABO1938	REFEIÇÃO TABO	484	73	-12	51	21	86
91	TABO3864	BULANDA TABOQUINHA	3 / 12 / 2012	TABO2333	SULFO TE TABO	TABO1053	MALIBU TE TABO	483	77	19	57	19	89
92	TABO4305	DESARMADA TABOQUINHA	31 / 12 / 2014	UNIU439	ESCOTEIRO FIV UNIU	TABO3372	ZIAR TABO	483	68	-8	51	23	80
93	TABO3496	ANATOLIA TABOQUINHA	17 / 2 / 2011	TABO2333	SULFO TE TABO	TABO1293	ÓTICA TE TABO	482	71	16	58	15	81
94	CALG229	UTUZADA CAL	5 / 12 / 2005	TABO636	HUMAITÁ TE TABO	JFT2096	EMBOABA JF	482	78	28	61	13	90
95	LKW446	LIMEIRA FIV BOA LEMBRANÇA	7 / 3 / 2011	8301	CUBITO G.I DA ND	LKW114	CONDENSA B LEMB	481	71	-19	58	21	81
96	EMGA955	URCA-A	28 / 2 / 2003	A1462	PACÍFICO A	EMGA860	QUILHA	478	74	40	56	14	83
97	TABO2900	VIRTUDE TABOQUINHA	27 / 8 / 2008	CNS5319	CABUL III S	TABO1847	RAIA TE TABO	477	82	13	64	11	91
98	TABO1293	ÓTICA TE TABOQUINHA	23 / 11 / 2001	A1443	HORTO A	J873	PLATINA JF	476	80	14	62	10	89
99	TABO2117	SUSPEITA TABO	30 / 8 / 2005	TABO636	HUMAITÁ TE TABO	TABO1070	MANGABA TE TABO	476	77	49	60	14	87
100	AVPG469	FIGA 4 MENINOS	2 / 1 / 2014	LKW436	LICOR FIV B LEMB	CIPO324	GRAVIOLA FIV CIPÓ	475	68	-2	51	18	79
101	VMP388	QUINTANA DAS FLORES	27 / 10 / 2006	TABO1301	OBUS TE TABO	VMP296	LÓGICA DAS FLORES	473	79	20	57	6	92
102	I7740	ONDINA-A	2 / 11 / 1997	A1437	ÉDIPO A	I7609	LISBOA-A	471	85	67	68	9	93
103	EMGA1445	GINGA-A	19 / 11 / 2011	JFT2261	RUSSO TE JF	I7661	MUSA A	470	73	7	60	18	82
104	JFT3254	ORILHA FIV JF	5 / 11 / 2010	A1437	ÉDIPO A	JFT2203	RASURA TE JF	468	74	22	59	-3	85

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
105	FNFA1520	INSPETORA FIV NF	15 / 10 / 2011	TABO1835	REMANSO TE TABO	FNF7139	UBÁ NF	466	75	23	57	11	85
106	TABO2375	TABA TE TABOQUINHA	10 / 7 / 2006	TABO1099	NAIROBI TABO	TABO691	ÍNDIA TABO	466	78	2	60	12	88
107	TABO3814	BELÉM FIV TABOQUINHA	6 / 11 / 2012	UNIU52	AGHA KHAN FIV	TABO2312	SUMA TE TABO	465	71	-7	56	22	81
108	TABO3559	AMAZONAS TABOQUINHA	18 / 7 / 2011	TABO2333	SULFO TE TABO	MEU36	BITOCA MTE CRISTO	465	73	19	53	16	86
109	AVPG266	DIVISA 4 MENINOS	1 / 11 / 2012	A1462	PACÍFICO A	TABO1847	RAIA TE TABO	465	73	42	61	13	82
110	EMGA1700	JANETE-A	27 / 7 / 2014	EMGA1103	ALADO-A	EMGA1161	BEM-TE-VI-A	464	73	24	49	17	86
111	CIPO354	GUIANA FIV DO CIPÓ	17 / 11 / 2006	CNS4995	ABAETÉ S	JAJ2638	GAROTA JA	463	81	5	64	15	89
112	IHL128	ESMERALDA	9 / 5 / 2006	TABO636	HUMAITÁ TE TABO	MRM175	DELTA TE MRM	463	77	67	63	9	87
113	EMGA1202	CHELITA-A	18 / 3 / 2007	A1462	PACÍFICO A	I7740	ONDINA-A	462	79	69	60	10	90
114	TABO3669	AGÊNCIA FIV TABOQUINHA	17 / 1 / 2012	JFT2261	RUSSO TE JF	TABO1178	NONA TABO	462	79	2	63	17	90
115	LKW345	JACUMA FIV BOA LEMBRANÇA	28 / 6 / 2010	A6119	CAPITÃO-MOR D	LKW154	DOCERA B LEMB	462	74	-25	56	14	86
116	MAPZ327	PORCELANA FIV STA CECÍLIA	5 / 4 / 2011	TABO2510	TRONO TE TABO	MRM298	FIBRA MRM	462	74	29	60	23	83
117	TABO3969	BEJA FLOR FIV TABOQUINHA	28 / 10 / 2013	8301	CUBITO G.I DA ND	TABO2757	URALITA TABO	461	75	-36	58	21	86
118	TABO3569	AMADA TABOQUINHA	8 / 9 / 2011	TABO2333	SULFO TE TABO	TABO1582	QUARTA TE TABO	461	72	34	59	16	81
119	TABO3312	ZULMIRA TABOQUINHA	2 / 9 / 2010	TABO1835	REMANSO TE TABO	TABO2691	UVAIA TABO	461	70	34	55	12	80
120	TABO3893	BURMA FIV TABOQUINHA	25 / 12 / 2012	TABO2333	SULFO TE TABO	TABO1749	QUERATINA TABO	460	72	14	59	20	81
121	LKW424	LETRA FIV BOA LEMBRANÇA	1 / 2 / 2011	MDVG6458	NOVA SEITA D	MMMM5883	ONDINA 4M	460	77	10	54	13	91
122	TABO3034	VENDA TABOQUINHA	8 / 7 / 2009	LVPS203	RESPLENDOR TE N F	TABO1561	QUARTILHA TABO	460	74	29	48	11	89
123	TABO3542	ADANA FIV TABOQUINHA	23 / 5 / 2011	JFT2261	RUSSO TE JF	TABO632	HUNGRIA TE TABO	459	78	1	63	16	90
124	IHL147	ESBELTA	15 / 11 / 2006	TABO636	HUMAITÁ TE TABO	MRM298	FIBRA MRM	458	80	39	67	15	88
125	TABO3281	ZANIA FIV TABOQUINHA	6 / 8 / 2010	TABO1835	REMANSO TE TABO	TABO982	MOLDURA TABO	458	74	34	55	11	86
126	JFT2357	NIÁGARA TE JF	8 / 9 / 2004	TABO636	HUMAITÁ TE TABO	JFT1906	CALÇADA JF	456	75	56	63	11	83
127	TABO3329	ZACARIAS TABOQUINHA	16 / 9 / 2010	TABO1835	REMANSO TE TABO	TABO2753	UALA TABO	453	77	14	56	10	90
128	CALG215	UTUFAZ CAL	5 / 11 / 2005	TABO636	HUMAITÁ TE TABO	PEAC181	FELICIDADE TE PEAC	452	77	22	59	13	89
129	TABO3590	ARAUCANA TABOQUINHA	4 / 10 / 2011	TABO2510	TRONO TE TABO	TABO1349	OPA TE TABO	452	77	22	56	15	90
130	GNEL11	BAILARINA DA BOMAR	18 / 9 / 2010	JFT2422	NOTÁVEL TE JF	TABO1366	OLA TE TABO	452	70	-10	57	18	80
131	TABO4236	CAMADA TABOQUINHA	9 / 6 / 2014	HUM28	HUM SONHO ARGEU	TABO2078	SELVA TE TABO	451	68	-20	52	23	79
132	TABO3987	BEM-EU FIV TABOQUINHA	31 / 10 / 2013	8301	CUBITO G.I DA ND	TABO2304	SALEMA TE TABO	451	70	-9	58	17	80
133	TABO3558	APLICADA TABOQUINHA	27 / 6 / 2011	TABO2333	SULFO TE TABO	TABO2831	ULA TE TABO	451	70	11	55	18	80
134	TABO2304	SALEMA TE TABOQUINHA	25 / 3 / 2006	TABO1301	OBUS TE TABO	TABO1154	NAIRA TABO	451	75	29	61	13	83
135	TABO2000	RESINA TE TABOQUINHA	12 / 5 / 2005	TABO1272	OURIÇO TE TABO	TABO833	JUSTA TABO	450	75	-1	57	13	86
136	TABO3808	BEATA FIV TABOQUINHA	7 / 11 / 2012	TABO1301	OBUS TE TABO	TABO2346	SEBE TE TABO	447	70	17	56	20	80
137	JFPA1258	MIA IBITURUNA	5 / 5 / 2016	JFPA222	URIEL IBITURUNA	JFPA542	ONDA FIV IBIT	446	70	11	54	19	80
138	TABO3721	ALPACA FIV TABOQUINHA	13 / 4 / 2012	TABO2510	TRONO TE TABO	TABO1760	QUIBORANA TE TABO	445	71	25	58	17	81
139	LKW1012	PARADA FIV BOA LEMBRANÇA	4 / 12 / 2015	TABO636	HUMAITÁ TE TABO	LKW502	LEA FIV B LEMB	445	71	6	58	24	81
140	FCGP556	CAUCAIA DA EMPARN	10 / 4 / 2007	TABO636	HUMAITÁ TE TABO	FCGP460	TIMBAÚBA DA EMPARN	444	80	65	63	10	90
141	TABO3653	AZEITONA TABOQUINHA	19 / 12 / 2011	JFT2403	NANDI TE JF	TABO1192	OFERTA TABO	441	71	3	50	15	85
142	ESEJ1116	PRECIOSA TE ESJ	18 / 11 / 2013	TABO2333	SULFO TE TABO	TABO1628	QUADRIGA TABO	441	72	20	59	17	81
143	METG1	ALFA FIV DA META	6 / 10 / 2011	TABO1835	REMANSO TE TABO	FNF7139	UBÁ NF	440	72	31	57	9	80
144	TABO3278	ZANA FIV TABOQUINHA	1 / 8 / 2010	TABO1835	REMANSO TE TABO	TABO982	MOLDURA TABO	440	79	25	55	9	93
145	JFT3097	CAJUADA FIV JF	27 / 9 / 2009	JFT2422	NOTÁVEL TE JF	JFT2263	BÁRBARA TE JF	440	78	-30	63	21	86
146	LKW404	LUA FIV BOA LEMBRANÇA	16 / 1 / 2011	TABO1835	REMANSO TE TABO	LKW169	ESCÓCIA B LEMB	439	70	10	54	15	80
147	AVPG308	ÉPOCA 4 MENINOS	6 / 1 / 2013	8301	CUBITO G.I DA ND	IHL147	ESBELTA	438	71	-9	59	16	81
148	TABO4146	CALUNGA TABOQUINHA	8 / 2 / 2014	HUM28	HUM SONHO ARGEU	TABO2444	TULIPA TE TABO	437	73	0	52	19	86
149	FNFA880	HÍBRIDA FIV NF	6 / 7 / 2010	TABO1835	REMANSO TE TABO	FNF7139	UBÁ NF	437	71	25	53	8	80
150	TABO2751	UBATINGA TABOQUINHA	28 / 9 / 2007	CNS4995	ABAETÉ S	TABO1130	NIRVANA TABO	437	75	-10	61	17	84
151	TABO3444	ALIADA FIV TABOQUINHA	4 / 12 / 2010	TABO1835	REMANSO TE TABO	TABO947	LAGOA TE TABO	437	72	23	59	10	81
152	AVPG245	DEBUTANTE 4 MENINOS	25 / 9 / 2012	8301	CUBITO G.I DA ND	IHL108	DONDOCA	435	72	7	60	13	81
153	LKW462	LINDÓIA FIV BOA LEMBRANÇA	15 / 3 / 2011	8301	CUBITO G.I DA ND	LKW114	CONDENSA B LEMB	435	75	3	58	11	87
154	FCGP546	EMPARN CANAÃ	4 / 12 / 2006	TABO1117	NAQUE TE TABO	FCGP349	PADIOLA DA EMPARN	434	80	-5	55	11	92
155	CIPO324	GRAVIOLA FIV DO CIPÓ	4 / 9 / 2006	TABO1301	OBUS TE TABO	CNS5266	BIBA S	433	79	-6	61	10	89
156	TABO3570	ALAGOAS TABOQUINHA	19 / 8 / 2011	TABO2333	SULFO TE TABO	FNF9677	FERVURA FIV NF	433	69	28	54	18	80
157	TABO3539	ARMÊNIA TABOQUINHA	12 / 5 / 2011	TABO2333	SULFO TE TABO	TABO1628	QUADRIGA TABO	433	72	17	59	15	81
158	ESEJ1107	PITOMBA TE ESJ	12 / 11 / 2013	TABO2333	SULFO TE TABO	TABO1628	QUADRIGA TABO	432	72	20	59	16	81

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
159	LKW539	MALETA FIV BOA LEMBRANÇA	4 / 1 / 2012	8301	CUBITO G.I DA ND	TABO2117	SUSPEITA TABO	430	70	-2	53	18	79
160	TABO2416	TANGA TABOQUINHA	16 / 8 / 2006	TABO1301	OBUS TE TABO	TABO1582	QUARTA TE TABO	429	75	39	58	7	87
161	JFPA899	REGATA IBITURUNA	18 / 6 / 2013	JFPA222	URIEL IBITURUNA	JFPA289	ULA-ULA IBIT	429	73	-6	52	17	86
162	APAY1	LEMBRANÇA APAN	10 / 10 / 2012	TABO1364	ÓLEO TE TABO	FNFA880	HÍBRIDA FIV NF	429	67	4	47	12	79
163	IVAG4356	MÁGICA VILLEFORT	7 / 9 / 2013	TABO1835	REMANSO TE TABO	IVAG1607	ELANCE VILLE	427	67	16	53	14	76
164	JFT3667	NAKANA JF	13 / 4 / 2014	JFT3094	CÁLICE FIV JF	JFT2557	AFRICANA JF	427	70	5	54	21	80
165	LKW169	ESCÓCIA BOA LEMBRANÇA	13 / 9 / 2006	TABO1597	QUIEVE TABO	LKW31	POTIRA B LEMB	426	73	-1	51	22	86
166	LKW313	IMÃ BOA LEMBRANÇA	18 / 1 / 2010	A2389	ESTILO A	LKW106	CIRANDA B LEMB	426	78	-10	59	10	90
167	TABO1724	QUERENA TE TABOQUINHA	24 / 2 / 2004	A1462	PACÍFICO A	TABO691	ÍNDIA TABO	425	76	15	62	14	84
168	TABO3745	APATITA FIV TABOQUINHA	13 / 4 / 2012	TABO2333	SULFO TE TABO	TABO2006	RÉSTIA TE TABO	425	71	10	57	16	81
169	EMGA1536	HANCE A	6 / 11 / 2011	8301	CUBITO G.I DA ND	I7728	OLIMPÍADA-A	424	72	-1	57	11	81
170	EMGA870	SUÉCIA-A	11 / 11 / 2001	A1462	PACÍFICO A	I7621	LADY A	423	76	39	58	11	87
171	MDVG6324	MANDRAGÔA D	7 / 6 / 2002	A2687	ALOPRADO D	3855	CAMÉLIA D	423	75	-1	51	10	90
172	CALG280	VAQUEJADA CAL	12 / 4 / 2006	TABO636	HUMAITÁ TE TABO	I7621	LADY A	422	79	38	61	8	90
173	MAPZ653	XIMENA FIV STA CECÍLIA	16 / 3 / 2016	TABO636	HUMAITÁ TE TABO	MAPZ327	PORCELANA FIV S C	422	71	42	60	15	80
174	JUZZ127	PROPOSTA DA JUZZ	20 / 3 / 2016	LKW516	LUCRO FIV B LEMB	JUZZ31	ESTÉTICA FIV JUZZ	421	64	6	50	26	76
175	WSPV1843	1843 F 10 DO MINEIRÃO	10 / 8 / 2010	DSM3371	ESTILETE DA MS	TABO1333	OROPA TE TABO	421	77	1	53	15	91
176	LKW820	NAPOLITANA BOA LEMBRANÇA	25 / 12 / 2013	LKW223	GARI B LEMB	LKW160	ETAPA FIV B LEMB	420	72	2	50	19	86
177	TABO3534	ADRIA FIV TABOQUINHA	2 / 5 / 2011	TABO2510	TRONO TE TABO	TABO632	HUNGRIA TE TABO	420	73	41	61	16	81
178	CALG267	VALÉCULA CAL	14 / 1 / 2006	TABO727	INSTINTO TE TABO	EMGA877	SEIVA-A	420	78	8	60	14	88
179	TABO4268	DENGOSA TABOQUINHA	5 / 8 / 2014	TABO1835	REMANSO TE TABO	TABO3126	XUXA TE TABO	419	69	11	54	14	80
180	TABO1178	NONA TABOQUINHA	18 / 6 / 2001	MMMMA5873	OSASCO 4M	TABO322	FRAGATA	418	87	22	74	13	92
181	SULA1461	PALMEIRA ILHA FUNDA	31 / 1 / 2011	SULA770	JAMBO TE ILHA FUN	SULA879	JU ILHA FUNDA	418	68	-5	33	10	84
182	TABO4049	BERNADETE FIV TABOQUINHA	5 / 11 / 2013	5800	PERSEU S	TABO1178	NONA TABO	418	76	2	61	19	87
183	TABO3565	ARAGUAIA TABOQUINHA	29 / 8 / 2011	TABO1726	QUIMÃO TE TABO	CIPO287	GELATINA FIV CIPÓ	418	77	11	52	13	91
184	WEME306	LAVANDA FIV BOA FAMÍLIA	8 / 8 / 2015	JFT3157	CAIM JF	CALG295	VARAJA CAL	417	68	-5	54	24	79
185	IVAG281	BODEGA DO VILLEFORT	25 / 12 / 2007	CNS6391	NGAÔ TE S	TABO886	LAVANDA TABO	417	69	-6	55	17	79
186	AVPG163	CONVERSA 4 MENINOS	16 / 12 / 2011	A1462	PACÍFICO A	IHL108	DONDOCA	417	77	44	60	11	87
187	TABO3262	XABEL TABOQUINHA	19 / 3 / 2010	TABO2333	SULFO TE TABO	TABO1730	QUINTILHA TE TABO	416	74	27	57	11	86
188	GNEL89	DIVINA DA BOMAR	18 / 3 / 2012	TABO2988	VELEIRO TABO	GNEL2	ABELHA FIV BOMAR	415	63	1	39	13	76
189	TABO4184	CABOCLA FIV TABOQUINHA	24 / 5 / 2014	JFT2351	NEPAL TE JF	TABO2444	TULIPA TE TABO	414	70	22	56	15	80
190	AVPG118	CIRANDA 4 MENINOS	13 / 9 / 2011	1389	URUTU	IHL108	DONDOCA	411	76	19	61	12	87
191	EMGA877	SEIVA-A	22 / 11 / 2001	A1462	PACÍFICO A	I7658	MEDALHA A	411	84	25	62	9	95
192	I7728	OLIMPÍADA-A	24 / 9 / 1997	A1446	EPSON A	F5885	ITUIPAVA A	411	82	19	55	7	94
193	ESEJ1200	RESERVA TE ESJ	1 / 6 / 2014	TABO2333	SULFO TE TABO	TABO2292	SEDNA TE TABO	411	67	14	54	14	75
194	LKW733	NATURA FIV BOA LEMBRANÇA	10 / 8 / 2013	UNIU439	ESCOTEIRO FIV UNIU	LKW228	GARAPA B LEMB	410	71	-23	57	19	81
195	LKW863	OSTRA BOA LEMBRANÇA	18 / 8 / 2014	JFT3094	CÁLICE FIV JF	LKW228	GARAPA B LEMB	410	75	-13	56	20	86
196	TABO3548	ARQUITETA TABOQUINHA	5 / 6 / 2011	TABO2333	SULFO TE TABO	TABO2224	SABÓIA TABO	410	71	7	58	15	81
197	UNIU432	ESPANHOLA FIV UNIUBE	21 / 1 / 2011	TABO1835	REMANSO TE TABO	MABI491	MAAB JITANA	409	73	4	52	13	86
198	JCGU266	FLOR DA SERRA FIV CAMARÃO	14 / 2 / 2011	A1462	PACÍFICO A	PEAC215	MACEDÔNEA TE PEAC	409	74	25	56	11	85
199	C5812	HUM SONHO AMADA	10 / 10 / 2006	5892	VAIDOZO			409	70	-20	48	21	85
200	JAJX161	HÚNGARA FIV JA	15 / 5 / 2010	A1437	ÉDIPO A	JAJ3362	ENCANTADA JA	409	74	23	58	14	86
201	TABO2698	URCA TABOQUINHA	24 / 7 / 2007	TABO1835	REMANSO TE TABO	TABO1743	QUITANDEIRA TABO	408	71	18	57	11	81
202	EMGA1161	BEM-TE-VI-A	25 / 6 / 2006	A1463	QUILATE A	I7699	MARINA A	407	81	23	59	12	92
203	SULA1800	RAQUEL ILHA FUNDA	9 / 12 / 2012	CNS5319	CABUL III S	SULA1150	MACEDÔNIA I FUNDA	407	65	-2	52	14	77
204	LKW406	LATA FIV BOA LEMBRANÇA	17 / 1 / 2011	TABO1835	REMANSO TE TABO	IHL46	CAMURÇA	407	70	40	56	10	80
205	EMGA860	QUILHA	9 / 9 / 1999	A1460	NEGUS-A	I7708	NÚBIA A	406	79	32	52	9	93
206	EMGA1420	GALERIA-A	10 / 10 / 2011	8301	CUBITO G.I DA ND	EMGA909	TABUADA-A	406	77	-9	60	15	87
207	JAJX94	CARTUCHEIRA FIV JA	3 / 12 / 2008	A2389	ESTILO A	JAJ3199	COTIA JA	405	79	-37	60	11	90
208	JFPA608	PITANGA IBITURUNA	11 / 3 / 2011	JFT2351	NEPAL TE JF	JFT2516	ABAIA JF	405	69	15	55	17	79
209	AVPG381	DECIDIDA 4 MENINOS	20 / 10 / 2012	JFT2261	RUSSO TE JF	CIPO303	GALILÉIA FIV CIPÓ	404	75	-1	60	14	86
210	TABO2887	VADIAÇÃO TABOQUINHA	1 / 8 / 2008	TABO1726	QUIMÃO TE TABO	TABO1968	RUIVA TE TABO	403	72	20	52	8	86
211	TABO1366	OLA TE TABOQUINHA	11 / 6 / 2002	TABO866	LABRADOR TE TABO	TABO632	HUNGRIA TABO	403	75	-12	64	15	83
212	JFPA746	POLÍNIA FIV IBITURUNA	30 / 12 / 2011	JFT2351	NEPAL TE JF	JFPA74	MUSA TE IBIT	403	74	21	57	12	86

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
213	TABO632	HUNGRIA TE TABOQUINHA	8 / 6 / 1996	A1437	ÉDIPO A	A3920	VANUSA	402	89	21	79	12	93
214	TABO3573	ANDORINHA TABOQUINHA	15 / 9 / 2011	TABO2333	SULFO TE TABO	TABO2930	VIAGEM TABO	401	74	1	62	16	82
215	TABO1842	REDOMA TE TABOQUINHA	20 / 8 / 2004	TABO636	HUMAITÁ TE TABO	TABO893	LEGIÃO	401	76	21	62	9	84
216	TABO3449	ANDINA FIV TABOQUINHA	4 / 12 / 2010	A1462	PACÍFICO A	CNS6431	NINHADA S	401	78	9	55	12	91
217	FNFA1340	INFÂNCIA FIV NF	23 / 3 / 2011	8301	CUBITO G.I DA ND	FNF7139	UBÁ NF	399	76	-20	60	12	87
218	JFT2358	NORA TE JF	10 / 9 / 2004	TABO636	HUMAITÁ TE TABO	JFT1906	CALÇADA JF	399	75	48	63	11	84
219	TABO3362	ZONA FIV TABOQUINHA	17 / 10 / 2010	TABO1835	REMANSO TE TABO	TABO1089	NAÇÃO TABO	398	77	24	61	11	87
220	METG62	BRILHANTINA FIV DA META	1 / 11 / 2013	TABO2510	TRONO TE TABO	HUM22	HUM SONHO ALIANÇA	398	68	5	55	21	79
221	EMGA1169	BÉLGICA-A	25 / 7 / 2006	EMGA952	URÂNIO-A	EMGA955	URCA-A	398	75	4	51	13	89
222	TABO886	LAVANDA TABOQUINHA	20 / 11 / 1998	TABO488	HARLEM TE TABO	TABO442	GUERRA TE TABO	397	84	0	69	11	90
223	TABO3404	ZANE FIV TABOQUINHA	18 / 11 / 2010	TABO1272	OURIÇO TE TABO	TABO833	JUSTA TABO	397	75	3	57	13	87
224	BPSS37	CALIFÓRNIA FIV BPS	12 / 5 / 2007	PEAC28	CRAVO PEAC	JFT2124	ESTRELA JF	397	69	10	50	12	79
225	CALG593	CABINA FIV CAL	5 / 12 / 2011	TABO1099	NAIROBI TABO	CALG267	VALÉCULA CAL	396	75	9	56	13	87
226	FCGP584	CANGUARETAMA DA EMPARN	28 / 12 / 2007	TABO1301	OBUS TE TABO	FCGP349	PADIOLA EMPARN	396	76	6	55	11	87
227	LKW823	ODISSÉIA FIV BOA LEMBRANÇA	4 / 2 / 2014	TABO636	HUMAITÁ TE TABO	LVPS90	MOCINHA N FLOR	396	69	59	58	12	79
228	TABO3734	ALIANÇA FIV TABOQUINHA	13 / 4 / 2012	TABO2510	TRONO TE TABO	TABO1760	QUIBORANA TE TABO	396	71	24	58	15	81
229	TABO2345	SARTA TE TABOQUINHA	1 / 6 / 2006	HANC311	CORSÁRIO VEREDA	TABO1154	NAIRA TABO	395	70	16	55	13	80
230	LVPS191	QUARTELA DA NOVA FLORESTA	21 / 12 / 2004	TABO636	HUMAITÁ TE TABO	MMMM5875	OFENSIVA 4M	395	70	5	58	11	78
231	METG12	ÁLGEBRA FIV DA META	4 / 12 / 2012	JFT2261	RUSSO TE JF	TABO1826	RABECA TABO	395	76	-11	61	18	86
232	EMGA1333	FLORESTA-A	1 / 1 / 2010	A1437	ÉDIPO A	I7728	OLIMPÍADA-A	395	81	25	62	11	92
233	TABO1582	QUARTA TE TABOQUINHA	20 / 8 / 2003	TABO636	HUMAITÁ TE TABO	J653	FLECHA	394	75	40	63	9	84
234	WFM1668	IDENTIDADE FIV DO CIPÓ	12 / 2 / 2011	TABO636	HUMAITÁ TE TABO	WFM1053	VARETA DO CIRNE	394	68	1	52	17	80
235	TABO2444	TULIPA TE TABOQUINHA	11 / 9 / 2006	TABO1467	PÓLO TE TABO	JAJ2638	GAROTA JA	393	76	20	59	15	85
236	JUZZ37	FÁBULA DA JUZZ	4 / 7 / 2012	JFT2261	RUSSO TE JF	JUZZ1	ALABA FIV JUZZ	393	70	2	56	24	79
237	IVAG275	BIVA DO VILLEFORT	21 / 12 / 2007	CNS6391	NGAÔ TE S	TABO886	LAVANDA TABO	393	73	-18	55	17	84
238	METG31	BARBACENA FIV DA META	8 / 2 / 2013	DSM3371	ESTILETE DA MS	TABO1749	QUERATINA TABO	392	71	12	57	14	80
239	I7621	LADY DE ALAGOINHA	30 / 1 / 1994	A1443	HORTO A	F5676	ESMERALDA A	391	83	32	60	2	94
240	TABO4177	CROATA FIV TABOQUINHA	20 / 5 / 2014	5572	NERO JF	TABO1154	NAIRA TABO	391	68	-15	52	19	79
241	TABO3457	ATRIZ FIV TABOQUINHA	4 / 12 / 2010	TABO1364	ÓLEO TE TABO	TABO1293	ÓTICA TABO	390	77	-6	55	9	89
242	TABO2006	RÉSTIA TE TABOQUINHA	7 / 6 / 2005	TABO1272	OURIÇO TE TABO	TABO833	JUSTA TABO	390	79	1	63	12	87
243	JFT3283	OIANA FIV JF	23 / 11 / 2010	TABO1835	REMANSO TE TABO	JFT2112	ESPADA JF	388	77	1	56	6	89
244	GCBS12	AMADA FIV	2 / 9 / 2011	8301	CUBITO G.I DA ND	JFT2303	NEGA TE JF	388	68	-32	58	16	75
245	LKW839	OLINA BOA LEMBRANÇA	1 / 5 / 2014	LKW444	LUXO FIV B LEMB	IHL43	CIBELE	387	64	28	49	19	77
246	TABO3811	BEJA FIV TABOQUINHA	5 / 11 / 2012	UNIU52	AGHA KHAN FIV	TABO2312	SUMA TE TABO	387	71	-1	56	17	81
247	TABO2382	TABOCA TE TABOQUINHA	19 / 7 / 2006	A2687	ALOPRADO D	TABA691	IMERSA TABO	387	76	14	61	10	84
248	METG55	BONECA DA META	9 / 6 / 2013	GUZA1171	EDUCADO	HUM58	HUM SONHO CAAT	387	69	-20	47	15	83
249	TABO3670	ALFAFA FIV TABOQUINHA	28 / 1 / 2012	TABO2510	TRONO TE TABO	CNS6431	NINHADA S	387	70	10	53	18	80
250	LKW431	LINDA FIV BOA LEMBRANÇA	4 / 2 / 2011	TABO1835	REMANSO TE TABO	IHL46	CAMURÇA	387	70	36	56	11	80
251	TABO4003	BEM-OLÁ FIV TABOQUINHA	31 / 10 / 2013	5800	PERSEU S	TABO2375	TABA TABO	386	71	-9	58	16	81
252	TABO947	LAGOA TE TABOQUINHA	11 / 5 / 1999	A2633	TRIGUEIRO JA	G8740	JARRA	386	87	23	72	6	93
253	MAPZ99	NAISA STA CECÍLIA	4 / 10 / 2009	8301	CUBITO G.I DA ND	MRM298	FIBRA MRM	386	78	-22	60	18	88
254	MAPZ349	PARADA FIV STA CECÍLIA	1 / 4 / 2011	TABO2510	TRONO TE TABO	MRM298	FIBRA MRM	384	72	32	59	17	81
255	EMGA1167	BAGDÁ-A	21 / 7 / 2006	A1462	PACÍFICO A	EMGA846	QUIETA	384	77	77	57	9	89
256	TABO1749	QUERATINA TE TABOQUINHA	21 / 5 / 2004	A1462	PACÍFICO A	TABO760	JANGADA	383	86	17	71	12	93
257	TABO2992	VIOLENTA TABOQUINHA	28 / 2 / 2009	CNS4995	ABAETÉ S	TABO1178	NONA TABO	382	74	12	63	12	82
258	MDVG6475	NOÇÃO D	15 / 12 / 2003	MDVG5360	GIBÃO D	I8013	DOMADORA D	382	73	32	50	8	85
259	WRP15	FLÂMULA FIV 5B	16 / 6 / 2009	TABO636	HUMAITÁ TE TABO	WFM1095	VIDRAÇA DO CIRNE	382	67	21	55	11	76
260	EMGA1480	HALA-A	23 / 1 / 2012	JFT2261	RUSSO TE JF	EMGA909	TABUADA-A	382	79	12	61	13	90
261	ESEJ1190	RAÇA TE ESJ	15 / 5 / 2014	TABO2333	SULFO TE TABO	TABO2292	SEDNA TE TABO	381	67	14	54	13	75
262	TABO3083	XIRIRICA TABOQUINHA	12 / 10 / 2009	TABO1835	REMANSO TE TABO	TABO2218	SINDA TE TABO	381	70	6	56	9	80
263	TABO2327	SEQUÓIA TABOQUINHA	25 / 4 / 2006	LDCV391	FARO TE MORUMBI	TABO1154	NAIRA TABO	381	74	17	59	14	83
264	WFM1672	IDADE FIV DO CIRNE	18 / 2 / 2011	TABO636	HUMAITÁ TE TABO	WFM715	NORTISTA DO CIRNE	381	63	22	52	12	73
265	JFPA546	ÓTICA FIV IBITURUNA	18 / 11 / 2010	TABO1835	REMANSO TE TABO	TABO1410	PÁDUA TE TABO	380	72	27	59	8	81
266	EMGA886	TABOCA-A	22 / 1 / 2002	A1462	PACÍFICO A	I7708	NÚBIA A	380	82	33	58	10	93

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
268	IVAG4217	MURIEL VILLEFORT	17 / 8 / 2013	CNS4995	ABAETÉ S	IVAG1	ABAÍBA DO VILLE	379	68	14	56	13	76
269	JFT3319	PALOMA JF	28 / 1 / 2011	JFT2737	MANDARI FIV JF	JFT2311	NICARÁGUA JF	379	70	49	51	12	84
270	TABO3754	ASSOMBRA TABOQUINHA	19 / 5 / 2012	TABO2333	SULFO TE TABO	CNS6431	NINHADA S	379	71	3	56	15	81
271	TABO4143	CALANDRA TABOQUINHA	1 / 2 / 2014	TABO2333	SULFO TE TABO	TABO3120	XAMPANA TABO	379	74	11	56	16	86
272	TABO2281	SERICITA TABOQUINHA	10 / 1 / 2006	TABO1272	OURIÇO TE TABO	TABO1167	NICA TABO	378	76	16	56	7	87
273	I7682	MIMOSA DE ALAGOINHA	11 / 8 / 1995	A1446	EPSON A	F5448	CAMÉLIA A	378	80	26	53	4	94
274	AVPG230	DISCRETA 4 MENINOS	8 / 9 / 2012	1389	URUTU	IHL108	DONDOCA	377	73	30	61	10	81
275	TABO3633	AÇAÍ FIV TABOQUINHA	4 / 12 / 2011	TABO1301	OBUS TE TABO	TABO1178	NONA TABO	377	80	15	66	13	89
276	VMP446	VITA FIV DAS FLORES	5 / 11 / 2012	UNIU52	AGHA KHAN FIV	VMP377	PARMA DAS FLORES	377	70	-13	54	20	80
277	TABO3352	ZANZAR TABOQUINHA	9 / 10 / 2010	JFT2261	RUSSO TE JF	TABO2735	UFANIA TABO	376	79	-6	58	9	92
278	TABO3599	ARIETA TABOQUINHA	10 / 10 / 2011	TABO2510	TRONO TE TABO	TABO2243	SALVA TE TABO	376	74	15	56	15	86
279	TABO3629	AMERICANA TABOQUINHA	25 / 11 / 2011	TABO2333	SULFO TE TABO	TABO2787	URUPEMA TABO	376	71	11	55	15	81
280	TABO4171	CHICHA FIV TABOQUINHA	19 / 5 / 2014	TABO636	HUMAITÁ TE TABO	CIPO43	CARTELA CIPO	376	72	32	59	12	81
281	JFPA748	PAKI FIV IBITURUNA	31 / 12 / 2011	JFT2351	NEPAL TE JF	JFT2503	ATRIZ TE JF	376	74	12	56	12	86
282	LKW106	CIRANDA BOA LEMBRANÇA	29 / 7 / 2004	8301	CUBITO G.I DA ND	JAJ2800	OCEANIA JA	375	82	-7	66	15	89
283	TABO2399	TACHA TABOQUINHA	1 / 8 / 2006	TABO1301	OBUS TE TABO	TABO1550	QUEIMADA TABO	374	79	39	57	3	92
284	AVPG151	CHAPATI 4 MENINOS	17 / 11 / 2011	JFT2261	RUSSO TE JF	IHL108	DONDOCA	373	73	3	62	15	81
285	MAPZ104	NAVEGA STA CECÍLIA	5 / 10 / 2009	8301	CUBITO G.I DA ND	MRM298	FIBRA MRM	372	76	-9	59	11	86
286	LKW114	CONDENSA BOA LEMBRANÇA	1 / 10 / 2004	A1437	ÉDIPO A	JBP399	LARANJA JB	371	78	28	60	10	89
287	HUM3	HUM SONHO ALINA	1 / 9 / 2006	8301	CUBITO G.I DA ND	G8791	PALMA JF	371	76	-35	59	13	87
288	JFT3712	PANTERA FIV JF	10 / 9 / 2011	JFT2422	NOTÁVEL TE JF	JFT2263	BÁRBARA TE JF	371	76	-19	61	18	86
289	FNFA1291	IVANA FIV NF	6 / 4 / 2011	A6119	CAPITÃO-MOR D	FNF7139	UBÁ NF	370	76	-4	59	11	87
290	TABO1779	RADIA TE TABOQUINHA	13 / 7 / 2004	TABO636	HUMAITÁ TE TABO	TABO821	JAZIDA TABO	369	73	10	62	15	81
291	TABO3583	ANTILHAS TABOQUINHA	27 / 9 / 2011	TABO2333	SULFO TE TABO	TABO2355	SAÚVA TE TABO	369	74	1	56	13	86
292	EMGA1327	ESPANHA-A	23 / 11 / 2009	EMGA1182	BAURU-A	EMGA1049	VIGA-A (TE)	368	79	2	51	10	93
293	TABO3174	XARADA TABOQUINHA	25 / 11 / 2009	DSM3371	ESTILETE DA MS	TABO2382	TABOCA TE TABO	367	76	7	53	10	89
294	LKW277	HEVEA FIV	13 / 7 / 2009	MMMMA5873	OSASCO 4M	MMMM5883	ONDINA 4M	367	73	21	60	13	82
295	JCGU136	FACEIRA CAMARÃO	8 / 1 / 2011	MDVG6822	RAPA PÉ D	CALG216	UTUEFICAZ CAL	367	69	1	47	10	84
296	TABO4340	DACIA FIV TABOQUINHA	26 / 1 / 2015	TABO2333	SULFO TE TABO	TABO1178	NONA TABO	367	72	17	59	13	80
297	EMGA1447	GRANADA FIV A	20 / 11 / 2011	8301	CUBITO G.I DA ND	I7728	OLIMPÍADA-A	367	72	-20	57	12	81
298	EMGA1747	LEDA A	26 / 6 / 2015	EMGA1103	ALADO-A	EMGA1099	AGENDA-A	366	68	2	46	16	80
299	TABO4318	DEMOCRATA TABOQUINHA	12 / 1 / 2015	TABO2567	TUISTE TE TABO	TABO3593	ÁLGEBRA TABO	366	67	0	52	19	78
300	APAY4	NEULMA APAN	18 / 1 / 2014	TABO1364	ÓLEO TE TABO	FNFA880	HÍBRIDA FIV NF	365	64	4	47	12	72
301	AVPG147	CERES 4 MENINOS	14 / 11 / 2011	JFT2261	RUSSO TE JF	IHL108	DONDOCA	365	77	1	62	13	87
302	CALG295	VARAJA CAL	23 / 4 / 2006	TABO727	INSTINTO TE TABO	I7700	NOBREZA-A	365	82	7	65	13	91
303	CALG439	ANGRA CAL	19 / 3 / 2009	TABO866	LABRADOR TE TABO	TABO632	HUNGRIA TE TABO	364	79	-13	64	16	90
304	HUM7	HUM SONHO ANNI	18 / 9 / 2006	5800	PERSEU S	JFT1889	URTIGA JF	364	76	-6	61	11	87
305	JFT2356	NOVATA TE JF	8 / 9 / 2004	TABO636	HUMAITÁ TE TABO	JFT1906	CALÇADA JF	364	79	29	63	11	88
306	TABO1847	RAIA TE TABOQUINHA	25 / 8 / 2004	TABO636	HUMAITÁ TE TABO	TABO442	GUERRA	364	83	39	69	6	91
307	EMGA1739	LUMA A	5 / 5 / 2015	TABO1301	OBUS TE TABO	EMGA1420	GALERIA-A	363	70	1	55	14	80
308	TABO3667	AFERIDA TABOQUINHA	7 / 1 / 2012	TABO2510	TRONO TE TABO	TABO2861	UTUABA TABO	362	76	9	56	14	89
309	JFT3032	CÁSSIA JF	25 / 2 / 2009	JFT2543	ÁLIBI TE JF	JFT2457	ANDAIA TE JF	362	68	18	53	8	79
310	MAPZ566	UTINGA STA CECÍLIA	18 / 4 / 2014	MDVG6511	ORO D	MAPZ99	NAISA S C	362	72	-10	49	17	86
311	METG9	ATITUDE FIV DA META	6 / 11 / 2012	JFT2351	NEPAL TE JF	ACT175	QUEIMADA	362	72	15	58	23	81
312	TABO3709	AMÉRICA FIV TABOQUINHA	10 / 4 / 2012	TABO2333	SULFO TE TABO	TABO2006	RÉSTIA TE TABO	362	71	9	57	14	81
313	JFT3093	CANJA FIV JF	24 / 9 / 2009	JFT2422	NOTÁVEL TE JF	JFT2263	BÁRBARA TE JF	361	76	-22	61	11	86
314	CALG476	AVELÃ CAL	5 / 4 / 2009	5882	GURIRI TE TABO	LVPS67	LUMINOSA N FLOR	361	73	-1	55	13	84
315	LKW690	NIKARA FIV BOA LEMBRANÇA	1 / 4 / 2013	IHL146	ELETRO	LKW154	DOCERA B LEMB	361	67	18	52	16	79
316	TABO856	LACÍNIA TABOQUINHA	8 / 7 / 1998	5599	PATRONO	G6744	CATEDRAL S	361	73	2	61	10	82
317	MAPZ525	TATA STA CECÍLIA	18 / 9 / 2013	UNIU439	ESCOTEIRO FIV UNIU	MAPZ145	MAGALY S C	361	64	-22	50	23	77
318	MVB990	ESMERALDA DA VIC	15 / 9 / 2009	TABO636	HUMAITÁ TE TABO	TABO821	JAZIDA TABO	361	71	26	61	11	78
319	JFT2557	AFRICANA JF	17 / 8 / 2005	PEAC28	CRAVO PEAC	JFT1545	REGATA JF	360	73	14	59	12	82
320	LKW214	GUARÁ BOA LEMBRANÇA	24 / 10 / 2008	MMMMA5873	OSASCO 4M	LKW31	POTIRA B LEMB	360	77	17	58	9	88
321	JFPA74	MUSA TE IBITURUNA	8 / 4 / 2006	TABO636	HUMAITÁ TE TABO	CNS5372	CALORIA S	360	74	15	61	13	83

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
322	HUM79	HUM SONHO CAMBINDA	20 / 10 / 2009	GUZA883	IDEAL	HUM32	HUM SONHO AMBUÁ	359	69	10	44	8	84
323	TABO3486	ABSOLUTA TABOQUINHA	7 / 1 / 2011	TABO2333	SULFO TE TABO	TABO1613	QUIXABA TABO	358	78	-2	59	14	90
324	SULA1482	PAMONHA ILHA FUNDA	25 / 6 / 2011	JFT2261	RUSSO TE JF	CNS6549	PALHETA S	358	76	-17	51	7	88
325	TABO4119	CALÚNIA TABOQUINHA	8 / 1 / 2014	TABO2333	SULFO TE TABO	TABO1374	PARATI TABO	358	70	-5	57	15	80
326	WEME70	DEVA FIV BOA FAMÍLIA	21 / 2 / 2009	8301	CUBITO G.I DA ND	WFM1179	ACUTI DO CIRNE	358	69	-16	55	11	80
327	LKW510	LÍBIA FIV BOA LEMBRANÇA	14 / 11 / 2011	A1437	ÉDIPO A	LKW106	CIRANDA B LEMB	357	73	8	61	18	82
328	EMGA1049	VIGA-A (TE)	17 / 5 / 2004	A6119	CAPITÃO-MOR D	I7613	JAMAICA A	356	82	-6	60	9	94
329	MAPZ424	RAINHA FIV STA CECÍLIA	8 / 2 / 2012	TABO1726	QUIMÃO TE TABO	MRM298	FIBRA MRM	356	70	19	55	14	80
330	AVPG253	DEDICAÇÃO 4 MENINOS	1 / 10 / 2012	A2687	ALOPRADO D	TABO1847	RAIA TE TABO	356	75	18	58	11	87
331	LKW929	OCARINA FIV BOA LEMBRANÇA	7 / 12 / 2014	JFT3094	CÁLICE FIV JF	LKW228	GARAPA B LEMB	356	71	-5	56	18	81
332	TABO1192	OFERTA TABOQUINHA	16 / 7 / 2001	TABO812	JEQUIÁ TE TABO	TABO760	JANGADA TABO	356	73	6	58	11	82
333	CNS9624	TAKA S	15 / 6 / 2015	CNS6629	PAPADO S	JFT3097	CAJUADA FIV JF	355	65	-23	49	15	75
334	WSPV1837	1837 F 10 DO MINEIRÃO	2 / 7 / 2010	CNS4995	ABAETÉ S	TABO1333	OROPA TE TABO	355	70	16	58	12	78
335	TABO4101	CANINHA TABOQUINHA	8 / 12 / 2013	JFT2351	NEPAL TE JF	TABO2228	SARDENHA TE TABO	355	70	-9	55	15	80
336	JUZZ124	PÉTALA DA JUZZ	14 / 2 / 2016	LKW516	LUCRO FIV B LEMB	JUZZ30	ESTILOSA FIV JUZZ	354	64	11	50	22	76
337	VMP454	ZENDA FIV DAS FLORES	27 / 10 / 2013	JFT2351	NEPAL TE JF	VMP377	PARMA DAS FLORES	354	71	21	57	13	81
338	JFT3730	ESPONJA FIV JF	22 / 1 / 2012	TABO1364	ÓLEO TE TABO	JFT2263	BÁRBARA TE JF	354	69	-23	56	16	79
339	TABO3975	BEM-BONITA FIV TABOQUINHA	28 / 10 / 2013	JFT3094	CÁLICE FIV JF	TABO2900	VIRTUDE TABO	353	72	8	57	15	82
340	EMGA15	QUALIDADE-A	15 / 12 / 1999	A1437	ÉDIPO A	I7621	LADY A	353	78	38	60	4	87
341	SAV36	DANÇA TE DA SADERE	16 / 10 / 2004	TABO636	HUMAITÁ TE TABO	TABO610	HONESTA TABO	353	72	43	61	11	81
342	EMGA1405	GOLADA-A	27 / 7 / 2011	EMGA1182	BAURU-A	EMGA1196	BOLÍVIA-A	352	78	34	53	10	91
343	FCGP497	VASTIDÃO DA EMPARN	23 / 5 / 2004	TABO747	JABUTI TE TABO	FCGP436	SABINA DA EMPARN	352	79	-24	53	8	93
344	TABO1850	ROCA TE TABOQUINHA	27 / 8 / 2004	TABO636	HUMAITÁ TE TABO	TABO893	LEGIÃO TABO	352	71	22	60	10	80
345	EMGA1358	FUMAÇA-A	18 / 9 / 2010	EMGA1209	CANDE-A	EMGA1161	BEM-TE-VI-A	352	78	38	53	11	91
346	LKW944	PRATA BOA LEMBRANÇA	15 / 4 / 2015	CNS7275	BAÇÃO S	LKW277	HEVEA FIV	351	65	16	47	16	78
347	TABO3375	ZONAL TABOQUINHA	29 / 10 / 2010	TABO2333	SULFO TE TABO	TABO1349	OPA TE TABO	350	75	10	57	9	86
348	ACT390	GARANTIDA	26 / 1 / 2006	TABO636	HUMAITÁ TE TABO	ACT183	CARAVELA	349	65	39	49	6	75
349	TABO3960	BANDOLETA FIV TABOQUINHA	21 / 10 / 2013	TABO636	HUMAITÁ TE TABO	CIPO287	GELATINA FIV CIPÓ	349	71	30	59	13	81
350	JFT3517	ESPINHA II JF	28 / 11 / 2012			JFT3003	ULLMAN JF	348	59	-5	39	12	75
351	CALG213	UTURRAZ CAL	4 / 11 / 2005	TABO636	HUMAITÁ TE TABO	PEAC181	FELICIDADE TE PEAC	348	75	23	59	11	86
352	CIPO400	HEROÍNA DO CIPÓ	4 / 3 / 2007	TABO1301	OBUS TE TABO	CIP20	BARONESA CIPO	348	73	8	53	7	86
353	TABO3074	XICRINHA TABOQUINHA	4 / 10 / 2009	JFT2351	NEPAL TE JF	TABO1550	QUEIMADA TABO	347	69	23	55	11	80
354	IVAG117	BAINHA DO VILLEFORT	8 / 10 / 2007	CNS5827	FUÁ S	JFT2254	RESSACA TE JF	347	73	0	51	14	85
355	TABO3971	BELIAL FIV TABOQUINHA	27 / 10 / 2013	LDCV391	FARO TE MORUMBI	TABO2329	SULIPA TE TABO	347	70	2	56	16	80
356	JFT3077	CAMBRAIA JF	20 / 8 / 2009	CNS6575	PANCHO S	JFT2311	NICARÁGUA JF	347	63	12	45	16	76
357	CNS8775	MARISTA S	17 / 9 / 2012	MDVG6458	NOVA SEITA D	CNS7563	CAMBOJA II S	346	67	0	50	13	79
358	MSVG5682	HÉLICE-D	19 / 8 / 1998	A2687	ALOPRADO D	G5198	TARJETA D	346	72	5	51	13	85
359	AVPG330	EFRATA 4 MENINOS	8 / 2 / 2013	LDCV391	FARO TE MORUMBI	IHL147	ESBELTA	345	71	15	59	14	81
360	TABO3476	ARTISTA TABOQUINHA	29 / 10 / 2010	JFT2351	NEPAL TE JF	TABO2382	TABOCA TE TABO	345	70	18	56	10	80
361	TABO3515	AQUARELA TABOQUINHA	14 / 3 / 2011	TABO2333	SULFO TE TABO	TABO2384	TÁBUA TE TABO	345	75	27	57	10	87
362	TAL5651	JAUARI DA TEOTÔNIO	18 / 12 / 2006	TAL4996	GAIAGOL DA TEOT	TAL3314	BARBELA TEOT	344	67	5	30	6	83
363	AVPG154	CROÁCIA 4 MENINOS	20 / 11 / 2011	JFT2261	RUSSO TE JF	IHL108	DONDOCA	344	73	-5	62	16	81
364	I7715	NEBULOSA DE ALG	7 / 12 / 1996	A989	IBÉRICO	F5884	JANGADA A	344	81	44	58	4	93
365	VMP453	ZARA FIV DAS FLORES	22 / 10 / 2013	LDCV391	FARO TE MORUMBI	VMP377	PARMA DAS FLORES	344	71	14	57	14	81
366	TABO1834	RAMA TE TABOQUINHA	17 / 8 / 2004	TABO636	HUMAITÁ TE TABO	TABO442	GUERRA	343	73	24	64	9	81
367	MAPZ579	UCHA FIV STA CECÍLIA	6 / 9 / 2014	TABO636	HUMAITÁ TE TABO	MRM298	FIBRA MRM	343	76	28	61	16	87
368	CALG182	UVALHA CAL	2 / 10 / 2005	TABO727	INSTINTO TE TABO	JFT2096	EMBOABA JF	343	77	10	58	11	89
369	TABO3372	ZIAR TABOQUINHA	28 / 10 / 2010	JFT2261	RUSSO TE JF	TABO1740	QUINANGA TABO	343	78	-6	61	11	90
370	TABO760	JANGADA TABOQUINHA	21 / 9 / 1997	A6119	CAPITÃO-MOR D	TABO322	FRAGATA	342	83	-3	67	6	90
371	AVPG523	FILHOTA 4 MENINOS	6 / 7 / 2014	JFT2422	NOTÁVEL TE JF	IHL108	DONDOCA	342	72	10	58	14	81
372	UNIU1121	IRMANDADE UNIUBE	16 / 7 / 2015	JFT3311	ÓPIO FIV JF	FNFA764	HALONA FIV NF	342	67	-4	51	17	79
373	CALG333	VESÍCULA CAL	15 / 8 / 2006	TABO727	INSTINTO TE TABO	I7700	NOBREZA-A	342	79	13	60	10	91
374	TABO3609	ATRAÇÃO TABOQUINHA	2 / 11 / 2011	TABO2333	SULFO TE TABO	TABO1679	QUIJARA TE TABO	341	70	22	56	12	80
375	VMP377	PARMA DAS FLORES	23 / 11 / 2005	TABO1302	ORIENTE TE TABO	VMP304	MATILDE DAS FLORES	341	79	18	60	11	89

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
376	TABO2355	SAÚVA TE TABOQUINHA	5 / 6 / 2006	LDCV391	FARO TE MORUMBI	TABO1109	NAPA TABO	341	75	-9	60	12	84
377	EMGA1296	ESPADA-A	3 / 4 / 2009	A1462	PACÍFICO A	EMGA846	QUIETA	340	73	79	57	10	82
378	EMGA1224	CARPINA-A	18 / 6 / 2007	A1462	PACÍFICO A	EMGA114	SAARA-A	340	76	56	57	10	87
379	TABO2359	SARJA TE TABOQUINHA	10 / 6 / 2006	A2687	ALOPRADO D	TABA691	IMERSA TABO	340	72	10	59	10	81
380	TABO1109	NAPA TE TABOQUINHA	17 / 9 / 2000	A2389	ESTILO A	I7268	PRIMAZIA	339	80	-10	68	8	87
381	TABO2978	VALETA TABOQUINHA	7 / 1 / 2009	JFT2351	NEPAL TE JF	TABO2267	SHARIFA TE TABO	339	76	17	56	8	89
382	TABO1379	PATACA TABOQUINHA	12 / 7 / 2002	TABO636	HUMAITÁ TE TABO	TABO834	JUÁ TABO	339	75	16	61	10	84
383	I2553	SAUNA DA TEOTÔNIO	1 / 11 / 1991	1389	URUTU	G1553	NERIVADA TEOT	338	73	-2	47	4	85
384	GZF78	HATUNA FIV DO GUGA	23 / 10 / 2015	JFT2433	NÁPOLE TE JF	CALG295	VARAJA CAL	338	70	10	56	15	80
385	UNIU644	FELÍCIA UNIUBE	20 / 8 / 2012	MDVG6458	NOVA SEITA D	TABO3041	VIDA TE TABO	338	72	-9	50	15	85
386	TABO2385	TALITA TABOQUINHA	26 / 7 / 2006	TABO1467	PÓLO TE TABO	TABO1590	QUIÇAMA TE TABO	338	73	-2	53	8	86
387	TABO2646	TOSA TE TABOQUINHA	30 / 12 / 2006	TABO1272	OURIÇO TE TABO	TABO886	LAVANDA TABO	337	73	-3	60	9	82
388	CALG423	AÇUCENA CAL	8 / 2 / 2009	CALG133	ÚMIDO CAL	CALG180	UBAIA CAL	336	77	29	52	6	91
389	EMGA878	SELVA-A	22 / 11 / 2001	A1462	PACÍFICO A	I7658	MEDALHA A	336	81	28	60	9	91
390	J954	XIMBICA DA TEOTÔNIO	21 / 1 / 1995	1389	URUTU	G5546	PATY DA TEOT	336	71	-4	46	8	83
391	WSPV1953	1953 DO MINEIRÃO	25 / 3 / 2011	TABO1117	NAQUE TE TABO	TABO1333	OROPA TE TABO	335	70	14	57	11	79
392	TABO3786	BELINDA TABOQUINHA	28 / 10 / 2012	TABO2333	SULFO TE TABO	TABO1866	RIFAINA TABO	335	70	8	55	15	80
393	JFPA631	PALOMA IBITURUNA	25 / 8 / 2011	JFPA222	URIEL IBITURUNA	JFT2393	NAIA II JF	334	77	-20	54	13	89
394	JAJX77	CIBELE FIV JA	21 / 11 / 2008	MMMMA5873	OSASCO 4M	JAJ3199	COTIA JA	334	76	-12	59	8	87
395	JUZZ161	RECONQUISTA DA JUZZ	10 / 12 / 2016	LKW516	LUCRO FIV B LEMB	JUZZ38	FOLHA FIV JUZZ	334	64	7	49	23	76
396	TABO3175	XE TE TABOQUINHA	23 / 11 / 2009	5295	ACARI RF	TABO1350	ORILHA TE TABO	334	78	-4	54	9	91
397	TABO3313	ZENOBIA TABOQUINHA	4 / 9 / 2010	JFT2422	NOTÁVEL TE JF	TABO2601	TRAÍRA TE TABO	333	76	6	55	11	89
398	JUZZ55	HONRA FIV DA JUZZ	26 / 2 / 2013	JFT2351	NEPAL TE JF	JUZZ5	BRISA FIV JUZZ	333	68	38	54	7	78
399	TABO2445	TEQUILA TABOQUINHA	14 / 9 / 2006	TABO1301	OBUS TE TABO	TABO1411	PAMPLONA TABO	333	70	11	56	8	80
400	EAI435	LIDERANÇA	26 / 10 / 2010	TABO1726	QUIMÃO TE TABO	EAI396	HIDRA	333	61	17	46	9	72
401	JFT2587	ATLANTA TE JF	31 / 10 / 2005	TABO636	HUMAITÁ TE TABO	JFT1974	OLARIA JF	332	75	23	60	12	86
402	JFPA966	RACINE IBITURUNA	11 / 12 / 2013	JFPA465	CAMBUCI IBITURUNA	JFPA631	PALOMA IBITURUNA	332	73	-31	51	16	86
403	JFPA734	PRUDÊNCIA IBITURUNA	22 / 12 / 2011	JFPA222	URIEL IBITURUNA	GUZA1003	JACUTINGA	332	67	-9	50	15	78
404	TABO3643	ALANA FIV TABOQUINHA	10 / 12 / 2011	JFT2261	RUSSO TE JF	TABO1178	NONA TABO	332	74	3	63	15	82
405	ROSA126	URCA TE DO ROSÁRIO	9 / 7 / 2003	TABO636	HUMAITÁ TE TABO	A476	NÚBIA ROS	332	72	39	59	7	81
406	VMP429	UBAIA DAS FLORES	16 / 9 / 2010	TABO1835	REMANSO TE TABO	VMP318	NUVEM DAS FLORES	331	69	5	55	11	80
407	TABO1730	QUINTILHA TE TABOQUINHA	6 / 3 / 2004	A1462	PACÍFICO A	TABO760	JANGADA	331	75	25	61	7	83
408	METG2	ARUSHA FIV DA META	24 / 11 / 2011	A1437	ÉDIPO A	LKW106	CIRANDA B LEMB	331	72	15	61	15	81
409	IVAG2716	FIXA VILLEFORT	15 / 8 / 2011	TABO636	HUMAITÁ TE TABO	SULA321	FESTA ILHA FUNDA	331	70	21	52	14	80
410	FCGP554	EMPARN CUMARI	9 / 2 / 2007	TABO1272	OURIÇO TE TABO	FCGP436	SABINA DA EMPARN	331	79	-4	54	7	93
411	TABA691	IMERSA TABOQUINHA	15 / 1 / 1997	5763	ACOLHIDO TE CL	J653	FLECHA	330	86	25	72	5	93
412	JFPA1014	NERIAH IBITURUNA	21 / 5 / 2014	JFPA222	URIEL IBITURUNA	TABO3111	XEPA TE TABO	329	75	-22	52	17	89
413	SAV167	JASMIN FIV DE SADERE	10 / 3 / 2010	TABO1117	NAQUE TE TABO	SAV5	BOHEMIA TE SADERE	329	72	-32	56	11	83
414	EMGA1524	HEBE-A	11 / 7 / 2012	EMGA1182	BAURU-A	EMGA1196	BOLÍVIA-A	328	77	18	53	10	89
415	TABO4180	CURITIBA FIV TABOQUINHA	22 / 5 / 2014	TABO2343	SALOIO TE TABO	TABO3023	VISÃO TE TABO	328	69	0	54	14	79
416	FNF7139	UBÁ NF	26 / 3 / 2002	A748	ABC S	F7930	ARAGEM NF	328	86	14	68	7	93
417	JFT3299	OLAIA FIV JF	30 / 11 / 2010	5800	PERSEU S	JFT2303	NEGA TE JF	327	75	-9	60	11	86
418	CIPO329	GOTA FIV DO CIPÓ	13 / 9 / 2006	TABO1467	PÓLO TE TABO	JAJ2638	GAROTA JA	327	77	35	55	4	90
419	TABO2078	SELVA TE TABOQUINHA	1 / 8 / 2005	PEAC28	CRAVO PEAC	TABO539	HETÉIA	327	72	-6	57	12	82
420	EMGA1258	DIANA-A	13 / 5 / 2008	A1462	PACÍFICO A	EMGA959	UMAITA-A	326	73	11	56	14	82
421	EMGA1309	ESTRELA-A	14 / 7 / 2009	EMGA1103	ALADO-A	EMGA1099	AGENDA-A	326	75	-4	46	13	89
422	IVAG2976	FAGUANA VILLEFORT	27 / 11 / 2011	CNS4995	ABAETÉ S	IVAG238	BASE DO VILLEFORT	326	70	0	59	13	78
423	CNS8450	GRACIOSA S	31 / 12 / 2011	CNS7801	DESENHO S	JFT3097	CAJUADA FIV JF	326	62	-38	47	16	74
424	I8803	INDÍGENA DE ALAGOINHA	27 / 8 / 1992	5563	VAIDOSO JP	F5436	BONINA-A	326	82	28	62	10	91
425	IVAG238	BASE DO VILLEFORT	25 / 11 / 2007	A1437	ÉDIPO A	JFT2254	RESSACA TE JF	325	72	6	61	15	80
426	LUKG49	CABOTAGEM FIV	2 / 7 / 2010	TABO1835	REMANSO TE TABO	TABO691	ÍNDIA TABO	325	77	21	57	6	89
427	TABO2709	UAIEIRA TABOQUINHA	11 / 8 / 2007	TABO1726	QUIMÃO TE TABO	TABO1740	QUINANGA TABO	325	71	16	55	9	81
428	TABO3813	BELA FIV TABOQUINHA	5 / 11 / 2012	UNIU52	AGHA KHAN FIV	TABO2312	SUMA TE TABO	324	71	-7	56	16	81
429	JFPA561	OCTANA FIV IBITURUNA	27 / 11 / 2010	A1462	PACÍFICO A	TABO947	LAGOA TE TABO	324	72	31	59	8	81

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
430	BPSS36	CROÁCIA FIV BPS	12 / 5 / 2007	PEAC28	CRAVO PEAC	JFT2124	ESTRELA JF	324	68	8	55	10	77
431	WEME184	FÊNIX FIV BOA FAMÍLIA	4 / 11 / 2011	TABO1835	REMANSO TE TABO	WFM1119	ABAÍBA DO CIRNE	324	69	30	53	6	79
432	IVAG2134	EVASADA VILLEFORT	7 / 11 / 2010	CNS4995	ABAETÉ S	JFT2254	RESSACA TE JF	324	72	-18	61	19	80
433	TAL5743	LÂMINA DA TEOTÔNIO	22 / 7 / 2007	TABO636	HUMAITÁ TE TABO	TAL2221	VIOLADA TEOT	323	75	34	56	9	86
434	TAL7134	PAIXÃO DA TEOTÔNIO	25 / 4 / 2011	JFT2351	NEPAL TE JF	TAL5832	LIBANEZA TEOT	323	69	10	54	14	79
435	JFT3566	RAPOSA FIV JF	2 / 7 / 2013	JFT2261	RUSSO TE JF	JFT2358	NORA TE JF	323	71	16	60	14	80
436	WSPV1832	1832 F 10 DO MINEIRÃO	26 / 7 / 2010	DSM3371	ESTILETE DA MS	TABO1333	OROPA TE TABO	323	68	-2	50	13	78
437	JFT2311	NICARÁGUA JF	22 / 2 / 2004	TABO636	HUMAITÁ TE TABO	JFT1541	RECEITA JF	322	72	65	60	9	82
438	JFPA1207	MADONA FIV IBITURUNA	13 / 1 / 2016	JFPA222	URIEL IBITURUNA	JFT2356	NOVATA TE JF	322	70	12	55	15	80
439	AVPG378	ESCOLTA 4 MENINOS	19 / 5 / 2013	TABO2122	SERENO TABO	IHL108	DONDOCA	322	75	24	57	6	86
440	I2487	TRIBUNA DA TEOTÔNIO	22 / 8 / 1992	1389	URUTU	F3029	JAINARA TEOT	321	79	7	58	4	89
441	TABO2998	VIRGEM TE TABOQUINHA	1 / 3 / 2009	TABO866	LABRADOR TE TABO	CNS5266	BIBA S	321	79	-32	62	8	90
442	AVPG84	BIRITA 4 MENINOS	18 / 11 / 2010	UNIU52	AGHA KHAN FIV	IHL147	ESBELTA	321	70	-14	55	13	80
443	SULA637	ITALIANA ILHA FUNDA	4 / 8 / 2006	CNS5319	CABUL III S	SULA277	FAÍSCA ILHA FUNDA	320	75	-20	59	10	86
444	JFT3089	CARACA FIV JF	21 / 9 / 2009	TABO1835	REMANSO TE TABO	JFT2258	RENA TE JF	320	71	19	58	7	80
445	TABO1628	QUADRIGA TABOQUINHA	2 / 10 / 2003	A1462	PACÍFICO A	TABO1104	NAIA TE TABO	320	82	17	67	10	89
446	DYP144	DYANA DA ACONCHEGO	17 / 7 / 2009	TABO866	LABRADOR TE TABO	TABO632	HUNGRIA TE TABO	320	72	-17	63	15	78
447	TABO2400	TAINHA TABOQUINHA	1 / 8 / 2006	TABO636	HUMAITÁ TE TABO	TABO1620	QUIMANA TABO	320	72	14	59	10	82
448	TABO3753	AUDÁCIA TABOQUINHA	14 / 5 / 2012	TABO2510	TRONO TE TABO	TABO1965	RAGU TE TABO	320	70	3	55	17	80
449	EMGA1126	ATRIZ-A	4 / 12 / 2005	EMGA952	URÂNIO-A	EMGA873	SERVILHA-A	319	78	19	53	8	91
450	FCGP680	FACEIRA	1 / 10 / 2010	TABO1716	QUILATE TABO	FCGP584	CANGUARETAMA EMP.	319	73	-3	51	10	85
451	SULA379	GRÉCIA ILHA FUNDA	16 / 7 / 2004	CNS5319	CABUL III S	RLR894	LIDERANÇA	319	71	-18	52	10	85
452	JFT4250	ÉRICA JF	12 / 12 / 2012	JFT3102	CABO FIV JF	ZENA316	ZENA EMPATIA	319	63	2	38	12	77
453	TABO3380	ZARIFA TABOQUINHA	3 / 11 / 2010	JFT2351	NEPAL TE JF	EMGA1048	VENDA-A (TE)	317	74	1	55	10	86
454	LKW189	GAROTINHA BOA LEMBRANÇA	31 / 1 / 2008	LKW53	BURU B LEMB	LKW114	CONDENSA B LEMB	317	65	20	47	10	76
455	JFT3007	URÂNIA JF	25 / 10 / 2008	JFT2543	ÁLIBI TE JF	JFT2423	NIRVANA TE JF	317	66	2	50	8	78
456	JFPA720	POESIA IBITURUNA	13 / 12 / 2011	JFPA222	URIEL IBITURUNA	JFPA81	MOCINHA IBIT	317	75	21	52	9	89
457	JFT3756	NAIVA JF	29 / 8 / 2014	JFT3343	PAIOL FIV JF	JFT3267	OVELHA FIV JF	317	65	-18	48	16	78
458	AVPG188	DIANA 4 MENINOS	16 / 4 / 2012	TABO1406	PEQUI TE TABO	CIPO179	ESCAMA TE CIPÓ	317	71	0	58	23	81
459	APAY5	ÓTICA APAN	28 / 1 / 2015	TABO1406	PEQUI TE TABO	APAY1	LEMBRANÇA APAN	316	64	7	50	14	72
460	TABO1550	QUEIMADA TABOQUINHA	10 / 7 / 2003	A1463	QUILATE A	TABO1056	MÁGICA TE TABO	316	74	37	57	8	83
461	JFPA1159	ALICE IBITURUNA	26 / 11 / 2015	JFPA222	URIEL IBITURUNA	JFT2516	ABAIA JF	315	71	6	56	17	81
462	JFT2423	NIRVANA TE JF	18 / 12 / 2004	5800	PERSEU S	JFT1906	CALÇADA JF	315	80	0	66	11	89
463	VMP456	ZANNA FIV DAS FLORES	28 / 10 / 2013	JFT2351	NEPAL TE JF	VMP377	PARMA DAS FLORES	315	71	10	57	14	81
464	JFT2154	ESGRIMA JF	25 / 10 / 2002	A2389	ESTILO A	JFT1758	MALAGUETA JF	315	77	-18	59	9	87
465	TABO3831	BENÍCIA FIV TABOQUINHA	10 / 11 / 2012	TABO2333	SULFO TE TABO	TABO2509	TURQUIA FIV TABO	314	71	13	58	14	80
466	AVPG234	DOMITILA 4 MENINOS	15 / 9 / 2012	1389	URUTU	IHL108	DONDOCA	314	76	20	61	9	87
467	TABO3131	XABEBA TABOQUINHA	1 / 11 / 2009	TABO2333	SULFO TE TABO	TABO1679	QUIJARA TE TABO	314	70	25	56	9	80
468	JFPA1079	NOBREZA IBITURUNA	1 / 10 / 2014	JFPA222	URIEL IBITURUNA	JFT2436	NASCENTE TE JF	314	73	-6	58	17	82
469	JFPA69	MACALA TE IBITURUNA	31 / 3 / 2006	TABO636	HUMAITÁ TE TABO	CNS5372	CALORIA S	313	71	4	60	12	80
470	EMGA1669	INGAZEIRA-A	12 / 8 / 2013	EMGA1209	CANDE-A	EMGA1224	CARPINA-A	313	73	55	56	12	82
471	LKW94	CHÁCARA DA BOA LEMBRANÇA	20 / 3 / 2004	8301	CUBITO G.I DA ND	JAJ2947	TRAÍRA JA	313	68	-10	55	12	78
472	TABO1266	OPÇÃO TE TABOQUINHA	29 / 10 / 2001	A2389	ESTILO A	TABO517	HESTER	313	81	35	68	9	88
473	GCBS3	OSINHA TABOQUINHA	22 / 10 / 2010	TABO2333	SULFO TE TABO	TABO1348	OSA TE TABO	313	71	37	57	9	81
474	TABO1130	NIRVANA TABOQUINHA	7 / 11 / 2000	TABO727	INSTINTO TE TABO	TABO832	JUNINA TABO	312	76	-10	61	12	85
475	WSPV1787	GRANA DO MINEIRÃO	9 / 6 / 2010	CNS4995	ABAETÉ S	TABO1333	OROPA TE TABO	312	70	17	58	10	78
476	TABO3580	ANSIEDADE TABOQUINHA	27 / 9 / 2011	TABO2567	TUISTE TE TABO	TABO1866	RIFAINA TABO	312	73	-4	53	15	86
477	WEME320	MONALISA BOA FAMÍLIA	10 / 1 / 2016	JFT3157	CAIM JF	WFM1119	ABAÍBA DO CIRNE	312	64	-4	47	21	77
478	TABO4124	CAATINGA TABOQUINHA	13 / 1 / 2014	JFT3045	CAIO FIV JF	TABO2735	UFANIA TABO	312	69	-5	52	11	80
479	TAL7360	CASA DA TEOTÔNIO	8 / 10 / 2012	TABO1726	QUIMÃO TE TABO	TAL5270	IDENTIDADE TEOT	312	71	9	49	11	84
480	MDVG6348	MARIANA D	13 / 8 / 2002	A2687	ALOPRADO D	MDVG5308	GAMELEIRA D	311	75	17	53	7	84
481	JFPA1160	AYLA IBITURUNA	27 / 11 / 2015	JFPA222	URIEL IBITURUNA	PEAC314	MISS TE PEAC	311	69	22	53	16	80
482	CIPO303	GALILÉIA FIV DO CIPÓ	25 / 4 / 2006	CNS4995	ABAETÉ S	TABO632	HUNGRIA TE TABO	311	77	7	66	9	84
483	JFPA326	UMBAÚBA IBITURUNA	28 / 11 / 2008	JFPA48	ARGENTO FIV IBIT	JFT1725	AXÉ JF	311	68	-16	51	11	79

(to be continued...)

(continuation...)

Milk Rank.	Cow's ID	Cow's Name	Birthdate	Sire's ID	Sire's Name	Dam's ID	Dam's Name	Milk EPD	Rel. %	AFC EPD	Rel. %	MPE EPD	Rel. %
484	TABO2780	URUMA TABOQUINHA	27 / 10 / 2007	CNS4995	ABAETÉ S	TABO927	LADEIRA TABO	311	74	6	62	9	82
485	TABO1410	PÁDUA TE TABOQUINHA	21 / 8 / 2002	TABO727	INSTINTO TE TABO	TABA691	IMERSA TABO	310	77	19	64	6	85
486	TABO3604	ARMELA TABOQUINHA	13 / 10 / 2011	TABO2343	SALOIO TE TABO	TABO1967	RUGA TE TABO	310	74	-6	51	12	89
487	LKW918	ODALISCA BOA LEMBRANÇA	20 / 11 / 2014	LKW436	LICOR FIV B LEMB	LKW146	DELÍCIA B LEMB	310	65	2	46	17	78
488	JFT1800	BONANÇA TE JF	4 / 2 / 1997	A2389	ESTILO A	F2775	RUPIA	310	83	-4	69	8	90
489	TABO2348	SEIVA TE TABOQUINHA	2 / 6 / 2006	CNS4995	ABAETÉ S	TABO632	HUNGRIA TABO	310	77	7	66	9	84
490	JFT3255	OFICINA FIV JF	5 / 11 / 2010	A1437	ÉDIPO A	JFT2263	BÁRBARA TE JF	310	75	12	58	9	85
491	LKW936	OCRA BOA LEMBRANÇA	21 / 12 / 2014	UNIU52	AGHA KHAN FIV	LKW540	MIRRA FIV B LEME	310	74	-38	53	17	86
492	TABO1553	QUARTOLA TABOQUINHA	14 / 7 / 2003	MDVG6066	JANARI D	TABO982	MOLDURA TABO	309	72	3	57	12	82
493	LKW584	MALINA FIV BOA LEMBRANÇA	9 / 6 / 2012	JFT2488	ATLAS TE JF	LKW106	CIRANDA B LEMB	309	74	-20	55	10	86
494	EMGA1560	IARA-A	23 / 1 / 2013	A1437	ÉDIPO A	EMGA877	SEIVA-A	309	74	11	62	10	82
495	JFT3694	NINA JF	1 / 6 / 2014	JFT3232	ÓPIO II JF	JFT2258	RENA TE JF	308	65	-9	50	17	78
496	TABO3822	BAIUNA FIV TABOQUINHA	8 / 11 / 2012	UNIU52	AGHA KHAN FIV	TABO2312	SUMA TE TABO	308	75	1	56	13	86
497	TABO2311	SALGA TE TABOQUINHA	25 / 3 / 2006	5883	HÁBIL TE TABO	TABO856	LACÍNIA TABO	307	71	-7	58	11	81
498	GUZA957	JANELA	18 / 3 / 2007	TABO1301	OBUS TE TABO	GUZA566	ESMERALDA	307	71	-11	56	16	81
499	GZF66	HUNGRIA FIV DO GUGA	7 / 4 / 2015	TABO2510	TRONO TE TABO	BPSS34	COLÔMBIA FIV BPS	307	67	22	54	13	77
500	TABO4053	BETÂNIA FIV TABOQUINHA	6 / 11 / 2013	DSM3371	ESTILETE DA MS	TABO1749	QUERATINA TE TABO	307	72	-1	57	15	81
501	CALG145	UCHOA CAL	4 / 8 / 2005	TABO727	INSTINTO TE TABO	EMGA877	SEIVA-A	306	73	32	59	7	82
502	JFT3555	EPOPÉIA FIV JF	16 / 12 / 2014	JFT2488	ATLAS TE JF	JFT2427	NÁDIA TE JF	306	69	-2	56	18	80
503	TABO2329	SARAGOÇA TE TABOQUINHA	4 / 5 / 2006	CNS4995	ABAETÉ S	TABO632	HUNGRIA TABO	306	78	5	67	11	85
504	TABO3467	AMOROSA TABOQUINHA	17 / 12 / 2010	TABO2333	SULFO TE TABO	TABO2130	SENTENÇA TABO	306	75	5	55	10	86
505	SAV114	GARÇA TE DE SADERE	21 / 12 / 2007	TABO1117	NAQUE TE TABO	SAV16	DANÇARINA SADERE	306	73	4	55	9	84
506	SAV5	BHOEMIA	5 / 6 / 2002	TABO866	LABRADOR TE TABO	TABO632	HUNGRIA TABO	306	79	-19	66	11	86
507	JUZZ40	FIBRA FIV DA JUZZ	8 / 7 / 2012	JFT2261	RUSSO TE JF	JUZZ1	ALABA FIV JUZZ	306	68	7	56	15	77
508	TABO3656	ACIDALIA TABOQUINHA	23 / 12 / 2011	TABO2124	SENTIDO TABO	TABO832	JUNINA TABO	306	67	5	49	12	79
509	TABO2054	SAVENA TABOQUINHA	17 / 7 / 2005	TABO1272	OURIÇO TE TABO	TABO1379	PATACA TABO	305	72	14	57	6	82
510	TABO2380	TABERNA TABOQUINHA	19 / 7 / 2006	A2687	ALOPRADO D	TABA691	IMERSA TABO	305	72	8	59	9	81
511	TABO2388	TRAMA TE TABOQUINHA	20 / 7 / 2006	LDCV391	FARO TE MORUMBI	TABO1109	NAPA TABO	305	75	-6	58	7	86
512	TABO2803	UNIÃO TABOQUINHA	7 / 12 / 2007	TABO1835	REMANSO TE TABO	TABO1268	OUSADIA TABO	305	70	19	56	6	80
513	TAL7087	OMANA DA TEOTÔNIO	15 / 11 / 2010	CNS4995	ABAETÉ S	TAL3343	BOBINA TEOT	305	66	2	54	14	77
514	TABO1333	OROPA TE TABOQUINHA	1 / 2 / 2002	9957	NAVEGANTE	JFT1545	REGATA JF	305	78	28	63	8	86
515	LKW251	HERA BOA LEMBRANÇA	12 / 4 / 2009	MMMM638(	VALETE 4M	LKW16	AREAS B LEMB	304	63	-1	44	9	77
516	TABO3509	ALTEZA FIV TABOQUINHA	22 / 2 / 2011	5295	ACARI RF	TABO1749	QUERATINA TE TABO	304	76	2	58	11	87
517	TABO3610	ATENÉIA TABOQUINHA	4 / 11 / 2011	TABO2333	SULFO TE TABO	TABO2241	SHAKIRA TE TABO	304	75	10	58	12	87
518	TABO4072	BINACA FIV TABOQUINHA	6 / 11 / 2013	LDCV391	FARO TE MORUMBI	TABO2346	SEBE TE TABO	303	74	5	55	15	86
519	TABO2346	SEBE TE TABOQUINHA	1 / 6 / 2006	HANC311	CORSÁRIO VEREDA	TABO1154	NAIRA	303	75	11	59	13	85
520	LCSJ20	GANA SANTA TEREZINHA	10 / 8 / 2010	TABO1117	NAQUE TE TABO	LCSY1	GAZETA S T	303	63	1	53	11	72
521	JFPA1049	NAMORADA IBITURUNA	8 / 8 / 2014	JFPA222	URIEL IBITURUNA	JFPA309	UBAJARA IBIT	303	74	-12	52	14	86
522	TABO1858	ROMA TABOQUINHA	7 / 9 / 2004	TABO1272	OURIÇO TE TABO	TABO1178	NONA TABO	302	75	10	59	6	86
523	TABO4313	DECORADA TABOQUINHA	8 / 1 / 2015	TABO2567	TUISTE TE TABO	TABO3572	AMIZADE TABO	301	67	6	52	18	79
524	JCGU536	IQUARIA CAMARÃO	14 / 4 / 2014	JCGU231	ESTEIO FIV CAMARÃO	EGBG10	AMETISTA FIV EGB	301	63	-4	36	13	77
525	GUZA707	EDUCADA TE	8 / 9 / 2003	9957	NAVEGANTE	G8902	CASSIMBA	301	66	6	50	8	78
526	LKW714	NELICA BOA LEMBRANÇA	4 / 5 / 2013	UNIU52	AGHA KHAN FIV	LKW276	HAICAL FIV	300	74	-27	57	15	86
527	JFT3269	OLA FIV JF	16 / 11 / 2010	A1437	ÉDIPO A	CNS5266	BIBA S	300	73	10	61	10	81
528	EMGA1417	GENEBRA-A	8 / 10 / 2011	8301	CUBITO G.I DA ND	EMGA817	PITANGA-A	300	72	-8	58	15	81
529	JFPA1140	AMETISTA IBITURUNA	2 / 9 / 2015	UNIU439	ESCOTEIRO FIV UNIU	JFPA711	PEPITA IBIT	300	67	-9	50	18	79

Table 8. Results of genetic evaluation of Guzera sires for milk production according to management level of the herds, i.e., the response to the productive environment.

Sire's Name	Sire's identification	Environmental gradient*		Reaction**
		Low-input management	High-input management	
ABAETE S	CNS4995			SENSITIVE (-)
ALOPRADO D	A2687			SENSITIVE (-)
BARBANTE JF	9940			ROBUST (=)
CABUL III S	CNS5319			ROBUST (=)
CASSINO JF	9951			ROBUST (=)
CRAVO PEAC	PEAC28			SENSITIVE (-)
CUBITO G.I DA ND	8301			SENSITIVE (-)
DEDAL TE DO ROSÁRIO	ROS18			SENSITIVE (-)
DESENGASGO D	A6134			ROBUST (=)
DEVOTO TE DO ROSÁRIO	ROS34			SENSITIVE (+)
ÉDIPO DE ALAGOINHA	A1437			SENSITIVE (-)
ESTILO DE ALAGOINHA	A2389			SENSITIVE (-)
ÊXITO TE TABOQUINHA	5762			ROBUST (=)
FARO TE DA MORUMBI	LDCV391			SENSITIVE (-)
GENTIL JA	7963			ROBUST (=)
GITANO DE ALAGOINHA	A2664			SENSITIVE (-)
GURIRI TE TABOQUINHA	5882			SENSITIVE (-)
HÁBIL TE TABOQUINHA	5883			SENSITIVE (+)
HORTO DE ALAGOINHA	A1443			SENSITIVE (+)
HUMAITA TE TABOQUINHA	TABO636			ROBUST (=)
IMPERIAL JA	A133			SENSITIVE (-)
IMPULSIVO DE ALAGOINHA	A1447			ROBUST (=)
INSTINTO TE TABOQUINHA	TABO727			SENSITIVE (+)
LABRADOR TABOQUINHA	TABO866			ROBUST (=)
LAGO DE ALAGOINHA	A6174			SENSITIVE (+)
MARABA S	CNS6135			SENSITIVE (+)
MARANHÃO TE PEAC	PEAC211			ROBUST (=)
NAIROBI TABOQUINHA	TABO1099			SENSITIVE (-)
NAMBU JP	7655			ROBUST (=)
NAQUE TE TABOQUINHA	TABO1117			SENSITIVE (-)
NAVEGANTE	9957			SENSITIVE (-)
NEHERU TE JF	JFT2349			SENSITIVE (-)
NEPAL TE JF	JFT2351			SENSITIVE (-)
NOBRE JF	5791			SENSITIVE (-)
NOTÁVEL TE JF	JFT2422			ROBUST (=)
OBUS TE TABOQUINHA	TABO1301			SENSITIVE (-)
ÓLEO TE TABOQUINHA	TABO1364			SENSITIVE (-)
OPUS TE TABOQUINHA	TABO1367			SENSITIVE (-)
ORIENTE TE TABOQUINHA	TABO1302			SENSITIVE (-)
OSASCO 4M	MMMMA5873			SENSITIVE (-)
PACÍFICO DE ALAGOINHA	A1462			ROBUST (=)
PARAÍSO JF	9754			ROBUST (=)
PEQUI TE TABOQUINHA	TABO1406			SENSITIVE (+)
PERSEU S	5800			ROBUST (=)
QUERO QUERO	9323			SENSITIVE (-)
QUIEVE TE TABOQUINHA	TABO1597			SENSITIVE (-)
QUILATE DE ALAGOINHA	A1463			SENSITIVE (-)
QUIMÃO TE TABOQUINHA	TABO1726			ROBUST (=)
REMANSO TE TABOQUINHA	TABO1835			SENSITIVE (-)
RUSSO TE JF	JFT2261			ROBUST (=)
SALOIO TE TABOQUINHA	TABO2343			ROBUST (=)
SERIDO JA	7866			SENSITIVE (-)
SULFO TE TABOQUINHA	TABO2333			SENSITIVE (-)
TRIGUEIRO D	A2633			SENSITIVE (-)
URUTU	1389			SENSITIVE (-)
VAIDOSO JP	5563			SENSITIVE (+)

*Environmental gradient: Classification of the management level or pattern

****Reaction: sensitive (-) = underdemanding animal in environmental conditions, i.e., able to produce in simple environments (low-input management); sensitive (+) = overdemanding animal in environmental conditions, i.e., able to produce in refined environments; Robust (=) animal able to produce in any environment, unregardless of the environment pattern.

Table 9. Results of genetic evaluations of double proven Guzera sires for growth, carcass and functional traits conducted by ANCP-USP in 2020.

Sire's ID	Sire's Name	W210 EPD	W210 EPD ACC.	W210 TOP %	W365 EPD	W365 EPD ACC.	W365 TOP %	W450 EPD	W450 EPD ACC.	W450 TOP %	MW EPD	MW EPD ACC.	MW TOP %	REA EPD	REA EPD ACC.	REA TOP %	ACAB EPD	ACAB EPD ACC.	ACAB TOP %	STAY EPD	STAY EPD ACC.	STAY TOP %
CNS4995	ABAETÉ S	13,40	78	0,5	20,92	82	2	24,54	82	1	21,93	51	95	-1,94	66	100	0,24	64	2	72,53	70	0,5
5736	ACARAJÉ S	4,94	44	33	0,05	50	79	1,96	51	66	5,51	40	37	-0,26	7	88	0,27	7	2	50,27	53	76
5295	ACARI RF	9,85	67	4	19,65	70	2	21,10	71	3	19,39	51	89	1,14	52	8	0,30	49	1	66,41	67	6
CNS5027	ACASO S	8,37	61	9	13,71	66	12	11,85	69	23	29,22	26	100	0,84	37	14	-0,23	34	99	46,57	56	94
7556	ADORNO	1,28	24	65	14,29	27	11	8,69	28	36	-7,98	5	2	2,02	33	2	0,17	29	6	56,72	26	40
JAR5726	ADVENTO TE JA	8,06	33	11	10,50	36	24	9,48	37	33	13,12	11	67	-0,37	13	91	-0,02	13	71	56,35	32	42
UNIU52	AGHA KHAN FIV	0,43	13	74	1,76	16	68	-1,97	19	89	-0,18	4	14	0,10	1	55	0,03	1	43	50,82	7	73
5735	ALADIM S	6,69	54	19	9,35	60	30	13,71	61	17	15,76	33	77	1,33	49	6	0,09	45	20	66,29	55	7
973	ALBATROZ JP	-0,05	3	82	0,07	4	79	-0,30	4	81	2,45	2	26	0,15	1	51	0,00	1	59	49,40	3	83
A2687	ALOPRADO D	-2,42	23	97	4,13	26	56	-0,06	27	79	2,17	5	25	-0,09	1	79	-0,01	1	66	61,47	16	20
9940	BARBANTE JF	2,91	67	50	12,60	70	16	14,38	71	15	42,19	46	100	0,63	57	21	0,37	54	1	69,84	68	2
CNS7293	BEIJIM S	5,10	28	32	12,49	35	16	14,68	38	14	21,53	4	94	0,94	14	12	-0,02	12	71	58,96	10	30
9387	BERLIM NF	1,09	42	67	7,97	48	36	6,85	50	44	6,83	37	41	0,05	3	59	-0,06	3	83	76,07	43	0,1
ROES1	BESOURO ROES	11,59	74	1	18,89	77	3	22,49	77	2	34,18	39	100	2,76	68	0,5	0,10	65	17	74,80	70	0,5
A914	BURGUÊS S	6,16	34	23	6,64	36	43	7,88	37	39	15,33	22	75	-0,87	23	98	0,39	23	0,5	47,07	33	93
A6120	CABO DE GUERRA D	-2,73	17	98	-3,69	18	95	-5,74	19	97	-5,19	6	4	-0,04	1	74	-0,01	1	66	49,90	13	79
A951	CABUL II S	3,28	31	47	1,44	38	70	-0,27	39	80	9,92	19	53	-0,34	5	90	0,17	5	6	50,62	39	74
CNS5319	CABUL III S	6,54	45	20	9,45	52	29	12,76	54	20	7,54	9	44	1,67	23	3	0,14	21	9	53,22	34	59
9737	CABUL S	1,47	64	63	7,11	67	41	3,76	68	57	23,48	61	97	-0,68	28	96	0,23	27	3	58,45	71	32
5558	CADUCEU S	4,08	46	40	6,13	49	46	6,22	51	46	13,35	29	68	-0,57	36	95	-0,02	34	71	63,34	46	13
UNIU236	CAIRO	2,20	25	56	7,62	27	38	5,37	28	50	-2,72	10	7	0,02	1	62	0,04	1	38	58,22	14	33
4790	CAIRO JP	-1,04	31	92	-0,44	38	84	0,69	40	73	5,71	11	37	0,21	1	46	0,00	1	59	49,42	22	83
JFT3094	CÁLICE FIV JF	4,92	19	33	9,45	20	29	10,34	20	29	12,13	9	63	-0,29	7	89	0,14	6	9	62,34	10	17
A6119	CAPITÃO-MOR D	2,92	40	50	7,76	46	37	5,48	48	50	5,71	22	37	-0,02	1	72	-0,03	1	75	78,24	41	0,1
9951	CASSINO JF	0,91	57	69	8,58	62	33	8,89	64	35	12,81	33	65	1,86	22	3	0,47	20	0,5	50,30	55	76
PEAC22	CIGANO TE PEAC	-1,64	13	95	-2,83	14	94	-4,71	15	96	-2,27	7	8	0,25	1	44	0,00	1	59	45,23	15	97
HANC311	CORSÁRIO DA VEREDA	2,22	25	56	5,44	28	49	8,31	27	37	23,50	9	97	0,03	10	61	0,09	10	20	61,09	15	21
PEAC28	CRAVO TE PEAC	2,20	15	56	10,81	17	23	5,65	18	49	16,25	11	79	0,23	4	45	0,17	4	6	60,48	17	23
8301	CUBITO G I DA ND	-2,97	25	98	-3,10	30	94	-7,89	32	99	-3,00	14	7	0,16	1	50	0,02	1	47	50,64	21	74
A6430	DANDI JP	-0,76	15	90	-0,66	17	85	-2,95	18	92	-3,44	10	6	0,57	2	24	0,03	1	43	48,44	16	88
ROS17	DARDO TE DO ROSÁRIO	8,26	64	10	8,00	69	36	10,55	71	28	6,70	36	41	0,31	4	39	0,06	4	29	58,53	47	32
ROS18	DEDAL TE DO ROSÁRIO	0,91	32	69	2,33	37	65	4,39	39	54	2,43	15	26	0,32	4	38	0,06	4	29	46,15	21	95
CNS5614	DELITO S	10,62	18	3	19,61	22	2	21,81	23	2	12,51	3	64	0,49	3	28	0,12	3	13	60,52	7	23
A119	DESAFIO JA	-4,50	13	100	-1,73	14	90	-4,24	15	95	-5,61	5	3	0,05	1	59	0,02	1	47	44,92	11	97
A6134	DESENGASGO D	1,45	17	63	4,17	22	55	5,33	24	50	0,00	1	15	0,00	1	64		0		62,87	13	15
A2118	DESPACHO S	3,31	47	47	10,74	52	23	9,25	54	34	13,39	43	68	0,90	16	12	0,26	15	2	63,06	53	14
ROS34	DEVOTO TE DO ROSÁRIO	-0,20	52	84	7,57	57	38	6,49	58	45	6,45	29	40	0,63	15	21	0,17	15	6	70,11	43	2
JAJA2755	DINAMARQUÊS TE JA	-6,10	26	100	-5,02	33	97	-9,36	34	100	-12,17	16	0,5	0,00	1	64		0		44,63	13	97
5088	DRAKAR S	0,58	31	72	-0,21	33	82	2,28	33	64	1,13	14	22	-0,14	5	82	0,20	5	4	50,62	29	74
A1437	ÉDIPO DA ALAGOINHA	-1,67	51	95	-4,84	56	97	-6,44	57	98	-2,16	30	8	0,19	5	48	-0,03	4	75	55,14	52	49
A6719	EDITOR	0,54	11	73	6,11	13	46	3,00	13	61	-10,41	3	1	1,17	8	8	0,12	7	13	53,47	13	58
IHL146	ELETRO	-1,82	15	96	-3,10	17	94	-2,04	17	89	-5,09	7	4	-0,18	3	84	-0,04	2	78	55,06	10	49
7962	EMBORNAL D	-5,93	21	100	-7,94	25	99	-6,78	27	98	1,48	5	23	-0,40	3	92	0,00	3	59	59,05	15	29
UNIU439	ESCOTEIRO FIV UNIUBE	0,95	46	68	10,97	52	22	12,29	54	22	11,92	6	62	0,21	5	46	0,04	5	38	52,20	10	65
DSM3371	ESTILETE DA MS	3,87	52	42	11,50	58	20	12,00	59	23	18,20	27	85	0,28	23	42	0,30	22	1	58,26	44	33
A2389	ESTILO DA ALAGOINHA	0,37	42	75	9,66	48	28	0,24	50	76	6,71	31	41	0,15	2	51	0,08	1	23	56,82	39	40
5762	ÊXITO TE	1,76	18	61	5,51	21	49	2,55	22	63	-3,32	12	6	-0,08	8	78	-0,30	8	100	59,55	20	27
9491	FALATÓRIO DE NAVIRAÍ	2,43	59	55	4,83	62	52	3,71	62	58	14,03	35	70	-0,15	26	82	-0,01	24	66	60,16	47	25
LDCV391	FARO TE DA MORUMBI	3,40	56	46	4,61	63	53	4,20	66	55	4,25	30	32	0,70	2	18	0,07	1	26	46,90	39	93
A336	FOGO RF	6,62	75	20	9,88	78	27	8,33	79	37	13,02	60	66	-0,26	30	88	0,00	28	59	55,89	64	45
CNS5827	FUÁ S	1,71	54	61	3,29	59	60	5,81	59	48	30,25	27	100	0,53	42	26	-0,28	39	100	69,15	53	3
A337	FUNDADOR TE RF	-0,67	54	89	-1,14	61	88	2,05	59	66	-1,70	39	9	-0,02	2	72	-0,11	2	92	37,64	40	100
LKW223	GARI FIV BOA LEMBRANÇA	1,09	32	67	3,57	38	59	5,50	40	50	10,25	17	55	0,83	4	14	0,02	4	47	51,09	20	71
A2731	GAVIÃO DA N. FLORESTA	-0,09	37	82	0,44	43	76	0,56	44	74	-1,78	20	9	0,22	1	46	-0,01	1	66	58,34	27	33

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	W210 EPD	W210 EPD ACC.	W210 TOP %	W365 EPD	W365 EPD ACC.	W365 TOP %	W450 EPD	W450 EPD ACC.	W450 TOP %	MW EPD	MW EPD ACC.	MW TOP %	REA EPD	REA EPD ACC.	REA TOP %	ACAB EPD	ACAB EPD ACC.	ACAB TOP %	STAY EPD	STAY EPD ACC.	STAY TOP %
7963	GENTIL JA	-0,76	41	90	-9,62	46	100	-14,33	47	100	6,99	31	42	-0,38	7	91	-0,11	7	92	57,29	47	38
A2664	GITANO DE ALAGOINHA	-0,61	9	88	-4,57	11	97	-8,02	11	99	5,14	7	35	-0,14	2	82	-0,04	2	78	54,09	10	54
ITG1235	GOBBO IT	8,65	87	8	14,21	89	11	16,95	89	9	15,56	38	76	0,58	85	24	-0,19	83	98	52,90	81	61
5882	GURIRI TE TABOQUINHA	3,23	53	48	5,12	59	51	6,56	60	45	3,03	28	28	0,33	4	37	0,06	4	29	41,28	46	100
NESZ2	GUZERÁ DA BARRA 2	4,84	66	34	11,25	71	21	13,09	73	19	20,50	25	92	1,23	65	7	-0,30	62	100	41,85	50	99
5883	HÁBIL TE TABOQUINHA	1,41	70	64	6,25	75	45	6,44	77	45	25,73	37	99	-0,58	56	95	0,29	52	2	57,85	60	35
AFGF184	HAITI TE S CLARAMAR	13,35	54	0,5	18,89	60	3	23,06	61	2	24,26	21	98	0,53	54	26	-0,07	51	86	60,99	44	21
TABO538	HETEU TE TABOQUINHA	1,71	23	61	5,32	27	50	5,33	29	50	-3,05	13	7	0,67	5	19	0,05	4	34	47,42	27	92
FNFA960	HIDRANTE FIV NF	-0,25	63	85	3,55	67	59	-0,08	68	79	12,30	12	63	-0,54	1	94	0,04	1	38	58,00	14	34
TABO587	HÍFEM TE TABOQUINHA	1,92	19	59	7,14	21	40	12,93	22	20	26,47	11	99	0,31	13	39	0,17	13	6	67,19	20	5
TABO618	HOMERO TE TABOQUINHA	2,58	23	53	8,96	25	32	8,14	25	38	26,67	15	100	0,08	17	57	0,23	17	3	65,20	25	9
A2804	HORIZONTE NF	-1,81	24	96	-0,22	28	82	-1,98	28	89	-1,72	18	9	0,97	3	11	0,02	2	47	46,36	24	95
A1443	HORTO DE ALAGOINHA	-4,71	49	100	-5,68	55	98	-8,87	57	99	5,22	18	36	0,94	5	12	0,03	5	43	51,59	42	68
GUZA834	HOTEL TE	0,48	1	74	2,86	3	62	1,53	1	68		0		0,00	1	64		0		49,76	1	80
HUM24	HUM SONHO ABADON	-1,94	34	96	1,80	40	68	3,31	42	59	-2,79	17	7	-0,31	8	89	0,07	7	26	54,34	13	53
TABO636	HUMAITÁ TE TABOQUINHA	-2,22	66	97	-1,98	70	91	-1,70	72	88	-9,05	29	1	-0,46	10	93	-0,06	8	83	58,00	48	34
4610	HUMAYAN	3,19	18	48	-1,51	20	89	-5,05	24	96	0,02	6	17	-0,13	2	81	0,05	2	34	45,87	23	96
TABO637	IAGO TE TABOQUINHA	0,14	23	78	1,12	28	72	2,34	28	64	3,17	10	29	0,52	2	27	0,08	2	23	49,26	20	84
A989	IBÉRICO JP	-0,42	30	87	0,44	34	76	1,61	35	68	1,56	21	23	0,41	1	33	0,01	1	53	63,15	31	14
A133	IMPERIAL JA	2,23	46	56	2,24	50	66	2,96	50	61	6,19	32	39	-0,19	4	85	-0,15	4	96	52,02	50	66
A1447	IMPULSIVO DE ALAGOINHA	-3,53	35	99	-2,74	44	93	-5,29	45	96	8,55	19	48	0,51	3	27	0,03	2	43	46,91	28	93
ROS116	INGLÊS TE DO ROSÁRIO	1,74	15	61	7,67	17	38	6,55	18	45	5,59	7	37	1,06	5	9	0,25	5	2	44,93	15	97
TABO727	INSTINTO TE TABOQUINHA	1,25	51	65	3,12	57	61	0,77	59	72	-10,14	24	1	0,41	4	33	-0,03	3	75	74,95	42	0,5
TABO747	JABUTI TE TABOQUINHA	-2,92	38	98	3,70	48	58	-1,63	48	88	2,32	8	26	0,02	1	62	0,05	1	34	57,94	26	35
4899	JACUI NF	0,99	36	68	2,36	46	65	-2,42	48	90	-9,41	23	1	0,34	1	37	0,03	1	43	41,37	34	100
A1449	JAGUNÇO DE ALAGOINHA	-1,53	13	94	-3,62	13	95	-5,70	14	97	0,65	7	20	0,15	1	51	-0,01	1	66	53,63	10	57
MDVG6066	JANARI D	0,56	30	73	3,79	36	57	1,34	38	69	8,94	17	49	-0,06	1	76	-0,06	1	83	65,15	21	9
A739	JAVANÊZ NF	-0,61	23	88	1,49	28	70	3,02	30	61	6,16	21	39	0,60	1	23	0,02	1	47	53,69	29	56
TABO849	JECA TE TABOQUINHA	0,58	65	72	1,84	70	68	1,28	72	70	9,15	9	50	-0,92	52	98	0,08	48	23	42,85	49	99
TABO812	JEQUIÁ TE TABOQUINHA	-3,33	36	99	-2,95	43	94	-6,15	46	97	3,57	11	30	0,12	1	53	-0,01	1	66	50,91	29	72
LVPS59	JOÁ DA N.FLORESTA	-2,38	29	97	0,49	33	76	-4,70	32	96	-4,72	12	4	0,96	2	11	0,09	1	20	42,80	17	99
TABO818	JONAS TE TABOQUINHA	-3,88	34	100	-2,96	40	94	-4,35	41	95	2,90	8	28	0,12	1	53	-0,01	1	66	52,04	24	66
9974	JÓQUEI TE JP	0,51	14	73	-4,76	16	97	-6,74	17	98	3,74	8	31	-0,17	2	84	-0,05	2	81	50,83	15	73
FNF4392	JOVEM TE NF	2,19	59	57	1,24	66	71	2,81	68	62	2,38	37	26	-0,15	1	82	-0,15	1	96	50,16	43	77
JAJ3188	JUAZEIRO JA	-3,51	8	99	-5,86	10	98	-8,92	11	99	-7,02	8	2	0,41	1	33	0,05	1	34	61,36	13	20
TABO866	LABRADOR TE TABOQUINHA	2,93	60	50	11,87	66	19	4,93	67	52	-8,40	39	2	-0,49	3	94	0,04	3	38	57,43	45	37
5769	LEITEIRO JP	0,35	20	75	-0,80	23	86	-4,08	25	95	5,16	17	35	-0,13	2	81	-0,06	2	83	53,00	22	60
A1056	LOUVADO D	-2,64	6	98	-1,18	8	88	-1,27	9	86	1,23	2	22	-0,16	1	83	0,00	1	59	55,44	6	47
MVB20	MABROUK DA VIC	13,76	67	0,5	26,89	71	0,1	28,04	72	0,5	27,70	28	100	1,31	59	6	0,05	57	34	59,32	64	28
5465	MAGNUM S	3,47	41	45	2,05	47	67	2,51	50	63	3,93	42	31	1,21	4	7	0,24	4	2	55,47	45	47
CNS6042	MAGO TE S	14,92	61	0,1	21,16	66	1	21,39	66	3	21,35	36	94	2,10	31	2	0,16	29	7	72,77	52	0,5
CNS6135	MARABÁ S	2,14	34	57	8,22	43	35	6,89	45	43	19,37	7	89	-0,05	26	75	-0,07	23	86	54,61	27	52
TABO964	MARACATU TABOQUINHA	3,64	40	44	7,62	48	38	7,13	50	42	2,57	8	27	0,39	5	34	0,16	5	7	45,42	23	96
PEAC211	MARANHÃO TE PEAC	2,99	26	50	8,16	29	35	3,77	28	57	0,89	12	21	0,58	2	24	0,13	2	11	44,62	25	97
HQB258	MARCA SOL EMENTHAL	10,99	77	2	18,80	80	3	20,78	81	3	30,15	34	100	0,22	71	46	0,08	68	23	72,53	71	0,5
TABO969	MATIPÓ TE TABOQUINHA	1,58	18	62	8,62	21	33	4,67	21	53	5,59	7	37	1,06	5	9	0,25	5	2	44,33	17	98
TABO1058	MIRADOR TE TABOQUINHA	4,75	23	35	2,35	28	65	4,15	29	56	3,23	7	29	0,95	5	11	0,17	5	6	53,94	12	55
TABO1042	MOMBAÇA TABOQUINHA	2,14	20	57	5,81	22	47	3,94	24	57	1,34	12	22	1,05	5	10	0,24	5	2	57,84	18	35
A5255	MORENO	0,09	1	79	0,07	1	79	0,70	1	73		0		0,00	1	64		0		48,57	2	87
TABO1099	NAIROBI TABOQUINHA	3,87	43	42	10,20	50	26	9,40	50	33	19,25	13	89	0,41	3	33	0,08	3	23	59,57	27	27
7655	NAMBU JP	-0,08	30	82	-1,36	34	89	-0,90	35	84	-9,21	22	1	0,48	1	29	0,01	1	53	58,61	34	31
JFT2302	NAQUE TE JF	0,57	5	73	3,59	8	58	2,63	9	63	1,01	1	21	0,15	1	51	0,10	1	17	53,57	1	57
TABO1117	NAQUE TE TABOQUINHA	2,81	45	51	10,97	50	22	6,00	53	47	1,52	14	23	0,27	1	42	0,03	1	43	68,27	25	4
PEAC491	NATURALISMO TE PEAC	5,33	37	30	15,65	42	7	17,67	43	7	21,25	15	94	3,84	48	0,1	0,21	44	3	58,35	29	33
JFT1619	NAVAL JF	0,71	12	71	4,00	15	56	5,08	16	51	7,01	8	42	1,26	5	7	0,30	5	1	50,81	11	73
8182	NAVARRO S	3,46	16	45	1,31	28	71	1,33	30	69	7,36	10	43	-0,21	5	86	0,11	5	15	49,63	16	81

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	W210 EPD	W210 EPD ACC.	W210 TOP %	W365 EPD	W365 EPD ACC.	W365 TOP %	W450 EPD	W450 EPD ACC.	W450 TOP %	MW EPD	MW EPD ACC.	MW TOP %	REA EPD	REA EPD ACC.	REA TOP %	ACAB EPD	ACAB EPD ACC.	ACAB TOP %	STAY EPD	STAY EPD ACC.	STAY TOP %
9957	NAVEGANTE	4,25	16	39	2,65	21	63	3,21	22	60	-4,19	14	5	0,07	1	57	-0,01	1	66	59,21	19	29
JFT2351	NEPAL TE JF	3,89	26	42	8,73	28	33	10,43	27	29	10,56	14	56	-0,91	13	98	0,15	14	8	62,51	17	16
TABO1132	NEPAL TE TABOQUINHA	0,47	25	74	7,79	37	37	6,64	40	44	5,40	11	36	0,99	5	11	0,26	5	2	51,72	20	68
CNS6391	NGAÔ TE S	5,58	40	28	11,83	44	19	15,36	44	12	17,73	15	84	-0,91	19	98	0,06	20	29	71,75	33	1
5791	NOBRE JF	1,44	55	64	4,08	61	56	2,54	62	63	7,16	18	42	0,64	20	21	0,28	19	2	43,35	46	99
JFT2422	NOTÁVEL TE JF	9,18	61	6	14,55	66	10	16,33	68	10	18,97	28	88	-0,67	19	96	0,16	17	7	68,21	26	4
MDVG6458	NOVA SEITA D	-6,04	27	100	-5,54	34	98	-8,35	35	99	1,07	8	21	-0,09	1	79	0,00	1	59	56,24	15	43
TABO1301	OBUS TE TABOQUINHA	-1,65	46	95	3,13	54	61	5,12	57	51	2,54	13	27	0,81	7	15	0,10	7	17	52,20	27	65
TABO1345	OCRE TE TEBOQUINHA	-0,16	34	83	10,04	39	27	5,78	41	48	15,73	10	77	0,51	5	27	0,13	5	11	60,97	18	21
TABO1231	ODRE TE TABOQUINHA	2,76	45	52	12,15	47	18	11,40	49	25	13,35	17	68	0,92	4	12	0,21	4	3	53,23	25	59
TABO1351	OFURÔ TE TABOQUINHA	-3,04	34	99	1,32	39	71	0,41	44	75	-0,67	12	12	0,15	6	51	0,09	6	20	52,99	17	60
MMMMA5843	OLENTE 4M	-11,13	28	100	-10,98	31	100	-10,16	39	100	-13,15	12	0,5	0,64	1	21	0,06	1	29	45,57	12	96
TABO1364	ÓLEO TE TABOQUINHA	-4,42	35	100	-3,40	41	95	-7,89	44	99	-6,21	12	3	-0,39	5	92	0,05	4	34	54,17	20	54
JFT3311	ÓPIO FIV JF	4,92	11	33	9,86	12	27	11,94	12	23	17,02	6	81	0,32	8	38	0,17	8	6	59,11	9	29
TABO1367	OPUS TE TABOQUINHA	-2,14	39	97	0,62	45	75	-0,73	48	83	-6,21	12	3	-0,21	1	86	0,03	1	43	54,38	22	53
TABO1302	ORIENTE TE TABO	4,15	65	40	8,70	70	33	9,09	72	34	2,84	29	27	0,90	6	12	0,10	5	17	43,40	42	98
TABO1353	ORINOCO TABOQUINHA	0,50	23	73	5,89	28	47	3,20	24	60	15,73	10	77	0,51	5	27	0,13	5	11	61,03	16	21
MDVG6511	ORÓ D	-1,79	10	96	3,65	12	58	-0,04	12	79	-0,25	6	14	-0,07	1	77	-0,01	1	66	62,17	9	17
TABO1329	ORÓS TE TABOQUINHA	1,62	25	62	4,78	28	52	4,08	30	56	7,92	9	46	0,45	1	30	0,09	1	20	66,98	15	5
TABO1272	OURIÇO TE TABOQUINHA	2,79	39	51	9,41	41	30	5,11	44	51	6,38	17	40	0,40	1	33	0,07	1	26	49,79	28	80
A1462	PACÍFICO DE ALAGOINHA	2,59	30	53	9,69	35	28	10,98	38	27	9,22	23	50	1,14	3	8	0,21	4	3	53,47	26	58
CNS6629	PAPADO S	6,63	34	20	11,12	40	22	6,23	41	46	7,39	16	43	0,56	3	25	0,15	3	8	50,08	18	77
9754	PARAÍSO JF	1,40	32	64	10,66	38	24	13,09	39	19	22,95	15	97	1,56	13	4	0,34	14	1	56,18	27	43
5799	PAREDÃO S	4,25	60	39	5,86	66	47	4,80	67	53	15,11	11	74	-0,20	34	85	0,30	30	1	54,04	38	55
FNF5697	PATRONO NF	-0,19	63	84	-5,01	69	97	-2,26	70	90	-3,49	33	6	0,42	2	32	-0,05	2	81	51,66	35	68
TABO1406	PEQUI TE TABOQUINHA	2,94	57	50	5,30	63	50	4,68	67	53	-9,48	11	1	0,34	1	37	-0,02	1	71	64,82	36	10
5800	PERSEU S	8,33	39	10	14,41	42	10	17,13	44	8	26,24	20	99	-0,14	38	82	0,19	35	4	65,94	34	7
A2726	PINCEL JA	-1,25	7	93	-0,16	9	82	-3,38	9	93	-0,37	6	13	0,68	1	19	0,09	1	20	48,55	6	88
FNF5873	PLEBEU NF	2,58	58	53	3,89	64	57	4,27	65	55	13,30	29	67	0,75	12	17	-0,13	12	94	50,61	36	74
TABO1467	PÓLO TE TABOQUINHA	2,19	36	57	5,07	43	51	-0,10	46	79	8,37	12	47	0,44	3	31	0,09	4	20	54,67	20	51
JFT2077	PREFEITO JF	6,81	18	19	16,62	19	6	19,25	19	5	22,04	13	95	0,90	13	12	0,27	14	2	61,58	17	19
7402	PROFETA	-0,92	5	91	0,96	6	73	-3,41	6	93	6,59	3	40	0,20	1	47	0,04	1	38	51,75	5	67
JFT2049	PSIU JF	-2,99	37	99	-0,94	45	87	-2,35	47	90	2,60	23	27	1,14	6	8	0,32	6	1	57,90	22	35
5870	QUARTZO TE	0,18	31	78	-5,69	40	98	-0,55	44	82	8,66	12	48	-0,42	4	92	-0,08	4	88	55,19	25	48
TABO1579	QUARUP TE TABOQUINHA	2,52	22	54	0,45	29	76	5,30	31	50	1,64	7	23	-0,16	2	83	0,03	2	43	53,02	15	60
TABO1745	QUASAR TE TABOQUINHA	1,73	12	61	9,88	15	27	8,70	16	36	-0,86	11	12	0,58	1	24	0,10	1	17	50,17	12	77
TABO1584	QUEBEC TE TABOQUINHA	-1,61	29	95	-0,99	34	87	-0,69	36	83	-9,21	13	1	-0,12	6	81	-0,02	5	71	61,20	22	20
9323	QUERO QUERO NF	-3,22	47	99	-0,95	51	87	-3,64	53	94	-0,98	35	11	-0,03	8	73	-0,06	7	83	53,93	52	55
TABO1716	QUILATE TABOQUINHA	2,33	23	55	8,13	28	36	-1,62	31	88	9,39	4	51	0,16	1	50	0,04	1	38	59,38	11	28
A1463	QUILATE TE A	-1,69	24	95	-1,37	28	89	-5,51	30	97	0,05	9	17	0,24	2	44	-0,03	1	75	56,50	24	42
TABO1726	QUIMÃO TE TABOQUINHA	0,77	32	70	7,00	42	41	6,00	46	47	-0,86	11	12	0,58	1	24	0,10	1	17	50,17	15	77
TABO1776	RABI TE TABOQUINHA	2,07	29	58	5,20	33	50	3,90	33	57	1,66	12	23	-0,27	4	88	0,01	4	53	57,79	19	35
MDVG6822	RAPA PÉ D	-1,08	4	92	1,63	5	69	-0,08	6	79	0,31	1	18	-0,06	1	76	-0,01	1	66	55,41	1	47
TABO1835	REMANSO TE TABOQUINHA	-0,45	45	87	3,32	49	60	2,23	50	65	-0,19	16	14	-0,09	3	79	0,00	3	59	51,40	22	70
LVPS203	RESPLENDOR TE N. FLOR	0,21	15	77	4,61	18	53	3,67	18	58	9,53	9	52	0,70	3	18	0,12	3	13	53,41	10	58
TABO2010	RETIRO TE TABOQUINHA	-0,39	53	86	6,95	59	41	6,45	61	45	5,69	30	37	0,50	2	28	0,12	2	13	46,28	28	95
JFT2261	RUSSO TE JF	-1,78	49	96	1,10	54	72	1,34	56	69	0,78	25	20	0,11	9	54	0,12	9	13	57,91	24	35
A2621	SACADO D	6,20	28	23	9,37	37	30	4,97	36	52	4,17	16	32	0,03	1	61	-0,02	1	71	65,63	22	8
TABO2246	SADRAQUE TE TABOQUINHA	-2,15	35	97	6,81	42	42	2,11	44	65	12,12	21	63	0,17	3	49	0,09	3	20	75,62	21	0,1
TABO2303	SAEL TABOQUINHA	2,70	18	52	4,75	27	53	2,84	29	62	1,96	12	25	0,59	2	23	0,07	2	26	52,20	15	65
EMGA883	SAGRADO A	1,17	14	66	4,98	15	51	3,63	16	58	12,79	9	65	0,58	3	24	0,10	3	17	51,17	14	71
TABO2343	SALOIO TE TABOQUINHA	4,68	23	35	9,62	25	29	10,72	26	28	8,96	14	50	-0,81	13	97	0,14	14	9	62,39	20	16
A5230	SAPUCAÍ JA	0,05	19	79	2,70	22	63	2,47	23	63	-3,98	17	5	1,31	2	6	0,18	1	5	62,70	20	15
TABO2260	SAROM TE TABOQUINHA	2,87	67	51	6,12	72	46	5,85	74	48	-0,33	50	13	0,48	1	29	0,01	1	53	69,74	49	2
TABO2122	SERENO TABOQUINHA	4,37	47	38	10,05	51	27	6,11	53	47	7,09	12	42	0,03	5	61	-0,06	4	83	57,46	12	37
7866	SERIDÓ JA	-1,01	64	92	2,99	68	62	1,30	68	69	-6,29	50	3	1,28	5	6	0,12	5	13	41,19	66	100

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	W210 EPD	W210 EPD ACC.	W210 TOP %	W365 EPD	W365 EPD ACC.	W365 TOP %	W450 EPD	W450 EPD ACC.	W450 TOP %	MW EPD	MW EPD ACC.	MW TOP %	REA EPD	REA EPD ACC.	REA TOP %	ACAB EPD	ACAB EPD ACC.	ACAB TOP %	STAY EPD	STAY EPD ACC.	STAY TOP %
FAFM792	SIGNO AM	11,34	64	2	13,50	68	13	14,01	69	16	24,93	34	99	0,18	54	49	-0,14	51	95	64,43	67	11
TABO2333	SULFO TE TABOQUINHA	2,59	37	53	4,87	45	52	8,62	37	36	8,96	14	50	-0,93	12	98	0,13	13	11	62,39	20	16
A2708	TAITI JA	-2,80	6	98	-4,49	7	97	-4,85	7	96	-3,80	3	5	0,29	1	41	0,03	1	43	54,26	3	53
CNS4923	TAMARINDO S	5,00	57	33	7,73	63	37	14,09	65	16	10,66	13	56	1,37	34	5	0,05	30	34	64,44	41	11
9346	TRICÔ	0,99	3	68	1,30	4	71	0,41	5	75	-0,42	2	13	0,00	1	64	-0,01	1	66	49,32	6	83
A2633	TRIGUEIRO D	-0,72	35	89	4,84	41	52	2,95	43	61	-5,93	19	3	-0,13	1	81	-0,01	1	66	59,87	35	26
8341	TRIGUEIRO JA	-1,32	6	93	1,47	8	70	-0,15	9	80	-6,67	5	2	0,07	1	57	0,03	1	43	53,01	12	60
GUZA264	ÚNICO TE	-2,52	1	98	-3,66	1	95	-4,21	1	95		0		0,00	1	64		0			0	
1389	URUTU	-2,76	58	98	-0,33	62	83	-3,00	63	92	-11,46	36	0,5	-0,62	23	95	-0,03	20	75	52,03	57	66
5563	VAIDOSO JP	-1,93	41	96	-2,58	48	93	-4,19	49	95	1,04	27	21	0,79	5	15	-0,02	4	71	49,11	46	84
5892	VAIDOZO		0		1,23	1	71		0		0,00	1	15	0,00	1	64		0			0	
EMGA1060	VATICANO A	-1,22	24	93	0,91	24	73	-0,23	24	80	12,59	10	64	-0,19	11	85	0,15	11	8	54,54	17	52
A2033	VIRTUAL DA TEOTÔNIO	-0,79	18	90	-3,29	23	95	1,93	25	66	-9,09	6	1	-0,24	1	87	0,00	1	59	48,43	17	88

Table 10. Results of genetic evaluations of double proven sires for reproduction traits conducted by ANCP-USP in 2020.

Sire's ID	Sire's Name	AFC EPD	AFC EPD ACC.	AFC TOP %	GL EPD	GL EPD ACC.	GL TOP %	SC365 EPD	SC365 EPD ACC.	SC365 TOP %	SC450 EPD	SC450 EPD ACC.	SC450 TOP %	MA120 EPD	MA120 EPD ACC.	MA120 TOP %	ACP EPD	ACP EPD ACC.	ACP TOP %
CNS4995	ABAETÉ S	-0,43	58	21	-0,57	76	11	1,30	73	0,1	1,71	76	0,5	5,52	63	0,1	7,65	45	0,1
5736	ACARAJÉ S	0,71	34	100	-0,66	9	9	-0,28	39	98	-0,52	43	99	1,06	44	30	3,30	23	6
5295	ACARI RF	-0,23	53	40	2,47	52	100	0,55	60	10	0,29	64	36	2,18	60	7	4,32	44	2
CNS5027	ACASO S	-0,87	37	3	-0,36	76	16	0,03	54	70	-0,09	62	85	2,08	42	8	0,51	20	61
7556	ADORNO	-0,10	14	55	-0,05	2	31	0,71	18	4	0,99	18	4	1,12	23	28	1,11	10	43
JAR5726	ADVENTO TE JA	0,02	21	72	1,03	10	90	0,00	19	76	-0,13	23	88	-1,12	20	97	2,11	10	20
UNIU52	AGHA KHAN FIV	-0,16	4	48	-0,50	3	12	0,46	13	14	0,48	16	21	-0,62	5	91	-0,37	2	89
5735	ALADIM S	-0,98	41	1	-1,36	41	3	0,85	48	2	0,95	50	4	-0,41	48	87	1,42	34	35
973	ALBATROZ JP	0,09	2	81	-0,01	2	35	0,19	2	44	0,20	3	46	0,35	3	57	-0,48	1	91
A2687	ALOPRADO D	-0,08	11	57	0,22	13	58	0,09	17	60	0,25	19	40	0,78	10	40	-0,43	3	90
9940	BARBANTE JF	0,15	55	86	-0,71	68	8	0,08	59	61	0,41	62	25	1,82	63	11	2,84	48	10
CNS7293	BEIJIM S	-0,34	6	29	-0,21	11	22	0,53	29	11	1,21	35	2	0,52	7	50	2,14	4	20
9387	BERLIM NF	-0,97	24	1	1,19	9	93	0,31	43	28	0,46	47	22	4,76	43	0,1	3,92	25	3
ROES1	BESOURO ROES	-1,24	58	0,5	-0,52	48	12	0,53	66	11	0,51	69	19	-1,08	63	97	3,31	46	6
A914	BURGUÊS S	-0,06	25	60	-0,77	22	8	-0,18	29	96	-0,21	30	92	1,23	30	25	1,32	20	38
A6120	CABO DE GUERRA D	0,13	8	85	-0,48	11	13	-0,16	7	95	-0,33	11	96	0,03	10	71	-2,21	5	100
A951	CABUL II S	-0,78	24	4	0,81	41	85	0,74	18	4	0,71	20	10	-0,33	29	85	1,31	14	38
CNS5319	CABUL III S	0,01	21	71	-3,38	47	0,5	0,87	40	2	1,01	41	3	1,14	25	28	1,92	13	24
9737	CABUL S	0,22	53	91	1,29	34	95	0,43	48	17	0,71	51	10	1,04	61	31	3,30	33	6
5558	CADUCEU S	-0,89	33	2	-0,52	34	12	0,86	38	2	1,10	40	2	-0,83	41	94	-0,08	24	82
UNIU236	CAIRO	-0,25	10	38	-1,73	17	2	0,33	12	26	0,33	23	32	1,62	11	15	-1,87	6	99
4790	CAIRO JP	0,27	13	93	0,42	47	70	0,18	9	46	0,03	7	67	1,36	17	21	-0,18	9	85
JFT3094	CÁLICE FIV JF	-0,37	9	26	-0,20	6	22	0,35	15	24	0,52	16	18	0,98	10	33	2,52	6	14
A6119	CAPITÃO-MOR D	0,02	27	72	-0,85	55	7	0,07	26	63	-0,21	24	92	1,58	33	16	0,50	19	61
9951	CASSINO JF	0,55	38	99	0,29	67	63	0,28	45	32	0,80	50	7	1,85	48	11	1,78	32	27
PEAC22	CIGANO TE PEAC	0,23	10	91	-0,73	12	8	-0,02	8	81	0,04	8	65	-0,10	12	77	-0,28	6	87
HANC311	CORSÁRIO DA VEREDA	-0,22	9	41	-1,57	12	2	0,21	14	41	0,71	15	10	1,40	10	20	1,16	5	42
PEAC28	CRAVO TE PEAC	0,03	10	74	0,57	17	77	0,13	8	54	0,22	8	43	2,42	13	5	1,01	7	46
8301	CUBITO G.I DA ND	-0,40	10	24	-1,25	13	3	0,16	20	49	0,36	24	29	-1,40	16	99	-0,95	6	96
A6430	DANDI JP	0,34	12	96	-0,07	14	29	0,04	10	68	0,03	10	67	0,64	13	46	-1,25	8	98
ROS17	DARDO TE DO ROSÁRIO	0,09	35	81	1,92	19	99	0,24	57	37	0,49	63	20	-1,21	41	98	-1,29	27	98
ROS18	DEDAL TE DO ROSÁRIO	0,42	17	98	1,70	50	98	0,11	17	57	0,10	17	58	1,00	19	32	-1,61	12	99
CNS5614	DELITO S	-0,42	5	22	0,77	4	84	0,55	5	10	0,60	15	14	0,77	7	41	1,99	3	23
A119	DESAFIO JA	-0,10	6	55	0,15	2	54	-0,13	10	93	-0,18	11	91	0,14	5	66	0,28	2	68
A6134	DESENGASGO D	-0,52	7	15	-0,94	24	5	0,04	1	68	0,11	2	56	1,72	10	13	3,87	7	3
A2118	DESPACHO S	-0,65	35	8	-1,76	23	2	0,35	43	24	-0,04	46	79	1,61	47	15	2,74	32	11
ROS34	DEVOTO TE DO ROSÁRIO	0,09	29	81	0,54	64	75	0,11	39	57	0,00	38	72	2,38	33	5	1,15	22	42
JAJA2755	DINAMARQUÊS TE JA	-0,06	6	60	-0,52	1	12	-0,51	29	100	-0,92	29	100	0,48	9	52	0,39	4	65
5088	DRAKAR S	0,02	13	72	0,15	24	54	0,17	13	47	-0,12	13	87	0,93	21	35	0,78	9	53
A1437	ÉDIPO DA ALAGOINHA	0,20	37	90	-1,58	56	2	-0,06	29	87	0,12	32	55	-0,26	42	83	-0,69	24	93
A6719	EDITOR	-0,08	4	57	-0,31	3	18	0,40	7	19	0,48	9	21	0,13	10	66	0,40	4	65
IHL146	ELETRO	0,20	8	90	0,38	13	68	-0,12	8	92	-0,01	8	75	0,16	9	65	0,48	6	62
7962	EMBORNAL D	0,02	3	72	0,60	23	78	-0,40	13	100	-0,45	15	98	0,41	9	55	0,22	2	70
UNIU439	ESCOTEIRO FIV UNIUBE	-0,17	10	47	-1,02	7	5	0,23	33	38	0,69	49	10	0,45	9	53	0,16	4	72
DSM3371	ESTILETE DA MS	-0,48	30	18	1,57	37	98	0,72	43	4	0,82	49	7	4,11	34	0,1	4,18	19	2
A2389	ESTILO DA ALAGOINHA	0,08	23	80	0,06	50	47	0,24	15	37	0,32	14	33	1,73	32	13	0,02	15	78
5762	ÊXITO TE	0,76	13	100	0,30	16	63	0,05	12	66	-0,06	13	82	0,45	17	53	-0,21	9	85
9491	FALATÓRIO DE NAVIRAÍ	-0,43	31	21	-0,08	52	29	0,71	49	4	0,95	51	4	-0,72	44	93	-2,15	25	100
LDCV391	FARO TE DA MORUMBI	0,06	25	78	-0,13	50	26	0,04	34	68	-0,20	45	92	1,06	23	30	-1,35	10	98
A336	FOGO RF	0,48	50	99	4,13	63	100	0,35	65	24	-0,42	71	98	1,87	58	10	3,11	41	7
CNS5827	FUÁ S	0,08	37	80	1,54	23	97	-0,05	50	86	0,09	52	59	1,51	41	17	-0,54	21	91

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	AFC EPD	AFC EPD ACC.	AFC TOP %	GL EPD	GL EPD ACC.	GL TOP %	SC365 EPD	SC365 EPD ACC.	SC365 TOP %	SC450 EPD	SC450 EPD ACC.	SC450 TOP %	MA120 EPD	MA120 EPD ACC.	MA120 TOP %	ACP EPD	ACP EPD ACC.	ACP TOP %
A337	FUNDADOR TE RF	0,73	23	100	-0,93	41	6	-0,07	30	88	-0,19	27	91	-0,06	27	76	-0,56	16	92
LKW223	GARI FIV BOA LEMBRANÇA	0,24	13	92	-0,77	14	8	0,23	21	38	0,65	24	12	1,76	17	12	-0,47	10	90
A2731	GAVIÃO DA N. FLORESTA	0,49	18	99	0,85	43	86	0,28	22	32	0,21	25	45	2,19	24	7	-0,65	16	93
7963	GENTIL JA	0,99	31	100	-0,36	38	16	-0,27	33	98	-0,57	36	99	-1,25	41	98	0,35	23	66
A2664	GITANO DE ALAGOINHA	0,54	7	99	-0,17	8	24	-0,12	8	92	-0,28	8	95	-0,53	9	89	0,00	5	78
ITG1235	GOBBO IT	-0,96	73	2	2,34	78	100	0,46	84	14	0,33	85	32	1,04	77	31	1,41	62	36
5882	GURIRI TE TABOQUINHA	0,57	33	100	2,45	53	100	0,20	19	43	0,31	21	34	2,54	39	4	-1,59	24	99
NESZ2	GUZERÁ DA BARRA 2	0,33	41	95	-1,88	56	1	1,15	64	0,5	1,72	67	0,5	0,17	41	65	3,94	16	3
5883	HÁBIL TE TABOQUINHA	0,09	47	81	-2,22	77	1	0,14	57	52	0,76	63	8	0,25	54	61	0,00	39	78
AFGF184	HAITI TE S CLARAMAR	-0,26	29	37	-1,21	24	4	0,89	48	2	0,96	56	4	2,03	27	8	3,59	13	4
TABO538	HETEU TE TABOQUINHA	0,40	18	97	2,92	23	100	0,08	14	61	-0,24	18	93	1,07	22	30	-1,47	11	98
FNFA960	HIDRANTE FIV NF	-0,23	21	40	0,02	4	43	0,39	51	20	0,82	61	7	0,33	14	58	-1,77	7	99
TABO587	HÍFEM TE TABOQUINHA	0,36	14	96	-0,19	18	23	-0,06	13	87	0,15	13	52	0,56	18	49	1,66	11	29
TABO618	HOMERO TE TABOQUINHA	-0,39	20	25	-2,68	28	0,5	0,25	19	36	0,55	19	16	0,51	22	51	0,72	16	55
A2804	HORIZONTE NF	0,15	18	86	1,74	30	98	-0,01	18	79	-0,07	19	83	0,62	22	47	-2,37	14	100
A1443	HORTO DE ALAGOINHA	0,68	28	100	-0,20	64	22	0,26	28	34	-0,26	28	94	1,04	36	31	-3,84	22	100
GUZA834	HOTEL TE	0,00	1	69	0,06	1	47	0,11	2	57	0,02	1	68	0,44	1	54		0	
HUM24	HUM SONHO ABADON	-0,27	15	36	-0,65	12	9	0,23	17	38	0,52	37	18	0,84	16	38	2,13	8	20
TABO636	HUMAITÁ TE TABOQUINHA	0,07	33	79	0,49	76	73	-0,27	31	98	0,14	34	53	0,07	37	69	1,25	23	40
4610	HUMAYAN	0,18	12	88	0,61	2	78	0,26	5	34	0,04	6	65	-0,28	11	83	-0,37	2	89
TABO637	IAGO TE TABOQUINHA	-0,14	12	50	-1,13	15	4	0,00	9	76	0,26	11	39	0,92	15	35	-0,11	8	83
A989	IBÉRICO JP	0,67	21	100	1,97	22	99	0,35	20	24	0,05	22	64	2,58	27	4	-0,13	16	83
A133	IMPERIAL JA	1,12	34	100	-0,37	38	16	0,07	27	63	-0,21	31	92	0,38	38	56	-1,48	21	98
A1447	IMPULSIVO DE ALAGOINHA	0,51	17	99	0,04	50	45	0,61	19	7	0,24	23	41	1,21	23	25	-1,55	11	99
ROS116	INGLÊS TE DO ROSÁRIO	0,40	10	97	0,81	19	85	0,28	10	32	0,39	11	27	0,59	12	48	0,76	7	54
TABO727	INSTINTO TE TABOQUINHA	-0,14	29	50	0,27	57	61	0,17	13	47	0,07	13	61	0,79	33	40	-1,12	19	97
TABO747	JABUTI TE TABOQUINHA	0,09	16	81	1,80	41	99	0,04	7	68	0,23	5	42	1,25	20	24	0,84	9	51
4899	JACUI NF	0,35	23	96	0,27	3	61	0,28	32	32	-0,11	39	86	-0,49	32	89	-2,24	22	100
A1449	JAGUNÇO DE ALAGOINHA	0,13	8	85	-0,76	11	8	-0,05	7	86	0,03	7	67	-0,01	9	73	-0,54	6	91
MDVG6066	JANARI D	0,04	11	75	1,45	38	97	0,01	18	74	-0,23	16	93	0,71	17	43	-1,02	8	96
A739	JAVANÊZ NF	0,45	19	98	0,49	7	73	0,12	18	55	0,02	22	68	0,69	24	44	-0,46	15	90
TABO849	JECA TE TABOQUINHA	0,03	35	74	2,30	45	100	0,23	58	38	0,47	64	21	0,66	41	45	-0,35	25	88
TABO812	JEQUIÁ TE TABOQUINHA	0,57	19	100	-0,66	41	9	0,05	10	66	0,00	15	72	0,84	22	38	0,18	11	71
LVPS59	JOÁ DA N. FLORESTA	0,38	13	97	1,44	13	97	0,57	25	9	0,17	17	49	0,91	14	35	-1,81	10	99
TABO818	JONAS TE TABOQUINHA	0,35	16	96	-1,40	51	3	-0,05	16	86	-0,26	14	94	0,06	18	69	-0,40	9	89
9974	JÓQUEI TE JP	0,32	9	95	-0,22	8	22	-0,23	10	97	-0,31	12	95	-0,13	13	78	0,97	7	47
FNF4392	JOVEM TE NF	0,95	30	100	0,01	12	42	-0,25	61	98	-0,63	66	100	0,46	41	53	-1,46	28	98
JAJ3188	JUAZEIRO JA	-0,33	6	30	0,41	1	70	0,06	6	65	-0,03	9	78	-1,52	7	99	0,41	3	64
TABO866	LABRADOR TE TABOQUINHA	-0,66	32	8	-3,68	68	0,1	0,51	46	12	0,44	50	23	1,56	37	16	-2,53	23	100
5769	LEITEIRO JP	0,47	13	99	-0,07	9	29	-0,04	16	84	0,03	19	67	-0,14	20	79	-0,61	12	92
A1056	LOUVADO D	0,03	1	74	0,28	6	62	-0,14	5	94	-0,14	6	88	0,43	4	54	0,09	1	75
MVB20	MABROUK DA VIC	-0,37	49	26	-1,46	67	3	0,39	56	20	-0,02	60	76	3,98	52	0,5	2,44	30	15
5465	MAGNUM S	-0,15	24	49	-1,36	23	3	-0,21	21	97	0,04	26	65	1,03	36	31	-2,93	16	100
CNS6042	MAGO TE S	-1,38	37	0,1	-2,72	68	0,5	0,90	54	2	1,29	57	1	0,05	42	70	4,73	23	1
CNS6135	MARABÁ S	-0,57	17	12	0,30	4	63	0,56	36	9	0,58	40	15	2,37	20	5	0,70	11	55
TABO964	MARACATU TABOQUINHA	-0,31	15	32	0,41	37	70	-0,29	22	99	0,87	38	6	0,66	17	45	1,19	10	41
PEAC211	MARANHÃO TE PEAC	-0,14	18	50	-0,94	43	5	0,29	12	31	0,22	12	43	1,36	19	21	-0,53	9	91
HQB258	MARCA SOL EMENTHAL	-0,84	60	3	1,28	51	95	0,35	76	24	0,27	78	38	1,91	66	10	5,75	55	0,5
TABO969	MATIPÓ TE TABOQUINHA	0,41	10	97	0,39	15	69	0,28	11	32	0,30	15	35	0,46	12	53	0,76	7	54
TABO1058	MIRADOR TE TABOQUINHA	0,02	8	72	-0,54	10	11	0,35	7	24	0,52	6	18	0,66	10	45	2,94	6	9
TABO1042	MOMBAÇA TABOQUINHA	0,24	11	92	0,86	20	86	0,24	12	37	0,43	12	24	1,52	15	17	0,61	9	58
A5255	MORENO	0,23	1	91	0,00	1	36	0,02	1	72	0,02	1	68	0,36	1	57		0	
TABO1099	NAIROBI TABOQUINHA	0,37	17	97	-1,74	57	2	0,32	10	27	0,55	9	16	1,47	19	18	-0,26	9	87

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	AFC EPD	AFC EPD ACC.	AFC TOP %	GL EPD	GL EPD ACC.	GL TOP %	SC365 EPD	SC365 EPD ACC.	SC365 TOP %	SC450 EPD	SC450 EPD ACC.	SC450 TOP %	MA120 EPD	MA120 EPD ACC.	MA120 TOP %	ACP EPD	ACP EPD ACC.	ACP TOP %
7655	NAMBU JP	0,58	23	100	2,09	27	99	0,30	20	29	0,01	22	70	1,60	29	15	-0,95	16	96
JFT2302	NAQUE TE JF	0,06	1	78	0,45	13	71	0,00	1	76	-0,04	1	79	0,50	1	51	0,24	1	69
TABO1117	NAQUE TE TABOQUINHA	0,05	15	76	1,91	61	99	0,31	18	28	0,12	6	55	1,34	21	21	0,87	9	50
PEAC491	NATURALISMO TE PEAC	0,17	20	88	1,31	21	95	0,41	31	18	0,44	33	23	1,22	21	25	3,39	13	6
JFT1619	NAVAL JF	0,26	8	93	-0,54	17	11	0,24	10	37	0,55	11	16	1,32	11	22	1,22	7	40
8182	NAVARRO S	0,20	10	90	-0,81	5	7	-0,38	20	100	-0,11	24	86	1,36	15	21	2,12	8	20
9957	NAVEGANTE	-0,07	10	59	-0,89	22	6	0,16	5	49	0,16	3	50	0,85	15	38	3,31	8	6
JFT2351	NEPAL TE JF	-0,13	15	51	0,34	17	66	0,56	21	9	0,93	19	4	3,52	17	0,5	3,20	13	7
TABO1132	NEPAL TE TABOQUINHA	0,03	13	74	-0,27	19	19	0,04	19	68	0,52	24	18	1,37	17	21	1,35	10	37
CNS6391	NGAÔ TE S	-0,64	22	8	-1,83	50	2	1,13	32	0,5	1,64	39	0,5	3,51	23	0,5	5,17	12	0,5
5791	NOBRE JF	0,04	32	75	2,03	64	99	-0,18	40	96	0,26	45	39	-0,33	38	85	0,87	24	50
JFT2422	NOTÁVEL TE JF	-0,53	27	14	-0,39	9	15	0,62	50	7	0,79	60	7	1,33	30	22	2,73	16	11
MDVG6458	NOVA SEITA D	0,03	8	74	0,18	3	56	-0,24	25	98	-0,32	29	96	0,78	9	40	-0,64	2	93
TABO1301	OBUS TE TABOQUINHA	0,62	16	100	-1,57	31	2	0,22	23	40	0,36	25	29	1,45	19	19	-1,35	11	98
TABO1345	OCRE TE TEBOQUINHA	0,17	13	88	-0,11	39	27	0,28	13	32	0,20	12	46	1,27	15	24	-1,43	10	98
TABO1231	ODRE TE TABOQUINHA	0,24	16	92	-0,32	51	17	0,23	21	38	0,81	20	7	2,88	19	2	0,90	11	49
TABO1351	OFURÔ TE TABOQUINHA	0,03	13	74	1,40	58	96	0,15	14	50	0,34	14	31	1,35	16	21	2,09	9	21
MMMMA5843	OLENTE 4M	0,29	10	94	0,96	10	88	-0,24	11	98	-0,37	10	97	0,60	11	47	-1,21	8	97
TABO1364	ÓLEO TE TABOQUINHA	-0,28	14	34	-3,07	44	0,5	0,13	25	54	-0,01	27	75	0,05	17	70	-2,53	10	100
JFT3311	ÓPIO FIV JF	-0,17	7	47	-1,50	8	2	0,36	9	23	0,44	9	23	1,20	8	26	1,20	5	41
TABO1367	OPUS TE TABOQUINHA	-0,38	15	25	-2,39	33	0,5	0,25	16	36	0,26	16	39	0,59	15	48	-1,86	8	99
TABO1302	ORIENTE TE TABO	0,34	28	96	-2,28	54	0,5	0,56	54	9	0,71	63	10	2,63	30	3	-1,45	14	98
TABO1353	ORINOCO TABOQUINHA	0,21	12	90	0,61	38	78	0,32	12	27	0,23	12	42	1,12	15	28	-1,43	10	98
MDVG6511	ORÓ D	-0,05	5	61	-0,10	6	28	0,00	5	76	-0,07	7	83	0,98	6	33	-0,39	3	89
TABO1329	ORÓS TE TABOQUINHA	0,14	10	86	-0,70	39	9	0,11	10	57	0,10	9	58	1,41	12	20	0,93	7	48
TABO1272	OURIÇO TE TABOQUINHA	0,34	17	96	2,24	52	100	0,22	8	40	0,18	7	48	1,74	18	13	-1,42	8	98
A1462	PACÍFICO DE ALAGOINHA	0,41	16	97	-1,41	48	3	0,14	8	52	0,42	12	25	1,73	20	13	0,02	13	78
CNS6629	PAPADO S	-0,01	12	67	-0,12	13	26	0,09	29	60	-0,19	36	91	1,92	13	10	-0,09	7	82
9754	PARAÍSO JF	0,27	19	93	-0,26	42	20	0,16	17	49	0,65	19	12	1,69	22	13	2,06	15	21
5799	PAREDÃO S	0,04	23	75	-0,09	58	28	-0,34	57	99	-0,20	62	92	2,66	32	3	2,67	17	12
FNF5697	PATRONO NF	-0,11	27	54	-0,21	14	22	-0,25	54	98	0,03	65	67	-1,16	33	97	-1,87	20	99
TABO1406	PEQUI TE TABOQUINHA	0,33	23	95	-0,40	57	15	0,17	8	47	0,09	7	59	1,20	23	26	-1,32	6	98
5800	PERSEU S	-0,51	27	15	-2,36	23	0,5	0,60	36	8	0,58	38	15	1,44	31	19	2,06	19	21
A2726	PINCEL JA	-0,17	3	47	0,61	2	78	0,20	6	43	-0,06	6	82	0,55	6	49	0,35	2	66
FNF5873	PLEBEU NF	-0,05	29	61	-0,02	12	34	0,16	53	49	0,49	61	20	0,66	34	45	0,41	20	64
TABO1467	PÓLO TE TABOQUINHA	0,39	13	97	-1,34	26	3	0,32	14	27	0,59	13	14	1,56	14	16	-0,65	8	93
JFT2077	PREFEITO JF	-0,10	13	55	1,17	13	93	0,41	15	18	0,39	16	27	1,65	16	14	3,09	12	8
7402	PROFETA	0,18	3	88	0,06	5	47	0,07	2	63	-0,01	2	75	0,40	4	55	-0,69	2	93
JFT2049	PSIU JF	0,33	15	95	0,33	13	65	-0,30	36	99	-0,57	41	99	2,10	20	8	2,02	12	22
5870	QUARTZO TE	0,44	17	98	0,97	20	89	-0,01	14	79	-0,02	14	76	0,71	20	43	-0,68	11	93
TABO1579	QUARUP TE TABOQUINHA	-0,18	9	45	-0,45	17	13	0,32	5	27	0,69	5	10	0,52	9	50	0,49	6	62
TABO1745	QUASAR TE TABOQUINHA	0,35	7	96	-0,73	19	8	0,09	3	60	0,16	4	50	1,58	9	16	-1,69	6	99
TABO1584	QUEBEC TE TABOQUINHA	-0,11	15	54	0,50	30	74	0,14	13	52	0,01	12	70	1,29	20	23	1,52	10	33
9323	QUERO QUERO NF	-0,56	33	12	0,52	18	74	0,07	44	63	0,07	48	61	2,96	47	2	1,22	28	40
TABO1716	QUILATE TABOQUINHA	0,28	6	94	-0,91	49	6	0,19	4	44	0,28	3	37	0,65	9	45	-0,43	4	90
A1463	QUILATE TE A	0,37	15	97	-1,24	35	3	0,02	10	72	0,05	10	64	0,47	17	52	0,31	9	67
TABO1726	QUIMÃO TE TABOQUINHA	0,32	9	95	-0,16	57	24	0,05	5	66	0,11	5	56	1,58	9	16	-1,69	6	99
TABO1776	RABI TE TABOQUINHA	0,05	14	76	-1,27	38	3	0,06	11	65	0,36	11	29	0,97	15	33	0,43	9	64
MDVG6822	RAPA PÉ D	0,00	1	69	0,24	1	59	0,17	3	47	0,21	5	45	0,23	1	62	-0,29	1	87
TABO1835	REMANSO TE TABOQUINHA	0,29	17	94	0,23	61	59	-0,22	26	97	0,30	27	35	1,16	17	27	-0,52	10	91
LVPS203	RESPLENDOR TE N. FLOR	0,29	7	94	-0,25	12	20	0,19	8	44	0,38	8	28	2,00	10	9	0,07	6	76
TABO2010	RETIRO TE TABOQUINHA	0,35	18	96	-0,74	19	8	0,42	51	17	0,64	55	12	0,51	21	51	-0,76	11	94
JFT2261	RUSSO TE JF	-0,50	21	16	-0,02	15	34	-0,10	33	91	0,38	46	28	0,60	25	47	3,21	14	7

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	AFC EPD	AFC EPD ACC.	AFC TOP %	GL EPD	GL EPD ACC.	GL TOP %	SC365 EPD	SC365 EPD ACC.	SC365 TOP %	SC450 EPD	SC450 EPD ACC.	SC450 TOP %	MA120 EPD	MA120 EPD ACC.	MA120 TOP %	ACP EPD	ACP EPD ACC.	ACP TOP %
A2621	SACADO D	0,27	12	93	-0,19	48	23	0,09	10	60	-0,30	9	95	1,49	18	18	-0,40	11	89
TABO2246	SADRAQUE TE TABOQUINHA	-0,12	13	52	-1,10	20	4	0,13	30	54	0,50	36	19	2,02	18	8	1,59	10	31
TABO2303	SAEL TABOQUINHA	0,24	10	92	-1,02	17	5	0,39	13	20	0,39	13	27	2,12	11	7	-0,67	5	93
EMGA883	SAGRADO A	0,37	9	97	-0,16	36	24	0,37	9	22	0,51	9	19	1,90	10	10	-1,03	7	96
TABO2343	SALOIO TE TABOQUINHA	-0,08	16	57	-0,86	22	6	0,77	19	3	0,96	19	4	2,39	18	5	3,23	12	7
A5230	SAPUCAÍ JA	-0,32	12	31	1,12	3	92	0,24	16	37	-0,10	16	85	-0,14	16	79	1,71	9	28
TABO2260	SAROM TE TABOQUINHA	0,16	35	87	0,43	18	70	-0,04	65	84	-0,32	70	96	0,06	43	69	-0,71	31	93
TABO2122	SERENO TABOQUINHA	0,11	7	83	0,17	72	55	0,27	10	33	0,23	8	42	1,12	10	28	0,53	4	61
7866	SERIDÓ JA	0,57	50	100	1,92	54	99	0,15	45	50	-0,13	47	88	1,21	56	25	-2,42	35	100
FAFM792	SIGNO AM	-0,01	52	67	2,08	49	99	0,38	56	21	0,09	58	59	-0,78	55	94	4,45	34	2
TABO2333	SULFO TE TABOQUINHA	-0,08	16	57	-0,88	69	6	0,65	19	6	0,89	19	5	2,39	18	5	3,23	12	7
A2708	TAITI JA	-0,17	2	47	0,25	1	60	0,05	4	66	0,08	4	60	0,06	2	69	0,46	1	63
CNS4923	TAMARINDO S	-0,59	28	11	1,39	47	96	0,62	53	7	0,87	56	6	-0,40	34	86	3,05	22	8
9346	TRICÔ	0,00	2	69	-0,31	1	18	0,13	3	54	0,26	4	39	0,40	4	55	-0,77	2	94
A2633	TRIGUEIRO D	0,01	21	71	-0,93	57	6	0,01	15	74	-0,19	16	91	1,67	28	14	-1,85	16	99
8341	TRIGUEIRO JA	-0,18	4	45	0,13	1	52	-0,20	3	96	-0,19	4	91	0,73	7	42	0,28	2	68
GUZA264	ÚNICO TE		0			0		-0,09	1	90	-0,09	1	85		0			0	
1389	URUTU	-0,20	42	43	0,09	53	49	0,12	46	55	0,23	52	42	0,84	50	38	2,82	32	10
5563	VAIDOSO JP	0,45	28	98	0,57	30	77	0,42	35	17	0,32	37	33	0,96	38	34	-1,68	20	99
5892	VAIDOZO		0		0,00	1	36	0,04	1	68		0		0,00	1	72		0	
EMGA1060	VATICANO A	0,17	13	88	-3,04	38	0,5	0,06	14	65	0,41	14	25	-0,13	16	78	-0,41	10	89
A2033	VIRTUAL DA TEOTÔNIO	-0,22	10	41	0,17	14	55	0,26	5	34	0,81	6	7	-0,58	11	90	1,37	6	37

Table 11. Partner farms of purebred cattle.

Herd/Farm	Farmer/Owner	City	State	E-mail
2 Meninas	Fernando Ferreira Carvalho	Governador Valadares	MG	
Aconchego	Jose Roberto Salgado	Felixlândia	MG	
AGS	Anselmo Guedes Silva	Teófilo Otoni	MG	agsmoto@oi.com.br
Água Verde	Alexandre Gontijo Guerra	Palmácia	CE	
Araras	Ana Luíza da Costa Cruz Borges	Luziânia	GO	
Areas	Quatro Meninas Agropecuária Ltda.	Cantagalo	RJ	
Barra da Cruz	Alexandre de Medeiros Wanderley	Angicos	RN	
Barra do Peixe Branco	Diomario Teixeira Oliveira	Frei Inocêncio	MG	
Barra do Pirapetinga	Igor Abras Rodrigues	Piranga	MG	guzeraportofirme@gmail.com
Barro Preto	Sérgio Augusto Teixeira	Ipiaú	BA	teixeirasergioaugusto@gmail.com
Bebe Água	Tomaz Acácio da Costa Soares	Lassance	MG	
Bela Vista	Walter Santana Arantes	Capim Branco	MG	
Belém	Renaldo Barreto dos Santos	Esplanada	BA	renaldobs@uol.com.br
Boa Esperança	Djanir Baquero de Souza	Leopoldina	MG	guzeratimoneiro@hotmail.com
Boa Esperança	Luis Evandro Aguiar	Veríssimo	MG	
Boa Esperança	Wilson Lemos de Moraes Junior	Silva Jardim	RJ	
Boa Família	Wemerson Amaro Coura	Muriaé	MG	contato@guzeradeboafamilia.com
Bom Sucesso	Julio Mendonça Mundim	Paracatu	MG	
Cajazeiras	Marco Andre Queiroz Barral	Santo Estevão	BA	
Calciolândia	Gabriel Donato de Andrade	Arcos	MG	
Camarão	Joel Magno dos Santos	Florestal	MG	jrenatosantos16@yahoo.com
Canaã	Allyrio Jordão de Abreu	Cantagalo	RJ	
Canaã	Denise de Abreu Ribeiro & Out. Cond.	Cantagalo	RJ	
Canoas	Antonio P. Salvo & Out. Cond.	Curvelo	MG	
Canoas	Seleção Guzerá Agropecuária Ltda.	Curvelo	MG	
Canto Dos Sonhos	Marilac Jaqueline da Silva	Bom Despacho	MG	cantodossonhos@yahoo.com.br
Caracol	Almir Mendes de Carvalho Neto	Itapetinga	BA	
Carnaúba	Manoel Dantas Vilar Filho	Taperoá	PB	
Chácara Oliveira	Lúcio Dias de Oliveira & Out. Cond.	Alexânia	GO	
Cinco Barras	Walter Rocha Pereira	Laje do Muriaé	RJ	walterrpereira@hotmail.com
Cisne e Salobo	Walter Francisco de Moura	Morada Nova de Minas	MG	
Colorado	Mateus Ferraz Souza	Bom Jesus do Tocantins	PA	
Curral da Serra	Itabajara Potengy de Mello	Nova Friburgo	RJ	
Curral de Cima	Carlos Fernando Villar Coutinho	Igreja Nova	AL	
Curralinho	Agroville - Agric. e Empreend. Ltda.	Morada Nova de Minas	MG	denilson@villefort.com.br
Curralinho	Ivagro Agropecuária Ltda.	Morada Nova de Minas	MG	denilson@villefort.com.br
Curralinho	Virgilio Villefort Martins	Morada Nova de Minas	MG	denilson@villefort.com.br
Da Barra	Roberto Neszlinger	Nazário	GO	
Daniel e Flavia	Mata Negra Agropast. Partic .Ltda.	Várzea Grande	MT	
Deus Dara	Jose da Costa Falcão	Baixa Grande	BA	
Do Carmo	Juliana Pistore Ragazzi	Ituverava	SP	
Do Pinheiro	Paulo Roberto Menicucci	Ibituruna	MG	guzeraibituruna@yahoo.com.br
Do Rosário	Hércules Antonio M. do Rosário	Carlos Chagas	MG	fazendadorosario@autlook.com
Dona Vera	Arisalvo Costa Campos Filho	Itapetinga	BA	arisalvo@ig.com.br
Douradinho	Jorge Luiz Caixeta da Cunha	Uberlândia	MG	
Encarnação	Eduardo Abreu Rodrigues	Santarém Novo	PA	
Encarnação	Luiz Guilherme Soares Rodrigues	Santarém Novo	PA	
Estabelecimento Agrícola de Italva	Emater - Rio	Italva	RJ	riogenetica@agricultura.rj.gov.br
Estação Exp. Cruzeiro do Mocó	Empr. Baiana Des. Agric. - EBDA	Feira de Santana	BA	
Estação Experimental de Alagoinha	Emp. Est. Pesq. Agrop. Paraíba - EMEPA	Alagoinha	PB	emepa@emepa.org.br
Estação Experimental de Itaberaba	Empr. Baiana Des. Agric. - EBDA	Itaberaba	BA	
Estância Esperança	Francisco H. Capparelli Virgílio	Uberlândia	MG	
Estância Kankrej	Jose Marinho Peres	São Pedro Dos Ferros	MG	
Estância Nova Recreio	Antonio P.P. Amarante Neto & Out. Cond.	Ortigueira	PR	
Europa	Marcelo Militão Abrantes	Carlos Chagas	MG	militao@grupometa.med.br
Faz. Escola Alexandre Barbosa	Sociedade Educ. Uberabense	Uberaba	MG	marcelolack@gmail.com
Felipe Camarão	Emp. Pesq. Agr. R. Gde. Norte - EMPARN	S. Gonçalo do Amarante	RN	guilhermeemparn@hotmail.com
Fiel	Antonio Abílio Marques Cordero	Uberaba	MG	
Fortaleza	Moacyr Resende	Rio Pomba	MG	
Fundão Boa Lembrança	Marcelo Garcia Lack & Out. Cond.	Carmo	RJ	marcelolack@gmail.com
Garcia	Faz. Garcia Ltda.	Magé	RJ	
Gentilândia	G & F Maricultura Ltda.	Quixadá	CE	
Gontijo	Antonio Ferreira Sobrinho	Bom Despacho	MG	
Graúna	Fernando Luiz Gonçalves Bezerra	São José de Mipibu	RN	
Guarita	Omar Resende Peres Filho	Rio Das Flores	RJ	
Harmonia	Fernando Antonio Moreira Calaes	Bom Despacho	MG	
Ibipora	Walter Henrique Zancaner	Guararapes	SP	
Ilha do Lobo	Jair Ortiz	Alterosa	MG	
Ilha Funda	Agostinho Alcântara de Aguiar	Alpercata	MG	
Independência	Paula Anastácia Gallo	Colatina	ES	
Indiana	Jose Mauricio de Figueiredo	Patrocínio	MG	
Ipeal - Cruz das Almas	Empr. Bras. Pesq. Agropec. - Embrapa	Cruz das Almas	BA	
Itapinoa	Amaro Vaz	Governador Valadares	MG	
Itapinoa	Leolino Pimenta Ribeiro Jr Cond	Governador Valadares	MG	
Jacobina	Rodrigo Diniz de Mello	S. Gonçalo do Amarante	RN	
Juca	Rodrigo Coutinho Madruga	Lagoa Dos Velhos	RN	
Lageado	Roberto Martins Franco	Sales Oliveira	SP	
Lagedão	Altamirano Pereira da Rocha	S. Antônio Jacinto	MG	
Lagoinha	Byron Fonseca Ladeira	Caetanópolis	MG	
Lapa	Dalton Moreira Canabrava Filho	Curvelo	MG	
Lua Nova	Benicio Cunha Cavalcanti	Lagedinho	BA	
Maçaranduba de Cima	Francisco Assis da Camara F. Melo	S. Gonçalo do Amarante	RN	
Maquine	Antônio Márcio Gomes Jardim	Florestal	MG	
Mara Lúcia	Alfredo Fonseca Marquez Júnior	Uberlândia	MG	
Monjolinho	Severo de Araujo Dias	Alfenas	MG	
Morada Dos Ventos	Rubem Sergio Santos de Oliveira	Alagoinhas	BA	
Mutum	Leo Machado Ferreira	Alexânia	GO	
N.Senhora da Paz	Isidoro Campos Raposo Almeida	Carapebus	RJ	

(to be continued...)

(continuation...)

Herd/Farm	Farmer/Owner	City	State	E-mail
Nossa Senhora Aparecida	Gilson Carlos Bargieri	Caçapava	SP	
Nossa Senhora Das Graças	Jose Maria Couto Sampaio	Riachão do Jacuípe	BA	
Nova Era	Carlos Oscar Niemeyer M. Silveira	Rio Novo	MG	
Nova Floresta	Luiz Vitor C. Pereira de Souza	Estrela Dalva	MG	
Nunes	Reginaldo Jose Da Silva	Conceição Das Alagoas	MG	
Olho D'água	Jose Otavio Maia de Vasconcelos	Catolé do Rocha	PB	
Olhos D'água	João de Azevedo Cavalcanti Neto	Lajedinho	BA	
Paiol	Euler Fernandes Junior	Frei Inocêncio	MG	
Palestina	Palestina Agropast. Ltda.	Unaí	MG	
Passagem Funda	Roosevelt Jose Meira Garcia	Taipu	RN	
Pedras de Maria	Pedras Do Reino Com. Agropec. Ltda.	Pedras De Maria da Cruz	MG	
Perfeita União	Aldo / Ângelo Frederico Tonetto - Cond.	Pirajuí	SP	
Poção	Leandro Botelho Neiva	Paracatu	MG	
Pontal	Claudio Severino Lara	Baldim	MG	
Queimada de Baixo	Woden Coutinho Madruga	Lagoa Dos Velhos	RN	
Rancho Cayama	Francisco Jose A. Maia Costa	Campo Grande	MS	
Rancho Colatina	Emerson Soares Junior	Nova Venécia	ES	
Recaída	Paulo Xavier Trindade	Monte Alegre	RN	
Recanto do Sol	Ronaldo Costa da Silva	Paracatu	MG	
Recreio	Mila de Carvalho L. e Campos	São Jose de Ubá	RJ	
Resplendor	Perly Dorneles De Oliveira	Cacaulândia	RO	
Retiro Mr. James	Bilfford James Crawford	Curvelo	MG	
Reunidas Minas Gerais S/A	Alberto Carlos de Freitas Ramos	Cordisburgo	MG	
Riacho do Ponteio	Pedro Bittencourt Ferraz	Vitória da Conquista	BA	
Rio Grande	Marcelo Palmerio	Prata	MG	
S. J. Tadeu do Chapadão	Amilcar Farid Yamin	Porto Feliz	SP	
Saco	Inst. Agronômico Pernambuco - IPA	Serra Talhada	PE	
Salto e Ponte	Paulo Cesar Carneiro Árabe	Prata	MG	
Samuara	Walter Guimarães Pinto	Jaboticatubas	MG	
Santa Albertina	Antonio Paulo Abate	Campo Florido	MG	
Santa Cecília	Ana Claudia Mendes Souza	Uberaba	MG	
Santa Clara	Egas Adjuto Botelho	São Felix do Xingu	PA	
Santa Maria	André Malzoni Langhi	Matão	SP	andre.langhi@hhemo.com.br
Santa Maria	Fernando Maximiliano Neto	Belmiro Braga	MG	
Santa Maria	Mario Ermírio de Moraes	Água Boa	MG	
Santa Paula	Lucio Carlos Gonçalves	Curvelo	MG	
Santa Terezinha	Frederico Crispe Bamberg	Carlos Chagas	MG	
Santa Terezinha	Lucas Caldas Neto	Felixlândia	MG	
Santa Vitoria	Maria Victoria Bolivar Gomes	Curvelo	MG	
Santana	Gustavo Alves de Faria	Muriaé	MG	fariavet@yahoo.com.br
Santana II	Vitor Cesar Caldas Machado	Uberaba	MG	
Santo Amaro	Caio Pimenta Junqueira	São Sebastião do Paraíso	MG	
Santo Antônio	Heloiza Tinoco de Paula	Itaperuna	RJ	
Santo Antônio	João Natal Cerqueira	Contagem	MG	
Santo Antônio	Jose Eduardo Jorge Barbosa	Ituverava	SP	
Santo Antônio	Marcos Corteletti	Serra	ES	
Santo Antônio	Renato Franco	Sales de Oliveira	SP	
São Bernardo	Mario Wilson Nou Falcão	Feira de Santana	BA	
São Caetano	José Renato Chiari	Morrinhos	GO	
São Cristovão	Cristovão José Rabelo	Eugenópolis	MG	
São Domingos	Silvio E. Gadelha Simas Procópio	Serra Caiada	RN	
São Francisco	Paulo Cézar Gallo	Colatina	ES	
São Francisco de Assis	Francisco Roriz Verissimo	Pancas	ES	
São José	Gilson Carlos Bargieri	Uberaba	MG	
São Jose do Bomirar	Jose de Vasconcellos e Silva	Chiador	MG	
Sao Judas Tadeu	Amilcar Farid Yamin	Porto Feliz	SP	
São Luiz	Alcebíades Paes Garcia	Piraí	RJ	
São Luiz	Francisco Jose Araujo Lutterbach	Carmo	RJ	
São Luiz	Luiz Alves de Castro	S.Antônio do Descoberto	GO	
São Sebastião	Carlos F. Fontenelle Dumans & Out - Cond.	Baixo Guandu	ES	contato@guzeranf.com.br
Serra Negra	Carlos Magno C. Brandão & Out - Cond.	Santana do Riacho	MG	guzeracipo@terra.com.br
Serraria	Sávio Suisso Tinoco	Natividade	RJ	
Serrinha/Calciolandia	Gabriel Donato de Andrade	Betim	MG	
Sitio Beija Flor	Zootécnica Tropical Ltda.	Uberaba	MG	
Sitio Das Lages	Richard Wagner A. Freitas Santos	Datas	MG	
Sitio Miranda	Paulo César Miranda Faria Júnior	Fernandes Tourinho	MG	
Sitio Nossa Senhora Aparecida	Milton Okano	Ituverava	SP	
Sítio Rio Negro	Rio Negro Agropecuária Ltda.	Uberaba	MG	
Sitio Santa Helena	Sávio Costa Gonçalves	Poço Fundo	MG	saderesav@gmail.com
Sumaúma	João Cruz Reis Filho	Miradouro	MG	
Taboquinha	Sinval M. de Melo	Itambacuri	MG	guzerataboquinha@terra.com.br
Tapera Cajazeiras	Frutos Trop. Belém S/A - Frutibem	Conceição da Feira	BA	
Teimosa	Jose Armando Nogueira Diógenes	Jaguaribe	CE	
Teotônio	Teotônio Agropecuária Ltda.	Quixeramobim	CE	
Terra Nova	Marco Aurélio Grillo de Brito	Duas Barras	RJ	
Terra Nova	Rodrigo Pinto Canabrava	Bocaiúva	MG	
Tibuna	Paola Gazzinelli	Novo Cruzeiro	MG	
Três Colinas	Bruno Knoop C. Nobre de Campos	Aparecida	SP	
Três Marias	Carlos Fernando M. L. Filho & Out - Cond.	Linhares	ES	
Turmalina	Elysio Jose Ferreira	Frei Inocêncio	MG	
Ubaia	Henderson Magalhães Abreu	Touros	RN	
Umari	Ubiratan Souto Botelho	Banabuiu	CE	
Urtigão	Sergio Castelani	Marília	SP	
Uruguay	Vânia Maldini Penna	Corinto	MG	vaniapenna@gmail.com
Varginha Forquilha	Marcos Valadares M. Diniz	Curvelo	MG	
Várzea	Manoel Goncalves Pereira	Felixlândia	MG	
Ygarapés	José Transfiguração Figueiredo & Out - Cond.	Jampruca	MG	guzerajf@hotmail.com
Zebuína	Geraldo Franca Silvany	São Miguel Das Matas	BA	
Zootecnia	Fund. E. D. C. Agrarias - FUNDAGRI	Uberaba	MG	

Active collaborators of progeny testing (they offer females to mate)

Table 12 . Partner Farms of crossbred cattle (all active)..

Herd/Farm	Farmer/Owner	City	State	E-mail
Agropecuária Cappa	Francisco Humberto Cappareli Virgílio	Uberlândia	MG	
Água Limpa	Alexandre José Ferreira	Vieiras	MG	
Alvorada	José Carlos Loreto de Oliveira	Itaperuna	RJ	
Amaralina	Anderson Luiz Andrade Amaral	Itapé	BA	
Aparecida	Celso Bittencourt Teixeira	Barra de São Francisco	ES	
Barra Alegre	Manoel Teodoro P. de Carvalho	Muriaé	MG	
Beija Flor	Anedina Maria Pardim	Carlos Chagas	MG	
Beija Flor	Ildeu Leite Moreira	Engenheiro Caldas	MG	
Beirador	Paulo Teixeira	Ecoporanga	ES	
Bela Vista	Edilceu Reis Costa	Medeiros Neto	BA	
Bela Vista	Sérgio Paula Gonçalves	Durandé	MG	
Bela Vista & Califórnia	José Geraldo O. Miranda	Carlos Chagas	MG	
Boa Esperança	Everton Benedicto Poyes	Miracema	RJ	
Boa Esperança	Lorena Nogueira Silva	Laje do Muriaé	RJ	
Boa Esperança	Neide Stephano Guedes Nogueira	Laje do Muriaé	RJ	
Boa Esperança	Rommel da Silva Batalha	Faria Lemos	MG	
Boa Sorte	Rui da Silva Verneque	Pocrane	MG	ruiverneque@gmail.com
Bom Jardim	Ernando de Oliveira Cidrine	Barão de Monte Alto	MG	aparecidaeoc@gmail.com
Bom Jesus	Leonardo Rezende Figueredo	Bom Jesus do Itabapoana	RJ	
Bom Retiro	Cláudio Lopes da Silva	Teófilo Otoni	MG	
Bom Sucesso	Hélio Martins de Arújo	Rio Pomba	MG	helio.bomjardim3@gmail.com
Cachoeira Alegre	Rogério Figueira Zini	Dores Rio Preto	ES	
Cachoeira Comprida	Djalma de Sá Oliveira Filho	Ecoporanga	ES	washingtongerker@hotmail.com
Cachoeira do Cedro	José da Rocha Amim	Miracema	RJ	
Califórnia	Alzemar Pereira da Silva	Carlos Chagas	MG	
Campo Experimental Santa Mônica	Embrapa Gado de Leite	Valença	RJ	jose.landeiro@embrapa.br
Cantagalo	Lúcio Alves Pereira	Jampruca	MG	
Capão da Imbira	João Edigar Leite	Itutinga	MG	
Casa Nova	Luiz Carlos Portal Costa	Itaperuna	RJ	portal.costa@bol.com.br
Chácara	Jose Augusto Arquetti Furlani	Barão de Monte Alto	MG	
Convento	José Maurício de Oliveira	Ubá	MG	
Coqueiro	Rivelino Lima Garcia	Natividade	RJ	
Córrego do Bugre	Cristiano de Oliveira Poncio	Aimorés	MG	
Córrego do Traíra	Wellington Luiz Teixeira	Governador Valadares	MG	
Cutia	Elizabete Nogueira	Carlos Chagas	MG	fazendacutia@hotmail.com
Da Fidelidade	Luiz Carlos da Silva	Raul Soares	MG	
Da Mata	Jacques James Ronacher Passos	Nanuque	MG	
Do Pontão	Célio Candido da Silva	Barão de Monte Alto	MG	
Do Porto	Getulio de Lima Leal	Bom Jesus do Galho	MG	
Do Sul	Odilon Paiva Carvalho	Barão de Monte Alto	MG	odiloncarvalho@oi.com.br
Dourada	Ângelo André Bosi	Barra de São Francisco	ES	
Gertrudes	José Onofre Rodrigues	Vieiras	MG	
Granja São Domingos	Menelick Bodervan Bastos	Dores Rio Preto	ES	
IFF Campus Bom Jesus do Itabapoana	Instituto Federal Fluminense	Bom Jesus do Itabapoana	RJ	
Independência	Luiz Fernando Meirelles Barbosa	Leopoldina	MG	
Invejada	Márcio da Silva Carvalho	Barão de Monte Alto	MG	
Lagoa Grande	Edinaldo Martins da Silva	Medeiros Neto	BA	
Lajedinho	Agesandro da Costa Pereira Filho	Ataléia	BA	
Lambari Alegre	Eron José dos Santos Carvalho	Miradouro	MG	eron.jose@sancar.com.br
Laranjeiras	Alejandro Vargas Velásquez	Uberaba	MG	alejandrovavel@hotmail.com
Limeira	José Carlos Nunes de Oliveira	Durandé	MG	
Limoeiro	Pedro Ivo dos Santos Ourique Figueiredo	Rosal	MG	
Lua Nova	Vanderlei Silva Lessa	Itamaraju	BA	vanderlei.lessa@gmail.com
Manacá	Luiz Gabriel Pinheiro Fernandes	São Fidélis	RJ	
Mangueira	Pedro Novaes	Mutum	MG	
Mara Lúcia	Alfredo Fonseca Marquez	Uberlândia	MG	
Meia Légua	Wanderley José de Oliveira	Ipanema	RJ	
Miguéis & Mendonça	André Luiz de Melo Toreta	Muriaé	MG	
Monte Alegre	Miguel Eugênio Monteiro de Barros	Rosário da Limeira	MG	
Monte Verde	Alice Ferreira Carrasco	Cambuci	MG	
Novo Horizonte	Conrado Dias Corsi	Poço Fundo	MG	conradocorsi88@gmail.com
Novo México/Mangalô/Maravilha	Luiz Fernando A. Da Silva	Carlos Chagas	MG	
Pampulha	Ângela Nogueira Calcagno	Carlos Chagas	MG	ranieri_calcagno@hotmail.com
Papuda	Luiz Gonzaga Santos	Ataléia	RJ	lgsantos22@hotmail.com
Paraíba	José Geraldo Ferreira Baptista	Carlos Chagas	MG	gerinha-ferreira@hotmail.com
Pedra Dourada	Carlos Alberto Andrade Amaral	Itamaraju	BA	
Planalto	João Pereira da Silva	Carlos Chagas	MG	celsodeoliveira@hotmail.com
Ponte Alta	José Roseira Vargas Neto da Fônseca	Bom Jesus do Itabapoana	RJ	
Recanto da Boa Vista	Ricardo Duarte Ribeiro	Barão de Monte Alto	MG	
Recreio	Álvaro Gomes Moreira	Jucuruçu	BA	fazendacachoeiradouro@hotmail.com
Recreio e Pedra	Arthur Pinto Gabeto	Laje do Muriaé	RJ	
Retiro	Leonardo Teles Diniz	Iguatama	MG	lt.diniz@uol.com.br
Reunidas Estrela do Oriente	Idalina da Rocha Nonato	Vereda	BA	
Reunidas Monte Líbano	Nacib S. A. Habib	Mutum	MG	
Revolta & Santa Fé	Claudia Langnier Scherr	Carlos Chagas	MG	
Rio Novo	Cleitomar Santana dos Santos	Miracema	ES	
Rio Preto	Jorcimar Otávio de Assis	Água Doce do Norte	ES	
Rosal	Paulo César da Silva Pereira	Laje do Muriaé	RJ	
Sabiá	Adalberto da Rocha Nonato	Teófilo Otoni	MG	
Santa Inês	Guilherme Ribeiro de Camargo	Miracema	RJ	
Santa Maria	João Vidal de Moraes	Pocrane	MG	jvidalmoraes@hotmail.com
Santa Maria	José Bento da Silva	Raul Soares	MG	
Santa Maria	Paulo Bittencourt Teixeira	Vila Pavão	ES	paulobitencourtteixeira@gmail.com
Santa Maria	Sebastião Lopes de Faria Filho	Raul Soares	MG	
Santa Rita	Aluízio Lindemberg Thomé	Faria Lemos	MG	izothome@gmail.com
Santa Rita	Marlene A. de Moraes Junqueira	Volta Grande	MG	sindvoga@hotmail.com
Santa Rosa	Maria C. P. Costa	Mutum	MG	

(to be continued...)

(continuation...)

Herd/Farm	Farmer/Owner	City	State	E-mail
Santa Terezinha	Carlisom Costa de Souza	Paraíba do Sul	RJ	
Santa Terezinha	Sérgio Barbiere Biscotto	Tarumirim	MG	
Santo Antônio	Mery Henrique Ribeiro Fernandes	Linhares	ES	mery-fernandes@hotmail.com
São Geraldo	Manoel A. Magalhães	Taparuba	MG	daysicapil@hotmail.com
São João da Cruz	José Renato Severo Correia	Italva	RJ	
São José do Paraíso	José Eduardo Coelho B. Junqueira Ferraz	Leopoldina	MG	
São Romão	Marcílio Fialho da Silva	Santo Antônio de Pádua	RJ	
São Sebastião	Cláudio José Magalhães Baptista	Durandé	MG	
São Sebastião	Fábio Maciel de Carvalho	Varre-Sai	RJ	
São Sebastião	José Alvim Godinho Spinola	Durandé	MG	
São Sebastião	Vinício Araújo Nascimento	Quirinópolis	GO	
São Vicente	Rogério Côrtes Ventura	Itaperuna	RJ	
São Vicente da Estrela	José Evangelista Raspante	Raul Soares	MG	
Sítio Da Laje	Adib José Abrahão Neto	Guarará	MG	
Sitio do Engenho	Sérgio Murilo Teixeira	Ibituruna	MG	sergioteixeira1969@hotmail.com
Sítio Maomé	Emerson Elias Pontes	Mantena	MG	
Sítio Saudade	Ricardo Reis Junqueira	Leopoldina	MG	
Sítio Santa Cecília	Vicente de Paula Machado	Senador Cortes	MG	
Sítio São João	João Vitor Cerqueira	Durandé	MG	
Sítio Valão	Sérgio Machado	Mar de Espanha	MG	
Sobrasil	Rosa Maria Almeida de Resende	Miraí	MG	
Soledade Cristal	Maurício de Abreu Lima Campos	Miradouro	MG	raphaelbcampos@yahoo.com.br
Todos os Santos	Genegelnisone Partelle	Vila Pavão	ES	
Vereda	Adalberto da Rocha Nonato	Vereda	BA	
Vista Alegre	Romero Tadeu da Silva Batalha	Faria Lemos	MG	

Table 13. Batteries of sires in the Guzerá Progeny Testing

Sire's ID	Sire's Name	Battery	A.I. Company	Sire's ID	Sire's Name	Battery	A.I. Company
9940	BARBANTE JF	1ª		TABO 1345	OCRE TE TABO	8ª	
A1437	ÉDIPO A	1ª		TABO 1367	OPUS TE TABO	8ª	
A2389	ESTILO A	1ª		TABO 1406	PEQUI TE TABO	8ª	CRV
A337	FUNDADOR TE RF	1ª		TABO 1467	PÓLO TE TABO	8ª	
A2664	GITANO A	1ª		ROS 206	PUPILO ROS	8ª	
A133	IMPERIAL JA	1ª		JFT 2230	REINO TE JF	8ª	
9974	JÓQUEI TE JP	1ª					
A2633	TRIGUEIRO D	1ª		JFT 2488	ATLAS TE JF	9ª	CRV
				JFT 2433	NÁPOLE TE JF	9ª	CRV
A6104	ALMA DE GATO D	2ª		JFT 2302	NAQUE TE JF	9ª	
A6120	CABO DE GUERRA D	2ª		JFT 2367	NASSAU TE JF	9ª	
A951	CABUL II S	2ª		JFT 2351	NEPAL TE JF	9ª	ALTA
A6119	CAPITÃO-MOR D	2ª		JFT 2325	NÔMADE TE JF	9ª	
A2804	HORIZONTE NF	2ª		JFT 2422	NOTÁVEL TE JF	9ª	ALTA
A1443	HORTO A	2ª		TABO 1716	QUILATE TABO	9ª	
A1449	JAGUNÇO A	2ª		TABO 1776	RABI TE TABO	9ª	CRV
5769	LEITEIRO JP	2ª		ROS 342	UÍSQUE ROS	9ª	
A5230	SAPUCAÍ JA	2ª					
				JFT 2452	ADONAI TE JF	10ª	CRI
A6134	DESENGASGO D	3ª		UNIU 52	AGHA KHAN FIV	10ª	
5762	ÊXITO TE	3ª		JFPA 20	ALINHADO TE IBITURUNA	10ª	SEMEX
5791	NOBRE JF	3ª		HUM 24	HUM SONHO ABADON	10ª	ALTA
9754	PARAÍSO JF	3ª		JFPA 92	MAESTRO IBITURUNA	10ª	SEMEX
5775	RADIAL TE	3ª		ROS 522	OURO TE ROS	10ª	
A2033	VIRTUAL TEOTÔNIO	3ª		CALG 133	ÚMIDO CAL	10ª	ALTA
4790	CAIRO JP	4ª		CNS 7275	BAÇÃO S	11ª	
A2731	GAVIÃO N.FLOR.	4ª		ROS 780	DICK FIV ROS	11ª	
5883	HÁBIL TE TABO	4ª		LKW 223	GARI B.LEMB.	11ª	
A1447	IMPULSIVO A	4ª		SAV 94	GIM FIV SADERE	11ª	
MMMM A5873	OSASCO 4M	4ª		LKW 243	HUMORISTA FIV	11ª	
A2621	SACADO D	4ª		OTPZ 119	IRIL POI OT	11ª	
				JAJ 3652	QUITO FIV JA	11ª	
PEAC 22	CIGANO PEAC	5ª		TABO 2122	SERENO TABO	11ª	
ROS 34	DEVOTO TE ROS	5ª		TABO 2510	TRONO TE TABO	11ª	CRV
TABO 636	HUMAITÁ TE TABO	5ª		TABO 2624	TUCO TE TABO	11ª	CRI
TABO 727	INSTINTO TE TABO	5ª		TABO 2567	TUISTE TE TABO	11ª	ABS
TABO 747	JABUTI TE TABO	5ª		TABO 2935	VALENTE TABO	11ª	
TABO 812	JEQUIÁ TE TABO	5ª		ROS 614	VERNIZ TE ROS	11ª	
TABO 866	LABRADOR TABO	5ª					
A1462	PACÍFICO A	5ª		JFPA 184	BOIEIRO IBITURUNA	12ª	ALTA
FNF 5873	PLEBEU NF	5ª		JFT 3045	CAIO FIV JF	12ª	
A1463	QUILATE A	5ª		JFT 3094	CÁLICE FIV JF	12ª	CRV
				JCGU 50	DENIS CAMARÃO	12ª	
ROS 116	INGLÊS TE ROS	6ª		FCGP 604	DÓLAR TE EMPARN	12ª	
MDVG 6066	JANARI D	6ª		LKW 219	GREGO B.LEMB.	12ª	ALTA
LVPS 59	JOÁ N.FLOR.	6ª		IHL 178	GULOSO	12ª	ALTA
PEAC 211	MARANHÃO TE PEAC	6ª		HUM 51	HUM SONHO BALBECK	12ª	
TABO 1058	MIRADOR TE TABO	6ª		HUM 34	HUM SONHO BARÃO	12ª	
TABO 1117	NAQUE TE TABO	6ª	ALTA	HUM 38	HUM SONHO BARUC	12ª	SEMEX
LVPS 98	NOTÁVEL N.FLOR.	6ª		TAL 5966	NATALINO TEOTÔNIO	12ª	
JFT 2049	PSIU JF	6ª		JFPA 222	URIEL IBITURUNA	12ª	CRV
CIPO 41	CASSINO CIPÓ	7ª		JFT 3102	CABO FIV JF	13ª	
TABO 1231	ODRE TE TABO	7ª		JFT 3157	CAIM JF	13ª	CRV
TABO 1302	ORIENTE TE TABO	7ª		UNIU 236	CAIRO	13ª	ABS
TABO 1329	OROS TE TABO	7ª		IVAG 2053	ESMINGO VILLEFORT	13ª	
TABO 1272	OURIÇO TE TABO	7ª	ALTA	IVAG 2269	EXBAIANO VILLEFORT	13ª	
				CNS 8034	FERIDO S	13ª	
HANC 311	CORSÁRIO DA VEREDA	8ª		FNF A 960	HIDRANTE FIV NF	13ª	ALTA
ROS 128	INDEX ROS	8ª		LKW 319	IPÊ FIV B.LEMB.	13ª	CRV
TABO 1301	OBUS TE TABO	8ª	ALTA	MAPZ 74	NEON SANTA CECÍLIA	13ª	

(to be continued...)

(continuation...)

Sire's ID	Sire's Name	Battery	A.I. Company	Sire's ID	Sire's Name	Battery	A.I. Company
JFPA 465	CAMBUCI IBITURUNA	14ª	CRV	DTOO 70	BALIFAX FIV PEIXE BRANCO	17ª	
AVPG 124	CID 4 MENINOS	14ª	CRV	METG 44	BEMENTHAL FIV DA META	17ª	ALTA
JCGU 237	ESCOLHIDO FIV CAMAR	14ª	CRV	METG 77	BIZANTINO FIV DA META	17ª	ALTA
UNIU 439	ESCOTEIRO FIV UNIUBE	14ª	ALTA	JUZZ 73	LOBO DA JUZZ	17ª	SEMEX
IVAG 2818	FABULOSO VILLEFORT	14ª		FNF A 2547	MANSO FIV NF	17ª	
FNF A 753	HAMAL NF	14ª	ALTA	JFPA 1018	NATAN IBITURUNA	17ª	SEMEX
JAJ 4196	MONTENEGRO FIV JA	14ª		JFPA 1043	NICOLA IBITURUNA	17ª	ALTA
JFT 3253	OÁSIS FIV JF	14ª	CRV	JFPA 1023	NOBRE IBITURUNA	17ª	ALTA
JFT 3311	ÓPIO FIV JF	14ª	SEMEX	IVAG 4836	NORTON VILLEFORT	17ª	
MAPZ 382	PACTO FIV SANTA CEC	14ª		GCIK 29	OREGON DC TE	17ª	ABS
TABO 3245	XAXIM FIV TABO	14ª					
				METG 92	DIVIDENDO FIV DA META	18ª	ALTA
TABO 3689	ATIVO FIV TABO	15ª	ABS	GZF 77	HERMES FIV DO GUGA	18ª	ALTA
AVPG 241	DÓLAR 4 MENINOS	15ª	CRV	JFT 3738	NABIH FIV JF	18ª	SELECT
AVPG 322	DRAKAR 4 MENINOS	15ª		IVAG 4829	NÁPOLE VILLEFORT	18ª	
AVPG 325	EGEU 4 MENINOS	15ª	CRV	IVAG 4823	NERO VILLEFORT	18ª	
IVAG 2735	FAGUEIRO VILLEFORT	15ª		CNS 9315	PALETO S	18ª	
IVAG 2342	FALANTE VILLEFORT	15ª		CNS 9524	PAPADO II S	18ª	
FCGP 679	FANTOCHE EMPARN	15ª		JFT 3653	REN JF	18ª	
IVAG 3206	GIBA VILLEFORT	15ª		MAPZ 606	VACÍNIO FIV SANTA CECÍLIA	18ª	
IVAG 3205	GOLFO VILLEFORT	15ª					
FCGP 729	HEBREU EMPARN	15ª		JFPA 1136	AMON IBITURUNA	19ª	
HUM 314	HUM SONHO FALATÓRI	15ª		JFPA 1182	AQUILES IBITURUNA	19ª	
HUM 320	HUM SONHO FOSCO	15ª		UNIU 1152	IMPLACÁVEL FIV UNIUBE	19ª	
JFPA 691	PATRUS IBITURUNA	15ª	CRV	UNIU 1216	JEQUIÉ FIV UNIUBE	19ª	
				LKW 1026	PAYSANDU FIV B.LEMB.	19ª	ABS
TABO 3711	ABU FIV TABO	16ª	ABS	JUZZ 110	PREFERIDO FIV DA JUZZ	19ª	GENEX
TABO 3714	ACAJU FIV TABO	16ª	CRV	IVAG 5461	PRESIDENTE VILLEFORT	19ª	
TABO 3835	BICUDO FIV TABO	16ª		JUZZ 151	REFLEXO DA JUZZ	19ª	ALTA
METG 18	BLINDADO FIV DA META	16ª	ALTA				
METG 83	BLOG FIV DA META	16ª	ALTA	JFPA 1174	ABARÉ IBITURUNA	20ª	
AVPG 407	ÉDIPO 4 MENINOS	16ª	ALTA	JFT 3809	ÁRABE JF	20ª	GENEX
AVPG 405	ENCANTO 4 MENINOS	16ª		JFPA 1248	MAGNO IBITURUNA	20ª	ALTA
JFT 3456	ESQUADRÃO II JF	16ª	CRV	JFT 3864	MEXICANO JF	20ª	ABS
IVAG 4552	MARRONE VILLEFORT	16ª		LKW 1008	PANAMÁ FIV B.LEMB.	20ª	CRV
JCGU 467	TUAREG II FIV CAMARÃ	16ª		JUZZ 136	PENSAMENTO FIV DA JUZZ	20ª	ABS
				LKW 1115	REI FIV B.LEMB.	20ª	COGENT
DTOO 65	ASCRI FIV PEIXE BRAN	17ª		LKW 1220	SINGELO B.LEMB.	20ª	ABS
METG 40	BACHAREL FIV DA MET	17ª	ALTA	JUZZ 179	TROPEÇO DA JUZZ	20ª	ABS
METG 66	BALANCETE FIV DA ME	17ª	ALTA				

General information about the Guzera Breeding Program

Presidents of CBMG²

Bernhard Winkler (1992-1994)
Eduardo Almeida (1994-1996)
Bernhard Winkler (1996-1997)
José Orlando Duarte (1997-1998)
Roberto Winkler (1998-2002)
Virgilio José Matias Melo (2002-2006)
José Henrique Diniz Figueiredo (2006-2008)
Ariane Maria Figueirêdo Menicucci (2008-2016)
Carlos Fernando Fontenelle Dumans (2016-actual)

Researchers and Technicians of the Involved Public Institutions

Andrea Alves Egito - Embrapa Beef Cattle
Anibal Eugênio Vercesi Filho - IZ/SP
Fabyano Fonseca e Silva - DZO/UFV
Humberto Tonhati - FCAV/UNESP
José Aurélio Garcia Bergmann - EV/UFMG
Júlio Cesar Carvalho Balieiro - FMVZ/USP
Lenira El Faro Zadra - IZ/SP
Luiz Antônio Framartino Bezerra - ICB/USP
Maria de Fátima Ávila Pires - Embrapa Dairy Cattle
Maria Raquel Santos Carvalho - ICB/UFMG
Mario Luiz Martinez - Embrapa Dairy Cattle (in memorian)
Paulo Sávio Lopes - DZO/UFV
Pedro Alejandro Vozzi - CTAG/ANCP
Raimundo Nonato Braga Lobo - Embrapa Goats & Sheep
Raysildo Barbosa Lobo - ANCP
Roberto Luiz Teodoro - Embrapa Dairy Cattle
Ricardo Vieira Ventura - FMVZ/USP
Vânia Maldini Penna - CBMG²

Breeders and/or Owners of the Animals Chosen to the Dairy Breeding Program (sires and dams, progeny testing and MOET Nucleus)

Alexandre de Medeiros Wanderley
Allyrio Jordão de Abreu
Aloysio de Paula Penna
Ana Rita Tavares de Melo
Ana Vera Marques Palmério Cunha
Antonio Ernesto Salvo
Antonio Pitangui Salvo
Ariane e Paulo Menicucci
Aurelio da Fonseca Leal
Bernard Winkler

Carlos Lindenberg
Caroline Alves Dias Lorenzo
Celso Borba
Condomínio Édipo
Condomínio Seridó
Diomário S. Teixeira e outros/Condomínio
Eduardo Almeida
Eduardo Augusto de Souza
Embrapa Gado de Leite
Empresa Estadual de Pesquisa Agropecuária da Paraíba - Emepa
Empresa Pesquisa Agropecuária do Rio Grande Norte - Emparn
Euclides Aranha
Frutos Tropical Belém S/A - Frutibem
Gabriel Donato de Andrade
Geraldo Melo Filho
Gustavo Alves de Faria
Haroldo B. Fontenelle da Silveira e outros
Heloísa Tinoco de Paula
Hercules Antônio Miglio do Rosário
Hudson Armando Canabrava
João Cruz Reis Filho
Joel Magno dos Santos
José Resende e José Marinho Peres
José Sátiro da Costa e Silva
José Transfiguração Figueirêdo
Juliana Pistore Ragazzi
Lúcio Carlos Gonçalves
Luiz Vitor Carrão Pereira de Souza
Manoel Dantas Vilar Filho
Marcelo Garcia Lack
Marcelo Militão Abrantes
Marcelo Palmério
Maria José e Marilena Couto Sampaio
Marilac e Humberto Secundino
Paulo Emílio Almeida Carneiro
Ribamar Monteiro
Roberto Martins Franco
Roberto Winkler
Rodrigo Diniz de Melo
Romeu Bamberg
Sávio Costa Gonçalves
Sinval Martins de Melo
Sociedade Educacional Uberabense - Uniube
Supranor
Teotônio Agropecuária Ltda.
Vânia Maldini Penna
Virgilio Villefort Martins
Walter Rocha Pereira

Contact Information CBMG[2]

E-mail: cbmg@cbmgguzera.com.br
Internet: www.cbmgguzera.com.br

Carlos Fernando Fontenelle Dumans
President
CBMG[2]

Cibele Diniz Figueiredo Gazzinelli
Vice president
CBMG[2]

Ariane Maria Figueiredo Menicucci
Financial Director
CBMG[2]

Marcos Vinícius Matias de Melo
Technical Director
CBMG[2]

Lenira El Faro Zadra
Researcher
CBMG[2]

Contact Information ANCP

ANCP
Fax: (16) 3877-3260
E-mail: ancp@ancp.org.br
Internet: www.ancp.org.br

ACGB
Fax: (34) 3336-1995
E-mail: sede@guzera.org.br
Internet: www.guzera.org.br

Technicians responsible for the genetic evaluation at ANCP - Beef Cattle

Raysildo Barbosa Lôbo	**USP, ANCP**
José Aurélio Garcia Bergmann	**UFMG**
Luiz Antonio Framartino Bezerra	**USP**
Washington Luiz Olivato Assagra	**CTAG**
Letícia Mendes de Castro	**ANCP**
Henrique Nunes de Oliveira	**UNESP**

CTAG - Centro Técnico de Avaliação Genética
Daniel Pereira Lôbo
Washington Luiz Olivato Assagra

Technical Execution
CTAG - Centro Técnico de Avaliação Genética

Technical Staff of PNMGuL – 2020

Carlos Fernando Fontenelle Dumans
President
CBMG[2]

Marcos Vinícius Matias de Melo
Technical Director
CBMG[2]

Frank Angelo Tomita Bruneli
Researcher
Embrapa Dairy Cattle

Lenira El Faro Zadra
Researcher
CBMG[2]

Maria Gabriela Diniz Peixoto
Researcher
Embrapa Dairy Cattle

Maria Raquel Santos Carvalho
Professor
Instituto de Ciências Biológicas - UFMG

Vânia Maldini Penna
Consultant
CBMG[2]

Rodrigo Junqueira Pereira
Profesor
UFR

Mário Luiz Santana Júnior
Professor
UFR

Wagner Antonio Arbex
Analyst
Embrapa Dairy Cattle

Dejair Felipe Caetano
Farm Technician
CBMG[2]

Embrapa Gado de Leite

Sponsorship

Guzerá Ibituruna

Empório Guzerati Norte de Minas

Guzerá Villefort Leite – Linhagem Leiteira

Fazenda Taboquinha

Fazenda Carnaúba

NF Guzerá

Meta Leiteiro

Guzerá Hathor – Fazenda Stª Rita | Faria Lemos | MG – Aluízio Lindenberg Thomé

Fazenda Sgarapés – Guzerá JF

Guzerá da Juzz

Fazenda Escola Uniube

Support

UFMG – Universidade Federal de Minas Gerais

UFV – Universidade Federal de Viçosa

UFR – Universidade Federal de Rondonópolis

EPAMIG

Minas Gerais – Governo Diferente. Estado Eficiente.

emepa-pb

EMPARN – Empresa de Pesquisa Agropecuária do Rio Grande do Norte S/A

EMATER-RIO – Empresa de Assistência Técnica e Extensão Rural do Estado do Rio de Janeiro

EMATER-MG

CNPq – Conselho Nacional de Desenvolvimento Científico e Tecnológico

FAPEMIG

Polo de Excelência em Genética Bovina

Agência de Inovação Polo do Leite

IMA – Instituto Mineiro de Agropecuária

ANCP

YES! Idiomas

Guzerá – Associação dos Criadores de Guzerá do Brasil

ABCZ

Ministério da Agricultura, Pecuária e Abastecimento

Pátria Amada Brasil – Governo Federal