

**ACY0210B** 

# **BUSINESS ETHICS**

A CASE STUDY OF 2008 MELAMINE MILK SCANDAL

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## **Introduction**

#### Scope and objective

This project is a case study of the 2008 Melamine Milk Scandal, through which we will lift the veil of corporate governance of related companies and investigate the causes of this gigantic scandal. With the aim to identify the important role of business ethics from the perspectives of companies and the society, practical resolutions would be made to improve ethical behaviors in the business world.

#### Significance of business ethics

Nowadays, the issue of business ethics comes to people's mind more frequently especially in the food industry. In 2004, the use of hair in the production of soya sauce was exposed and made headlines in the press. In 2006, the whole nation was appalled by the news that the carcinogenic sudan red was being added into eggs.

As a developing country, business in China is developing very rapidly. It is now playing a more decisive role in social life and almost all people would be involved in business activities. As a result, unethical business behavior would have negative influence towards society. Hence, society is now more concerned with the issue of business ethics.

#### What is business ethics?

There are many definitions for business ethics. One of them refers to the moral rules and regulations governing the business world<sup>1</sup>. In other words, these moral rules and regulations determine the difference between good and bad decision making behavior. Although the meaning of "ethical" is blurred and the line between right and wrong may be difficult to judge in different situations, we still need these rules and regulations to govern the business world.

### Why do people choose to act unethically?

The way that people perceive and react to the environment can be understood on 4 vertically integrated levels: behavior, norm, attitude and value<sup>2</sup>. That means how people behave is actually influenced by the norm of society, their attitude towards the issue as well as the values of their own and other people. This model would help explain why people have unethical behavior and what should be done to improve the situation.

<sup>&</sup>lt;sup>1</sup> Define Business Ethics (n.d.), in *Your Dictionary*, Retrieved from <a href="http://www.yourdictionary.com/dictionary-articles/Define-Ethics.html">http://www.yourdictionary.com/dictionary-articles/Define-Ethics.html</a>

<sup>&</sup>lt;sup>2</sup> Liu Baocheng (2008), Business Ethics ABC. CIBE Retrieved from <a href="http://www.cibe.org.cn/CIBE/list.php?fid=37">http://www.cibe.org.cn/CIBE/list.php?fid=37</a>

## Case Study: 2008 Melamine Milk Scandal

### 1. Background

### Overview on the milk industry

In the industry, the production chain involves different parties, such as the milk peasants, intermediaries and the manufacturers. The production process is complex and involves many steps.<sup>3</sup>

Before the incident, the milk industry was growing at a high rate of about 20%.<sup>4</sup> In light of the rapid expansion, government had imposed a number of food safety laws and had the department, AQSIQ, to control the quality of products. One of the regulations implemented was the inspection-free policy<sup>5</sup>. A company would not be required to undergo inspection for a period of 3 years if it can meet the following three requirements<sup>6</sup>:

- product with stable quality
- high market share
- passed the inspection for more than 3 consecutive times

<sup>&</sup>lt;sup>3</sup> Appendix 1. "三 鹿 董 事 長: 事 件 前 己 檢 出 相 關 問 題" (2008, Sept 13) Retrieved from http://news.wenweipo.com

<sup>&</sup>lt;sup>4</sup> Appendix 2. Retrieved from "The milk and dairy industry in China", KPMG,.

<sup>&</sup>lt;sup>5</sup>"中國將實行產品品質免檢制度".(2000, Aug 10). Retrieved from <a href="http://big5.china.com.cn/chinese/PI-c/2956.htm">http://big5.china.com.cn/chinese/PI-c/2956.htm</a>

<sup>&</sup>lt;sup>6</sup> "廢除免檢制度不應拖泥帶水" (2008, Sept 25). Retrieved from <a href="http://www.takungpao.com/news/08/09/25/ZM-966183.htm">http://www.takungpao.com/news/08/09/25/ZM-966183.htm</a>

### 2. Impacts of the scandal

#### On the victims

Melamine is an important intermediate of organic chemistry used to manufacture resin. Since it is nitrogen-rich, it is sometimes added to food illegally to increase the protein content of dairy products. Melamine adulteration of food products has made headlines in some other parts of the world, but the 2008 milk scandal in China was the largest-scale.

By 26 September, more than 10,000 cases were reported. Most of the victims were children. According to the WHO, 82% of the victims were below 2 years old. On 8 October, the government refused to issue updated figures for the reason that this was not an infectious disease. On 1 December, Xinhua reported that the Ministry of Health revised the number of victims to more than 290,000 and 51,900 hospitalized and 3 deaths, but it was suggested by the media that official figures were likely to be understated.

According to the inspection report issued by the AQSIQ, large ingestion of contaminated milk (the daily bearable consumption of melamine is 0.63mg/kg weight) can cause high blood pressure, edema, and percussive pain in kidney area. Severe cases can be diseases in the urinary system like dysurea, acute renal failure, kidney stones and even bladder cancer.<sup>7</sup>

#### On the dairy industry

The eruption of the milk scandal led to a major collapse of consumers' confidence in Chinese dairy products. Since 2000, the industry had grown at an average rate of 23% per year, but the scandal caused the demand for dairy products to a tremendous decline.<sup>8</sup>

#### On the other dairy giants

#### i. Mengniu

Due to the milk scandal, Mengniu was forced to suspend trading from 17 Sep. After days of suspension, Mengniu resumed trading on 23 September in HKSE, but the stock price plunged to 6.85HKD, with a 65% drop range, the lowest in the past 52 weeks.<sup>9</sup>

<sup>7</sup> Appendix 3. Inspection Report, AQSIQ

<sup>8</sup> Appendix 4. "乳製品行業實現全面增長". (2009, Mar 31). Retrieved from http://www.cs.com.cn/ssgs/04/200903/t20090331\_1805113.htm

<sup>9</sup> Appendix 5. Retrieved from http://finance.yahoo.com/

For the year 2008, Mengniu suffered a net loss of 948,600,000RMB, compared to a net gain of 935,800,000RMB in 2007.

#### ii. Yili

On 24 September, Yili's stock price fell to 9.03RMB, with an annual drop range of 68.32%. The price dropped to decline limit for 7 trading days. For the year 2008, Yili suffered a net loss of 1,736,710,918RMB, compared to the net loss 4,563,290RMB in 2007.<sup>10</sup>

#### On dairy farmers

Due to the capacity constraint of modern facilities, the industry relies on the milk farmers for more than 90% of their production<sup>11</sup>. As the major provider of raw milk, these farmers found no escape from the negative impacts of the incident.

As the milk contamination was revealed, these farmers could not sell their milk and some had to pour them away. Some even killed their cows and sold the meat to minimize the loss.<sup>12</sup>

#### On China's exports

After the scandal began to spread, more than 25 countries stopped importing dairy products from China immediately. And a number of countries such as Japan, Singapore and Malaysia imposed bans on dairy products from mainland China that were tested melamine positive.

Other export products made in China were also recalled by foreign countries. On 25 September, a ban on baby food containing Chinese milk was announced by the EU. The popular Chinese candy brand White Rabbit was ordered off shelf and blacklisted.

<sup>10</sup> Appendix 6. Retrieved from <a href="http://finance.yahoo.com/">http://finance.yahoo.com/</a>

<sup>&</sup>lt;sup>11</sup>中國奶源危機四伏. (2004, Nov 17). Retrieved from http://news1.jrj.com.cn/news/2004-11-17/000000943078.html

<sup>&</sup>lt;sup>12</sup> 【奶源地記事】"腎結石嬰兒"事件重創中國奶農. (2008, Sep 22). Retrieved from <a href="http://www.caijing.com.cn/2008-09-22/110014671.html">http://www.caijing.com.cn/2008-09-22/110014671.html</a>

### 3. Weaknesses in Corporate Governance relating to the incident

Corporate Governance includes processes, customs, policies etc. affecting the way a corporation is directed, administered or controlled. It also involves relationships among the stakeholders involved and the goals for which the corporation is governed.

It is believed that the overall strategy of the company laid the tone for corporate governance and in turn led to weaknesses<sup>13</sup> in four key areas:

- i. The Acquisition of milk from independent sources
- ii. The Exploitation of Milk Peasants
- iii. The Substandard Quality Control
- iv. The Disclosure of the incident

#### The Rapid Expansion Strategy

Prior to the incident, the Chinese Dairy industry was under rapid expansion with a growth rate of over 20% in years prior to the incident. There were over 1500 corporation in the China Dairy industry. With the growth of two major players, i.e. Yili and Mengniu, occupying a majority of market share, an oligopoly market structure was gradually formed. Competition within the industry was fierce, approximately one third suffered from a loss and another one third only making enough earnings to sustain the corporation. Other corporations, including San Lu is struggling to keep up and faces a risk of being eliminated through competition.

To face the competition, increase market share and lower its average costs by economies of scale. The expansion strategy was adopted by the top management motivated them to be more aggressive in decision-making.

From the four integrated levels mentioned earlier, behaviour is a reflection of values. Here, not only the expansion strategy has affected the top management's decision making, it has also affected behaviour and policies beneath.

<sup>&</sup>lt;sup>13</sup>"三鹿迅速擴張致管理水平下降". (2008, Oct 9). Retrieved from <a href="http://news.sina.com/c/2008-10-10/012716425724.shtml">http://news.sina.com/c/2008-10-10/012716425724.shtml</a>

<sup>&</sup>lt;sup>14</sup> 工業和資訊化部消費品工業司提供統計數字. Retrieved from <a href="http://www.miit.gov.cn/n11293472/index.html">http://www.miit.gov.cn/n11293472/index.html</a>

<sup>&</sup>lt;sup>15</sup> Appendix 7, "The milk and dairy industry in China", Retrieved from <a href="http://www.kpmg.com.hk/en/virtual\_library/Consumer\_markets/MilkAndDairy.pdf">http://www.kpmg.com.hk/en/virtual\_library/Consumer\_markets/MilkAndDairy.pdf</a>

#### Weakness 1: Acquisition of milk from independent milk sources

With the need to increase the scale of production, securing milk sources is vital. Manufacturers had a choice of either building their own dairy farms or purchasing from milk sources.

Companies in the industry realised the importance of a stable milk source, Tian Wen Hua addressed the following message to the staff in the middle of the year in 2008, stating the importance of establishing own milk source and ensuring a stable supply of milk. Companies like Mengniu also stated the significance of maintaining milk supply. 17

However, 90% of the companies including the ones mentioned above relied on option 2, to purchase from independent source instead as it is a faster way to increase milk source. Yet, it is a rather unstable source with risks in quality control.

On the contrary, Sanyuan, which did not acquire milk from independent sources, was not involved in the 2008 melamine incident.

### Review

Related to the outsourcing, we believe that the company owes an obligation to consumer to provide up to standard products. It should fully assess risk involved in the expansion policy and weigh costs and benefits carefully before outsourcing.

They decided that they needed to acquire milk source in the fastest possible way to face competition. However, we believe that there were alternatives to differentiate the company during competition. By being open minded, the company could consider imputing more into areas like Research and Development in differentiating their products and their brand. What the industry doing may not be suitable for all companies, the risks and alternatives should been considered for a company on its own.

#### **Weakness 2: Exploitation of Milk Peasants**

Very often, price wars occurred due to the fierce cut-throat competition. Manufacturers focused on cutting costs and so suppressed the collection cost of milk from primary suppliers and intermediaries along the supply chain. Though percentage input is high (75%), the percentage profit is low for peasants (10%). 18

<sup>&</sup>lt;sup>17</sup> Mengniu Annual Report 2008

<sup>&</sup>lt;sup>18</sup> Appendix 8, Retrieved from http://www.caijing.com.cn/2008-09-22/110014671.html

The collection price is low while other costs of milk peasants have increased, the profit margin of milk peasants have become very grim.

The grim profit margin provided a motive for peasants to reduce their own costs<sup>19</sup>, even by extreme measures. They often added water to milk to increase weight. However, the diluted milk looked different and lowered the nitrogen concentration. Then, they added Melamine to improve the texture of the diluted milk and restore the nitrogen concentration to an acceptable level.

What worsened the situation was the lack of stable relationship among the manufacturers, intermediaries and the peasants. Usually there are no stable contracts between the parties. The milk production cost is highly fluctuating. When there is insufficient supply, collection prices soar during peak seasons but collection price plunges afterwards. Milk peasants opt for high prices and seldom have a stable relationship with one specific manufacturer. They chase after high collection prices instead of focusing product quality.

Despite what happened, San Lu did have some good practices that others can learn from. It has established a Milk Collection Centre<sup>20</sup> in Xintang (行唐) district to facilitate the collection of milk and to offer technical assistance to milk peasants. They established a stable relationship between the centre and San Lu by Milk Collection and Delivery Contract (鮮奶收購配送計劃), and also between the centre and peasants by another contract (鮮奶收購合同). By doing so, there was direct contact with peasants and avoided exploitation from intermediaries.

However, the establishment of such centres was not popular and limited to certain districts prior the incident.

#### Review

The main problems involved in the dealings of the company with the suppliers were that there was a lack of respect. Referring to the good practice mentioned, the company should maintain stable and continuous relationships with milk peasants. Formation of contract with agreed terms is a win-win situation. With a stable relationship formed, they can void price fluctuation, establish trust and motivate the peasants to provide quality products to sustain the relationship.

<sup>&</sup>lt;sup>19</sup>"鹿董事長:事件前已檢出相關問題". (2008, Sept 13). Retrieved from <a href="http://news.wenweipo.com/2008/09/13/IN0809130002.htm">http://news.wenweipo.com/2008/09/13/IN0809130002.htm</a>

<sup>&</sup>lt;sup>20</sup>··三鹿未雨綢繆啟動原料奶產地戰略" (2007, Jan 23). Retrieved from http://guide.ppsj.com.cn/art/3809/13486602/

#### **Weakness 3: Substandard Quality Control**

During peak seasons, milk source is particularly scarce. The manufactures would lower their standard of milk collection to fight over milk sources and meet the production schedule. In response to the low standard milk collection, manufactures also lower the standard of quality control.<sup>21</sup> However, manufactures will not be able to do so easily without AQSIQ, whose loose regulations allowed Sanlu to lower their standard of quality control

There are 4 areas of loopholes in AQSIQ that allowed the manufactures to take advantage of. The most significant one is the inspection-free policy. Though the policy has reduced manufactures' cost and the regulating department's workload, the AQSIQ's follow-up work was inadequate which enabled manufactures to lower the standard of quality control. Moreover, the regulating departments involving in the inspection process were usually not independent from the inspected manufactures. Added to this were the insufficient in-factory monitoring and supervision given by AQSIQ, as well as loose restriction on food additives before this incident due to the insufficient knowledge in the toxicity of melamine. These ineffective inspections by AQSIQ allowed the manufactures to lower their standard of the quality control and material used as well.

#### Review

Although AQSIQ should shoulder its responsibility in this incident, it should not be the only party to be blamed for substandard quality control. The manufactures should also observe its obligations to consumers and provide products that are up to standard. Such practice should be independent of the business environment and the industry practice, which should not be the excuses for them to lower their standard of quality control freely.

### Weakness 4: Disclosure of the incident

Throughout the incident, the corporation has been intentionally concealing the contamination by several unethical and unlawful means<sup>22</sup>, including the request made for Shijiazhuang government on control over media's report about the investigation result, bribing victims for covering up the problems<sup>23</sup>, and Baidu in return of screening all negative news on its site<sup>24</sup>.

http://news.gq.com/a/20080913/000614.htm

<sup>&</sup>lt;sup>21</sup>"三鹿迅速擴張致管理水平下降", (2008,Oct 19), Retrieved from <a href="http://news.sina.com/c/2008-10-10/012716425724.shtml">http://news.sina.com/c/2008-10-10/012716425724.shtml</a>

<sup>&</sup>lt;sup>22</sup> Appendix 9. Timeline of the 2008 Chinese milk scandal (n.d.), in *Wikipedia*, Retrieved 11 March 2010, from <a href="http://en.wikipedia.org/wiki/Timeline\_of\_the\_2008\_Chinese\_milk\_scandal">http://en.wikipedia.org/wiki/Timeline\_of\_the\_2008\_Chinese\_milk\_scandal</a>
<sup>23</sup> " 三 鹿 曾 用 四 箱 奶 粉 一 紙 協 議 將 投 訴 顧 客 封 □ ". (2008, Sept 13), Retrieved from

Clearly, Sanlu was acting for the sake of its brand name and profit. It hid the problem from public so as to maintain a leading position in this competitive milk industry. Another motive for the acts was the State government's lack of strict implementation of major food safety incidents reporting, which allowed Sanlu to escape from instant reporting of the investigation result to the state. To top that, Sanlu did not fully assess the risk. It considered the adverse effect on company and its employee's benefit to outweigh the adverse effect of spread of toxic milk and health of consumers. It failed to weigh the importance of its own interest and obligation to its consumer more carefully and comprehensively

#### Review

A corporation should always observe its obligation to consumers, provide them up to standard products and make decisions without exploiting them from their rights. It is also obliged to protect its shareholders' interests and right to get access to different information. When making thorough risk assessment, it should consider the long term effect of each alternative as well. Last but not least, a corporation should understand the important components required in building up its brand image. Companies refrain from full disclosure of their error for fear that the customer will lose confidence on them, yet they failed to realize that what consumers value a corporation most was its integrity. A good brand image was built upon integrity, which is often brought from honest disclosure of incidents.

<sup>&</sup>lt;sup>24</sup> "百度聲明:從未答應遮罩三鹿負面". (2008, Sept 13). Retrieved from <a href="http://tech.sina.com.cn/i/2008-09-13/15472456026.shtml">http://tech.sina.com.cn/i/2008-09-13/15472456026.shtml</a>

#### 4. Recommendations

In the melamine incident, a number of weaknesses concerning business ethics are identified. These weaknesses caused unrecoverable harm to thousands of babies and their families.

#### Regulations

To avoid similar incident from happening, implementing new measures and regulations is necessary. For example, AQSIQ should have regular and sudden inspection on the quality of products.

#### Laws and ethics

Nonetheless, even with laws, it is not sufficient. There are many acts that are legal but unethical. As in the above case, the use of melamine was legal because at that time, there was no regulation on it. It is clear that laws cannot fully control human behavior, as law is only the bottom line that society can accept how people behave.

However, for business ethics, the standard is much higher than that of laws. Ethics is not concerned only with people's behavior. It is a standard for our core values. As an individual or a company, in addition to being legal, being ethical is the key which shows that their values are of higher standard rather than meeting the minimum requirement only.

### **Education**

As mentioned by Professor Liu, people's behavior is actually influenced by norm, attitude and values. Changes in norm, attitude and values are of vital importance for improving business ethics. Hence, on top of implementation of measures and regulations, education on both top management and employees would be the most fundamental way to do so.

#### i. Business courses

In a survey by the Shanghai Jiao Tong University, program administrators and ethics professors of Chinese MBA programs from 80 of the 126 business schools in China accredited by the Ministry of Education were surveyed<sup>25</sup>. They found that fewer than half of the schools offered business ethics courses during 2006 and 2007.

<sup>&</sup>lt;sup>25</sup> Mary Hamann (2009). Ethics Education in China. *Notre Dame Business Magazine*. Retrieved from <a href="http://www.nd.edu/~ndbizmag/fall\_winter2009/EthicsEdInChina.shtml">http://www.nd.edu/~ndbizmag/fall\_winter2009/EthicsEdInChina.shtml</a>

The result showed that business ethics somehow was being ignored. Education department should require all business schools to have business ethics included in their courses. Top management should realize the benefit and rewards when they choose to behave ethically. They should have weighed the loss they would suffer if they behave in the other way round.

In a company, the top management is the highest authority. If they can understand the importance of business ethics, they can establish their corporate ethics standard and act as a role model for their employees.

#### ii. In-house training

For employees, in-house training programs should be provided. For example, before employees go to their working positions, the company should provide ethics training, covering ethical issues and addressing the rules, compliance requirement and the corporate values to their employees. Let employees realize the importance of business ethics for the company as well as their own.

During training, discussions on cases of ethical dilemma and analysis with employees are valuable in developing employees' awareness of business ethics and ethical competency.

Furthermore, the company should communicate information about the reporting mechanisms with all employees. When there is any unethical behavior, employees can report to the company immediately. This would be the most efficient way to discover any problems and take prompt actions to solve them.

### 5. Conclusion

After the study of the melamine incident and the issue of business ethics, it is necessary to understand the foundation of business. Why do people have business? In simple sense, business is actually an exchange of value. Through business, people should be able to obtain what they want and offer considerations to the other parties. In this way, both parties would be better off. Business ethics is the means to guide people in business processes, so that they can achieve the targets. Any unethical behavior would result in an unfair situation or sometimes, causing harm to the other parties. Therefore, business ethics certainly plays a crucial role for any people or corporation having business.

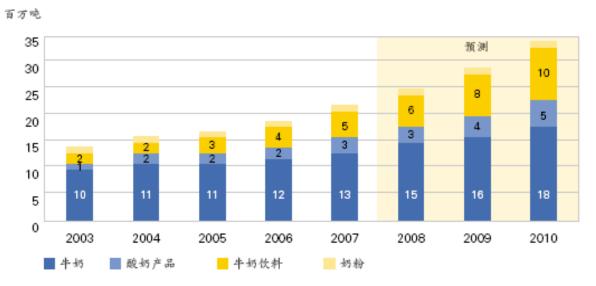
# **Appendix**

### Appendix 1: Production Chain of Milk powder

#### The Production Chain Production factory Milk peasants Milk collectors Milk Station(奶站) (生產廠) Self-(奶戶) (收奶員) owned/independent Filtration Ultra-heat treatment(UHT) Collection of raw milk source Concentration of milk Desiccation Cooling Packaging Quality check

### Appendix 2: Consumption of dairy products, 2003-2010

# 乳制品消费 (2003-2010)



### **Appendix 3: Inspection Report, AQSIQ**

與食用受污染三鹿牌嬰幼兒配方奶粉相關的嬰幼兒泌尿系統結石診療方案

- 一、臨床表現
- (一)不明原因哭鬧,排尿時尤甚,可伴嘔吐;
- (二)肉眼或鏡下血尿;
- (三)急性梗阻性腎衰竭,表現為少尿或無尿;
- (四)尿中可排出結石,如男嬰結石阻塞尿道可表現為尿痛、排尿困難;
- (五)可有高血壓、水腫、腎區叩擊痛。
- 二、診斷要點
- (一)有三鹿牌嬰幼兒配方奶粉餵養史。
- (二)上述臨床表現中的一項或多項。
- (三)實驗室檢查:尿常規(肉眼或鏡下血尿)、血生化、肝腎功能、尿鈣/尿肌酐(一般正常)、尿紅細胞形態(非腎小球源性血尿)、甲狀旁腺激素測定(一般正常)。
- (四)影像學檢查:首選泌尿系 B 超。必要時行腹部 CT 平掃和靜脈尿路造影(無尿或腎衰時禁忌),有條件可行腎核素掃描評價分腎功能。

因食用受污染三鹿牌嬰幼兒配方奶粉導致的嬰幼兒泌尿系統結石 B 超檢查特點:

一般性特點:雙腎腫大;實質回聲增強,實質多為正常厚度;腎盂腎盞輕度擴張,腎盞圓鈍;如梗阻位於輸尿管腔內,則梗阻點以上輸尿管擴張;部分病例腎周脂肪墊及輸尿管周圍軟組織水腫;隨病程發展,腎盂壁及輸尿管壁可出現繼發性水腫增厚改變;少數病人可探及少量腹水。

結石特點:結石絕大部分累及雙側集合系統及雙側輸尿管;輸尿管結石多位於腎盂輸尿管交界處、輸尿 管跨越髂動脈段及輸尿管膀胱連接部;結石呈碎渣樣聚積,累及範圍較大,後方為淡聲影,絕大多數與草酸 鈣結石不同,可探及結石後緣;結石所致尿路梗阻較完全。

#### 三、鑒別診斷

- (一)血尿鑒別:注意排除腎小球源性血尿。
- (二)結石的鑒別:結石一般為透X線的陰性結石,泌尿系X線片不顯影,可與不透X線的陽性結石如草酸鈣、磷酸鹽等鑒別。
  - (三)急性腎衰竭的鑒別,注意除外腎前性及腎性腎衰竭。

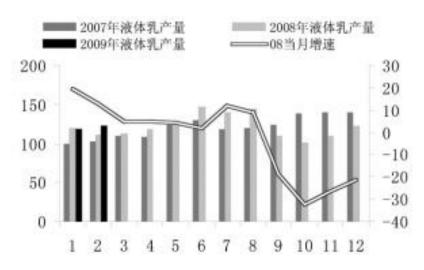
#### 四、治療

- (一)立即停用三鹿牌嬰幼兒配方奶粉。
- (二)內科保守治療:補液、鹼化尿液,促進結石的排出;糾正水、電解質及酸堿平衡紊亂。保守治療過程中密切檢測尿常規、血生化、腎功能,複查B超(尤其注意腎盂、輸尿管擴張程度和結石形態與位置的變化)。因結石較為鬆散或呈沙粒樣,自行排出可能性較大。
- (三)合併急性腎衰竭的治療:首先應糾正高血鉀等危及生命的情況,如應用碳酸氫鈉及胰島素,如條件具備儘早採取血液淨化、腹膜透析等方法,必要時外科干預解除結石梗阻。
- (四)外科治療:經內科保守治療結石形態和位置無改變,並且腎積水及腎損害加重,或者腎衰竭無條件進行血液淨化或腹膜透析時,可手術解除梗阻。可選擇膀胱鏡逆行輸尿管插管引流、經皮腎造漏引流、手術切開取石、經皮腎鏡取石等。因結石較為鬆散,尿酸成分為主,病人為嬰幼兒,體外震波碎石有較大的局限性,需慎重考慮。

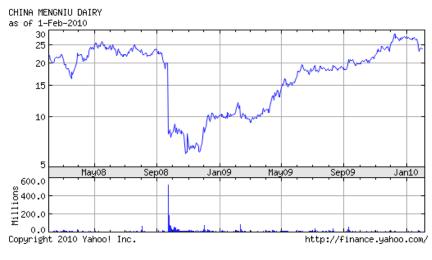
#### 五、隨診

患兒經治療,結石梗阻解除,一般情況好轉,腎功能恢復正常,排尿通暢可出院。出院後隨訪內容: 尿常規;泌尿系B超;腎功能檢查;必要時行靜脈腎盂造影檢查。

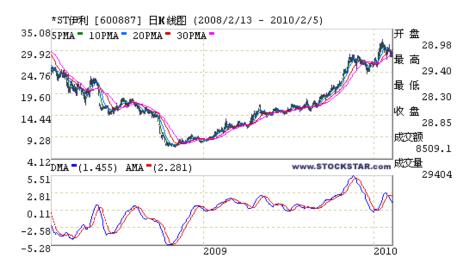
Appendix 4: Demand and production of dairy products, 2007-2009



Appendix 5: Stock price of Mengniu, 2/2008 - 2/2010

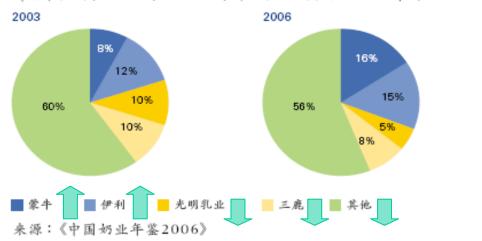


Appendix 6: Stock price of Yili, 13/2/2008 - 5/2/2010



### Appendix 7: Market share of major dairy manufactures

中国乳制品主导企业的市场份额(2003年和2006年)



# Appendix 8: Input and profit for milk peasants



Appendix 9: Timeline of 2008 Chinese Milk Scandal (Bold: disclosure-related events)

Date	Event	
2004	In Anhui Fuyang City, 45 corporations were blacklisted for substandard milkpowder. Sanlu was also on the list. It was later found to be a human error.	
12/2007	Sanlu Group first received complaints about sick infants with acute kidney failure	
21/5/2008	Mr. Wang, the father of a 13-year-old daughter, revealed on a number of Chinese social portals (e.g. Tianya) about his daughter's sickness after drinking Sanlu's milk.	
31/5/2008	Sanlu sent his officials to Mr. Wang's home, luring him to sign a contract, on which Mr. Wang would receive 4 boxes of milk powder if he deleted the postings on the portals.	
6/2008	Sanlu Group was receiving increasing report of sick infants, and finally started the investigation	
16/7/2008	Gansu Province sent a report to the Ministry of Heath to alert that one local hospital had identified an increase in the incidence of kidney failure among babies in the months earlier, and that most victims had consumed Sanlu's baby formula (The first official report suggesting kidney illnesses among babies)	
24/7/2008	The bulletin board of the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) indicated a rare occurrence of kidney stones in children – all causally traced to Sanlu milk formula – was flagged by a urologist in a pediatric hospital	

1/8/2008	The investigation report discovered that melamine was being added to milk. A trade recall was made. (However, no official and full public recall was made until September)	
2/8/2008	Sanlu Group wrote a letter to Shijiazhuang city government, asking for help "to increase control and coordination of the media to create a good environment for the recall of the company's problem products to avoid whipping up the issue and creating a negative influence in society"  Fonterra, which owns a 43% stake in Sanlu, became aware of Sanlu melamine contamination	
11/8/2008	Memo allegedly from PR agency dated this day, suggesting paying Baidu ¥3 million to censor negative news. The memo starts circulating on the internet within days.	
5/9/2008	Fonterra notified the New Zealand government the incident. The New Zealand Prime Minister Helen Clark had Beijing officials alerted directly	
9/9/2008	News reports began circulating in mainland China. The leading government officials in Shijiazhuang city reported the contamination to Hebei provincial and state authorities	
11/9/2008	Sanlu openly admitted its products were toxic and recalled baby formula manufactured on and before August 6.	
13/9/2008	Production halted at Sanlu; nineteen people are arrested; Baidu denies ever agreeing to bury Sanlu negative news	
15/9/2008	Sanlu issued a public apology for the contaminated milk powder, and was ordered to halt production, and to destroy all unsold and recalled products. An estimated 9,000 tons of product had been recalled	
16/9/2008	The AQSIQ released test of samples from 491 batches of products sold by all 109 companies producing baby milk powder. All 11 samples from Sanlu failed the melamine test and recorded the highest levels of contamination.	
	Tian Wenhua, Chairwoman and General Manager of Sanlu and Secretary of the Sanlu Communist Party chapter, was stripped of her party and functional posts. Four Shijiazhuang officials, including vice mayor in charge of food and agriculture, Zhang Fawang, were reportedly removed from office	
17/9/2008	Tian Wenhua was detained on criminal charges Shijiazhuang Mayor Ji Chuntang resigned	
18/9/2008	China revokes 'Inspection-Free' right of top dairy companies. The three major producers, namely Yili, Mengniu and Bright Dairy were stripped of their status as 'Chinese national brands'	
22/9/2008	Li Changjiang, minister in charge of the AQSIQ, was forced to resign after the State Council inquest concluded that he was responsible for the "negligence in supervision". Local Party Secretary Wu Xianguo was fired.	
23/9/2008	Other countries started to test Chinese dairy products or remove them from shops	
27/9/2008	Sanlu was close to bankruptcy	
10/10/2008	Zhang Yujun, a former dairy farmer from Hebei, was arrested. He was suspected to have produced more than 600 tons of the protein powder, made of melamine and maltodextrin, from September 2007 to August 2008. He and eight other traders, cattle farm owners and milk purchasers who bought the powder from him were arrested in early October, bringing the total to 36	
25/12/2008	Shijiazhuang court accepted a creditor's bankruptcy petition against Sanlu	
22/1/2009	Tian Wenhua was sentenced to life imprisonment along with three others. Zhang Yujun and Geng Jinping were sentenced to death. Wenhua was also ordered to pay a fine of 20 million Yuan (\$2.9 million). Sanlu was fined 50 million Yuan (\$7.3 million) although it has been declared bankrupt	
24/11/2009	Zhangyujun and Gengjinping were executed	

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