\*Dear Milk Customers:  
  
After much research and soul-searching we have decided to change Raw Milk Vendors.  We all like Russell Johnston's milk, but, it is likely that his cows carry the A1 gene (I will explain this in a minute) and we feel there is a better alternative.  I have spent the last 3 weeks, researching raw milk, the butterfat content that different breeds produce, and the A1 vs A2 gene factors.

The following contains a plethora of information, which you may know or not care about. If that is the case, please scroll down to the **Here is how your milk purchase will work** section!  
  
Here is a brief synopsis of my findings:

1. Cows produce milk (ok – just making sure we are all on the same page)
2. At some point in time, (hundreds of years ago) the protein in Holstein cows mutated
3. Cow milk contains proteins - the one we are interested in is beta-casein the A1 gene
4. Because Holsteins were crossed with so many other breeds to improve milk **productivity**, this led to the mutation of this gene in other cow breeds – It is known as the A1 gene
5. The **proteins** found in cow milk **is made up of a string of amino acids linked together**
6. **A1 beta-casein** is a mutated protein (in A1 milk, #67 amino acid is a histidine instead of a proline
7. The histidine breaks off - forming a peptide of a string of 7 amino acids called beta-casoporphon-7 also know as BCM-7.
8. (BCM-7) Casomorphons have opioid (narcotic) properties; they cross the blood/brain barrier and are not well digested by some people
9. This inability to be properly digested and the fact that it does cross the blood/brain barrier can possibly lead to health issues in certain people.
10. The key issue seems to be that it affects folks with a leaky gut or leaky intestine (ie people who have celiac disease, ulcerative colitis, Chrons disease)
11. Because people with these health issues have intestinal issues, the peptides can cross into the bloodstream before being broken down and thus travel through the body
12. In his book “**Devil in the Milk**”, Keith Woodward gives insight into the possible link between the mutated A1 gene and a range of serious health issues (heat disease, type 1 diabetes, autism and other neurological disorders
13. The A1 cow population is largely isolated to the Holstein breed
14. Other cow breeds, (Jerseys) have much less incidence of the A1 gene
15. The A1 gene does not exist in other milk-producing animals like goats and sheep
16. Johnston Family Farms has Holsteins and Holstein crosses. To my knowledge Russell does not have his cows tested for the A1 gene; however given they are Holsteins, it is **probable** that it is present in the milk produced by his cows.
17. This mutation was discovered a couple of decades ago, but news has not surfaced, probably due to the financial impact it would have on dairies to breed strictly for the A2 gene
18. In Australia and New Zealand Farmers are breeding for the A2 gene.
19. Very few Dairymen in the United States have realized the benefit of breeding for A2

On the Other Hand :

1. In cows with an A2 gene, the #67 amino acid is a proline and binds very tightly to the amino acids on either side of it and is digested easily and not leaked out of the gut.

Mary and I strive to find the best, most pure product for you. In addition, education about food, diet and how it relates to health is part of our mission to serve. We feel strongly that cows producing milk with the A2 gene are superior to those with the A1 gene.

For the last year, I drank Jersey milk and had no issues. In March, that milk was no longer available to me and I started drinking the milk sold at Market. I noticed that sometimes I would have issues after drinking milk but put it off to stress. When I started alternating between goat milk and cow milk, I could directly relate stomach issues to when I was drinking cow milk, which is really what started this whole let-me-do-some-research thing. I spent an inordinate amount of time researching the difference between A1 and A2 milk; then I spent more time attempting to find someone fairly close to us that has pure A2 tested herd. I was fortunate to call a man by the name of Sam Jones. Let me tell you a little bit about Sam, his experience and his cows!

From the moment I began talking to Sam about his raw milk, I knew the man was passionate about providing the best product he can for the community! Sam was born in Tennessee and his father was a Dairyman. He grew up drinking raw milk and is a firm believer in its benefits to one’s health. He is familiar with Weston A Price diet guidelines, leaky gut issues, Celiac disease. His cows roam on organic pastures of a 1200 acre organic farm. He has a closed herd, which means he has whole **families** of cows and knows the genealogy as well as the genetics of each individual. He feeds a GMO- Free grain at milking time and the amount of grain each cow receives depends on their body condition at milking. Sam explained that the need for cows to have some grain has been bred into cows. If they are suddenly prohibited from having any grain at all, they will starve themselves to death – mostly they survive on grasses, but man introduced grains to increase milk production. (another fine mess we have created!)

In an effort to correct this unfortunate reality, Sam is working with Dairymen in New Zealand where there exist closed herds that have never been fed any grains. Since he inseminates his cows, he is able to purchase semen from New Zealand in an effort to achieve the goal of having a herd that does not need grain to survive, but will in fact, thrive on a diet of pasture grasses. At the present time, Sam has bred 3 or 4 generations toward this optimum objective.

Sam does have his cows tested and all but one have the A2 gene and are “A2 cows”! Sam is a consultant for Farmers in Georgia and the surrounding states for purchase of Dairy cows, the breeding of Dairy cows and pasture management. His “hobby” is cow genetics! It is his passion; and boy, when Nora (Suwanee Locally Grown Manager) and I went to visit the Farm, we were blown away by the depth of Sam’s knowledge and expertise! We were also ecstatic about the taste of and quality of the milk! I was kind enough to share a little with several Market family members and they also gave it the “thumbs up”!

Sam does not vaccinate, he has his **cows** tested regularly, has his **milk** tested regularly and has a reputation with the Dept of Ag for having exceptionally excellent results. He does not use antibiotics unless it is absolutely necessary and the milk is not incorporated with the batch until it tests negative.

Cedar Creek, his Farm near Madison, Georgia is home to his beef cattle, which are Longhorns! (This Texas girl was happy about that!). His Dairy herd roams his 1200 acre Organic farm in Butler, Georgia. Sam is willing to provide us with fresh raw milk and Mary and I feel like we have been blessed to find him! Suwanee Locally Grown and The Cumming Harvest will also be switching to milk from Sam’s cows!

Prior to starting the Market, I was involved in creating a milk packaging and distribution program for a farm with a small dairy operation. Again, in research mode, I discovered that milk lasts longer, has a cleaner taste (and I like it better) if it is packaged in glass. Sam is also a believer in packaging milk in ½ gallon glass Mason jars. He sells at some traditional Farmers’ Markets and uses the same system! He will package in plastic jugs, but he will charge a dollar more per half gallon (due to the cost of the ½ gallon containers – not “just” the containers, but the storage, the cost of the diesel fuel to pick them up and the hours expended in travel time). He only packages in half gallons because it helps keep the temperature of the milk even which is a MAJOR consideration in milk storage and shelf life and the taste of the milk is much cleaner if stored in glass.

**Here is how your milk purchase would work:**

You have 2 choices:

1. Purchase milk in ½ plastic jugs at the cost of $4.40 per ½ gallon. Order online and pick up your milk just like you do now. ($8.80/gallon)
2. Purchase ½ gallon Mason jars and pay $3.30 per ½ gallon of milk. Order online and pick up your milk just like you do now AND return clean, dry jars each week to the Market. ($6.60/gallon)

Mary and I are working to find a **Volume Discount** on ½ gallon Mason jars and I will communicate our findings via email tomorrow. Of course, if you have ½ gallon jars, you may use those. Sam does prefer a plastic lid with the metal lid underneath to keep it well sealed. The least expensive place I have found packages of the plastic lids is WalMart. All of your jars and metal lids will be labeled, by us to ensure that you get your milk returned in your jar and all labels will be the same for Sam to easily identify Lilburn.locallygrown.net milk jars.

The particulars of how the system will work will be in the “Mason Jar” email.

You may also purchase your own ½ gallon Mason jars (Ace Hardware does carry them and WalMart is the best (cheapest) place to get the plastic lids), or you can elect to get your milk in plastic containers.

Obviously there is an initial investment involved in purchasing the jars. In the long run though, it will save you money and you will be much happier with how fresh and how good tasting your milk will be and stay!

Our target date to begin milk delivery with Sam, is June 27th. Please email your comments and questions to

[heirloomlivingmarket@gmail.com](mailto:heirloomlivingmarket@gmail.com).

If you want to discuss this, please call me at 404-432-4337 or Mary at 404-245-2919. Thanks for your support.

Joyful thought and bountiful blessings,

~Maryanne