

Premium Flour - For ultimate return

IAOM Capetown



Agenda

- 1 The market and its differing requirements
- 2 The parameters within the Milling process
- 3 The solutions for the Cleaning Section
- 4 The solutions for the Grinding Section
- 5 The solutions for the Finished Products Handling
- 6 The solutions for in Maize Milling

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Flour – More than a commodity, a valuable base for nutrition

- Understanding the market needs
 - Interpret the required properties
 - Selection of the appropriate raw materials
 - Apply the ultimate technology
- ➔ will lead to ultimate return !**



The Flour Market – The disparities to be considered

Production of consumer goods for the ...
staple food market
individualised market

Usage of flour in..

the **industrial** production



the **handmade** production



Flour Production – Mills as food manufacturing plant



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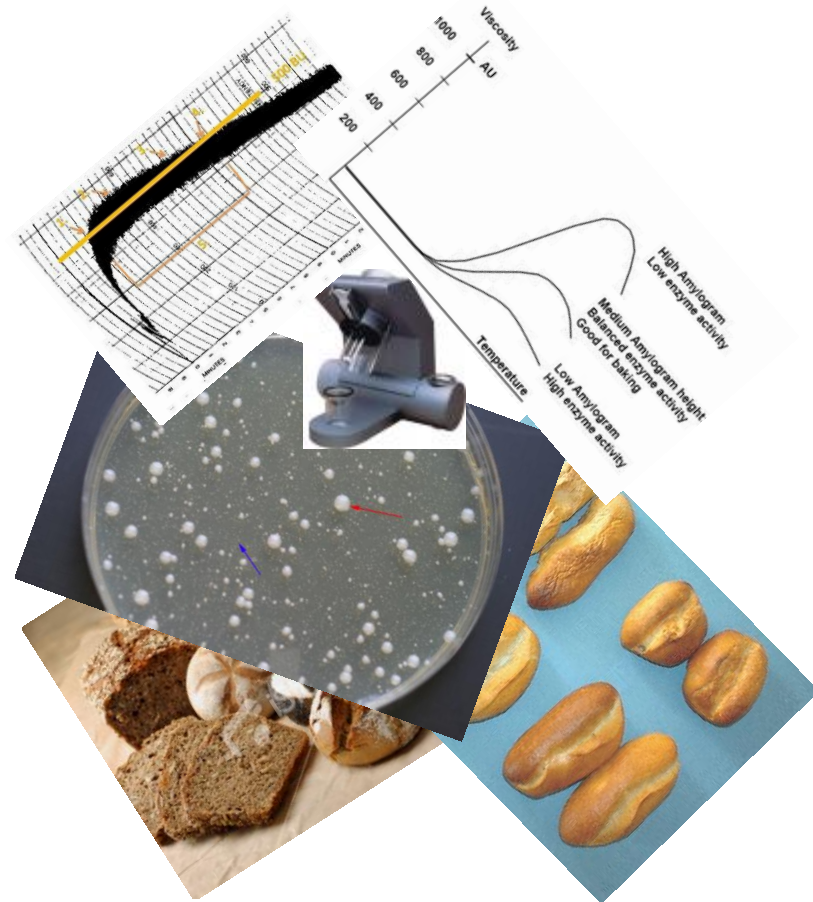
The parameters in the Milling Process – The leverages

Beside of choosing the Raw Material according:

- Protein content
- Gluten quality
- Rheological properties
- Colour
- Enzymatic characteristics

The miller has the “adjusting knobs” to influence:

- Hygienic standards
- Particle size
- Particle distribution
- Starch damage
- Gluten oxidation
- Flour composition (streams)
- Flour temperature

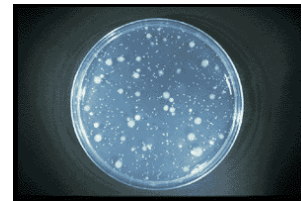
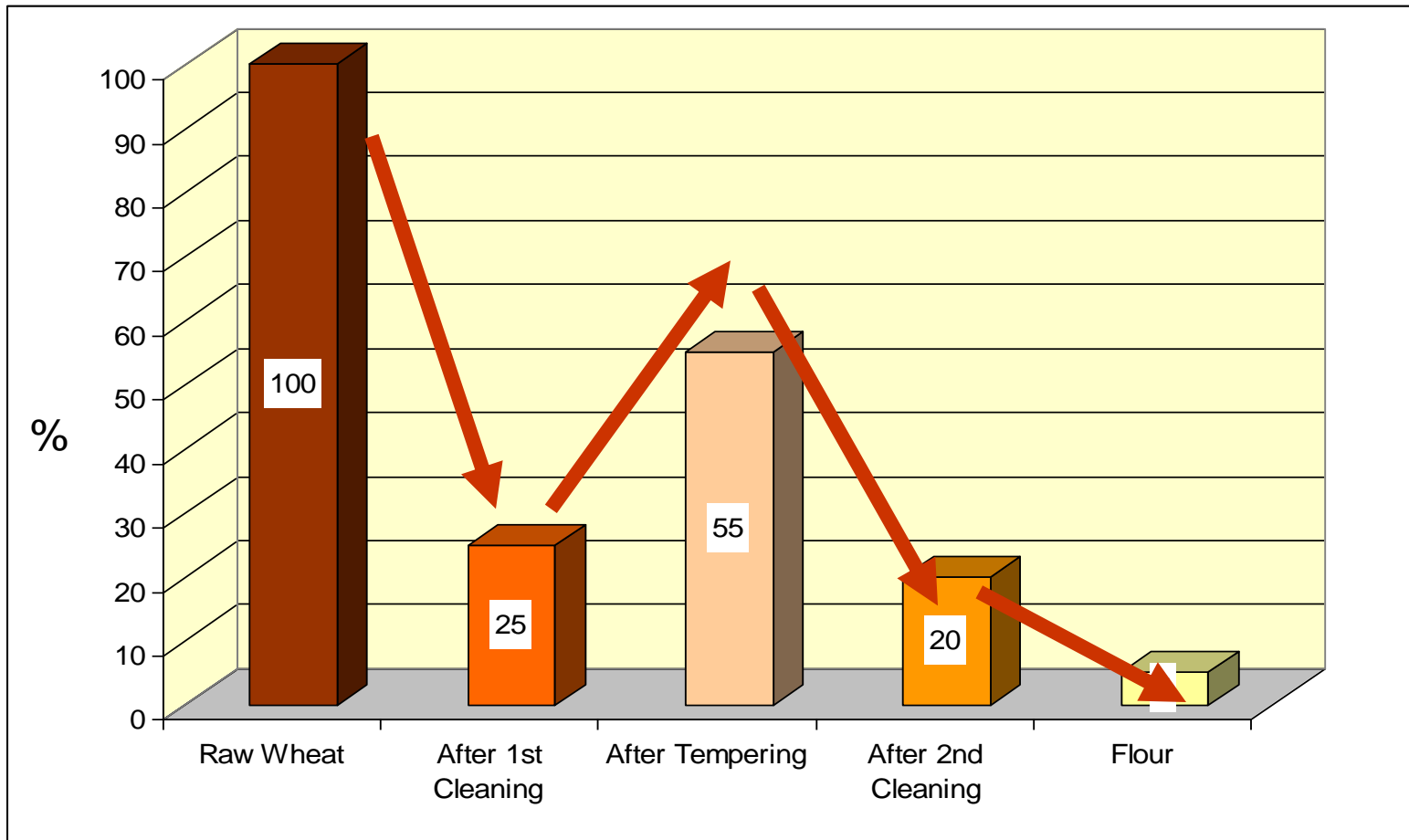


➔ **Advanced technology for Taylormade Finished Products**

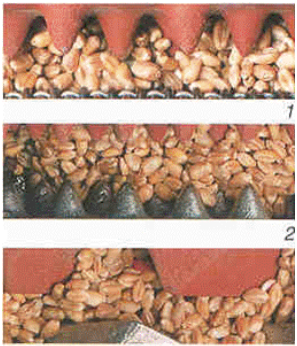
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Changing markets – Increasing demand for pure flours



The demand for clean food – It starts in wheat cleaning

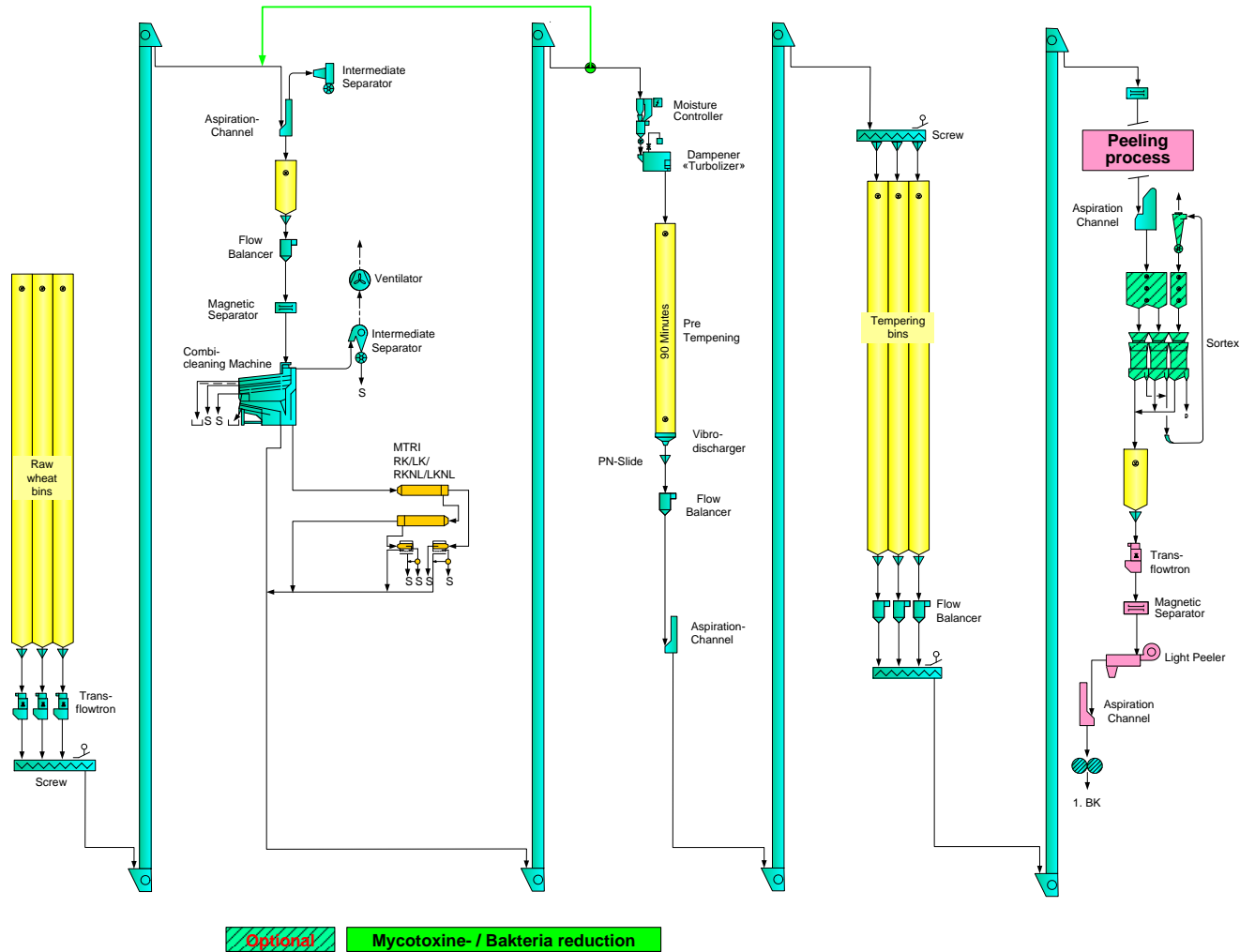


Contaminants and Countermeasures

- Superficial load:
➔ to be removed from the surface
- Contaminated outer layers
➔ to be mechanically eliminated
- Impurities, seeds and discoloured kernels
➔ to be detected optically and removed



The demand for clean food – Example Premium - Cleaning



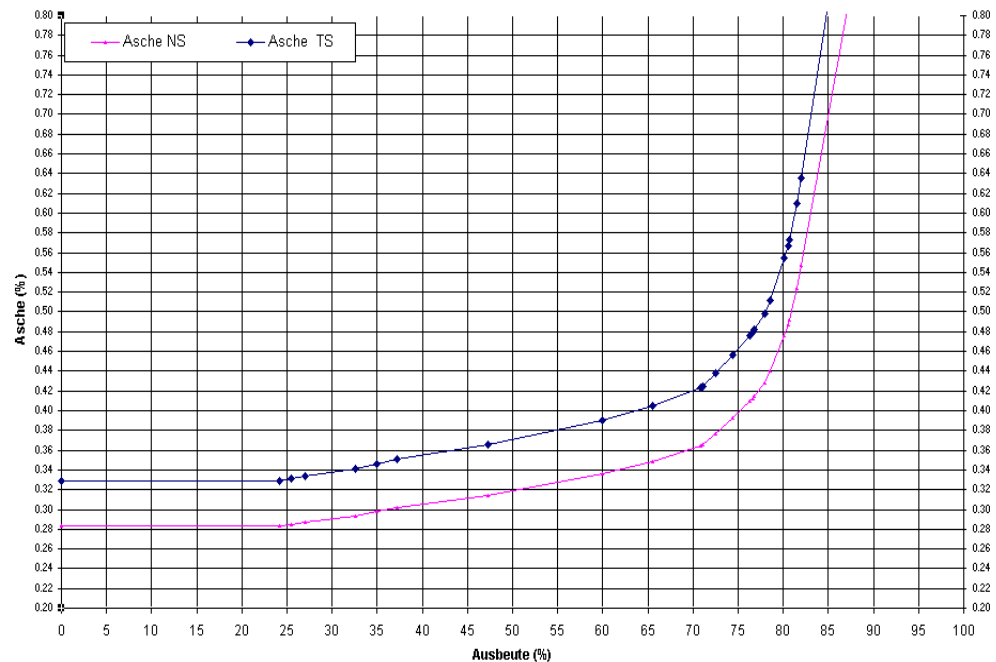
The demand for clean food – Example Premium - Cleaning



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Mill flowsheet – How to react on a wide range of demand

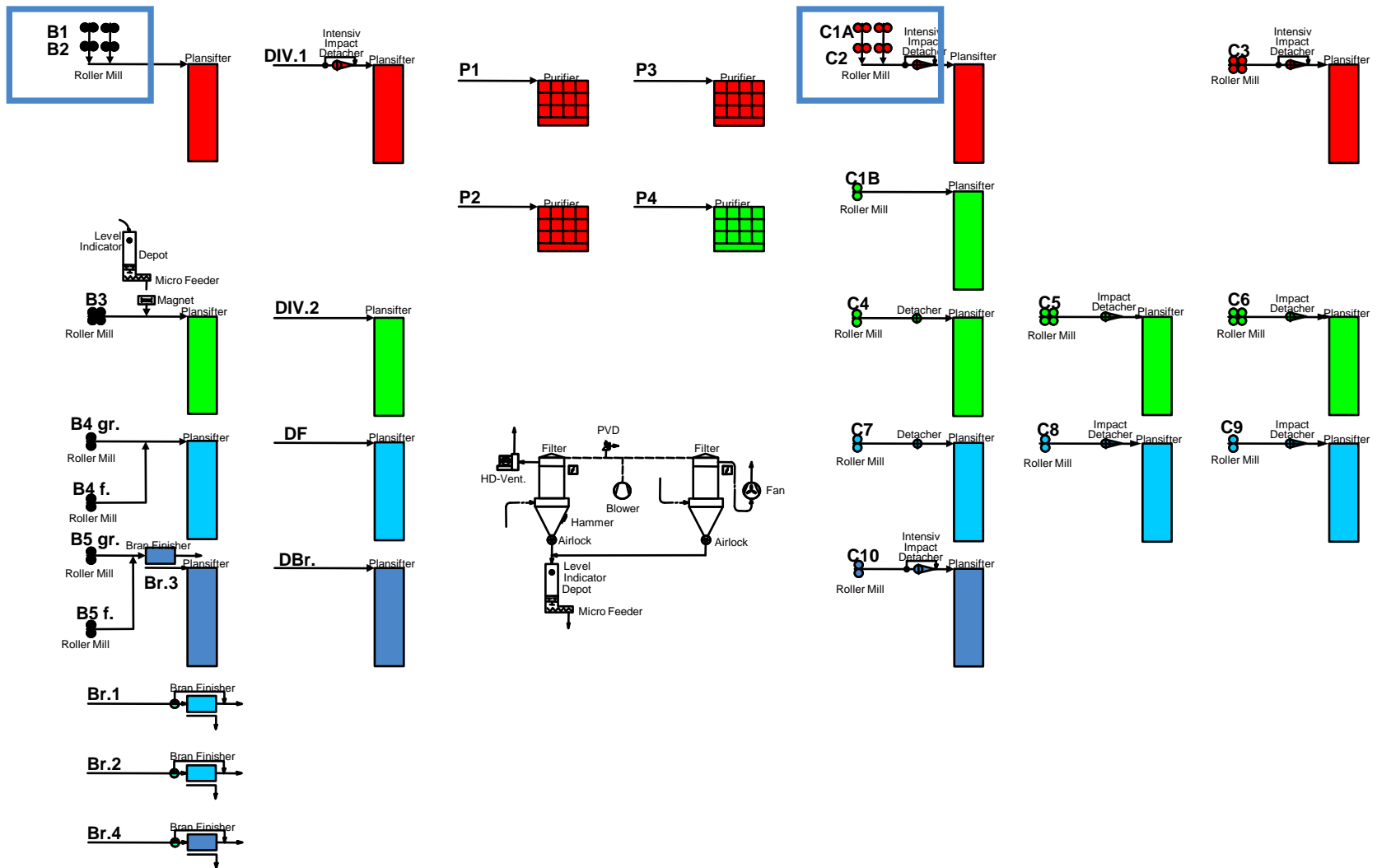


By choosing the adequate flowsheet, millers can provide optimised finished products.

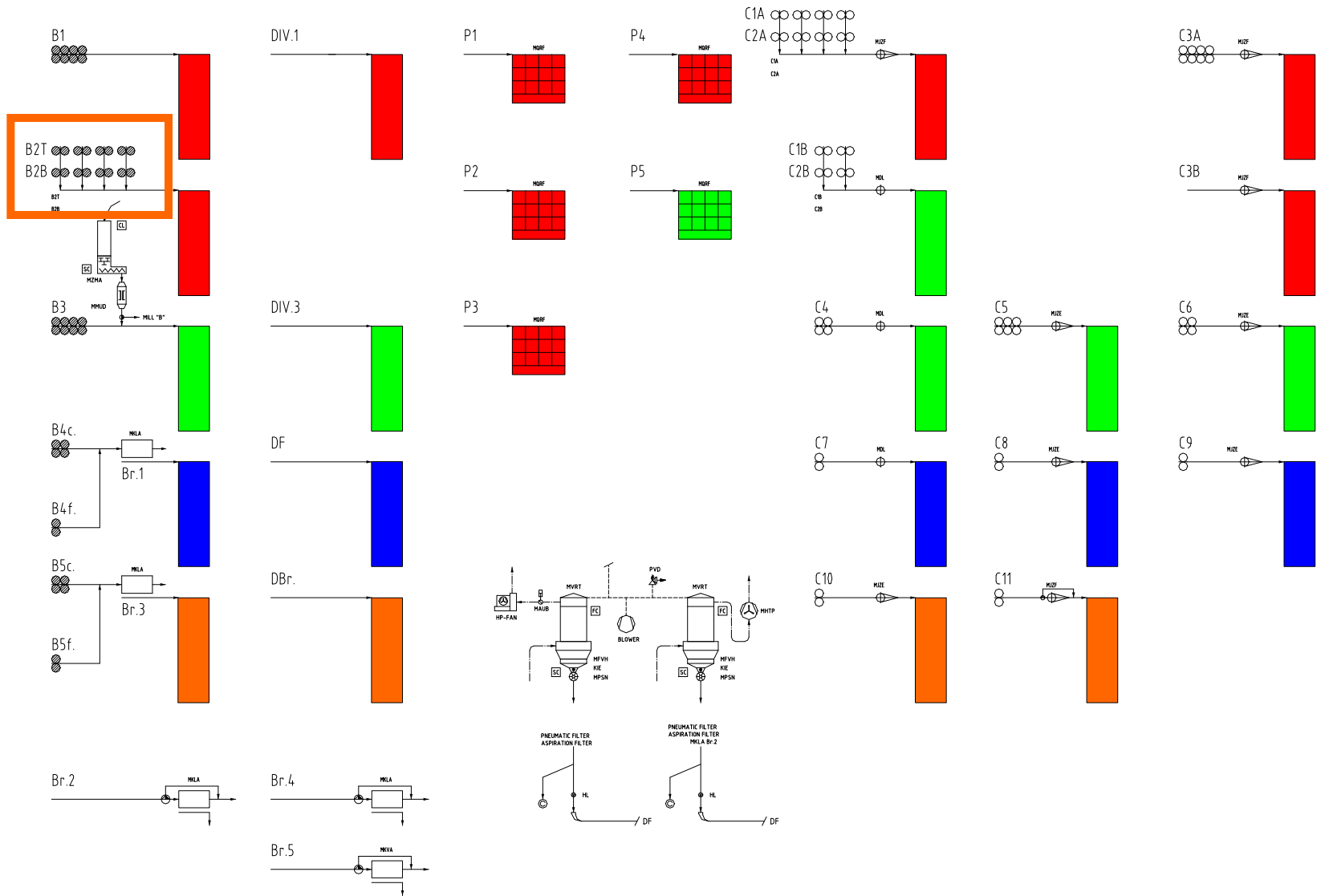
Yor keys to success:

- ➔ Higher extraction in low ash flour
- ➔ Higher extraction on total yield
- ➔ Adjustment of starch damage
- ➔ Optimised Energy-Input
- ➔ Robust process, easy to operate

Mill flowsheet – Adequate design to match high demands



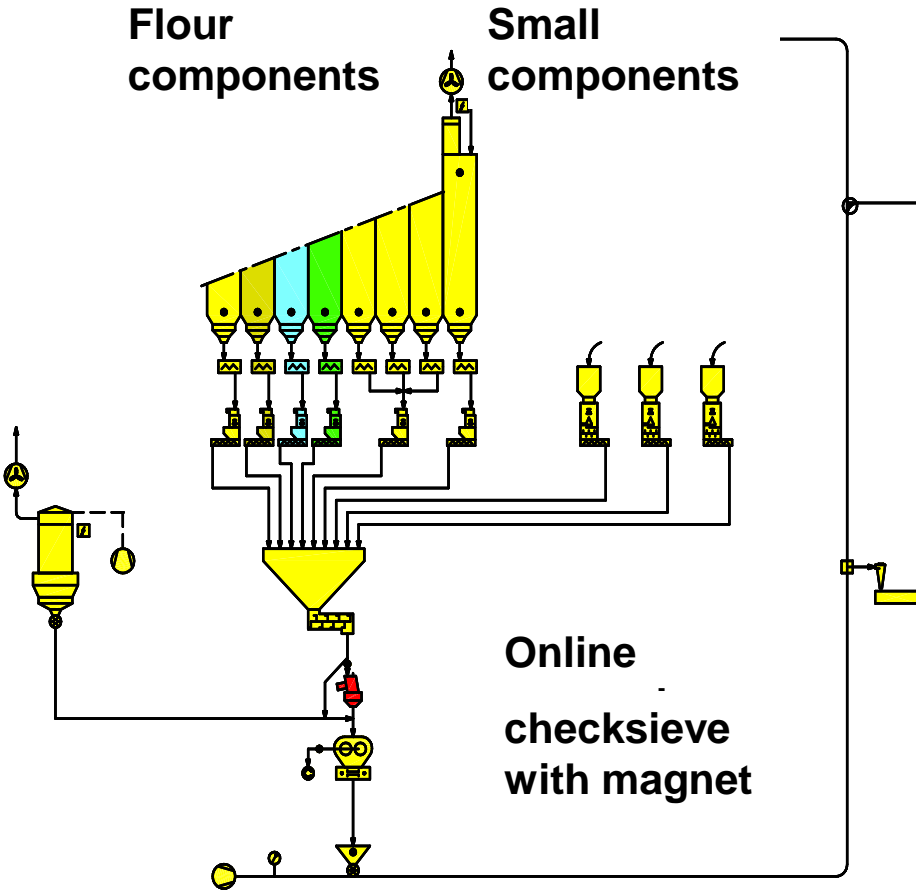
Mill flowsheet – Premium Flour Flow



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Flour Flow doesn't stop in Mill – New trends, new opportunities

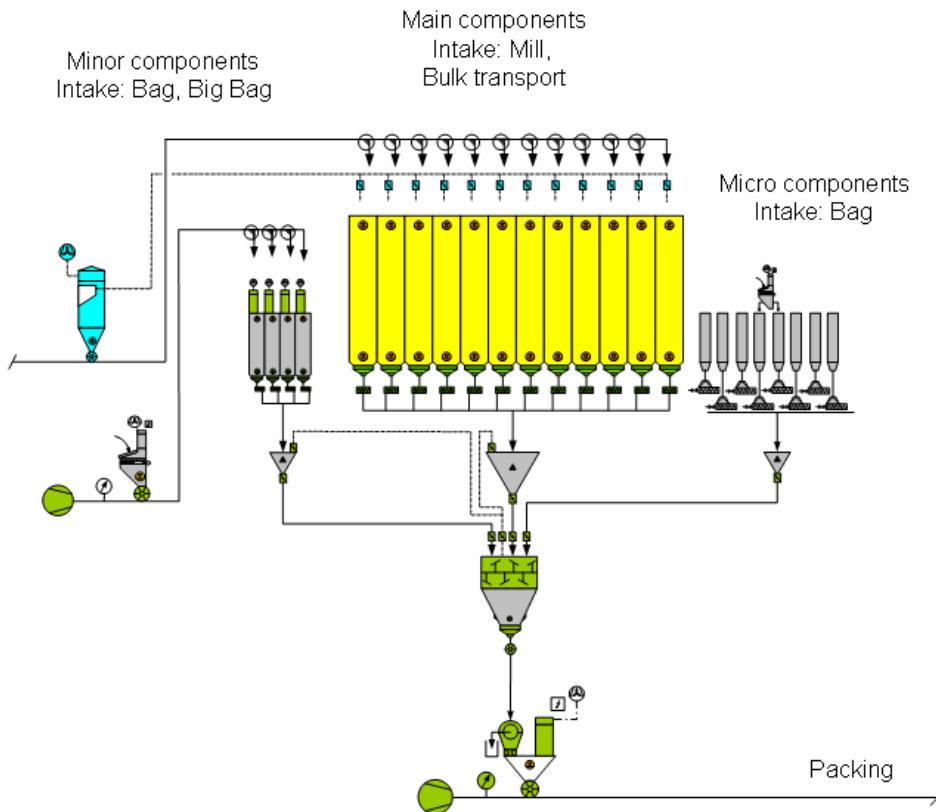


Consumers are looking for new products, a chance for millers to extend their value chain.

Premium Flour set-up might include:

- ➔ Add functional ingredients
- ➔ Mixing and Blending
- ➔ Modifying (Granulation, Starch etc.)

Flour Flow doesn't stop in Mill – New trends, new opportunities



Premium products might get their ultimate value addition e.g. in a mixing plant

Premium Flour by mean of mixing:

- ➔ Top consistency
- ➔ Easier downstream handling
- ➔ Satisfied customers
- ➔ greater market



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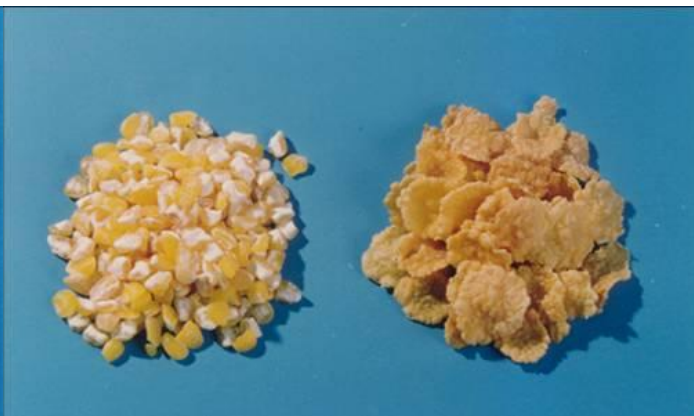
Maize Milling – Different raw material, different flowsheets



Maize Milling – The market determines the right technology



Mais couscous



Corn flakes



Maize pasta



Arepa

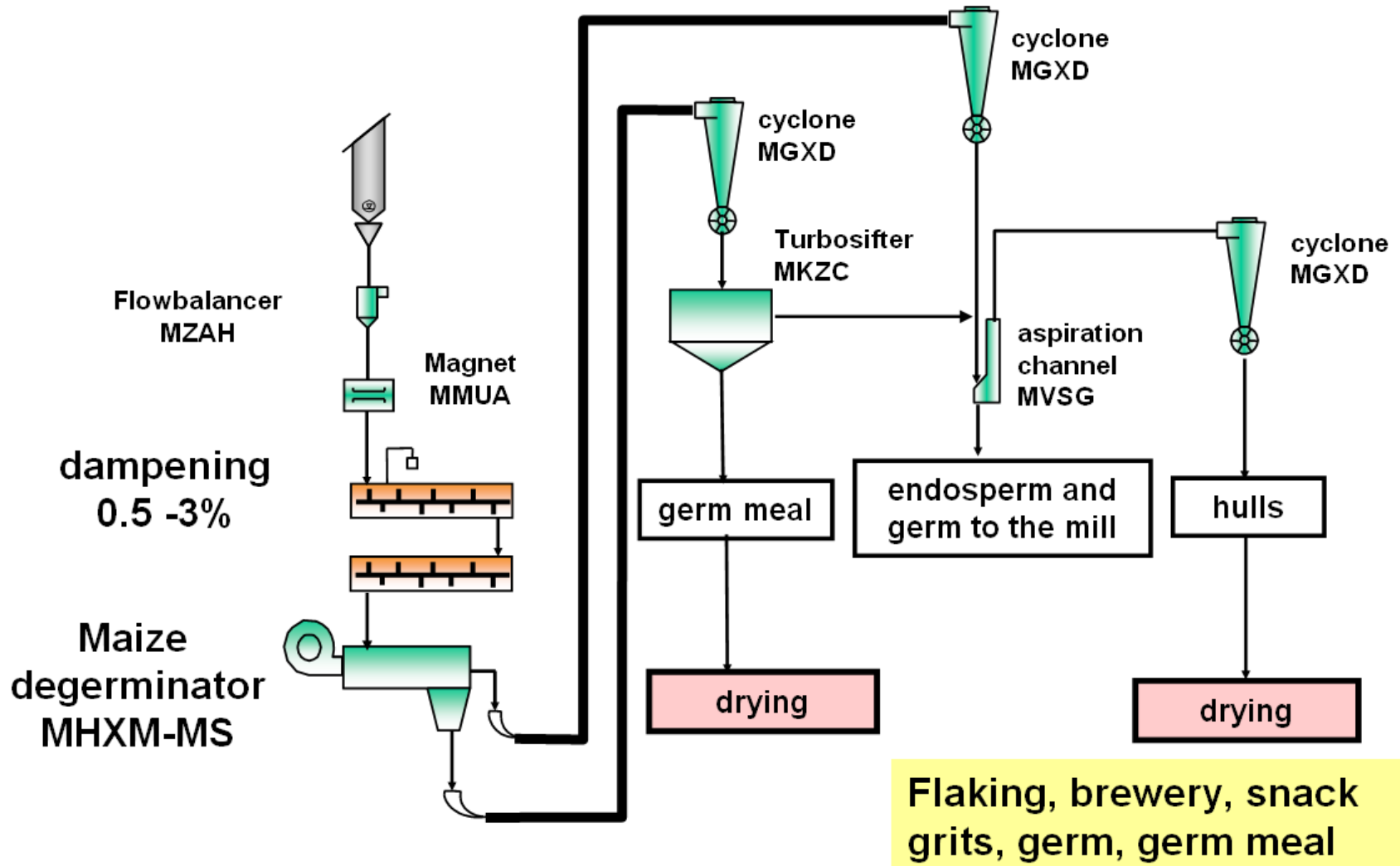


Tortillas

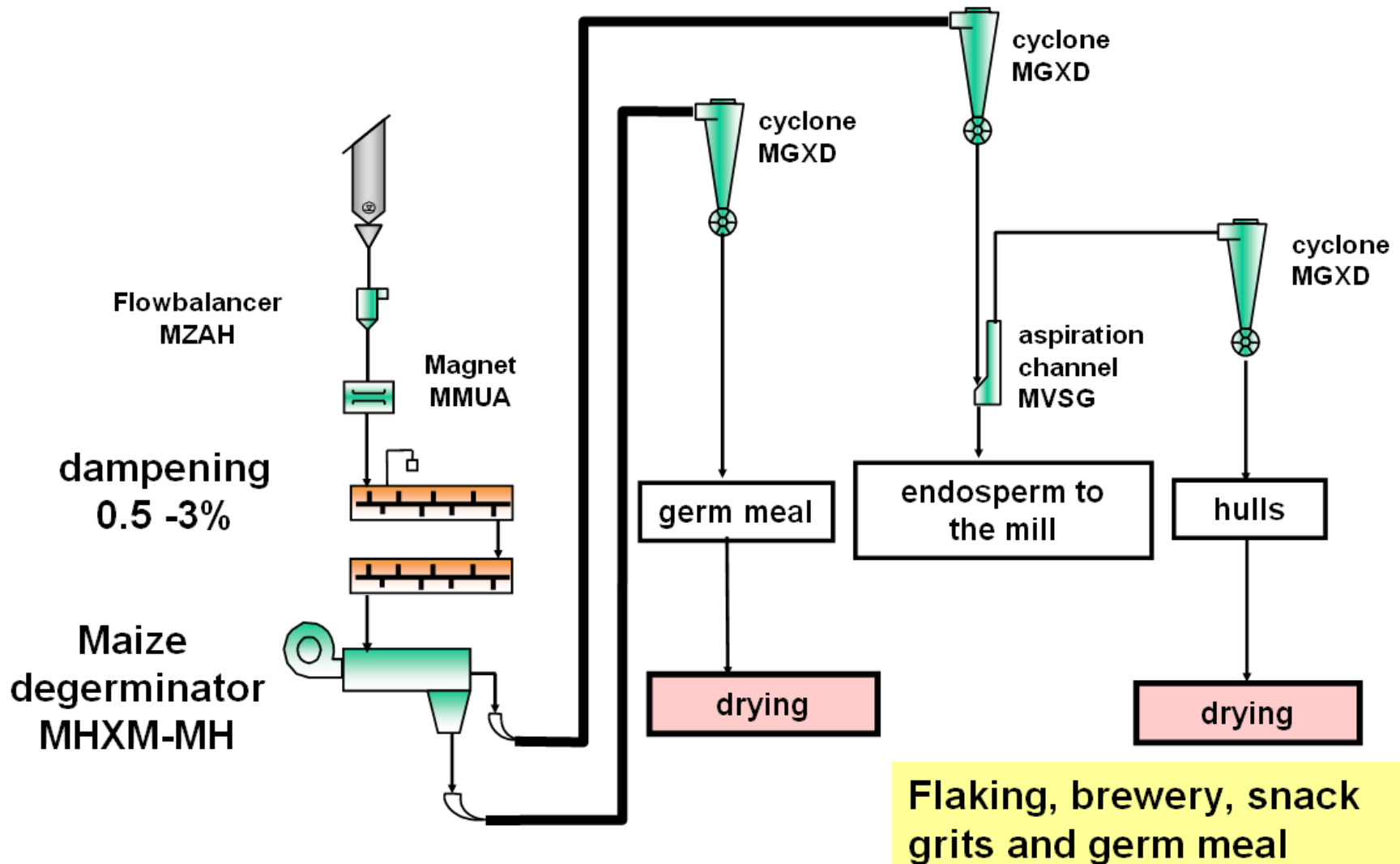


Snacks

Maize Milling – Different raw material, different flowsheets



Maize Milling – Different raw material, different flowsheets



Maize Milling – The market determines the right technology

**Flaking grits
(Hominy / Samp)
5600 - 4000 μ
Fat 0.6 - 0.8 %**



**Brewing grits
1200 - 300 μ
Fett < 1.0 %**



**Snack grits
< 800 μ
Fat 1.0 - 1.2 %**



**Maize flour
< 400 μ
Fat 1.0 - 2.0 %**



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Premium Flour – A driver of your success



Premium-Flour approach leads to:

- Mind set change: Flour is a valuable stuff
→ get rid of the commodity thinking
- Quality and consistency for all applications
→ get the best out of wheat
- Closer touch with the customer
→ understanding means listening
- Sensitivity to consumers demand
→ new opportunities in niche markets

Premium Flour – out of premium plants





Thank you for your attention