

EastGen

Invested in your future.



A2A2

A2A2 sires increase the prevalence of A2 milk

		A2A2 SIRE	
DAM	A2A2	100% A2A2	Produce 100% of A2 milk
	A1A2	50% A2A2 50% A1A2	
	A1A1	100% A1A2	Produce 50% A1 milk & 50% A2 milk

Holstein Canada, 2015

Herds can convert to 100% A2 milk within 4 years using intensive selection.

A2 Milk Popularity on the Rise

With files from Ben Versteeg, Semex Sales & Product Specialist

Semex has noted the continuous growth in customer demand for homozygous A2 bulls, and in response have developed the A2A2 brand to help breeders easily identify the bulls and traits they want to incorporate in their breeding programs. Semex's A2A2 lineup are bulls genetically tested as homozygous A2A2 carriers, so they will be guaranteed to pass on an A2 allele to their progeny. These bulls cover a wide range of our lineup including many Immunity+™ sires and top Genomax™ and proven bulls.

An A2A2 logo appears in sire inquiries at www.eastgen.ca, on sire proof sheets, and in EastGen's 360 Genetic Solutions.

Continued on page 2...

April 2016

This Issue:

A2 Milk Popularity on the Rise
Activity Monitoring, Mark Carson
360° Genetic Solutions

April Proof Sire Update - Val-Bisson
Doorman

Upcoming Events:



EastGen Showcase

July 4 - 5, 2016
Spencerville Fairgrounds

EastGen Challenge - West

July 7 - 8, 2016
Stratford Fairgrounds

EastGen Challenge - East

July 14 - 15, 2016
Markham Fairgrounds

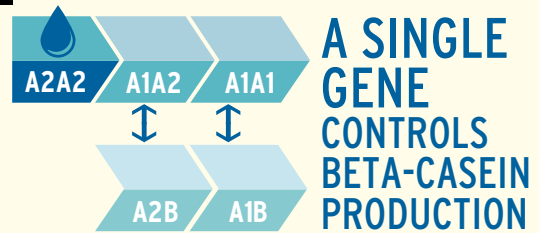
EastGen Atlantic Showcase

July 15 - 17, 2016
Truro, Nova Scotia

Watch for entry packages this April

A hot topic in the dairy industry today is the growing popularity of A2 beta-casein milk among consumers and dairy farmers. Farmers in many regions of the world are being incentivised to produce A2 milk to meet the growing demand in what is considered to be a healthier alternative to conventional dairy (Zoetis, 2015). However the science behind this trend remains controversial and is not well understood by many consumers and producers. The goal of this article is to present an assessment of the facts as they are currently known and explain Semex's A2 brand.

Milk is composed of several solid components including minerals, lactose, fat and protein. There are three notable casein milk proteins: alpha, kappa, and beta-casein - the protein of interest to us in this article (Zoetis, 2015). There are several variants of the beta-casein protein with the most common ones being the recognizable A1 and A2 variants, as well as a B variant and some other rare variants (Pal, 2015). Research suggests that all cattle carried the A2 variant historically, but the A1 variant arose due to a mutation in European herds a few thousand years ago. The A1 variant is most commonly found in breeds with European ancestry, however, it has been introduced in some non-European cattle populations through crossbreeding (Pal, 2015). In the Holstein population the A1 and A2 variants are estimated to appear in approximately equal amounts. In Jersey, the A2 allele is slightly more prevalent (Woodford, 2007). Beta-casein protein production is controlled by the combination of any two of these variants (ie. A1A2) as all cows carry two alleles. These alleles are co-dominant, meaning that cows that carry two different variants



*B is a variant within the gene that can be inherited along with A1. For simplicity sake, it can be considered the same as A1.

S. Kaminski 2007 Journal of Applied Genetics.

(heterozygous) will produce equal amounts of each protein that they carry, while cows that carry two copies of the same allele (homozygous) will produce only that protein (Woodford, 2007). This makes achieving a homozygous A2 herd exclusively through genetic selection a possibility for dairy producers. While a quick conversion to A2 would be possible via genetic testing and selective culling of A1 carriers, a more sound approach could be a step-wise approach of genetic selection for A2A2 sires in advance of conversion to mitigate the need for A1 culling.

WHAT'S BEHIND THE GROWTH OF A2?

In preliminary research A1 and A2 milk proteins have been shown to behave differently during the digestive process due to an amino acid variation. The A1 beta-casein amino acid chain is susceptible to breakdown during normal enzymatic digestion, the peptide it breaks down to is a bioactive opioid; beta-casomorphin-7 (BCM-7). A2 beta-casein's amino acid chain is not as likely to experience this breakdown into BCM-7 (Clarke, 2014).

Some studies conducted have linked A1 beta-casein and BCM-7 to a variety of ailments. The research and analysis on this subject is quite active and will likely continue for many years.

Activity Monitoring

Mark Carson,
Manager of Reproductive Solutions



Activity monitoring is becoming the backbone of many herd reproductive management programs. With many freestall herds now using the technology, and also a lot of heifers wearing a device, the question becomes, how do I get the most performance out of a system?

Recent work done at the University of British Columbia looked at the factors related to peak activity levels and duration when monitoring cows with commercially available activity monitoring equipment. Each cow was fitted with a SCR Heatime activity collar and a leg-mounted pedometer. The neck collar and leg-mounted pedometer had an estrous detection rate of 89.6% and 85.5% respectively during the trial.

The research showed that a low body condition score was associated with reduced peak and duration. The study also found more chance of pregnancy from cows that had a higher peak activity level. Lactation and secondary signs of heat were also related to estrous. It is also interesting to note that milk production on the day of breeding had only a weak relationship with peak activity levels, although when categorized into percentiles, it was shown that higher yielding cows have slightly reduced peak activity levels and durations.

This work done by The University of British Columbia shows the overall importance of managing body condition score and how it can relate to estrous expression in your herd.

Stay connected!

Anywhere! Anytime!

HealthyCow24[®] puts more time on your side by keeping you connected to your herd anytime and from anywhere! Fully mobile, with real-time alerts and reports, you can stay connected and in control of your herd wherever you are. We make it easy for you to access your farm data, helping you make better, faster decisions. HealthyCow24, just one more way we're working to put more time on your side!

Ask your EastGen Representative how to stay connected from anywhere. Available on Android and iPhone devices.



360° Genetic Solutions

360° is a service unlike any other. It helps you take a 360° look at your herd currently (genetic potential, production, classification and much more), as well as your short and long term plans for the herd. It closes the loop by providing you with a comprehensive mating program that fits.



GenoPlan

Gauge your herd's current genetics



SemexWorks

Choose appropriate sires to meet your herd's goals



ProGen

Mate your herd with the industry's leading mating program

Speak to your EastGen Representative to book your 360° Genetic Solutions Consultation.

April Proof Sire Update
NEWLY PROVEN

The Incomparable
Doorman!



Walkerbrae Doorman Locket
VG-88-2YR-CAN Photo: Vicki Fletcher

Comestar Lamadona Doorman
VG-89-2YR-CAN Photo: Patty Jones

EDG ATMS Adrenaline ET
VG-87-2YR-CAN Photo: Vicki Fletcher

Doorman is the most exciting and respected sire in the business bar none! The incomparable Doorman debuts as Canada's #1 Conformation sire with +19 and #2 GLPI sire with 3106 GLPI. He is also the #1 Immunity+ proven sire in the World. Whether it's for genetic improvement in your herd or for breeding that special one for the show ring, the elite LPI sire Doorman is truly INCOMPARABLE!

0200HO06480

Val-Bisson

DOORMAN

BOOKEM x SHOTTLE x GOLDWYN



IMMUNITY+



CALVING EASE



A2A2