



# GLUTEN-FREE STORY OF TIRLÁN OATS



# WHAT IS GLUTEN?

**Gluten is defined as a protein fraction from wheat, rye, barley, or their crossbred varieties and derivatives thereof, to which some persons are intolerant.**

**Gluten is a protein found in the following types of cereal:**

- **Wheat**
- **Barley**
- **Rye**

**Gluten is also found in many processed foods manufactured using the above cereals:**

- **Pasta**
- **Cakes**
- **Breakfast Cereals**
- **Most breads**

## What about oats?

Oats are naturally gluten-free. However, not all oats are gluten-free due to contamination with other crops that contain gluten. When oats are grown or milled in the same place as wheat, barley, and rye, they become contaminated with gluten.

To ensure oats are gluten-free, the full supply chain must be controlled.

It is worth noting that a small number of people with coeliac disease may also react to a protein called avenin found in oats; therefore, gluten-free oats are not suitable for these people.



## What is gluten-free?

The term "gluten-free" is covered by EU legislation under Regulation (EU) 828/2014 for the labelling of gluten-free foods. Based on the Codex Alimentarius Standard for gluten-free, the law stipulates that only foods containing a maximum of 20 parts per million (ppm) gluten content or less can be labelled as 'gluten-free'. This applies to packaged foods and foods sold in restaurants and other catering establishments.



### **Gluten-free (FSAI, 2011)**

The statement 'gluten-free' may only be used in the labelling or advertising of a food sold to the final consumer which contains no more than 20 mg/kg (or parts per million, ppm) of gluten.

### **Very low gluten**

The statement 'very low gluten' may only be used where food consisting of or containing one or more ingredients made from wheat, rye, barley, oats or their crossbred varieties which have been specially processed to reduce the gluten content to no more than 100 mg/kg (ppm) of gluten in the food as sold to the final consumer.



### **Tirlán Gluten-Free Standard**

Tirlán Gluten-Free Oats have a gluten guarantee of <5ppm compared to the industry standard of <20ppm. This gluten-free standard is achieved through a strict closed-loop supply chain.

<5 PPM

# OUR GLUTEN-FREE & SUPPLY CHAIN PROMISE

Tirlán's gluten free integrity is attained due to the Tirlán developed closed-loop supply chain system called OatSecure™.

Our identity represents the protection that comes with each stage in our unique 14-step process. It is a safeguard that ensures both a gluten free seed and oat.

OatSecure™ encompasses seed development, land and grower selection, sowing, crop monitoring, harvesting, drying, storage and milling.

It was developed in conjunction with our selected supplier farmers who work to a strict code of practice.

- **Tirlán Agronomists select the fields where the oat crop is grown.**
- **Only the purest oat seeds are grown, and all seed used is traceable.**
- **Drills are inspected before sowing to avoid contamination.**
- **All fields are mapped and rigorously inspected throughout the growing season.**
- **Harvests are done with dedicated Tirlán-leased combine harvesters and transporting equipment to ensure no contamination risks.**
- **Sampling and testing at our grain intake are a verification of the agronomy inspections from seed selection to harvest.**

**OatSecure™ gives us maximum confidence in our gluten-free guarantee.**



## Approvals and Accreditations



# HEALTH DRIVERS OF GLUTEN-FREE DIETS

Though there is a trend toward people following 'free from' diets including gluten-free, the main health and nutrition driver for following a gluten-free diet is coeliac disease.

## What is coeliac disease? (WGO, 2007)

Coeliac Disease is an autoimmune condition in which the affected individual reacts abnormally to the ingestion of gluten.

If a person with coeliac disease eats gluten, their small intestine becomes damaged. This reduces their ability to absorb nutrients from food.

### Common nutrients of concern are:

- Folate
- Iron
- Calcium
- Vitamin D

## What are the symptoms of coeliac disease?

### Symptoms and signs of coeliac disease include:

- Diarrhoea
- Bloating
- Constipation
- Chronic Tiredness
- Anaemia
- Flatulence
- Nausea/Vomiting
- IBS

## What is the treatment?

The treatment of Coeliac disease is based on following a strict gluten-free diet. Some foods are naturally gluten-free. The "crossed grain" symbol is a nationally and internationally recognised symbol by those who need to follow a gluten-free diet. The symbol is a gluten-free product certification that represents safety and integrity. It demonstrates that this product and its ingredient have passed a rigorous process to ensure that it is certifiably gluten-free.



## The benefits of oats in a gluten-free diet

- Oat is a type of cereal grain that has been grown globally for centuries due to its rich nutritional composition.
- Oats are of benefit in any diet but particularly in a gluten-free diet as they can provide nutrients which may be difficult to get sufficient levels of.
- One of the main nutrients it contains, which can be lacking in a gluten-free diet is fibre. Oats are naturally high in fibre which is an extremely important nutrient for digestive and gut health. Oats also contain a specific fibre called beta-glucan.
- Research confirms an association between the consumption of oat and the regulation of blood sugar levels and a reduction in cholesterol blood levels. These health benefits are due to the presence of beta-glucan.
- Oat is a good protein source with a Protein Digestibility Calculated Amino Acid Score (PDCAAS) of 0.81\*.
- They contain vitamins and minerals including thiamine, phosphorus, magnesium, and zinc, in addition to bioactive components such as phytochemicals.
- Oats can also add variety to your gluten-free diet.

# ADVANTAGES OF TIRLÁN OAT-STANDING™ INGREDIENT SOLUTIONS



## They are the safest seed and grain solutions on the market

Our food safety process starts with our source of supply. We mill only pure grains, which are processed in our fully enclosed facility.



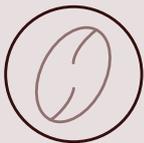
## They are sourced from sustainable, traceable supply chains

No detail is too small in our supply chain systems. We work continuously with our partners to develop and build robust, sustainable quality supply chains for all our plant-based ingredients.



## They are easy to incorporate into your products

Tirlán has innovated solutions to eliminate the classic problems of product formulation. For example, our Oat-Standing™ flour becomes virtually unnoticeable in beverages and other products. It solves the viscosity and particulate issues, tastes excellent, and delivers all the grain's inherent nutritional value.



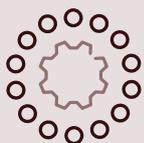
## They are minimally processed

All our Oat products are minimally handled, minimally processed, and milled in our state-of-the-art facility using purely mechanical means – without chemicals or solvents. We extract the full nutritional value of our grains and preserve that value with a heat treatment process, which maintains the full integrity of any ingredient that's exposed to it.



## They are GMO, chemical, gluten, and allergen-free

Our range of oat solutions is entirely allergen, GMO, chemical, and depending on the product, also gluten-free. After processing in our fully enclosed facility, they retain only their inherent goodness and nothing else.



## Our Gluten-Free Oat Processing Facility

Once the oats have passed through every step in the 14-step OatSecure™ supply chain process described below, they undergo processing at our new ultra-modern, state-of-the-art Buhler-equipped Oat Mill in Portlaoise Ireland. At one of the most hygienic and technologically advanced facilities of its kind in the world, the oats are milled following BRC, a standard recognized by the Global Food Safety Initiative. The oats are further rendered safe by a validated 4.6 log heat treatment process that eliminates pathogens and deactivates lipases to reduce oxidation and extend shelf life to 18 months.

For more information on the Tirlán gluten-free portfolio,  
please go to: [https://www.tirlaningredients.com/  
ingredients/grains-plant-based](https://www.tirlaningredients.com/ingredients/grains-plant-based)

## References

1. Food Safety Authority of Ireland, (2021); FSAI Guidance Note "Gluten-free" and "Very low gluten" declarations (Revision 2)
2. HSE, (2011); Available at: <https://www.hse.ie/eng/health/az/c/coeliac-disease/> (Accessed April 2021)
3. WGO, (2007); Available at: <https://www.worldgastroenterology.org/guidelines/global-guidelines/coeliac-disease> (Accessed April 2021)



### Get in Touch

To find out more about how Tirlán can support you  
in developing your solutions, please contact us directly.

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