Sustainability

We are a sustainable company. Our ingredients are produced to the highest standards using modern, sustainable farming practices ensuring full traceability from field to face.

Technology

Research and development is a core focus of Oat Services Ltd. We are actively involved in various funded oat research and we conduct more focussed investigations in the core development of our ingredients. We are involved a UK five year research project ''QUOATS – Quality Oats'. This project develops and applies state-of-the-art genomic (DNA sequencing) and metabolomics (systematic study of the unique chemical fingerprints that specific cellular processes leave behind) for oat genetic improvement. The project focuses on:

- Manipulation of key traits that will enhance the value of oats in human health improvement.
- Value of oats as a low input cereal.
- Environmental and economic sustainability of cereal based rotations.
- Potential of oats as a high value animal feed.
- Developing new opportunities for using oats through advanced fractionation.

Oat Services also has strong links with Finnish research institutes particularly MTT Agrifood Research, a leading research institute developing sustainability and competitiveness in food systems, together with VTT Technical Research Centre of Finland, the biggest multi-technological applied research organisation in Northern Europe. This focus on innovation and technology has enabled the company to take a traditional cosmetic ingredient, such as colloidal oatmeal and to improve its performance and sustainability.

For full details on various projects we are involved in please visit 'Our Projects':

Grain Batch Control MTT

Quality

We are firm believers in the philosophy of 'field to face'. The quality of our ingredients starts with specific varieties of oats which are grown utilising modern agricultural production techniques. We are able to test field batches to ensure they meet the necessary quality criteria enabling us to optimise production through the plant. Our ingredients are therefore of consistent quality, safe, sustainable and traceable.

We hold ISO9001:2008 and Ecocert (COSMOS) 'Natural' or 'Organic' certification where relevant.

Concept: Field to Face

We carefully select our oats from the main sources in Europe; Finland, Sweden and UK. In Finland have developed farmer groups focussed on the delivery of high quality oats, and we are assisted by the MTT who advise farmers on the optimum growing techniques. This enables us to have a highly traceable, high quality supply chain direct from the field. This also ensure that we control our supply of oats for quality parameters such as protein and fat content but also safety parameters such as heavy metals and mycotoxins.

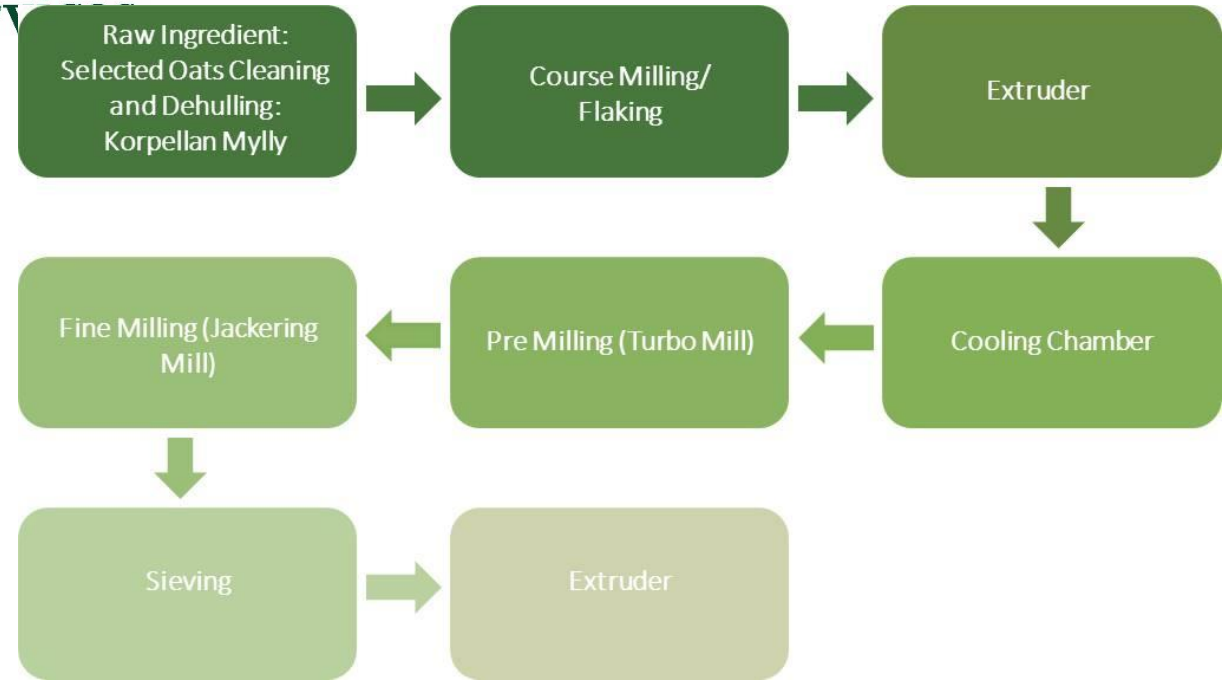
A supply chain as we have described above allows us to address a number of factors which we believe are important for cosmetics:

- Availability - We assess and select our oats as soon as possible after harvest in September as this allow us to purchase the best available.
- Specification - We ensure that our oats meet the highest possible quality standards.
- Safety - Our oats are routinely tested for heavy metal and mycotoxin levels
- Traceability - Each batch of ingredient can be traced to the farm that grew the crop.
- GMO - There are no known varieties of genetically modified oats, and to our knowledge there are no breeders working in this area.
- Regulation - Visibility of supply chain and process allow us to comply with EU REACH and cosmetic regulations and the US counterparts.
- Price - Controlled supply chains ensures we can take the unnecessary cost out of the process allowing us to be price competitive but deliver an added-value product.

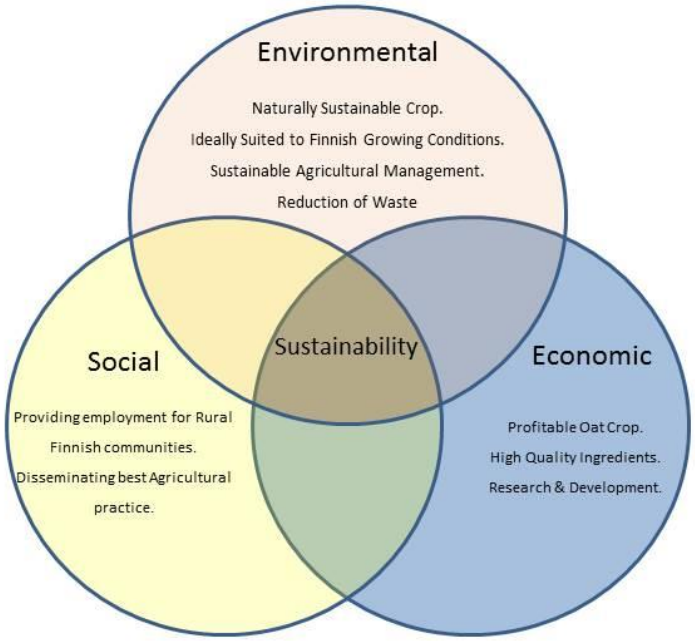
Oat Cosmetics

For over a thousand years oats have been used as a natural ingredient for the personal care industry. Innovations in breeding, growing and processing have created highly effective, active and functional ingredients, which add value and desirability to a wide range of hair and skin care products. These ingredients prove that innovative products can be developed, in a truly sustainable manner by taking into account the three principles of sustainability and working with the metier of a crop.

Our extruded colloidal oatmeal, Oat® COM is toll processed on our behalf by Taivalkosken Mylly, a small bespoke mill approximately 250 miles north of Helsinki. The mill was selected because of the high degree of expertise necessary to process grain utilising the patented process:



Sustainable agriculture integrates three main goals--environmental health, economic profitability, and social and economic equity [UCDavis College of Agriculture and Environmental Principles]. Western World arable production is sustainable when compared to Fairtrade and native resources. Western World production is not generally recognised as sustainable and in many cases is looked upon as a polluter, however in general and specifically for oats, the facts do not support this:



Oats: Three spheres of sustainability

Considerable research and development is being undertaken in the areas of:

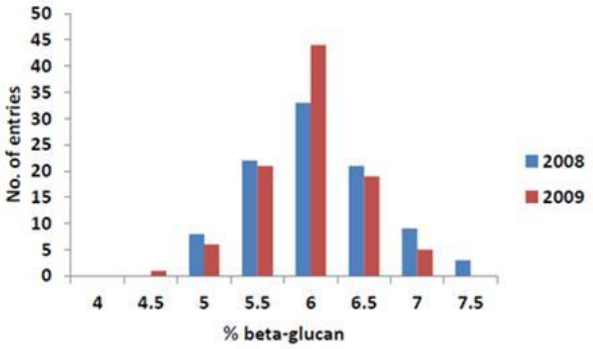
1. Selection of species and varieties that are well suited to the site and to conditions on the farm:

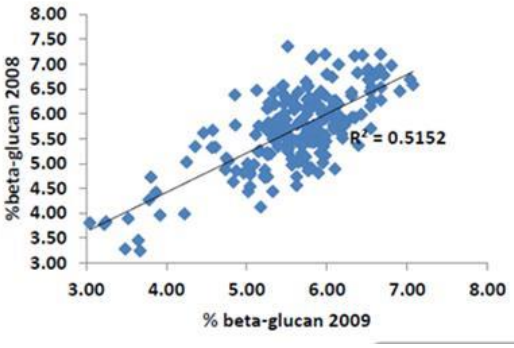
There is now global collaboration to map the oat genome and technology in this area is moving at increasing speed. Breeders are able to breed by phenotype rather than by the traditional genotypic breeding and quality traits such a high beta glucan, oil, and avenanthramide content are now a possibility.

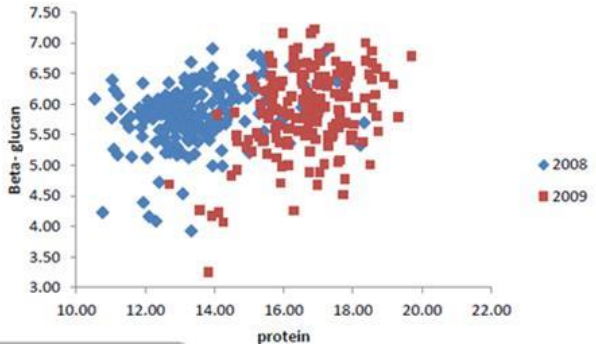
Spring oat mapping population: CDC-Solfi x HiFi

collaboration with Brian Rossnagel, Aeron Beatie Saskatoon

	2008	2009
CDC Sol-Fi	6.02	6.15
HiFi	6.18	n.d.



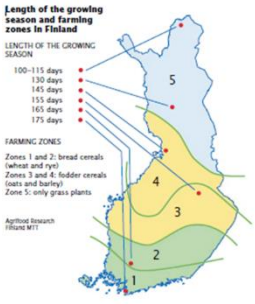




QUOATS Project: 2012

Life Cycle Assessment (LCA) undertaken in the UK Project Oatlink in accordance with ISO, 1997 for UK arable feed crops used in the poultry sector and for the UK porridge oat production chain found that oats have relatively less ecological impact compared to other arable feed crops.

2. Diversification of crops and cultural practies to enhance the biological and economic stability of the farm:



Agriculture is a key driver in maintaining the sustainability of rural populations in Northern Finland. The policy is to produce quality crops in a healthy environment at the lowest possible cost. Family farms are the backbone of Finnish agriculture, but the number of farms has decreased over the years to about 67,000, with today's farms being larger and more efficient.

Of the cereal species, oats, barley, wheat and rye grow well in Finland together with a number of specialised crops. Finnish farmers are showing growing interest in environmental issues, with over 90% of the farms having drawn up an environmental management plan which has helped to reduce water pollution from farming, and to protect biological diversity.

There is no commercial cultivation of genetically modified crops.

3. Management of the soil to enhance and protect soil quality:

This starts with 'knowing your soil' through soil sampling and ensuring there is minimum nutrient run-off to water courses. As oats are an excellent nutrient scavenger they are well suited as an environmentally sustainable crop.

4. Efficient and humane use of inputs:

Oats are an extremely efficient crop, and when compared to other cereals, utilise lesser quantities of the major nutrients, nitrogen, potash and phosphate as well as trace elements. As oats have good inherent disease resistance they require minimal use of herbicides and insecticides. Through our collaborators within our supply chain we ensure farmers are aware of the latest agricultural practices.