

GM Food Newsletter

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The Charges against dairy cow Bowie dismissed



- ▲ Bowie is a dairy cow. Like many other dairy cows in USA, Bowie has been given a growth hormone to increase her milk production. The growth hormone, known as bovine somatotropin (BST), is a protein produced naturally by all
- dairy cows and can increase milk production in cows. Although BST could increase milk production in cows, commercial uses of BST to increase milk production were limited in the past because it was very difficult to obtain the required amount of BST. With the recent advance in modern biotechnology, it is possible to produce a man-made version of BST known as recombinant bovine somatotropin (rBST). rBST has the same function as BST, and can be used to increase milk production in cows.

Controversy about rBST

Use of rBST has been held in controversy for a variety of reasons including human health concerns. Some organisations and researchers questioned the safety of the milk from rBST-treated cows. Some food traders have, under the public pressure, decided not to source milk from farms that use rBST.

Accusations made against Bowie

One day, Bowie was brought to the Food Safety Court because she was charged for producing unsafe milk. Nevertheless, Bowie is confident that her milk is good and safe and thus, she decides to defend for herself.

First Charge :

Milk from rBST-treated cows may adversely affect consumers' health and/or increase their cancer risks. That's why the use of it is not approved in Canada and European countries.

Bowie's defence :

Many internationally recognized food safety authorities and organisations have evaluated the safety of rBST applied in food production and concluded that rBST could be used without any appreciable risk to the health of consumers. Indeed, BST is a hormone that naturally exists in milk from all cows. Research showed that there is no significant difference in BST level of

milk from rBST-treated cow and untreated cow. Furthermore, BST in milk will normally be broken down in the digestive system after eating; similar to the other proteins in our daily food. In fact, the use of rBST in some countries is not approved because of animal welfare. It has been suggested that the use of rBST may be associated with breast inflammation, foot and reproductive disorders in some rBST-treated cows.

Second Charge : It has been reported that the application of rBST may increase infection rates in the recipient cows. Therefore, more antibiotics may be needed to treat the cows and as a result their milk will contain unsafe level of antibiotics.

Bowie's defence : Milk that contains unsafe level of antibiotics cannot be sold in the market, no matter it is produced from rBST-treated cows or not. In fact, the key to maintain our health is that the dairy producers must follow the established guidelines and good agricultural practices in farming.

Third Charge : Milk produced by rBST-treated cows may have quality inferior to milk from the untreated cows.

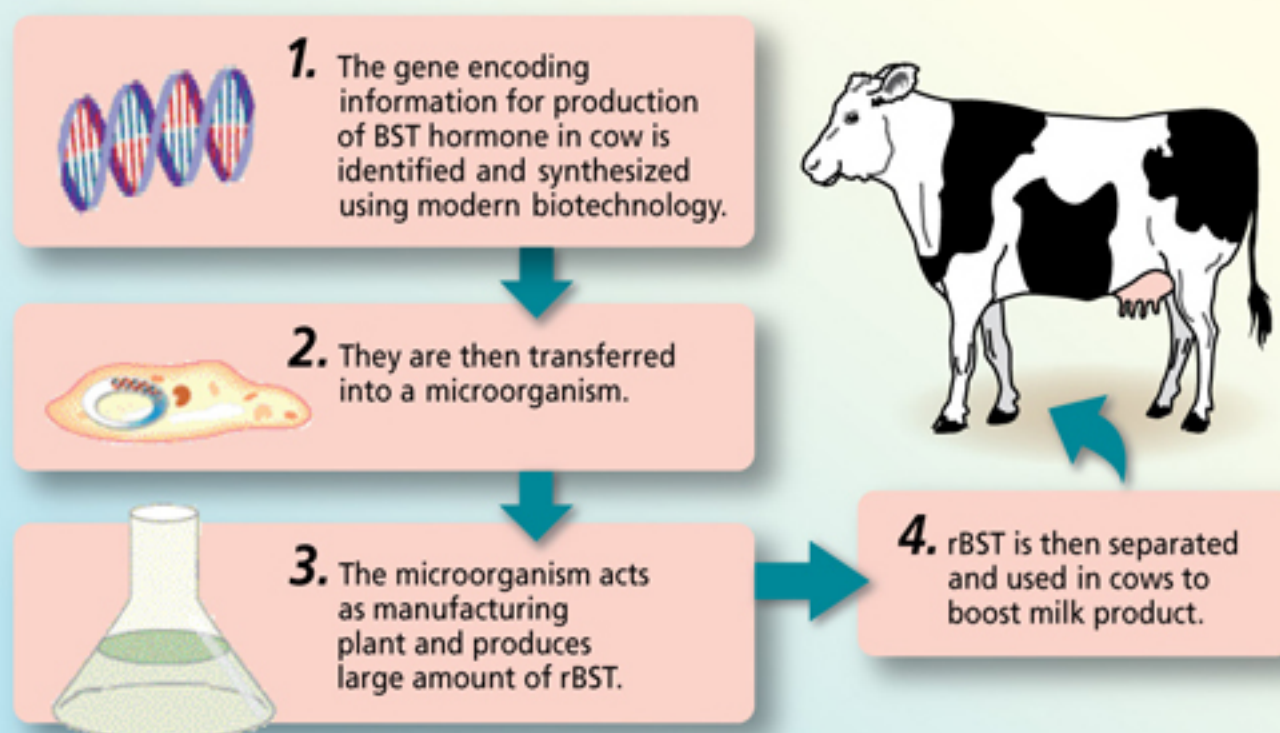
Bowie's defence : Research has shown that milk produced from rBST-treated cows has no differences in nutrient contents (i.e. fat, protein, calcium, vitamins, etc.) or food characteristics (i.e. flavour, colour, etc.) from milk of untreated cows.

Verdict by Food Safety Court : As the use of rBST in milk producing cows is unlikely to harm the consumers' health, the court decided to dismiss all the charges against Bowie. Bowie can return to her farm and continue to produce milk for human consumption.

Recombinant DNA Technology in producing rBST

Modern biotechnology uses living organisms to create chemicals and proteins that may be more difficult to produce using standard industrial methods.

rBST is created as follows:



For more information on GM food, please visit our website

http://www.cfs.gov.hk/english/programme/programme_gmf/programme_gmf.html