



Oat drinks

The environmentally sustainable alternative to cows milk

by Tietjen, Germany

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Right now, the oat drink is way up there on the popularity scale. This is because plant-based alternatives offer benefits such as cholesterol reduction and diabetes control and are therefore becoming increasingly popular and in demand.

However, the journey from the field to the oat drink is a long one. Without fine milling of the raw materials such as oat kernels or oat flakes, there is no oat flour, which is the basis for the production of the drink.

Oats are not a simple product for fine milling in terms of their properties. Important for successful milling is always the equipment of the hammer mill, as well as the "know-how" in the project planning and design of the entire milling plant.

Preservation of valuable nutrients

Oats naturally contain a lot of dietary fibre such as beta-glucan, minerals and essential amino acids. Especially the fibre here is higher than in animal milk and has been shown to have a positive effect on cholesterol and blood sugar levels.

But that's not all: a diet rich in fibre can prevent cardiovascular diseases and positively influence intestinal health and digestion. The oat drink is also a good alternative for allergy sufferers. The drink contains no lactose or gluten, nor soy or nuts.

In order not to reduce or even destroy the valuable components of the oats during flour production, gentle milling is required. In particular, very fat-containing products must be milled to a fine flour in this way.

Most Tietjen milling plants are designed by means of milling tests with customer-specific raw materials on the Tietjen test stand. The designed plants are always delivered with individually adjustable grinding parameters in order to be able to react to product variations or end customer specifications in the future.

From oat grain to oat drink

Oat drinks consist largely of water and, as the name suggests, oats. The starting material is oat grains. These are cleaned and hulled ("dehulled") before further processing. Next up they are processed into oat flakes and then ground, preferably, using a Tietjen hammer mill. Then the oatmeal is mixed with water. An enzyme is added to this emulsion, which starts a fermentation.

After a few days, the emulsion is dehydrated to a syrup. At the bottler, the oat drink is topped up with water to the desired concentration of 10-11% oats. If necessary, flavourings such as vanilla, chocolate or almond are added. In industrial processing, additives such as calcium or stabilizers are then added, and the product is made more durable by ultra-high temperature heating.

Qualitative production is crucial for a high-quality end product. This includes the milling step, and that's where Tietjen comes in. The Tietjen high-speed mills VL3, VDK 5 and VDK 7 are recommended for the grinding of oats.

These high-speed mills are available in the stainless steel version and are all easy to clean and are also equipped with wear plates. As a result, the mills enjoy particularly good protection against wear and thus a long service life.

The VDKs also come up trumps with beaters that can be turned and changed quickly and easily with a special changing device.

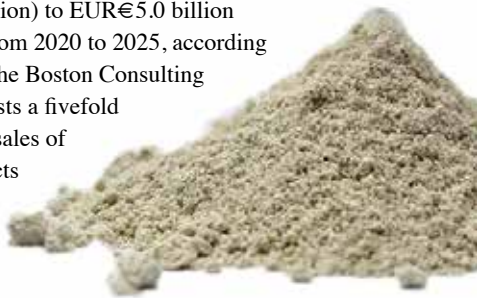
Efficiency is also the focus here. Since the high-speed hammer mills are designed for industrial use, oatmeal can be produced 24 hours a day, seven days a week.

Sustainability dominates the market

As well as tasting great, the production of oat drinks is also environmentally friendly. Compared with semi-skimmed cow's milk, they consume only 40 percent of the energy needed to produce them and at the same time require 80 percent less floor space – two benefits that are not only well received by society, but also impress in production.

In the EU, oats are also grown without the use of genetic engineering. In addition, oat drinks are produced almost exclusively from organically grown oat grains, which also benefits the environment. So those who choose oat drinks do so with a clearer conscience.

Sustainable consumption is becoming increasingly important to consumers, which means that the market for oat drinks will also continue to grow over the next five years. In the EU and the UK alone, sales are expected to increase from EUR€3.4 billion (~US\$4 billion) to EUR€5.0 billion (US\$5.9 billion) from 2020 to 2025, according to an ING study. The Boston Consulting Group even forecasts a fivefold increase in global sales of vegan dairy products to 54 million tons by 2035.



The VL is a universal mill for coarse grinding



The VDK is the classic mill for medium throughputs

