Sustainability

Aspartame and the Environment

Choosing foods and drinks with aspartame is not only beneficial for your health, but also has significant advantages for the environment.

To make the sugar that we eat, the raw materials, including sugar beet, sugar cane and corn starch, are harvested and shipped for refining. The refining process entails extracting the sugar from the crop by crushing, chopping or grinding and treatment with water. High fructose corn syrup undergoes an additional step in which the atoms within the molecules are re-arranged. The raw sugars then undergo further processing, depending on the final use that is required.

Aspartame is made using a fermentation process to produce amino acids from a feedstock of molasses (a thick syrup from sugar cane or beet), soy and corn. The amino acids are then combined to form aspartame crystals. These crystals are purified and converted into finished aspartame.

Less Bulk

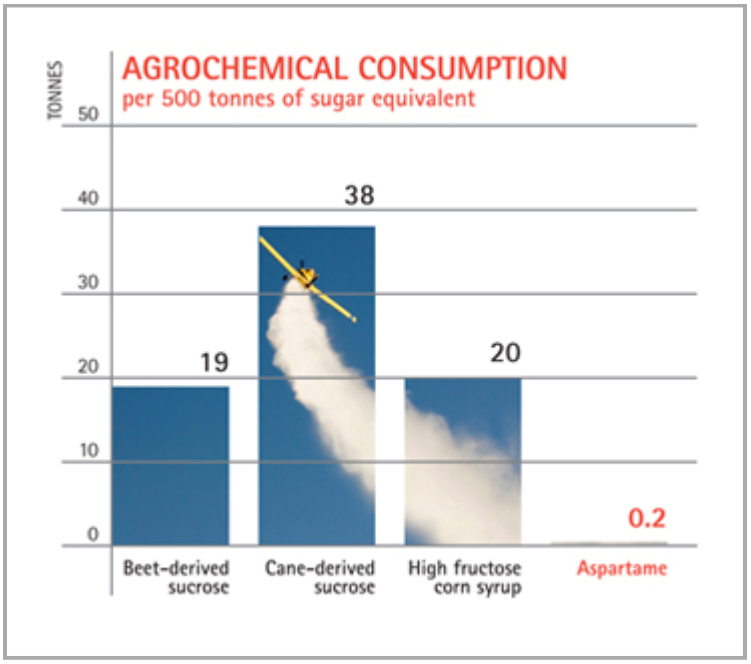
Aspartame is almost 200 times sweeter than sugar, which means that much less is required to sweeten foods and drinks. As a result:

- Less packaging is needed
- Emissions from manufacture and transportation are reduced
- Natural resources are conserved
- The carbon footprint is reduced
- Less space is required for storage

Less Fertiliser and Pesticide

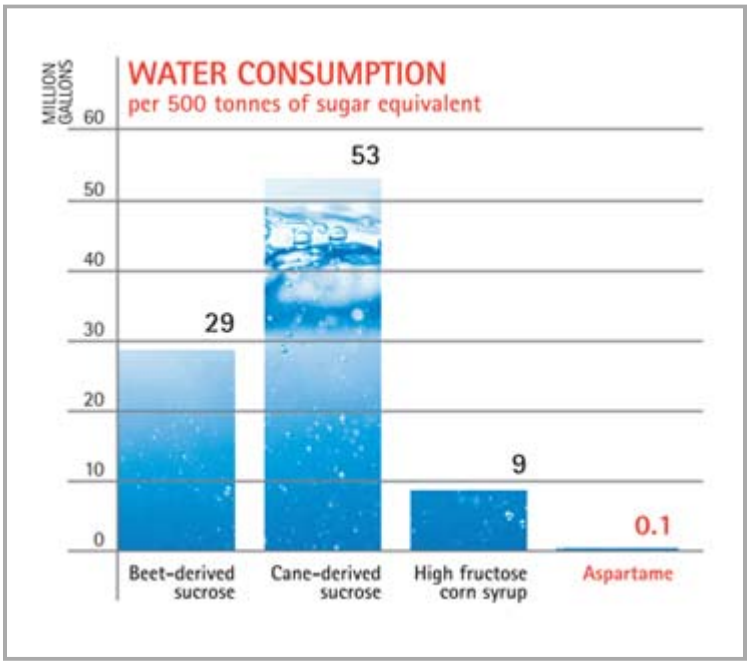
The agrochemical consumption associated with aspartame is between 0.4 and 1% of that stemming from sugar. It is 0.4% when compared to sugar from cane, 0.9% when compared to high fructose corn syrup, and 1% when compared to sugar from beet.

The table below shows how many pounds (lb) of agrochemicals are used to produce the amount of sweetness equivalent to that in 100,000lb of sugar:



Less Water

The amount of water used to produce aspartame is less then 2% of that used in the production of sugar. The following tables show water consumption in aspartame production as a percentage of that used for other sources of sweetness, and the amount of water used (in millions of gallons) to make the amount of sweetness equivalent to that in 100,000lb of sugar:

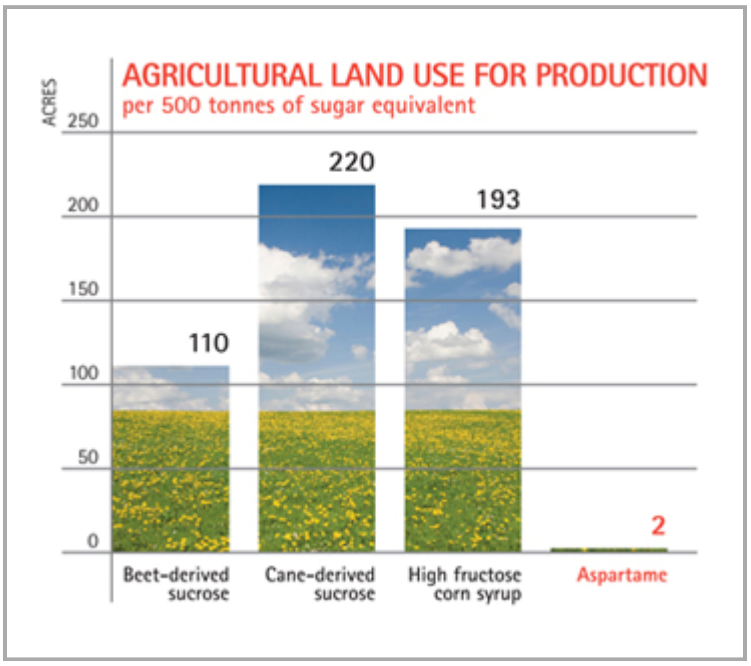


Less Land

Much lower amounts of arable land are required to produce aspartame, meaning that the average productivity of the land is greatly increased.

The farming of sugar impacts more heavily on the land, with topsoil being lifted with the crop during harvest. This causes extra carbon emissions during manufacture as it adds to weight during transportation and uses further resources during cleaning.

Aspartame can satisfy the demand for sweetness using much less land and causing much less soil erosion.



Easier Storage

Aspartame has a longer storage life than sugar, which means that it's less prone to degradation and that wastage is decreased.

It is also much less prone to vermin, with reduced need for vermin control, lessening the inputs from another manufacturing process.

Similarly, no temperature controlled storage facilities are required for aspartame, unlike some sweetener systems, so energy consumption is reduced.