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HOCHDORF
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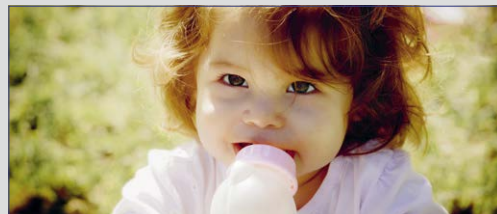


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HOCHDORF Group
MARBACHER ÖLMÜHLE AND ZIFRU AT THE
BIOFACH2019
into organic
13 – 16 February 2019: Hall 9, Stand 172
We look forward to seeing you.

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of nutrition, go to our blog:
inside.hochdorf.com/en

THE JOURNEY IS THE DESTINATION

Maintaining the high quality of natural raw materials

H OCHDORF represents healthy foods that meet premium quality standards. To keep our promise, the entire value chain must be committed to the seal of quality.

Quality is at the centre of this issue of HOCHDORF Inside. As a company that produces premium foods, such as our formula for infants and young children, quality awareness is a common thread throughout the entire value chain and all HOCHDORF companies. After all, the end of the chain leads to the consumer and our pledge that we will provide premium quality; no ifs or buts.

In the beginning: the raw material

Our approach to quality starts with the raw material. For our organic-grade infant formula, that is high-quality Swiss milk. You can read about what makes Swiss milk so special in this issue: follow our dairy farmer Toni and his cow Fiona along the journey and take a look behind the barn doors.



The buyers based at Marbacher Ölmühle and Zifru Trockenprodukte aren't looking behind barn doors – but they are peering over our growers' shoulders. Whatever the field or orchard produces must be grown on healthy soil and meet the highest quality requirements. Like the apricot kernels for the oils and flour we produce in Marbach or the tomatoes we use to make the crispy snack products at Zifru. So we want to know exactly where our products come from and be able to trace them at any point.

Care in processing

To retain the premium quality of these valuable raw ingredients, they need to be processed with care. At HOCHDORF, we are committed to using modern and gentle technologies. It's a principle that defines us, whether in cold pressing our oils or drying our vegetables and fruits. Even in developing new product lines for infant formula, we still focused on carefully processing the raw materials.

Our employees are an important part of the jigsaw when it comes to the value creation process. For that reason, we also rely on well-trained personnel who live and support our quality and BEST PARTNER philosophy every day, so that we keep our promises.

I hope you enjoy reading this latest edition of HOCHDORF Inside. ■

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SWISS MILK – THE BASIS FOR GENUINE QUALITY PRODUCTS

What makes Swiss milk so special?

A yoghurt for breakfast, a little milk chocolate once in a while, creamy pasta for your evening meal: we consume milk in lots of ways. The HOCHDORF Group’s Swiss production sites process around 800,000 litres of milk each day. But not all milk is the same. As with everything, the quality is determined by the method of production. And who produces our delicious milk? Our Swiss dairy cows of course!

We drink it fresh, use it for cooking and baking or consume it every day in processed form in various dairy products. For many of us, milk forms an important part of our daily nutrition. But what makes Swiss milk so special? A brief insight into the life of a dairy cow called Fiona provides a clue.

From calf to dairy cow

Farmer Toni is a little nervous: today is the big day. His favourite dairy cow Bella is in calf and the birth is due anytime now. A name has already been chosen and the beautiful little calf will be called Fiona. It’s a traditional Swiss name for a cow, one of the favourites for new-born calves.⁽¹⁾ Fiona will follow in her mother Bella’s footsteps and become one of Toni’s future dairy cows. Fiona will only become a dairy cow once she has had a calf herself and the milk production begins in her udder.

Four years on and Fiona has quickly found her place among Toni’s other dairy cows. Early in the morning, with the moon still shining, a long day slowly dawns on the farm. Having recently given birth to her second calf, Fiona knows the drill. She and the other cows are already waiting at the milking parlour when farmer Toni enters the cowshed at 5.30 am on the dot. Like almost all Swiss dairy farmers, Toni works with a milking machine. This has the advantage that the

milk is gently sucked out of the udders, in a similar motion to a calf taking milk from its mother. Milking takes around



Milk ingredients

Milk is not just delicious – it’s very healthy too. Milk contains the following ingredients⁽⁸⁾:

- Water:** a large proportion of milk consists of water
- Lactose:** energy supplier, ensures development of intestinal bacteria, promotes absorption of calcium
- Milk fat:** concentrated energy supplier, carrier of important fat-soluble vitamins
- Protein:** the body’s most important building material
- Vitamins:** 15 different vitamins can be detected: vitamin A for vision, vitamin D for bone formation, vitamin E for cell protection, vitamin K for blood coagulation, vitamin B2 for metabolism
- Minerals:** magnesium, phosphate, iodine, zinc, potassium, iron, manganese, cobalt
- Calcium:** provides strong bones



The food cows eat influences the composition of milk. Swiss cows receive high-quality, nutritional feed.

7 – 8 minutes. Each cow is then fed a quantity of concentrated feed related to its milk yield. Fiona is getting a little more than the average 2 kilogrammes today. Having recently given birth to a calf, her mammary glands are producing particularly large quantities of milk.⁽²⁾

group is important for the animals’ social development. Cows throughout Switzerland have around 800,000 hectares of grazing land, the equivalent of about 800,000 football pitches. The pasture fodder needs to be rich in content and easily digestible.

Swiss farmers provide their animals with high-quality feed.

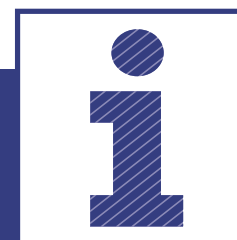
Valuable ingredients from high-quality feed

Milk has a water content of 88%. The remaining 12% comprises lactose, milk fat and protein. Milk also contains 15 of the 20 vitamins that we are most familiar with, as well as a combination of essential minerals such as iron, iodine and potassium. Milk is one of the best sources of calcium, providing for strong and healthy bones. A Swiss dairy cow supplies 20 litres of this valuable and nutritious milk each day. That’s a lot of work! Fiona has to drink 50-100 litres of water a day to maintain this level of performance. Her milk is only nutritious if she has sufficient nutrients in her blood, which itself depends on how much food she devours each day. And devours is the right word in this context!

It’s time for the morning walk in the pastures. Fiona and the other dairy cows now spend the rest of the morning in the fields. Spending time together as a

Swiss farmers look for a good mixture of juicy and aromatic grasses, clover and herbs and provide their animals with high-quality feed – the basis for the best Swiss milk.⁽³⁾

Midday: it’s time for Fiona to return to the cowshed. Grass and corn silage is available at her feeding station. Silage is a vegetable feed preserved by natural lactic acid fermentation.⁽⁴⁾ Corn provides cows with important energy in the form of starch. Fiona is kept in a free stall and decides when and how much to eat herself. She has had enough to eat for the moment. Fiona makes herself comfortable in the straw-littered lying area and begins to chew on her food again. Cows are able to break down raw fibres such as plants that are indigestible for humans. This provides us with nutrients that we would not be able to absorb without the preparatory work of the cows.



Cell count as a mark of quality

The cell count can be used to draw conclusions about the health of the udder. Increased cell count indicates an inflammation of the udder, which can have negative effects on the composition of the milk and lead to problems in milk processing.⁽¹¹⁾ In Switzerland the number of cells per millilitre is not allowed to exceed 350,000.⁽¹²⁾

International comparison of limit values for cell numbers per millilitre⁽¹³⁾:

| | | | |
|---|---|---|---|
|  |  |  |  |
| 350,000 | 400,000 | 750,000 | 1,000,000 |

Voluntary agricultural programmes for animal welfare

The Federal Office for Agriculture uses direct payments to remunerate farmers for services of public and common interest. This includes production system contributions that are linked to particularly animal-friendly husbandry.⁽¹⁴⁾

Regular exercise outdoors – RAUS programme

- At least 26 days per month spent in pasture (May to October)
- At least 13 days per month in pasture or outside (winter)
- Alternatively: free-stall access for the whole year
- Time spent outside must be documented in a journal⁽¹⁵⁾

Particularly animal-friendly housing in stables – BTS programme

- Group husbandry
- Continuous access to lying area and non-littered area
- Daylight of at least 15 lux intensity (street lighting corresponds to approx. 10 lux)⁽¹⁶⁾
- Compacted ground for eating and drinking area

Animal husbandry as a key factor

Only healthy cows produce high-quality milk. Husbandry has a key influence on the health of the animals. Fiona is in luck – Switzerland has some of the strictest animal welfare laws in the world.⁽⁵⁾ Both legislation to protect animals and voluntary agricultural programmes ensure animal welfare in Switzerland. 84% of all Swiss dairy cows are part of the voluntary

lies around and ruminates her food. And so the day ends as it began. Fiona and the other dairy cows are milked again. Her milk flows through the milking machine directly into the milk tank, where it is cooled to between 3 and 4 C°. The driver of the tanker checks the milk for smell and appearance before transport. A quality sample is also taken from the tank, which is

Strict conditions and controls support animal welfare and ensure that only milk of the best quality is processed and ends up on our table.

RAUS programme and thus receive regular outdoor exercise. 48% of all dairy cows live in particularly animal-friendly housing systems (voluntary BTS programme). Switzerland is a clear winner with regard to animal welfare in a Europe-wide comparison.⁽⁶⁾

Proven quality

Swiss milk is of a very high quality. But how can we prove this? Every four years, milk producers are monitored by a cantonal milk inspector. In addition, a milk sample is taken automatically each time the milk is collected. Two randomly selected samples are tested every month in an official laboratory for the bacterial count, cell count and freezing point. The milk is also tested for inhibitors (such as antibiotics).⁽⁷⁾ The limit values tend to be low compared to other countries, which clearly has a positive effect on quality.

Fiona's milk is also tested regularly. A considerable quantity of milk already forms in her udder as eats,

checked for inhibitors using a rapid test before unloading. This provides HOCHDORF with fresh Swiss milk every day, which it processes into high-quality milk powder and other milk derivatives.

The best Swiss milk – a combination of many factors

Good health, sufficient exercise and rich feed as well as clean water and fresh air enable Swiss dairy cows to produce high-quality milk. Strict conditions and controls support animal welfare and ensure that only the best quality milk is processed and ends up on our tables. Swiss milk is among the best in the world thanks to the Swiss farmers and all of the 575,000 Fionas and Bellas. ■

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Swiss milk production figures ^(9,10)

- **575,000** dairy cows across Switzerland
- **7,010** litres of milk are produced by an average Swiss dairy each year
- **10** months a year – the average a dairy cow produces milk
- **3.4** billion kilogrammes of milk is the total supplied by Swiss farmers each year
- **21,000** milk producers across Switzerland
- **25** dairy cows per Swiss farm on average
- **48%** of all dairy cows live in free stalls
- **84%** of all dairy cows are in the RAUS (regular exercise outdoors) programme
- **800,000** hectares of grazing land (pastures, meadows) across Switzerland
- **100** kilogrammes of grass are eaten by cows each summer day
- **20** kilogrammes of hay are eaten by cows each winter day
- **50–100** litres of water: the amount a cow drinks each day
- **15** of the 20 vitamins most familiar to us are contained in cow's milk
- **2** milk samples a month are submitted for official, extensive quality checking by each milk producer
- **350,000** cells per millilitre is the Swiss cell count limit (see infobox)

Sources:

- 1) www.swissmilk.ch/de/schweizer-milch/ueseri-milch/
- 2) LID Landwirtschaftlicher Informationsdienst, Alles über die Schweizer Milch, Ausgabe Juli 2018
- 3) milch-umwelt.swissmilk.ch/issue/landwirtschaftliche-nutzflaeche/
- 4) www.spektrum.de/lexikon/biologie/silage/61535
- 5) milch-umwelt.swissmilk.ch/issue/tierwohl/
- 6) milch-umwelt.swissmilk.ch/issue/tierwohl/
- 7) www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/lebensmittelsicherheit/verantwortlichkeiten/milchpruefung.html
- 8) www.landwirtschaft.ch/wissen/tiere/rindviehhaltung/milch/zusammensetzung/
- 9) LID Landwirtschaftlicher Informationsdienst, Alles über die Schweizer Milch, Ausgabe Juli 2018
- 10) www.swissmilk.ch
- 11) www.zmp.ch/milchproduzenten/dienstleistungen/melkberatung/zellzahl/
- 12) www.blv.admin.ch/blv/de/home/lebensmittel-und-ernaehrung/lebensmittelsicherheit/verantwortlichkeiten/milchpruefung.html
- 13) www.aphis.usda.gov/animal_health/nahms/dairy/downloads/dairy_monitoring/BTSCC_2016infosheet.pdf
- 14) www.blw.admin.ch/blw/de/home/instrumente/direktzahlungen.html
- 15) www.kontrolldienst.kut.ch/fileadmin/kut/programme/RAUS/A_Rinder_RAUS-spezifische_Anforderung_an_Stallbereich_und_Auslauf_Version_2017.pdf
- 16) naturallighting.wordpress.com/links/tageslicht-groessen-und-einheiten/

SUSTAINABLE – FROM A VERY EARLY AGE

Infant and young child formula in organic quality

A growing number of young parents are opting for a natural diet and food obtained from organic farming – especially with regard to their own children. But what happens when a baby can't be breast fed? Organic infant formula is one possible solution.

Naturally grown produce is gaining in popularity across all ages. There is a growing interest in and enjoyment of natural foods – “urban gardening” is one case in point. In New York, London and Zurich, high above the rooftops of our major cities and small towns, thousands of luxury terraces and balconies are being transformed into tiny gardens. Impressive, top-quality organic tomatoes, red and yellow peppers, as well as potatoes and much more are popping up from balcony boxes and raised beds. In just one season urban green spaces and bare yards are being transformed into bountiful fruit and vegetable gardens for the common good. All residents can take part. Aspiring gardeners can cultivate their own or even their neighbours’ unused beds.



Facts about the organic market

- Growth rates of organic acreage within one year (2016) in Asia were 23%, with China standing out at 41.5%; growth in North America was 5.8% and in Europe 6.7%.⁽¹⁾
- In Germany, the organic market share grew by almost 10% in 2016; in France it increased by as much as 20%. Countries such as Spain, Ireland and Sweden had already experienced the same growth a year earlier.⁽²⁾
- Organic food sales in Switzerland rose by 8.1% from 2016 to 2017 and have now reached a total volume of CHF 2.7 billion.⁽³⁾
- In Switzerland, it is mainly women who buy organic food.⁽⁴⁾
- More organic food is bought in German-speaking Switzerland than in French and Italian-speaking Switzerland, for example.⁽⁴⁾
- The higher the educational level, the more often organic products are purchased.⁽⁴⁾
- Above a certain level, the consumption of organic products is no longer related to income. While there is a continuous increase in the middle income classes, organic consumption decreases again in the upper income classes.⁽⁴⁾
- Age does not influence organic consumption.⁽⁴⁾

Sources: 1) Willer, Helga and Julia Lernoud (Eds.) (2018): Statistics and Emerging Trends 2018. Research Institute of Organic Agriculture (FiBL), Frick, and IFOAM – Organics International, Bonn. 2) <https://www.handelszeitung.at/handelszeitung/bio-branche-legt-weiter-zu-155190>, as at 17.12.2018. 3) BIO SUISSE annual conference, 12.4.2018. 4) Hanna Stolz, Simon Blattter et al. Biobarometer Schweiz: Wovon die Kaufentscheidung für Biolebensmittel abhängt. Agrarforschung Schweiz 8 (2): 62-69, 2017.



Love of nature. More and more parents prefer to buy organically-grown foods for their children. HOCHDORF organic products make this possible from the very first months of a child's life.

Even before learning to crawl, our little ones can sit in their prams and observe their parents digging around in communal city gardens or balcony boxes. So while they are still enjoying the natural goodness of mother's

We were one of the first companies to supply organic infant formula in Switzerland and we have been producing, marketing and exporting these products

“While both conventional and organic infant formula are subject to food laws, the organic line must also meet additional organic regulations.”

milk and before they have had their first solid meal, the next generation can learn about the delicious and healthy organic food that is also supplied by Mother Nature. At HOCHDORF, we are strong advocates of breastfeeding as the best and most natural nutrition for a baby.

Focussing on organic quality

But what if a child cannot be breast fed and relies on bottle feeding or a combination of the two? And if the parents also place value on organic nutrition?

Since our company was first founded, we at HOCHDORF have given a lot of thought to different types of nutrition and to the physiological aspects of nutrition, incorporating these specific requirements into our product development – including the use of organic ingredients in infant formula.

since the 1990s. Infant formula production is always governed by very strict laws, recommendations and guidelines. While both conventional and organic infant formula are subject to food laws, the organic line must also meet additional organic regulations. These state, for example, that at least 95% of the ingredients must be organic.

In addition to producing organic infant and follow-on formula, HOCHDORF also provides other high-quality children's specialities. Our cereals are ideal for infants from the age of 6 months while our porridge is suitable for children from 12 months onwards, available in different varieties.

Our dried fruits and vegetables are a great addition to the diets of older children from the age of 3. We feel a responsibility to offer healthy foods for toddlers

and pre-schoolers, as well as infants. A balanced diet in childhood lays the foundation for good health in later life.

Organic products: purchasing motives and behaviour

People have always found natural products appealing. The results of a large-scale consumer survey⁽¹⁾ of 30,000 people in over 60 countries conducted by the international market research institute Nielsen were therefore hardly surprising. Respondents cited freshness, natural ingredients and minimal processing as the most desirable features of good food.

But when it comes to organic infant formula there is more to consider than these three important factors. The value chain is the main focus for buyers. Key motives include animal welfare, environmental protection, the preservation of biodiversity, but also altruistic ways of acting such as unselfishness, self sacrifice and internalised moral attitudes.^(2,3)

An increasing preoccupation with nutrition is reflected in the sales growth of organic foods. In 2017, the global market for organic products approached the USD 90 billion mark and is still growing.⁽⁴⁾ But the global share of organic infant formula is also impressive. Last

year a total of 723 new infant formula products were launched, 283 of them in the organic sector.⁽⁵⁾ These are figures that should make infant formula suppliers – as well as consumers – sit up and take notice.

Consumer behaviour, attitudes towards the environment and dietary habits change from generation to generation, or sometimes even faster. But one constant remains: parents want to provide the best for their children, to give them a good start in life. We at HOCHDORF are happy to contribute to this by offering parents healthy nutrition specialities for children. ■

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Sources: 1) Nielsen Global Health and Wellness Survey (2015). 2) Hanna Stolz, Simon Blattert et al. Biobarometer Schweiz: Wovon die Kaufentscheidung für Biolebensmittel abhängt. Agrarforschung Schweiz 8 (2): 62-69, 2017. 3) Hanna Stolz. Biobarometer Schweiz 2018: Was bewegt KonsumentInnen dazu, Bio zu kaufen: Symposium Bio 2018: Klasse statt Masse vom 29. Nov. 2018. Forschungsinstitut für biologischen Landbau FiBL. 4) www.handelszeitung.at/handelszeitung/bio-branche-legt-weiter-zu-155190, as at 17.12.2018. 5) Mintel, as at 17.12.2018. 6) BIO SUISSE annual conference, 12.4.2018.

| Organic labels at HOCHDORF Swiss Nutrition | | |
|---|--|--|
| 1. Legal provisions and agreements | | |
| CH-Bio (Swiss Organic Farming Ordinance) | Products that meet the basic requirements of the Swiss Organic Farming Ordinance may be awarded the “Bio” (organic) label. The principles of the Swiss Organic Farming Ordinance include compliance with natural cycles, the use of organic feed for the production of animal products, avoidance of chemical and synthetic additives and ingredients and a ban on the use of genetically modified organisms. Organic agricultural ingredients must be used for the production of organic food. At least 95% of the agricultural ingredients must be organically farmed for the end product to carry an “organic” label. The use of food additives and non-organic ingredients should be kept to a minimum. Organic food processing should be carried out meticulously and by organic, mechanical or physical methods. ⁽¹⁾ | |
| EU organic farming | Products that meet the basic requirements of the EU Organic Regulation can be awarded the “organic” label. There are virtually no differences between the Swiss and European ordinances. Equivalence between the Swiss Organic Farming Ordinance and the EU Organic Regulation was regulated as part of the Swiss-EU Agreement on Agriculture. This is important for facilitating trade with organic products. Unlike Switzerland, the EU has defined an EU organic logo. This logo must be displayed on pre-packaged food when it is labelled “organic”. ⁽²⁾ | |
|  | | |
| CH – U.S. Organic Equivalency Arrangement | There is an equivalence arrangement between Switzerland and the US for organic products. Products that have been produced, processed or packaged in Switzerland and the US and which comply with the relevant organic legislation fall within the scope of this arrangement. The arrangement serves to reduce administrative costs and facilitate organic trade. An additional requirement must be observed for Swiss organic milk products to be exported to the US. The principle of absolute freedom from antibiotics applies, i.e. a herd of cows (including calves) must never come into contact with antibiotics. ⁽³⁾ | |
| 2. Organic standards under private law | | |
| Bio Suisse Bio Suisse Bud | Bio Bud | The Bio Bud organic brand is owned by Bio Suisse, the umbrella organisation of Swiss Bio Bud businesses. Bio Suisse has defined guidelines for producing vegetable and animal products as well as for their processing and trading. These guidelines are stricter than the CH-Bio label requirements. So fewer additives and processing ingredients are allowed for Bio Bud products than for CH-Bio organic products and rules are defined for the processing procedures. Bio Bud products must be processed as gently as possible, using only essential processing steps. According to the Bio Bud guidelines, sterilised milk, for example, is not permitted, but UHT milk is, since it has been heated more gently. ⁽⁴⁾ |
|  BIO SUISSE at least 90% of the raw materials come from Switzerland |  BIO contains more than 10% imported raw materials | |
| Migros Bio | The organic brand “Migros Bio” is owned by the Federation of Migros Co-operatives. Use of this label is based on the organic regulations of Switzerland and the European Union. Migros has defined additional requirements that represent the added value of the Migros organic label. For agricultural raw materials from Switzerland, the requirements of the Bio Suisse guidelines must be met for primary production. The requirements of the Swiss Organic Farming Ordinance must be met when processing Migros organic products. For agricultural raw materials from abroad, the requirements of the EU Organic Regulation apply to both primary production and processing. Migros has defined additional requirements for its organic label, stipulating that raw materials from abroad must not come from farms in the process of transition to organic produce and must not be transported by air. ⁽⁵⁾ | |
|  | | |
| Sources: 1) Organic Farming Ordinance (SR 910.18): https://www.admin.ch/opc/en/classified-compilation/19970385/index.html , EAER Ordinance (SR 910.181): https://www.admin.ch/opc/en/classified-compilation/19970387/index.html . 2) EU Organic Regulation (EU 834/2007: https://eurlex.europa.eu/legal-content/DE/TXT/?qid=1542356033040&uri=CELEX:02007R0834-20130701 . 3) bio.inspecta AG: Information sheet on the USA – Switzerland equivalence arrangement with regard to the mutual recognition of organic standards. 4) Bio Suisse: https://www.bio-suisse.ch/media/VundH/unterschiede_knospe-bio_d.pdf , https://www.bio-suisse.ch/media/VundH/Regelwerk/2018/DE/rl_2018_1.1_d_gesamt_11.12.2017.pdf . 5) Migros directive: Weisung 7.4.50: Richtlinien Migros Bio, Verarbeitung und Handel. | | |



The new EU Organic Regulation (EU 2018/848)

The first EU Organic Regulation came into force in 1992 and was revised initially in 2007. This resulted in the organic legislation currently in place. In 2014, a second review of organic legislation was initiated, with many regulations outdated and no longer appropriate, hindering rather than promoting the growing organic market. The drafting of "new" organic legislation proved to be difficult. Intensive negotiations lasted more than three years before the EU member states were able to agree on a proposal. The new EU Organic Regulation (EU 2018/848) was finally published in June 2018. This regulation forms the basis of new EU legislation and is still incomplete. As the new EU organic legislation will apply from January 2021, additional rules in the form of delegated acts will need to be adopted by then to complete the new EU organic legislation.⁽¹⁾

What innovations does the new EU organic legislation bring? ^(2,3)

- Principles and goals are more modern and include sustainability and regionality.
- The concept of organic plant breeding is defined for the first time. This aims to improve genetic diversity and the use of resistant and adaptable varieties.
- Progress in animal welfare with regard to species-specific behavioural needs, such as rules on exercise.
- Establishing a list of authorised detergents and disinfectants.
- Stricter risk-based controls on the supply chain.
- Alignment of imports with EU law (expiry of the equivalence model).
- The enrichment of organic baby food, infant formula and follow-on formula with vitamins and minerals remains permitted and is now defined in the Organic Regulation.
- All companies along the value chain must take proportionate and appropriate precautions within their sphere of influence to avoid contamination with unauthorised products.

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Sources:
1) Bund Ökologische Landwirtschaft: https://www.boelw.de/themen/eu-oeko-verordnung/revision/http://europa.eu/rapid/press-release_STATEMENT-17-4727_en.htm
2) bionetz.ch: <https://bionetz.ch/nachrichten/branchennews/91285-neues-bio-recht-in-europa.html>
3) Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and labelling of organic products and repealing Council Regulation (EC) No 834/2007: <https://eur-lex.europa.eu/legal-content/EN/%20TXT/?qid=1543843158187&uri=CELEX%3A32018R0848>

APRICOT KERNELS: PACKED WITH GOODNESS

Real treasure – hidden in a woody stone

Whether they are produced from rape-seed or olives, high-quality cooking oils are now a fixture in our kitchens. But nature has even more to offer. The woody stone of the apricot contains a precious kernel. Marbacher Ölmühle uses this to make high quality apricot kernel oil and flour – a true asset in lots of ways.

They thrive and grow in the midst of the Turkish high-lands, between the Caspian Sea and the Black Sea. It's an image that leaves an impression – tree upon tree, glittering here and there as their velvety skins reflect the warm sun's rays from the shade of the dark green leaves. Apricots – healthy, well-known and well-loved.

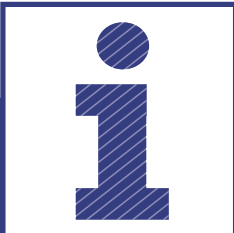
Fresh or processed – apricots are familiar to us all
Whether neatly arranged in rows, immersed in the sweet icing of a delicious cake or boiled, jellied and preserved as a fine jam – there are no limits to the versatility of apricots.

The long harvest period between May and September and various drying options mean that apricots are on our menu all year round. But they provide much more than their delicious fruit. Hidden inside the woody stone is a secret treasure – the apricot kernel.

It's important to distinguish between sweet and bitter apricot kernels here. The bitter seeds of wild apricots are primarily used in cosmetics.⁽¹⁾ They contain a high amount of amygdalin, which releases highly toxic hydrocyanic acid during the digestive process⁽²⁾, making the seeds unsuitable for the food industry. In contrast, complex processing enables us to produce high-quality apricot kernel oil and flour from sweet apricot kernels.

Great care for best quality

So how is the woody apricot stone, which we normally dispose of with our organic waste, transformed into high-quality oil and flour? Based in Germany, Marbacher Ölmühle produces a varied



Prunus Armeniaca – a demanding plant

The origins of apricots are not entirely clear. Some sources state that they originated in China, where they were found 4,000 years ago. The Latin name Prunus Armeniaca, however, suggests that the stone fruit originates from Armenia.⁽⁵⁾

Today the apricot is found in many countries. The largest area of cultivation is in eastern Turkey, in the province of Malatya. The provincial capital of the same name, also known as the apricot capital, exports more apricots than anywhere else in the world. It is estimated that 95% of all dried apricots traded in Europe come from Malatya.⁽⁶⁾



Marbacher Ölmühle uses a gentle process to produce the best apricot kernel oil and flour from the almond-like kernels.

range of cooking oils and flours. Each seed has specific characteristics that must be taken into account during the pressing process. On their arrival in Marbach, the apricot kernels have already undergone a number of important stages of production.

high-calibre apricot kernel oil or flour is by treating the raw materials with the greatest care throughout their further processing. Marbacher Ölmühle uses a cold pressing process to achieve this. Cold press-

Each seed has specific characteristics that must be taken into account during the pressing process.

After the apricots have grown and matured in the eastern sun, they were harvested and pitted by the thousand. So how can we extract the valuable kernel? The stone is left to dry in the air first. Then it is cracked and sorted by hand – the only way to ensure the unwanted hard-shell fragments are completely removed.⁽³⁾ Now the kernels are ready for the journey to Marbach, where they are processed into delicious virgin apricot kernel oil and high-quality de-oiled apricot kernel flour.

Gentle harvesting and hand-picking of the seeds are the first important step in producing an excellent end product. But the only way to create a distinctive,

ing means that there is no external heating and the pressing procedure is purely mechanical. Screw presses are also used at Marbacher Ölmühle: the gentle extraction preserves the valuable ingredients and the natural flavour in the oil. The result is a virgin apricot kernel oil – completely natural and of the highest quality.

Apricot kernel oil – a taste sensation with a health bonus

In addition to its unique fruity and nutty taste, the yellow-golden oil contains valuable ingredients. Omega-6 fatty acids make up 25% of the oil – unsaturated fatty acids that the body cannot produce on



**Apricot kernel oil –
loved by the cosmetic
industry too**

Lotions, body sprays, lip care or shampoos – due to its valuable ingredients, apricot kernel oil is found in countless cosmetic products and has become indispensable in the beauty industry. The high concentration of oleic acid (66.1%) and linoleic acid (25.3%) makes the oil particularly popular in skin and hair care products.

Oleic acid is one of the most important unsaturated fatty acids; it is vital for our health but cannot be produced by the body. Linoleic acid is an omega-6 fatty acid and an important component of the epidermis, our uppermost skin layer. Linoleic acid regulates the water balance and helps maintain the skin's natural barrier function.⁽⁷⁾

**Recipe
Marzipan balls with a hint of apricot**



- Ingredients**
- 200 g apricot kernel flour
 - 250 g ground almonds
 - 50 ml apricot kernel oil
 - 50 ml almond oil
 - 200 g icing sugar
 - 2 tablespoons water
 - 20 g almond liqueur
 - Cocoa powder

Method

Mix all the ingredients apart from the cocoa powder together in a bowl. Stir the mixture until it becomes easy to shape. Take a tablespoon of the marzipan and shape into a large ball. Sprinkle some cocoa powder on a plate and roll the marzipan in it. Voilà – tasty marzipan balls with a hint of apricot, ready to eat.

- Sources:**
- 1) www.olionatura.de/oele-und-buttern/aprikosenkernoel
 - 2) www.toxinfo.ch/367
 - 3) www.aprikosenkerne.eu/herkunft-geschichte-und-anbau-bittereraprikosenkerne/
 - 4) <https://omega-3-fettsauren.info/omega-3-6-und-9/>
 - 5) www.pflanzen-lexikon.com/index.php?a=prunus-armeniaca&l=de
 - 6) www.deutsch-tuerkische-nachrichten.de/2012/06/455373/aprikosenaus-malatya-sie-sind-die-ersten-zertifizierten-fruechte-der-tuerkei/
 - 7) www.aprikosenkernoel.info/

its own but are essential for important functions in the body. These include regulating blood pressure, lowering cholesterol levels or supporting growth and repair processes. Omega-6 fatty acids can also help prevent infections.⁽⁴⁾

Apricot flour – a protein booster

The apricot kernel has an oil content of about 40–50%. The material left after the kernel is pressed is known as the press cake. Marbacher Ölmühle grinds this into a high quality flour, which has a shelf life of up to

Due to its good binding properties and wonderfully delicate marzipan flavour, this flour is ideal as a baking ingredient or to add to smoothies. The light brown to slightly reddish flour is lactose-free and suitable for vegans and lots of diets.

Make every meal special

Like the pearl in the mussel, the stone of the apricot also hides a real treasure: the kernel with its unique taste and its essential components. The oil and flour

The only way to create a distinctive, high-quality apricot kernel oil or flour is by treating the raw materials with the greatest care throughout their further processing.

12 months. Like the oil, this apricot kernel flour also contains important nutrients. 100 grams contains around 51 grams of protein. At over 50%, this is relatively high compared to other flours. The impressive protein content makes apricot kernel flour particularly attractive for a low-carb diet. It also contains 23% fibre, the second most important nutrient group found in apricot kernel flour. Fibre is a delicacy for our intestinal bacteria, which make an essential contribution to a healthy gut flora.

produced in Marbach – both high-quality products – offer the freedom to be creative and help turn everyday meals into culinary delights. ■

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Typical sensory characteristics of apricot kernel oil

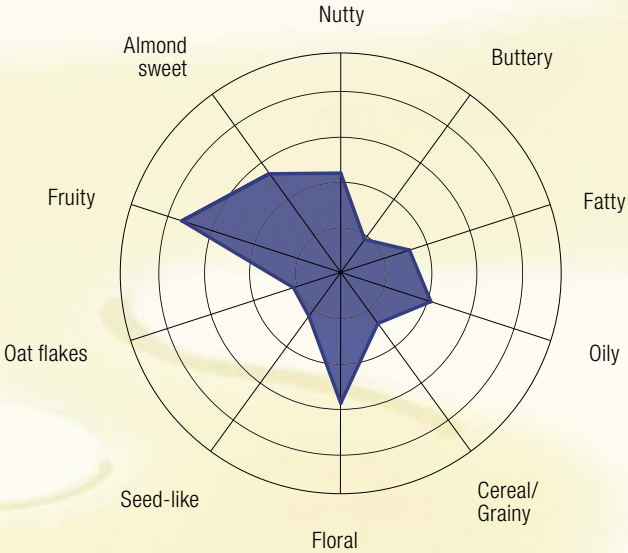
Its intensely fruity taste makes virgin apricot kernel oil an excellent choice for enhancing cold dishes, such as salads, muesli or yoghurt. The fruity aroma also gives desserts an added sparkle, turning simple dishes into something special. The nutty flavour is another dominant taste component, with the almond note particularly striking. Oily and fatty attributes, accompanied by grainy, seedy and buttery components, round off the flavours. Apricot kernel oil is also a good accompaniment to hot dishes, although the oil itself should not be heated.

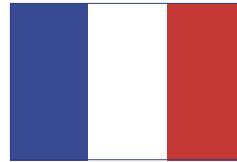
In 2018, the International Taste & Quality Institute awarded the Superior Taste 2-Star Award to the apricot kernel oil from Marbacher Ölmühle.



To make the quality standards and characteristics of its vegetable oils quantifiable in terms of flavour, Marbacher Ölmühle has developed special radar charts that map the typical sensory characteristics of its individual oils.

Sensory radar chart for apricot kernel oil





Felice Fauxpas

Airborne seafood

I had never been to Paris before. Then I received an invitation to a symposium in the French capital last October. I was really excited about visiting the city, with all its famous attractions and culinary delights.

As chance would have it, a friend from student days had recently moved to Paris. We quickly arranged a meal so we could enjoy an evening of reminiscence.

My friend greeted me with the news that he had reserved a table in a traditional gourmet restaurant just around the corner from where he lived. The place was almost full and the elegant waiter showed us to the last remaining seats. "You have to book a table weeks in advance," whispered my friend as he nodded to a charming French lady at the neighbouring table. She introduced herself as Catherine and we soon found ourselves in animated conversation.

Catherine advised us to try the catch of the day, fresh langoustines. My friend thought this was a great idea and so I chose the same dish, even though I wasn't really sure what he was ordering.

I could hardly believe my eyes when our main meal arrived: a plate of whole langoustines lying there, staring at me brazenly. I had had no previous experience with whole crustaceans. I would happily battle with the armour-plated creatures at home, but here, in this fine restaurant? I looked at my friend expectantly.

As if it were the simplest thing he had ever attempted, he picked up his knife and fork and began to remove the langoustines from their shells with the precision and elegance of a fine surgeon. Then he proudly stole a glance in Catherine's direction.

I tried to do the same, looking not at Catherine, but rather at the langoustine itself. No sooner had I started my first hesitant cut than the blade slipped and the langoustine drew an arc through the air before landing unceremoniously on my friend's plate. He was so taken with the lady from the next table that he seemed not to notice what had happened. When he finally turned his attention to his food again he was astonished to see how much remained on his plate. "They seem to be multiplying as I eat them," he said, shaking his head and offering my langoustine, which was now his langoustine, to the charming lady. She was so delighted at this gesture that there was a quick exchange of business cards.

My friend, an erstwhile confirmed bachelor, and his delightful Parisian companion, are now very much an item. In Parisian restaurants it seems the guests quickly fall for each other and not just the delicious French cuisine. ■

Yours,

Felice



NUTRITION

Milk fat – better than its reputation

Milk fat has been classed as unhealthy for several decades. But we now know that this conclusion was wrong. Milk fat's bad reputation dates back to the 1950s. At that time, a large-scale study showed a connection between heart attacks and saturated fatty acids. The results of the study triggered an anti-fat theory, which continues to have an effect today.

Animal fats in particular, including milk fat, were criticised for their high content of saturated fatty acids – and this had an impact on dairy products. Consumers were advised to replace butter with vegetable margarine and to choose low-fat products.

However, fat influences the specific properties of a product and is therefore often replaced by sugar. Some low-fat products even need to be greatly modified to match their natural counterparts. The most famous of these is margarine, a purely manufactured product. Margarine is therefore not automatically healthier than butter.

Milk fat – a component of the food pyramid around the world

New studies clearly show that saturated fatty acids do not lead to heart attacks per se and that low-fat products are often the worse choice. In addition to saturated fatty acids, milk and milk products also contain small amounts of monounsaturated and polyunsaturated fatty acids. A further advantage are its natural ingredients such as proteins, valuable vitamins and calcium.

A cross-comparison covering all continents and 14 different countries shows that the consumption of milk and dairy products plays an important role; whether in Benin, China or the Dominican Republic, it is always included in the food pyramid.

In the meantime, recent studies have reversed the reputation of milk fats. A healthy, varied diet may also include whole milk, normal-fat dairy products and butter. ■

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