InterFeed

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WBP

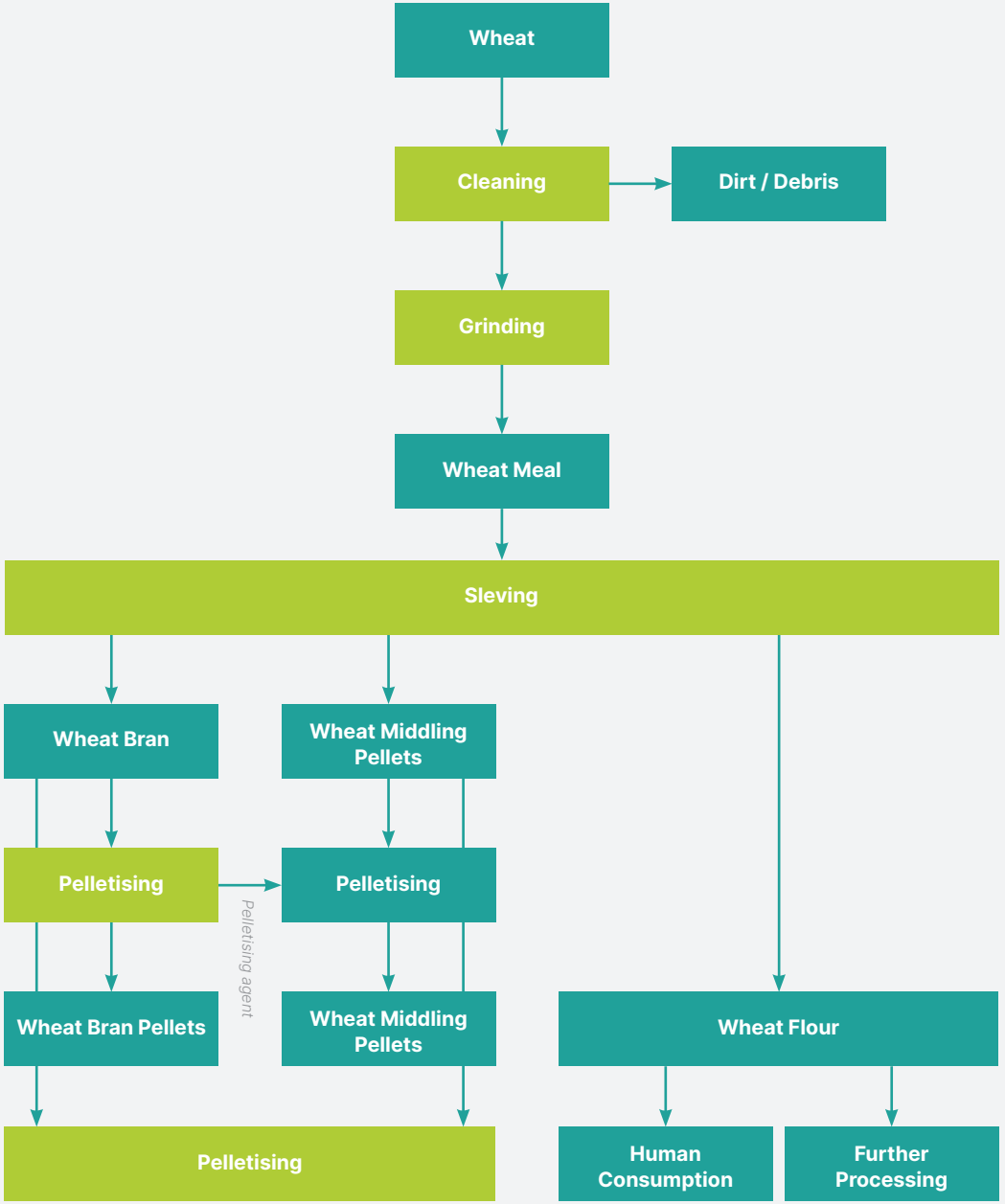
Module: Wheat Bran Pellets
HS Code: 1103 2060
Version: January 2021

02 PRINCIPLE PROCESS

A typical processing line from wheat to flour and its by-products, is visualized on the right side.

At the beginning of the process, the grain is cleaned thoroughly to remove dirt and other large debris, after which it's being grinded and different aspects of the product (e.g. Flour, Bran) are being separated by a sieving process.

Whereas flour and meal fractions of the product are separated and stored as such, part of the by-products, such as the Bran receives an additional treatment, by means of which so-called pelletising agents are added to the bran, in order to form the pellets that are suitable to be used as a feed material while maintaining proper product handling characteristics.



03 APPLICATION

Wheat Bran pellets (WBP) are predominantly used as a component for **direct feeding** in ruminant feed diets or included as an **ingredient in compound feed.** Due to its well-balanced palette of intrinsic nutrition, consisting of proteins, minerals, fibre and starch, Wheat Bran Pellets are considered **a vital staple in many ruminant diets**. The combination of protein and fibre in the product significantly reduces the risk on rumen acidification, whereas protein intake is realized. Maximum recommended inclusion rates range from abt. 10 percent for calves to 20 percent in dairy cow rations and 25 percent in beef cattle. Inclusion in diets suitable for lambs and ewes are generally comparable, with a maximum recommended inclusion of 5 and 20 percent, respectively.

As for ruminants, WBP is very much suitable in monogastric rations. The overall loss in net energy utilisation due to the relatively high fibre, is neglected in pig- and sow diets due to the **strongly increased consumption rate**, when feeding Wheat Bran Pellets. Maximum inclusion rates for the product range from 20 to 30 percent for pig- and sow diets.

Although not a very common choice, inclusion of WBP in poultry diets is very efficient. Providing a solid basis of protein, minerals and energy, poultry fed with pelletised Wheat Bran proves to have significantly **positive effects on osmoregulation, carcass fat reduction and methionine retention.**

Besides harboring a relatively high protein level of 15 – 19 percent, the main energy contributor of the product is starch, which is effectively available at rates around 20 percent, making the product **a highly valued source of energy**, reaching metabolisable energy levels between 16,00 to 18,90 MJ/kg, in different applications.

Feed products with a basis of Wheat bran pellets are **high in fibre and energy.** Therefore, they are **primarily used** in feeding ruminants (dairy cows, beef cattle, sheep), but can also be fed to non-ruminants.

04 NUTRITIONAL VALUE

Wheat Bran Pellets have the following specific characteristics:

- Very broad and balanced nutritional profile
- High mineral contents
- High energy values
- Less risk on rumen acidification compared to feeding of other protein sources
- Significantly positive impact on feed consumption rate in pigs and sows
- Positive influence on osmoregulation, carcass fat reduction and methionine retention in poultry.

Altogether in ruminant diets, WBP is hard to ignore as a key component. At the same time, the product's unique characteristics prove to be worth considering for monogastric diets similarly. Despite the broadly applicable spectrum on the nutritional side of the product, of which indicative values are displayed on the right side, the trading specifications, based on which Wheat Bran Pellets are contracted are generally classified in line with below:

- **Moisture content** **max. 15,0%**
- **Diameter size** **6 - 10mm**
- **Protein** **min. 13,0%**
- **Fibre** **max. 11,0%**

Wheat bran pellets		
Generic Analysis		
Dry Matter	87,00	%
Crude Ash	5,60	%
Crude Protein	17,50	%
Crude Fat	4,00	%
Crude Fibre	9,00	%
Starch	19,80	%
Sugars	7,20	%
Calcium	1,40	g/kg
Magnesium	4,50	g/kg
Phosphorums	11,10	g/kg
Potassium	13,70	g/kg
Sodium	0,10	g/kg
Iron	1,55	g/kg
Amino Acids (in % of protein)		
Alanine	4,60	%
Arginine	6,80	%
Aspartic Acid	7,00	%
Cystine	2,10	%
Glutamic Acid	19,00	%
Glycine	5,10	%
Histidine	2,70	%
Isoleucine	3,20	%
Leucine	6,00	%
Lysine	4,00	%
Methionine	1,50	%
Phenylanine	3,90	%
Proline	6,30	%
Serine	4,30	%
Threonine	3,20	%
Tryptophan	1,40	%
Tyrosine	2,70	%
Valine	4,60	%