

**自然养生** NATURAL HEALTH **健康报** 05/10-11/10 2012 第115期 34

## 鲜奶有多“鲜”?

文/摄影: 魏耀雄

超市的冷柜架上陈列了许多标签着“鲜奶”(Fresh Milk)字眼的牛奶,时下,许多人误以为自己所喝的鲜奶,就是纯正的牛奶。也有人认为,生鲜的牛奶应该就是最新鲜的了,但生鲜牛奶所含的许多细菌如果没有经过杀菌消毒,反而对人体有害。

市面上标明“鲜奶”字眼的牛奶,其实都经过加工处理。笔者买了4个不同品牌的鲜奶品尝之后发现,每个品牌的口味不一,浓稠度、口味与甜香差异很大,为何如此?

**牛奶为何变质?**  
要知道牛奶有多新鲜,首先必须了解什么因素会影响鲜奶的鲜度及口感。  
牛奶含有丰富的营养,极易受到细菌的污染。有些细菌会消耗乳糖及牛奶中的其他营养物质,并且迅速繁殖,将牛奶冷却在4摄氏度可延缓细菌的滋生,但并无法完全防止细菌的增长。当乳糖被细菌慢慢消耗时,牛奶的味道可能变酸;而蛋白质被慢慢消耗时,味道会变苦,并可能出現异味。当牛奶脂肪被慢慢消耗时,则会发出酸臭的味道,并影响其发泡能力。  
因此,未经消毒的生鲜牛奶和经过加工(杀菌消毒)的鲜奶中所含的细菌种类及数量,可直接影响牛奶的新鲜度。从船运到贮存的温度调控,都会直接影响到牛奶的新鲜度。另外,从乳牛身上挤出鲜牛奶,到消费者购买回家存放在冰箱里,整个流程耗时越久,牛奶的新鲜度就会随之下降。  
然而,一般厂家可能向多个农场购买生鲜牛奶,再长途运输往市内的加工处理厂进行巴氏杀菌消毒及均质处理。之后,又需多日才能运抵其他城市的港口出售。如此一来,难免细菌繁殖。为了安全起见,也为了延长赏味期限(保质期),这些牛奶可能必须经过第二次的巴氏杀菌消毒,难免会影响鲜奶的口感和质感。若是一流式的农场,就能简化鲜奶的整个处理流程,从而提高新鲜度。  
以新加坡而言,有些国家虽拥有得天独厚的天然环境及丰富的畜牧经验,非常适合生产优质牛奶。但由于运输时间较长,往往需要二度消毒,整个过程也相对复杂。因此,与邻近地区所生产的牛奶相比,到了本地消费者手上时,并不一定更为新鲜或美味。

**鲜奶未必是纯牛奶**  
同时,美国有些厂商为了增加收益,对乳牛注射增加产奶量的荷尔蒙激素。这些激素是否会渗入牛奶而危害到饮用者的健康,众说纷纭。然而,即使是在当前的批准规格下进行荷尔蒙注射,始终是以非自然的方式提高产奶量,难免叫注重健康的消费者感到不安。  
在澳大利亚,食品标准局允许厂商调控牛奶成分,全脂牛奶只要符合脂肪含量不低于3.2%,而且蛋白质不低于3%即可。有些人也许不晓得,有些鲜奶还加入了不超过16%名为“Permeate”的添加剂。基本上,“Permeate”是牛奶通过超滤技术处理时,渗透超滤膜的物质。据称,这些物质是具有“奶成分”的稀释牛奶。由于有助调控牛奶成分中的脂肪含量,成本又比纯牛奶低。在牛奶利润因削价放销暴减的环境下,许多厂商纷纷使用Permeate添加剂,让本来百分之百生鲜牛奶成分的鲜奶,如今也只保留了大约54%的纯正成分。  
如同刚刚煮熟的白米,打开饭锅盖时会溢出浓浓的糯米饭香。选购鲜奶时,也无需迷信哗众取宠的口号或过多的维生素添加物,尽量避开那些使用防腐剂、添加剂、荷尔蒙激素、抗生素、奶粉、渗透物或三聚氰胺等的厂家,才能在品尝纯正奶香与口味的同时,享受它原有的营养价值。





## **Article Summary**

How “fresh” is your fresh milk?

The fresh milk we purchase from the markets is in fact processed with additives. The writer of the article bought four brands of fresh milk from the supermarket and conducted a taste test. He concluded that the different brands of milk tasted different from one another, with differing thickness and milk fragrance. The writer investigates on why is this so in the rest of the article.

## **Article Translation**

### **How fresh is fresh milk?**

On the supermarket shelves, there are quite a number of milk products that have been labelled as ‘Fresh Milk’ so many consumers assume whatever they are taking is really fresh milk. Others may feel that milk freshly milked from the cows are the freshest, but raw milk contains quite a number of pathogens which may cause harm to our body.

There are many milk brands on the market with the labels ‘fresh milk’ on them but most are actually processed. This author has bought four different brands of milk to test and found that the taste, richness, flavour and scent differed greatly. Why the discrepancy?

### **Why does milk quality change?**

One must first understand what are the factors that affect freshness and taste before knowing how fresh their milk is. As milk is a nutritious source, it is easily contaminated by pathogens. Some of these pathogens may break down lactose and other nutrients in the milk and reproduce rapidly. Storing milk below four degrees Celsius helps to slow down their reproduction but it does not curb its reproduction completely. When lactose is broken down by these pathogens, the milk may turn sour; but when the proteins have been broken down, it will become bitter in taste and there will be malodorous smell. When the milk fat has been broken down, there will be a rancid smell and the milk will not be able to foam.

Hence, the bacteria count and type in unpasteurised milk and processed milk (pasteurised) will greatly affect the freshness of the milk. Shipping and storage temperatures also directly affect that. In addition, its freshness is also affected by the time period between the milking process and the time it reaches the consumer’s refrigerator.

However, most companies purchase milk from many dairy farms and import them into processing facility in the city for pasteurization and homogenization. After that, it will take a few more days before it can be shipped to other harbours to be sold. This long lag time means that there the pathogens would have multiplied substantially. For safety concerns, these milk are pasteurised twice to maintain its shelf life but it affects the taste and quality of the milk. If the dairy farm has a processing facility on-site, the lag time will be greatly reduced.

For many countries, although they have unique natural surroundings and rich experience in farming which is apt for milk production, due to the long shipping time frame, most have to

pasteurise their milk twice and the process is complicated. Thus, when compared to the consumers in our neighbouring countries, the milk that Singaporeans get may not necessarily be fresh or tasty.

### **Fresh milk may not be pure milk**

At the same time, in a bid to boost profits, some American farms have injected cows with recombinant bovine growth hormone (rBGH) to increase the milk production in cows. Whether these synthetic hormones can be traced in squeezed milk has not been proven thus despite approval by health authorities for farms to inject their cows with rBGH, it is still a cause for concern for health conscious consumers.

In Australia, their food standards allow farms to regulate the composition of milk so for full-cream milk, its fat content must not be lower than 3.2% and protein content must not be lower than 3%. Some consumers may not know that quite a number of fresh milk products have been added with less than 16% of additive called Permeate. Permeate is a filtrate derived from milk that has been ultra-filtrated. According to sources, this substance is a form of diluted milk and it is used to regulate the level of fat content in milk as its cost is low. Thus many companies add this additive into their milk, and their product is only 84% pure.

Similar to the fragrance of freshly cooked rice when the cover is first lifted, consumers should avoid milk which have added preservatives, additives, hormones, anti-biotic and milk powder. There is also no need to heed the marketing calls of these brands because this is the only way one can truly enjoy fresh and tasty milk while fully benefitting from its nutritional value.