We have
1001 reasons
to invest in sorghum

SORGHUM FOOD PROCESSING EVIDENCE THAT SORGHUM IS A STRATEGIC INGREDIENT FOR THE FOOD INDUSTRY

From breakfast to dinner, a huge variety of Sorghum food

We have 1001 reasons to invest in sorghum

SEEDS FROM EUROPE

4th European Sorghum Congress Budapest

October 8th - 9th 2025

We have 1001 reasons to invest in sorghum

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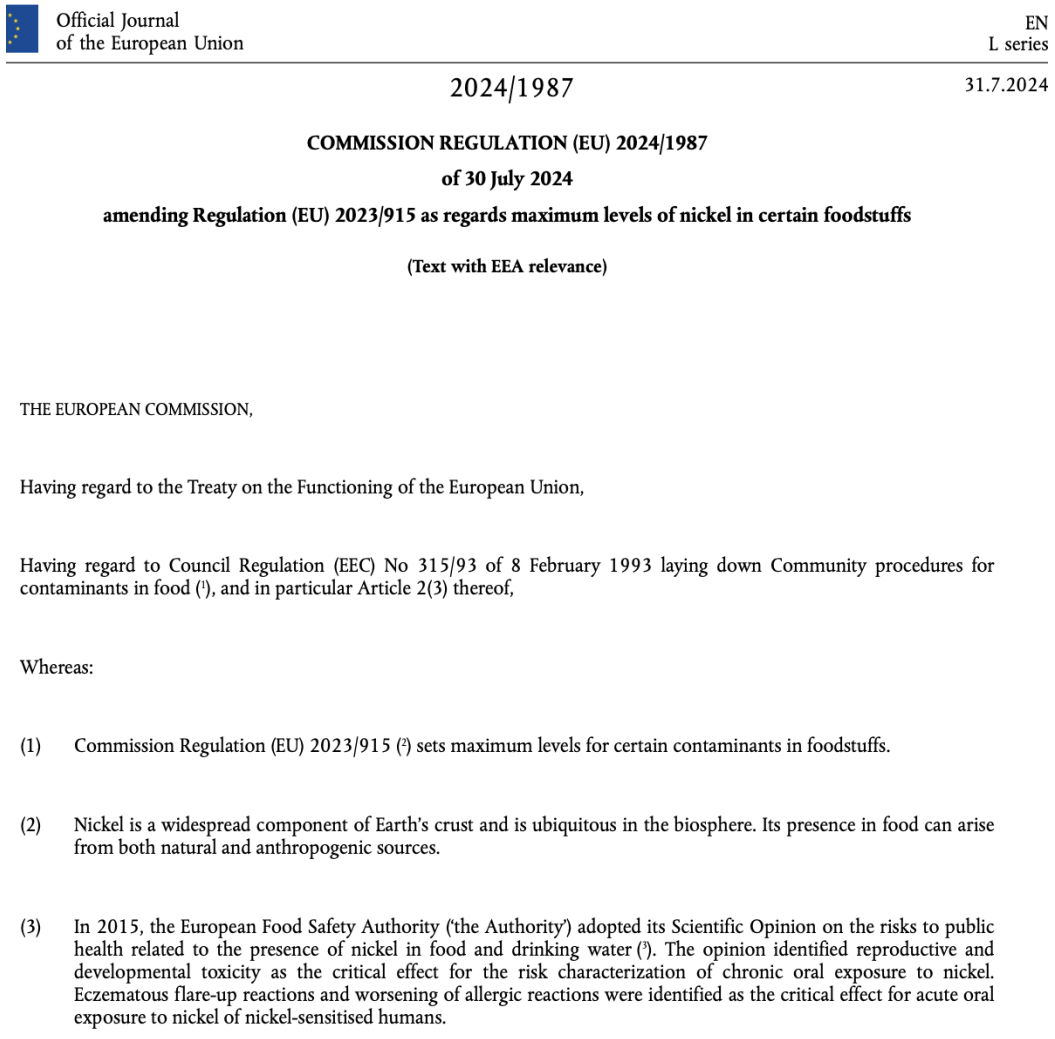
What we know

Sorghum plus

- **Gluten-free naturally** - unlike wheat, barley, rye, and spelt
- **Lower nickel content** compared to wheat, oats, and buckwheat (beneficial for nickel-sensitive individuals)
- **Higher protein quality** than corn and rice, with better amino acid profile

Medium Nichel content (EFSA) in 100g

Sorghum dec.	**1,7mcg**
Wholegrain rice	70mcg
Oat	270mcg
Millet	300mcg
Buckwheat	350mcg



Official Journal of the European Union

EN
L series

2024/1987

31.7.2024

COMMISSION REGULATION (EU) 2024/1987

of 30 July 2024

amending Regulation (EU) 2023/915 as regards maximum levels of nickel in certain foodstuffs

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Council Regulation (EEC) No 315/93 of 8 February 1993 laying down Community procedures for contaminants in food (1), and in particular Article 2(3) thereof,

Whereas:

(1) Commission Regulation (EU) 2023/915 (2) sets maximum levels for certain contaminants in foodstuffs.

(2) Nickel is a widespread component of Earth's crust and is ubiquitous in the biosphere. Its presence in food can arise from both natural and anthropogenic sources.

(3) In 2015, the European Food Safety Authority ('the Authority') adopted its Scientific Opinion on the risks to public health related to the presence of nickel in food and drinking water (3). The opinion identified reproductive and developmental toxicity as the critical effect for the risk characterization of chronic oral exposure to nickel. Eczematous flare-up reactions and worsening of allergic reactions were identified as the critical effect for acute oral exposure to nickel of nickel-sensitised humans.

EFSA on nickel content

EFSA's updated risk assessment led to EU Commission Regulation (EU) 2024/1987, establishing maximum levels (MLs) for nickel in various foods, effective July 1, 2025; cereals will be effective the 1° of July 2026 .

The same Regulament exstabilish a maximum nickel limit of **0.10 - 0.50 mg/kg (10-50mcg/100g) in infant and baby food formulas.**

CAMPAIN FINANCED WITH AID FROM THE EUROPEAN UNION

Why decorticated?

- **Higher starch content**: decortication removes components like non-starch polysaccharides, proteins, and lipids from the outer layers, concentrating the starch in the endosperm. This is beneficial for applications where a high starch content is desired.
- **Improved protein digestibility**: decortication can improve the bioavailability and digestibility of proteins, especially when the grain's organizational structure is broken down.
- **Stability in flavor and odor**: the process removes the pericarp, germ, and potential tannin-containing layers that can impart undesirable flavors and odors that develop during storage. We can improve the shelf life up to 8months.
- **Better functional properties**: increased starch concentration leads to better functional properties, such as *higher starch viscosity*, which is important for making certain foods like pasta, bread, babyfood

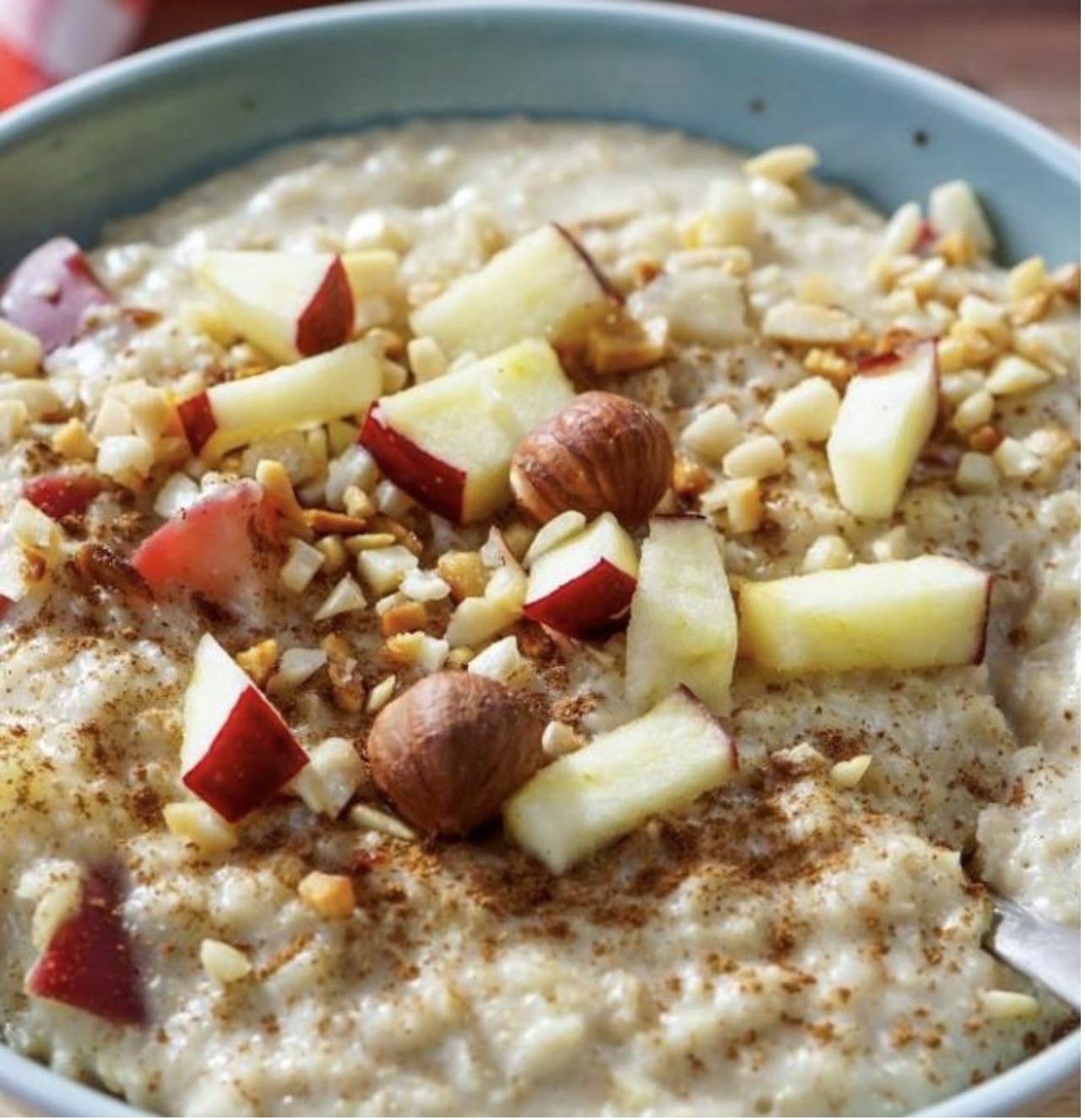
Why gelatinization?

• **Better digestibility**: Gelatinization breaks down sorghum's compact starch granules, making them more accessible to digestive enzymes and significantly improving nutrient absorption

• **Improved nutritional availability**: The process increases bioavailability reducing anti-nutritional factors, allowing better absorption of proteins, minerals, and vitamins.

• **Better functional properties**: Gelatinization transforms sorghum's texture from hard and gritty to soft and palatable, making it suitable for various food applications like porridges, baked goods, and beverages, while also *improving water-binding capacity and viscosity*.

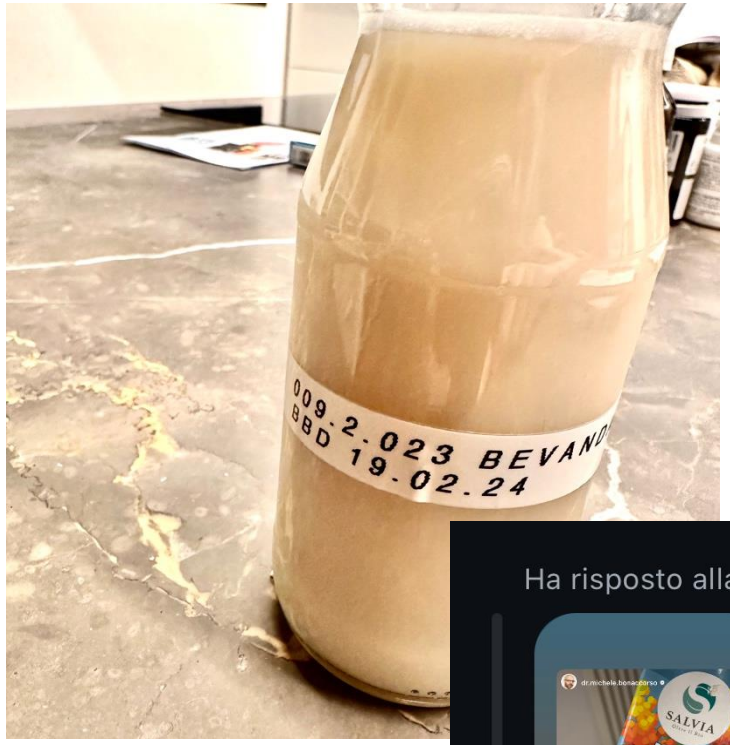
• **Industrial applications**: Properly gelatinized sorghum starch is crucial for gluten-free food products, as it provides the necessary binding and thickening properties.

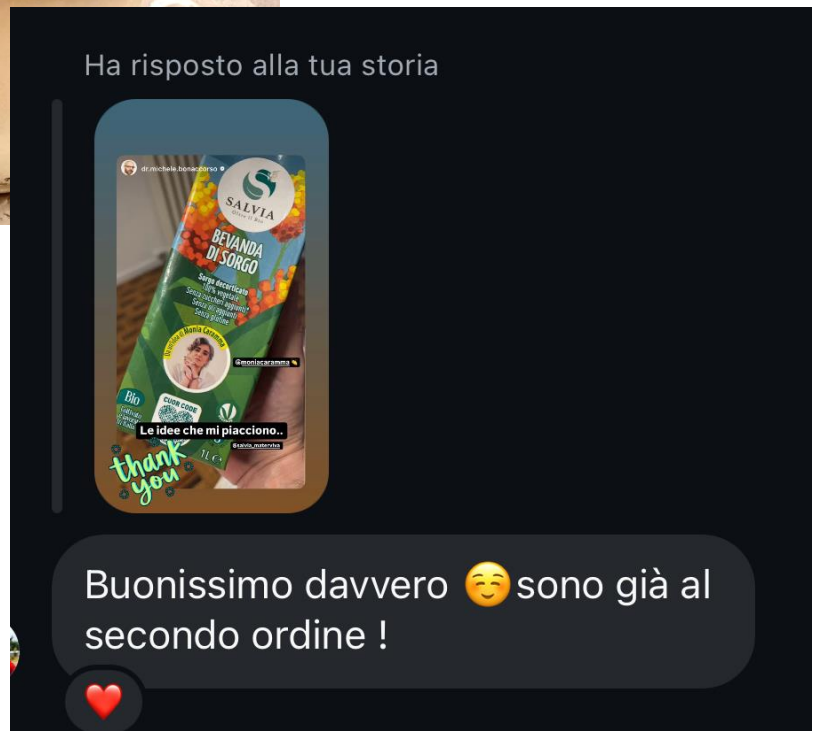


Flakes

Alternative to oat

- The flaking process is part of gelatinisation.
- Sorghum flakes are more fragile than oat flakes and cook in 2–3 minutes.

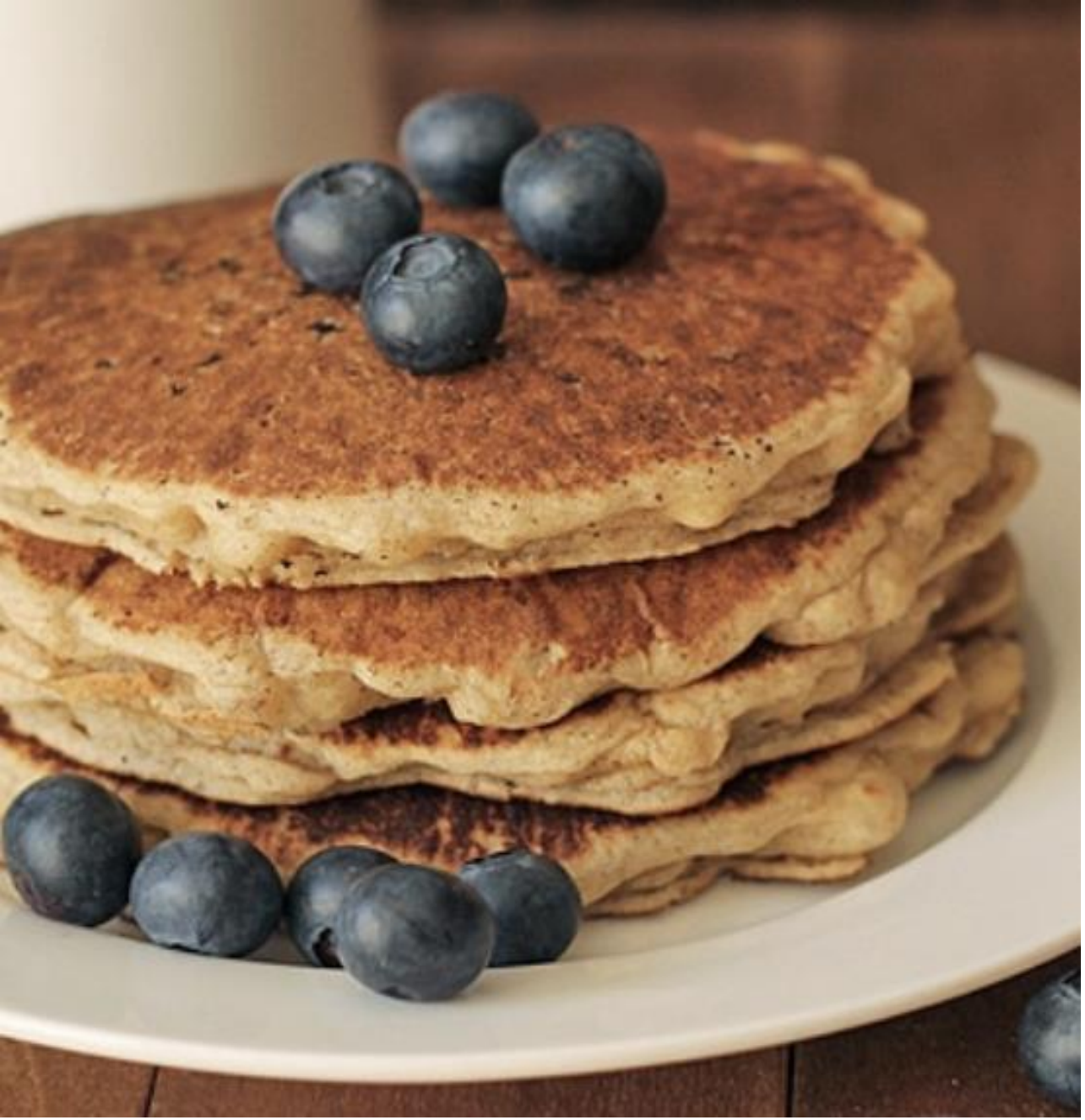




Vegetabile drink

Vegetable milk

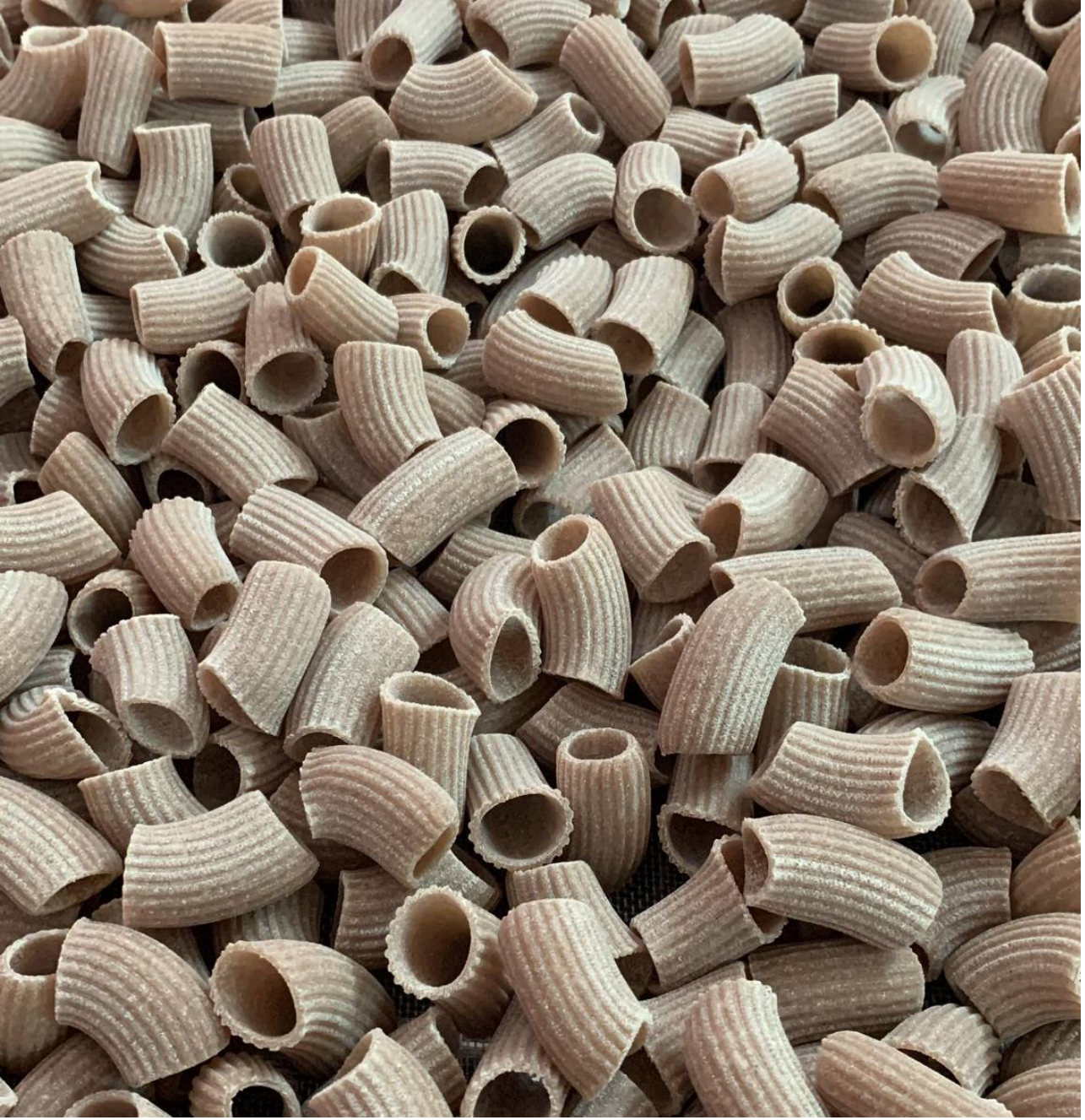
- 15% less sugar than oat drink
- 40% less sugar than rice drink
- Superior claims: up to 15% cereal can be used
- No need to add sunflower oil



Pancake/waffle

Clean ingredient list

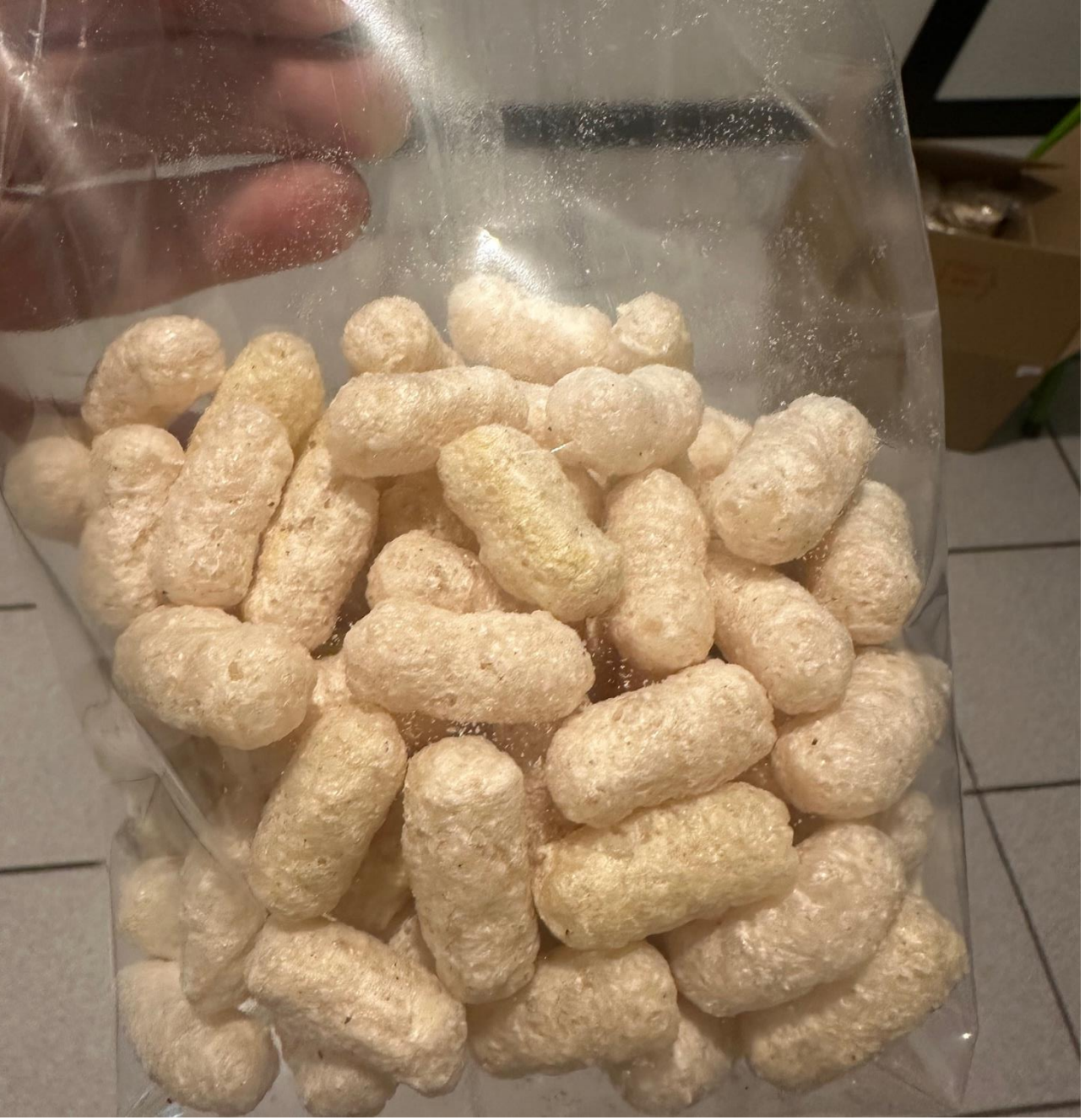
It is possible to create mixes that do not require high levels of starch, thickeners or emulsifiers. Using hulled sorghum stabilises the product.



Pasta

No additves

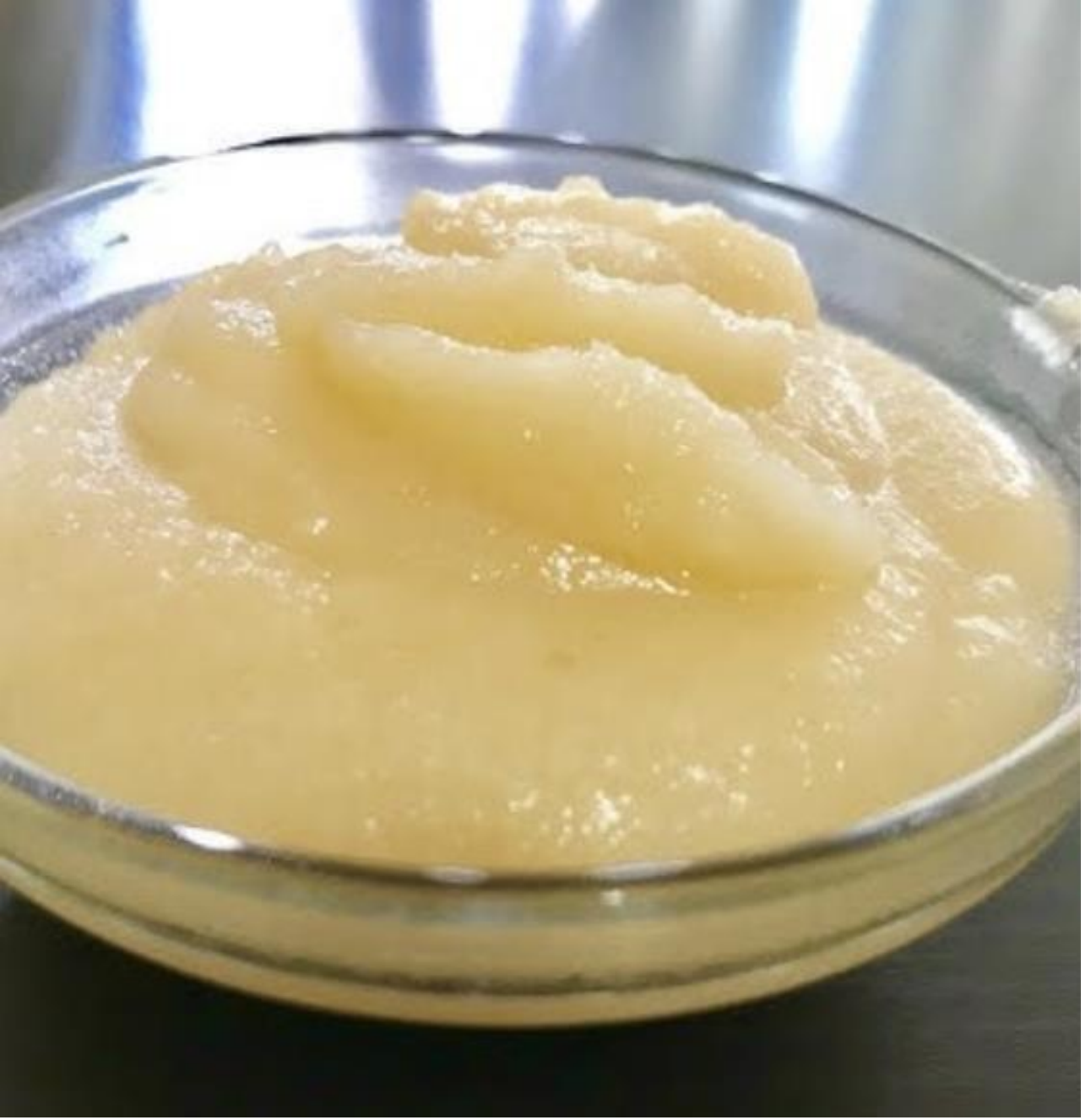
By using pregelatinised hulled sorghum, it is possible to obtain 100% sorghum dry pasta without the use of emulsifiers and additives.
Shelf life: 3 years.



Snacks

Just sorghum

Unlike the traditional extruded corn production process, which involves the addition of oil and emulsifiers, hulled sorghum allows for a clean label.



Infant formulas

Just sorghum

The process of making a 100% sorghum instant cream involves adjusting key parameters:

- sorghum variety (starch and protein content)
- degree of dehulling
- degree of gelatinisation
- grainulometry

We have 1001 reasons to invest in sorghum

Sorghum is easy, if you know it.

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Sorghum ID
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