



HENRY LAMOTTE
OILS

Upcycling



Food upcycling:
What it means in general and for
Henry Lamotte Oils in particular

We regularly receive requests for “upcycling products”. It’s a hot topic: a Google search for “food upcycling” returns around 20,000 results.

Generally speaking, upcycling means creating something new from surplus. The new product is an upgrade. While recycling, on the other hand, means “merely” reprocessing.

Food upcycling refers to the processing of food that would usually no longer be eaten. The main idea behind it: **using all the constituent parts of raw ingredients** – this is how customers, together with their end customers, can live in appreciation of nature and use its resources carefully.

A number of Henry Lamotte Oils products embody this idea – nut oils, fruit kernel oils and protein flours, for example. Thanks to them, raw materials are used in their entirety.

The UN’s Sustainable Development Goals (SDGs) came into effect in 2017. **Products embodying the upcycling idea contribute to Goal 12: sustainable consumption** means appreciating and using natural resources holistically.

SUSTAINABLE DEVELOPMENT GOALS



1. Nut Oils and Almond Oil

When it comes to the production of (food) oils, great taste is dependent on neither the size of the nut or almond nor their integrity. The crucial factors for high-quality oil are the quality of the raw materials and how they are processed. This is different from snack nuts and almonds: They have to be whole and preferably large.

Pressing nuts and almonds creates oils and press cakes. Press cakes with residual oil content of five to ten percent can be ground into food-quality

flours, which contain protein. Depending on the raw materials, the flours have a large number of nutritionally valuable ingredients – essential amino acids, for example. At appropriate concentration levels, the flours also give end products a subtle aroma. The flours are also suitable as natural peeling ingredients in cosmetic products, as well as protein- and fibre-rich components in animal nutrition.

This applies in principal to all the oils named below. In addition, we know the following about individual oils:



✓ Almond Oil

✓ Groundnut Oil

Only light nuts are used for snack products. All dark nuts can be pressed into oil.

✓ Hazelnut Oil

✓ Macadamia Nut Oil

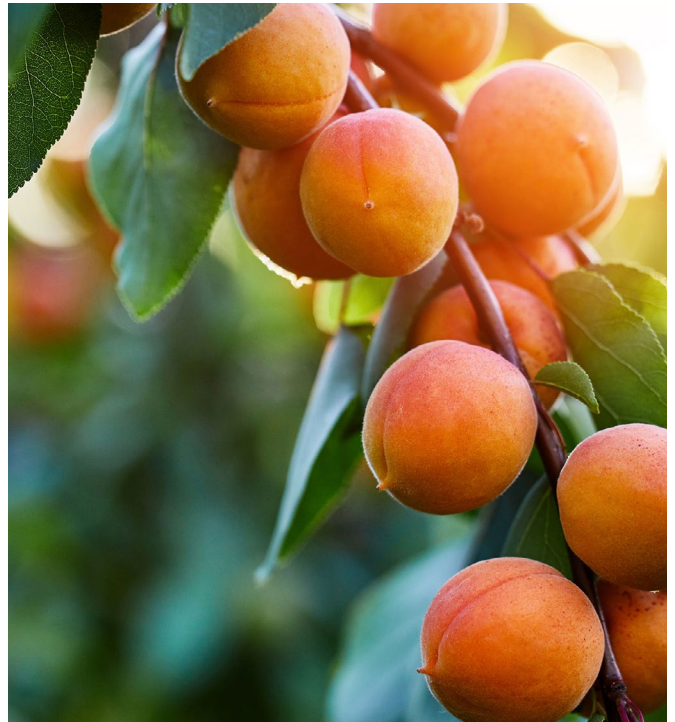
The shells of the nuts are sometimes used as heating material or processed into charcoal.

✓ Walnut Oil

2. Oils and butter made from fruit pulp and fruit kernels

The seeds of a plant need energy for germinating and growing until they can create energy through photosynthesis. Therefore, the seeds contain oil. Nature has arranged for seeds to provide the best conditions for the survival of species of plant. When we eat fruit at home, it is difficult for us to use the kernels (that of a peach, for example). By contrast, **manufacturers of oil together with manufacturers of marmalade, ice cream and juice process nearly all the components of a piece of fruit in carefully coordinated steps.** The press cakes created with the oil have a range of different uses depending on the raw material.

This applies in principal to all the oils named below. In addition, we know the following about individual oils:



✓ **Apricor Kernel Oil**

- Main use of the fruit: dried or pure as a fruit and in marmalades and juices
- The press cake is used as a food ingredient, for example in persipan or as a gluten-free baking ingredient. It is also valued in animal nutrition.

✓ **Black Currant Seed Oil**

- Main use of the fruit: juice
- The press cake can be used as a food ingredient, for example to a fine flour. It also enriches animal feed.

✓ **Cupuaçu Butter**

- Main use of the fruit: it is valued as culinary delicacy and used for marmalades, ice cream and similar products. It is also popular in the form of purée as part of shakes, such as True Fruit Smoothies.

✓ **Grape Seed Oil**

- Main use of grapes: wine
- In wine production, the so-called pomace is produced from berry skin and seeds.
- Our supplier separates the berry skins and dries the

seeds. The seeds are cold pressed after the final cleaning, which includes the removal of any grape skin residues.

- Grape seed press cakes are valued, for example, by the food industry.

✓ **Passionsfruit Seed Oil**

- Main use of passion fruit (maracuja): pure as fruit and in juices, marmalades and ice creams
- The press cakes are reprocessed into peeling raw materials. It is a natural substitute for microplastics in cosmetic products.

✓ **Peach Kernel Oil, refined**

- Main use of the fruit: pure and in marmalades and juices

✓ **Pomegranate Oil**

- Main use of the fruit: pomegranate juice
- The press cake is primarily used as animal feed. In individual cases, the press cake is made into pomegranate protein and pomegranate meal. Dried peel and pith can also be used in cosmetics and pharmaceuticals.

✓ **Plum Kernel Oil, pressed, organic**

- Main use of the fruit: plum purée and dried plums
- The press cakes are processed into biofuels as their cyanide content precludes many other applications

✓ **Seabuckthorn Pulp Oil**

- Main use of the fruit: juice
- The oil is part of seabuckthorn mash. The mash is run through a centrifuge, the oil is drained and filtered.

- The press remnants are dried and used in teas.
- The water collected during the drying process contains ingredients that are valued by the cosmetics industry.

3. Other oils and fats

What applies to oils and butters made from fruit pulp or fruit seeds is also true for the following products:
Fats, wax and oils contribute to using raw materials

holistically. The coordinated interaction of manufacturers of different products leads to **added value for people and represents appreciation of nature.**

✓ **Adeps Lanae (Lanolin)**

- The main aim of sheep farming: sheep's wool
- When washing wool after shearing, wool and raw lanolin are created. Lanolin is secreted from the oil glands of sheep and forms a protective coat over the wool fibres.

✓ **Bees Wax**

- The main aim of beekeeping: honey production
- Bees secrete wax from glands. They put their honey in honeycombs in the hive and cover it with wax. The beekeeper removes the wax from the honeycombs to centrifuge the honey. The wax and the honeycombs are melted into wax after being centrifuged.

✓ **Coconut Oil**

- The main products from coconuts are coconut oil, coconut milk, desiccated coconut and coconut purée. A feature of coconut trees is that all parts of the plant can be used for extremely diverse purposes:
 - **Hard shell:** production of charcoal briquettes and activated charcoal for absorption processes, as well as the production of bowls, small lights, spoons, figures and instruments
 - **Fruit pulp:** coconut oil, coconut press cake and flour or desiccated coconut

- **Coconut water:** drink
- **Fibre shell:** production of mattresses, ropes, brushes, mats and carpets
- **Roots:** cooked up for the purpose of manufacturing traditional medicine
- **Wood:** housebuilding, production of furniture or even in canoe (in Hawaii for example)
- **Leaves:** used for mats and baskets, as well as for roof construction, among things, by indigenous peoples
- **Blossoms:** coconut blossom sugar, vinegar, syrup, alcohol

✓ **Cottonseed Oil**

- Main use of cotton bolls: cotton for textiles
- For cotton, only the fibres of the capsules are used. The seeds can be pressed into oil.

✓ **Corn and Wheat Germ Oil**

- Main product: starch
- The fatty sprouts of the grain are pressed into oil.
- Only non-GMO (GMO = genetically modified organism) corn of European origin is used in our Corn Oil.

4. Press cakes and flours

The gentle cold pressing of oilseeds or fruit pulp produces oils and press cakes. Fine grinding of the press cakes produces flours. Press cakes and flours usually have a residual oil content of five to ten percent and are **often rich in protein and fibre**. Depending on the raw material, you have a **large number of other nutritionally-valuable ingredients** – essential amino acids for example. The flours are a popular source of protein in foodstuffs like shakes,

cakes and baked goods. Press cakes enrich animal food with omega fatty acids and amino acids. **Press cakes and flours represent the main idea behind upcycling: the raw material is used in all its constituent parts and according to the highest quality standards.**

At Henry Lamotte Oils, we currently have press cakes and flours made from the following raw materials:

- ✓ Almonds
- ✓ Amaranth seeds
- ✓ Apricot kernels
- ✓ Coconut pulp
- ✓ Hemp seeds
- ✓ Linseed
- ✓ Rapeseed
- ✓ Sesame seeds
- ✓ Sunflower seeds

