



Manufacturer, Demand star-sorghum.

www.sorghum-id.com

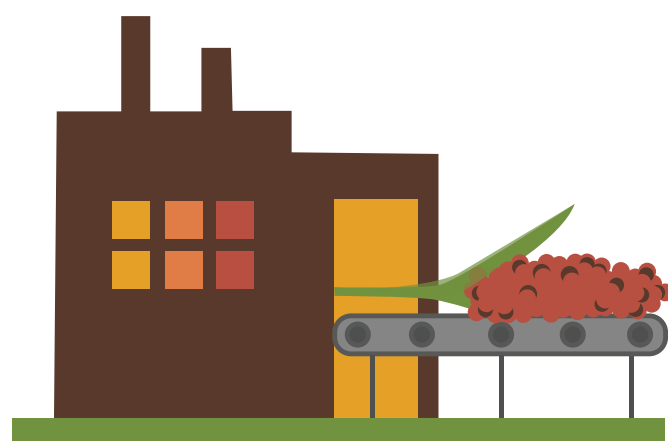
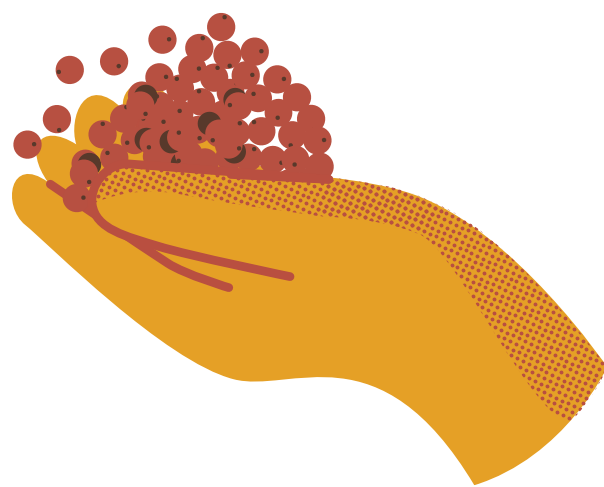
Star-sorghum

A star because it offers many uses.

The European (EU and non-EU) catalogue offers a broad and diversified selection, in grain and silage, for all existing outlets: more than 300 varieties are registered.

Animal feed.

Star-sorghum is an appetising cereal for animals : silage for suckler or dairy herds, tannin-free primary material for monogastrics...



Industry.

Star-sorghum is also destined for industrial uses: biofuels, methanisation, bio-materials...

Human food.

Star-sorghum is on its way to conquer European plates and glasses. Semolina, flour (cakes, cookies, pizzas, pasta, bread...), confectionery, syrups, beer, alcohol, pop-sorghum...

There are endless ways to use sorghum, which in addition is also adapted for people with gluten-free diets.



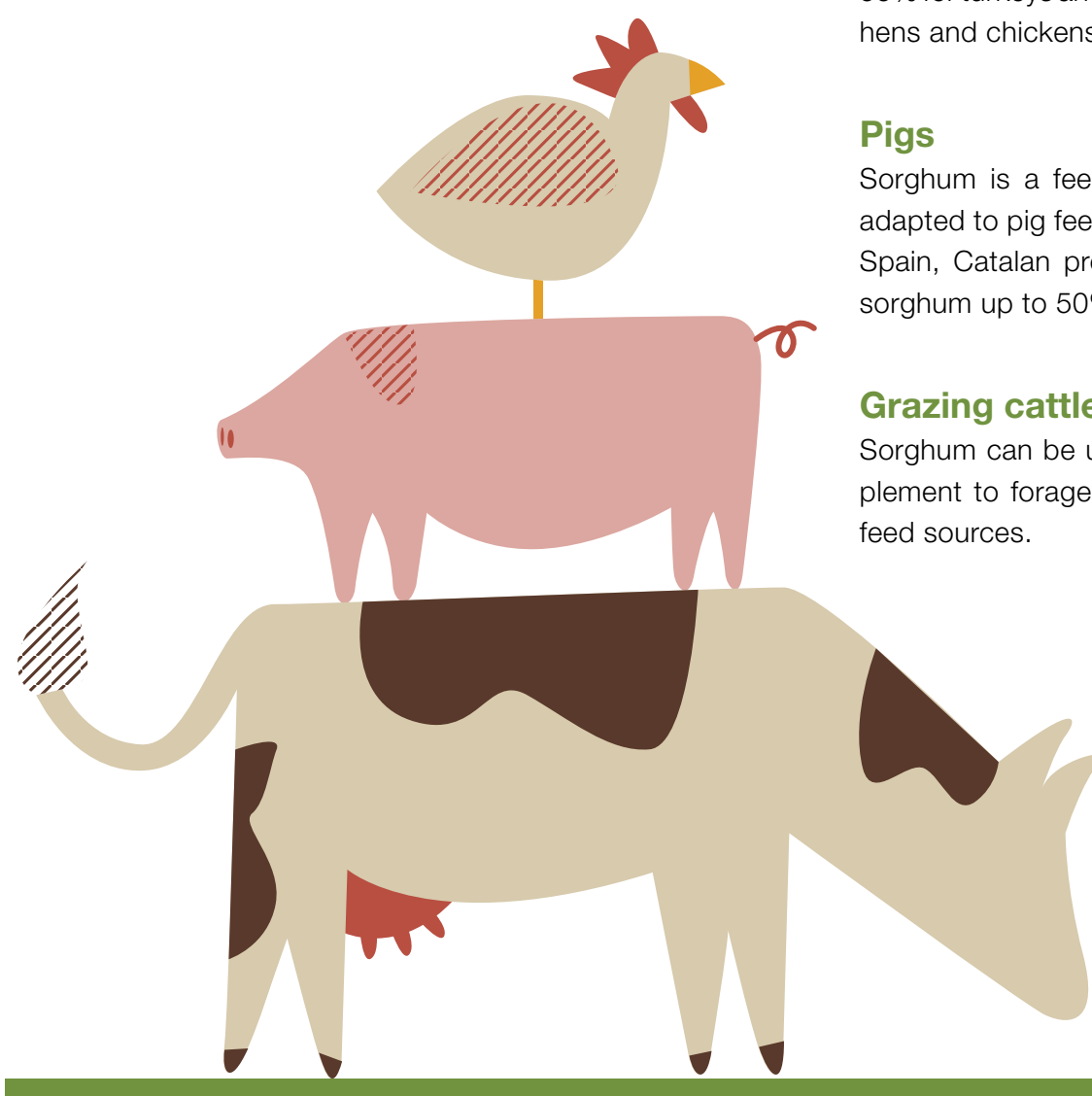
Star-sorghum

A star because it is tannin-free.

A big thank you to the European seed breeders who, for thirty years, have provided tannin-free sorghum. Why? Because the presence of tannins in animal feed is a significant anti-nutritional factor with monogastrics.

Indeed, it has been proven that the presence of 1% of tannins reduces by 7% the energy value of sorghum in pigs and 11% in poultry.

On this basis, France and the European Union considered that the criterion „Tannin content ≤ 0.3 “ was essential to register a new variety. This threshold can be equated with „tannin-free“ because it is so low that it has no impact on the quality of feed. This is one of the reasons – but not the only one – that European sorghum is a star.



Star-sorghum

A star, because it comes from a rigorous selection.

European genetics have every reason to be proud.

+1%/yr* since 1990. Or the increase in yield generated by early- and semi-early hybrid genetics produced in Europe.

Over the past 30 years, European seed breeders have worked hard to increase the yields of sorghum in Europe. In addition to their work,

an ambitious promotion campaign has been launched, supported by the EU. As a result: an increasing number of farmers is growing sorghum, and acreages are increasing (+ 5 to 10% in 2019, or + 25,000 ha). This is excellent news to guarantee the safety of sorghum supply!

**France is one example, source: Arvalis 2015*



THE 8 PILLARS OF EUROPEAN SELECTION.

- 1 Yield and stability
- 2 Early growth, as well as tolerance of low temperature during emergence and flowering
- 3 Drought tolerance
- 4 Lodging resistance, as well as its "stay green" character
- 5 Disease resistance
- 6 Predator resistance
- 7 Grain quality: very low tannin content, grain colour and texture, starch content, grain health quality, etc.
- 8 Forage quality: digestibility and food value, BmR character, sugar content, etc.

Star-sorghum

A star, because of its top-quality seeds.

European seed production has to meet extremely rigorous standards.

Minimum germination capacity:
80% pure seeds
(90% average in European Union)

Maximum humidity: 14% of weight

Minimum specific purity: 98% of weight
(99% average in European Union)

Maximum content in number of seeds from other species: 0

These very rigorous minimum standards also apply to base and pre-base seeds.

ANIMALS ENDORSE STAR-SORGHUM

Poultry

The average energy value amounts to 3,730 kcal/kg MS, with variable quantities incorporated into the ration up to 55% for turkeys and up to 70% for laying hens and chickens for fattening.

Pigs

Sorghum is a feed material very well adapted to pig feed. As an example, in Spain, Catalan producers incorporate sorghum up to 50% in pig diets.

Grazing cattle

Sorghum can be used as energy supplement to forage next to protein-rich feed sources.