

The Oat Supply Chain

Mycotoxin Forum: Thematic Session

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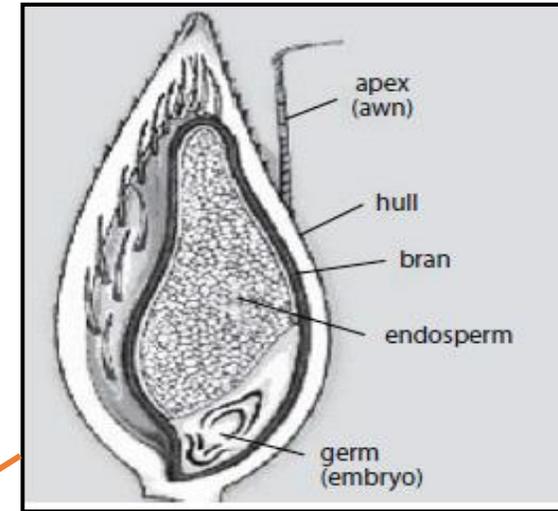
About CEEREAL

- CEEREAL is the European trade association representing producers of breakfast cereals and oat milling products
- CEEREAL has an **Oat Millers Committee (OMC)**, whose members are companies that **operate a complete oat mill**, from the husked oat to the finished food or food ingredient
- Nutrition and food safety are priority issues for CEEREAL. CEEREAL is participating in MyToolBox and MycoKey.

About CEEREAL

- CEEREAL counts on a network of **national associations** (Finland, France, Germany, Ireland, Italy, Portugal, Spain, United Kingdom)
- **Company members** (Brüggen, Cereal Partners Worldwide, Emco, Grainmore, Harries-Mühle, Jordans Dorset Ryvita, Kellogg, Lantmännen, Maselis, Unilever Israel)

Grain structure



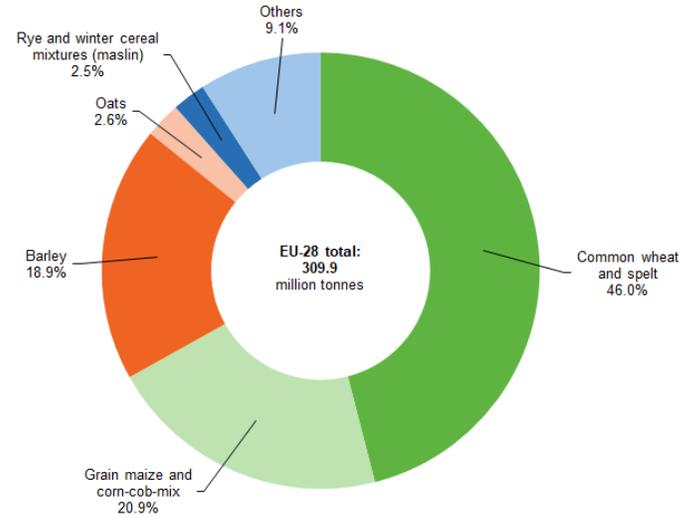
➔ The hull is about 25 - 35 % of the raw oat

ALL oats must be de-hulled before human food use.

Naked oats are not used for milling purposes

Oat production

Share of main cereals, EU-28, 2017
(% of EU-28 total cereals production)



Note: 'Total cereals' includes cereals for the production of grain (including seed). 'Others' includes rice, triticale, sorghum and buckwheat, millet, canary seed, etc.)
Source: Eurostat (online data code: apro_cpnh1)

eurostat 

- Oats are a minor crop
- Oat growing campaigns are needed

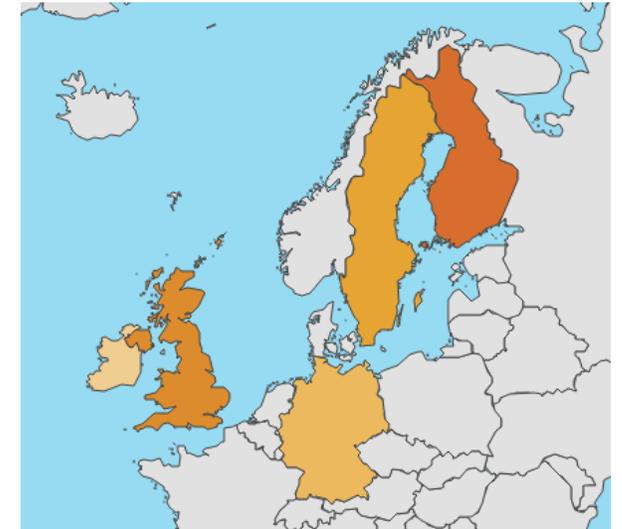


Oat production

EU-27	2019/2020f	2020/2021f
Beginning stocks	0,1	0,3
Gross production	6,9	7,6
Usable production	6,8	7,5
Imports	0,1	0,1
Availabilities	7,0	7,9
Total domestic uses	6,4	6,5
- Human	1,0	1,0
- Seed	0,4	0,4
- Industrial	0,1	0,1
- Animal feed	5,0	5,1
Losses (excl on-farm)	0,0	0,0
Exports	0,2	0,2
Total uses	6,7	6,8
End stocks	0,3	1,1

Main producers of oats (with husk) in million t for milling purposes in regular years

- Finland ~ 1,2
- Sweden ~ 0,7
- Germany ~ 0,6
- (UK ~ 1,1)



https://ec.europa.eu/info/files/eu-balance-sheets-and-production-details-member-state_nl&usg

Oat production

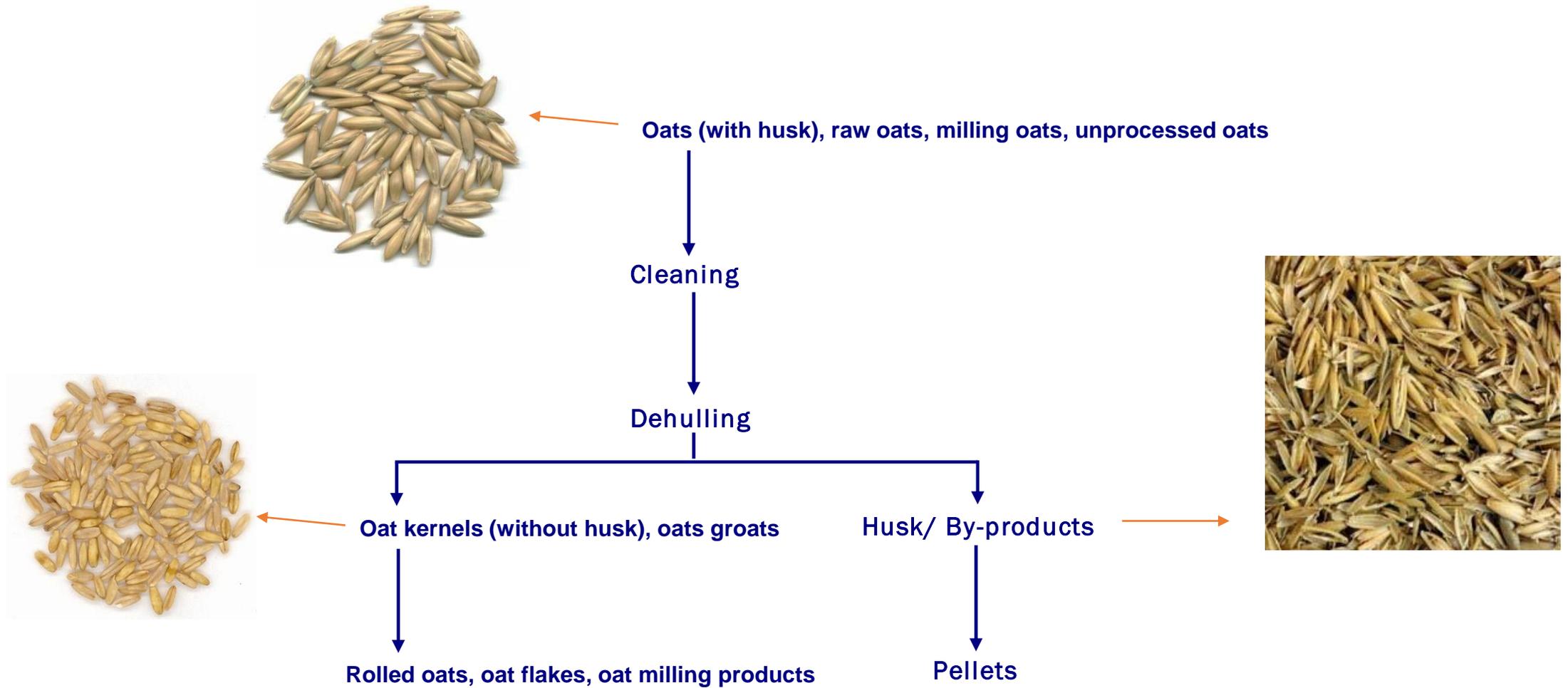
- Sourcing of non-EU oats is not economically viable due to the significant import tariff.

This could have a negative impact on the availability or affordability of oats to the detriment of the diet of the European population.

Oat varieties

Country	Main varieties	Others	Remarks	Post harvest treatment
Ireland	Husky, Isabel	+ 4	Spring varieties used for winter oats	No screening on farm level, drying by merchants,
UK	Mascani	+ 14	Spring and winter oats	England: Partly winter oats, partly drying on fields Scotland: spring oats
Sweden	Galant, Symphony	+ 17	Spring oats	Drying and aspiration on farm level or at elevators
Finland	Niklas	+ 61	Spring oats	Drying and aspiration on farm level

Oat processing



Oat milling products

Rolled oats, Oat flakes



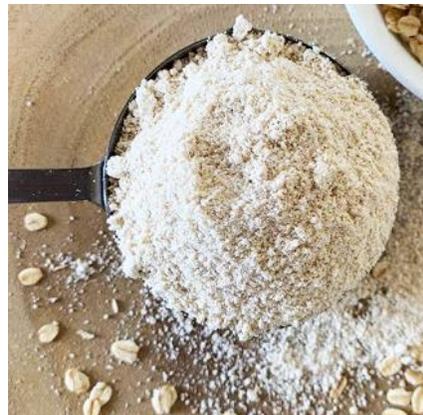
Steel cut oat grain



Instant oats



Oat flour



Oat bran

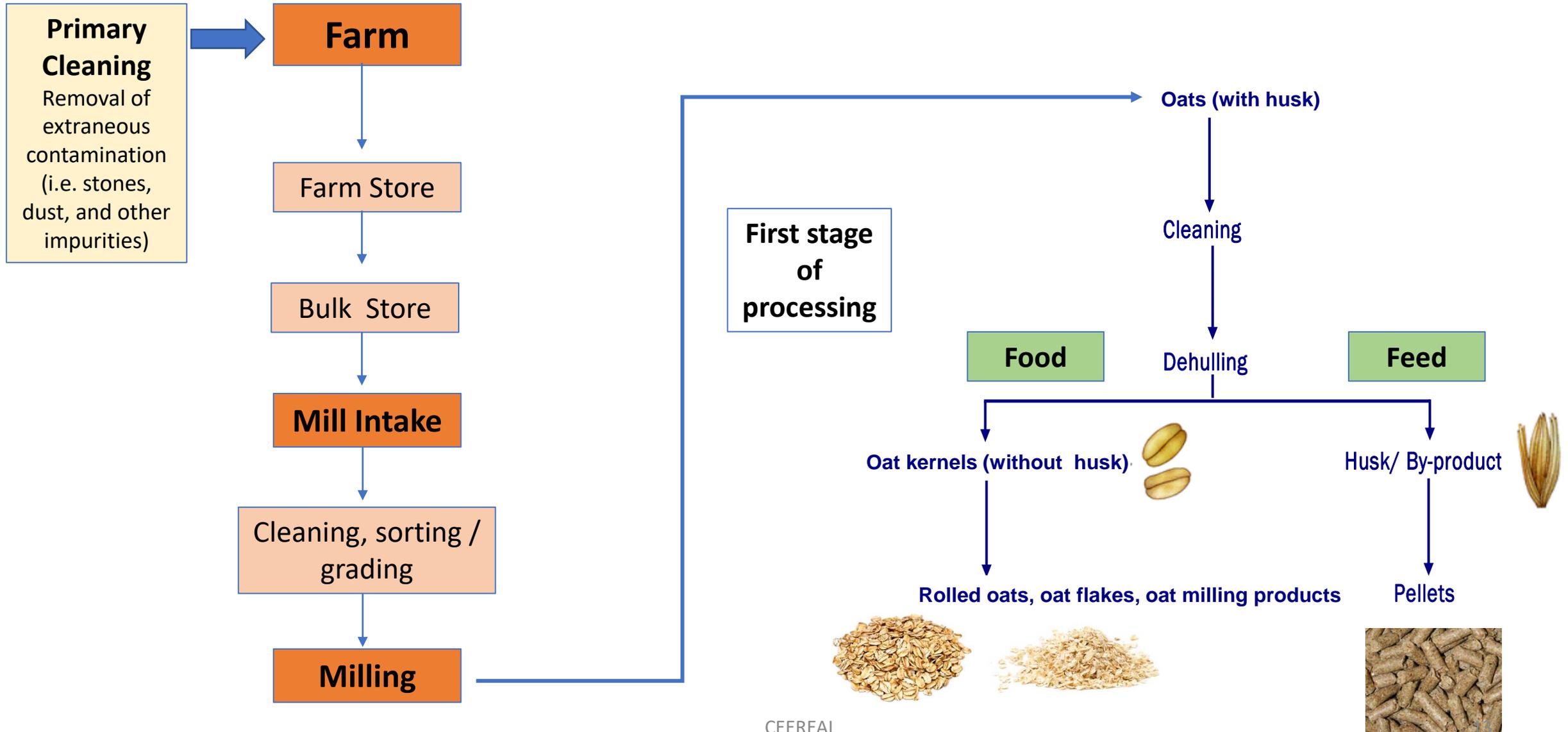


Quality criteria for milling oats

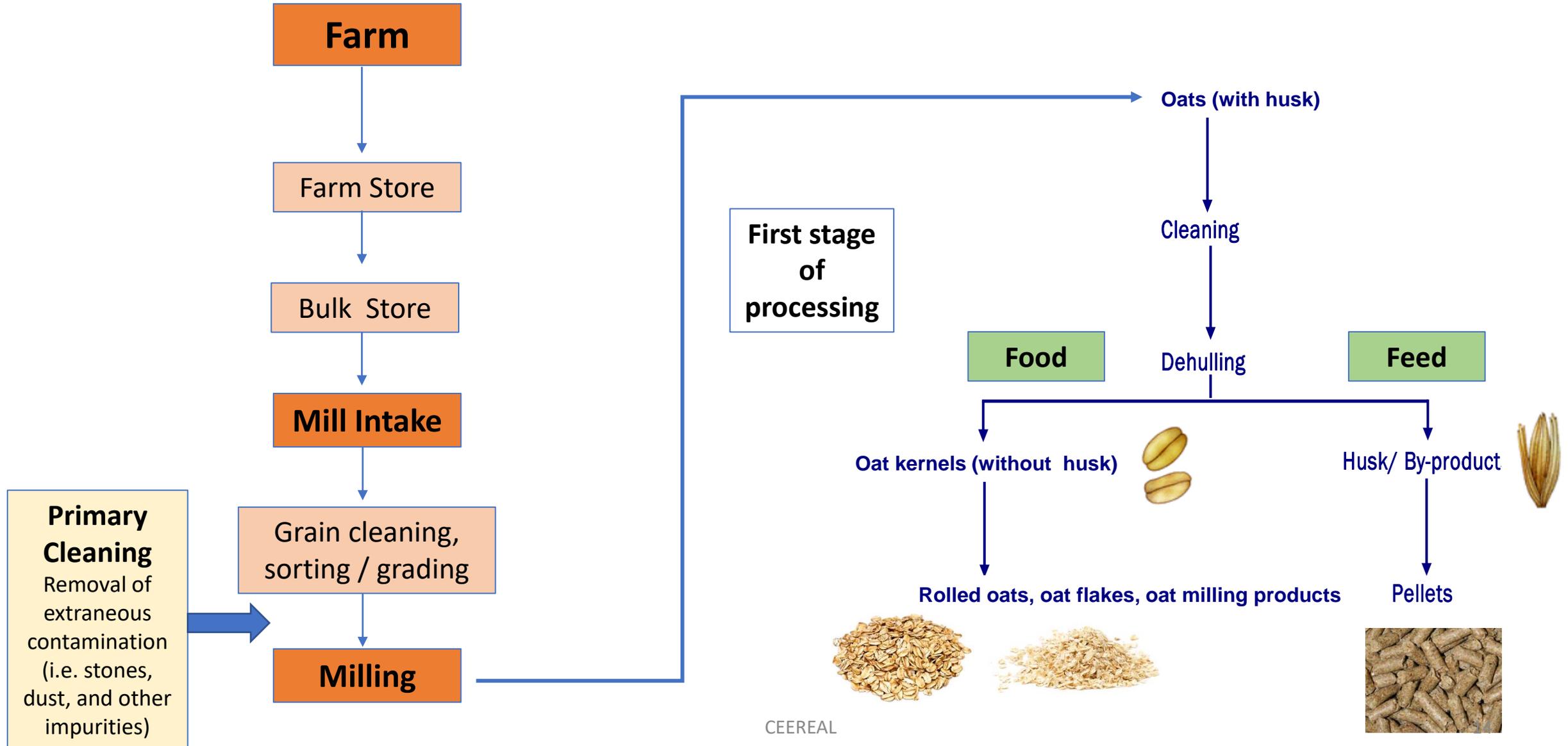
Parameter	Value
Appearance	No discoloured, weather-stained grain or unsound dark groats with damaged germs
Flavour	Sound, not musty and sour
Moisture	≤ 15%
Test weight	≥ 54 kg/hl
Husk content	≤ 26%
Size < 2 mm	≤ 10%

Ganßmann, 1995; Schönberger and Kropf, 2000; Zechner, 2001

Non-Integrated milling



Integrated milling



Health benefits of oats

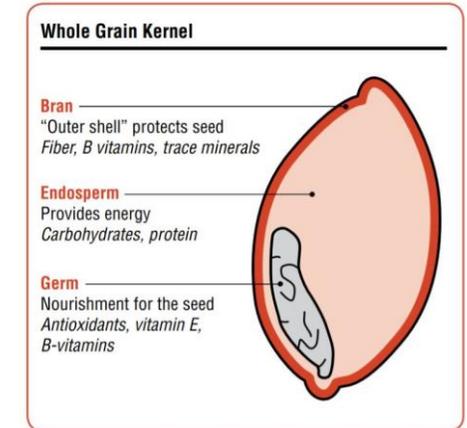
- Fiber
 - Beta – glucan
- Essential amino acids
 - Isoleucine, leucine, valine, tryptophan, phenylalanine and threonine
- Unsaturated fatty acids
 - Oleic acid and linoleic acid
- Vitamins B1 and E
- Minerals Ca, Fe, P, Mg, Zn
- Avenanthramide

EFSA authorised health claims related to Beta-glucans from oats:

- contributes to the maintenance of normal blood cholesterol levels
- contributes to the reduction of the blood glucose rise after that meal (*i.e. reduction of post-prandial glycaemic responses*)
- has been shown to lower/reduce blood cholesterol. High cholesterol is a risk factor in the development of coronary heart disease.

Health benefits of oats

- Oats are a source of non-animal protein that is affordable and sustainable. There is growing evidence that replacing animal proteins with more plant-based proteins can have positive effects on both health and the environment.
- The promotion, affordability and availability of oats should become an important part of EU and global strategy to improve population dietary patterns and prevent non-communicable diseases (NCDs).
- The role of healthy foods like oats, as a dietary intervention for achieving global disease reduction targets, is balanced against any decisions that may target the accessibility or affordability of this unique whole grain. We are at a critical time, where responsibility must be taken by all stakeholders and influencers, to make the healthy choice accessible, available, affordable to all.



Thank you

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