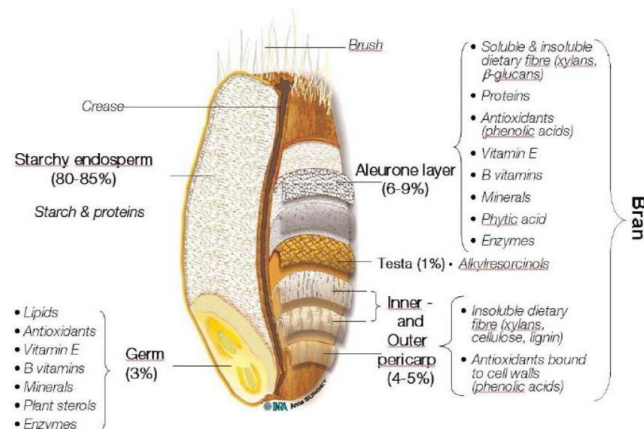




OMAS WHEAT SCRUBBING TECHNOLOGY

WHAT IS DRY WHEAT SCRUBBING?

- Gently removing small amounts of the pericarp using abrasion to eliminate surface impurities and enable the kernel to absorb water more efficiently and homogenously.



WHEAT SCRUBBING ADVANTAGES



- Reduced Tempering Time
- Reduced Bacteria Count
- Herbicide and Pesticide Reduction
- Reduced Ash Content
- Higher Milling Efficiency



OPERATING PRINCIPLE

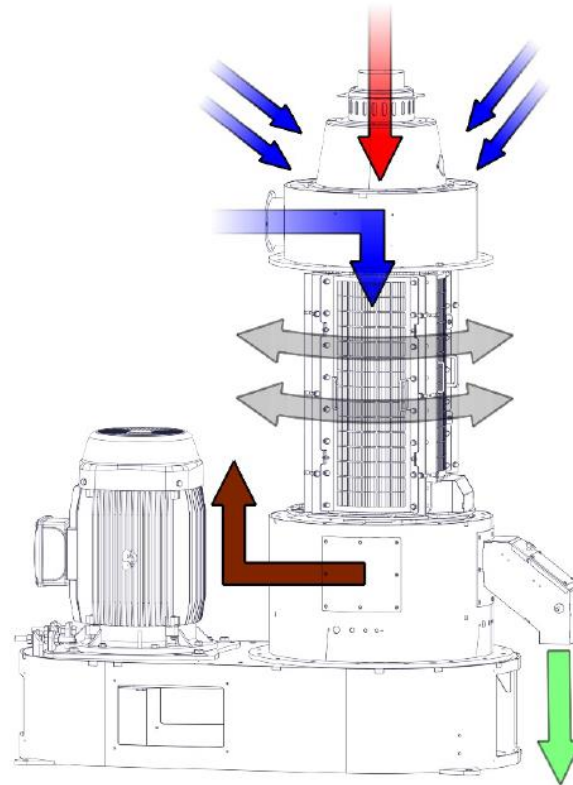
RED – Product Inlet

BLUE – Air Inlet

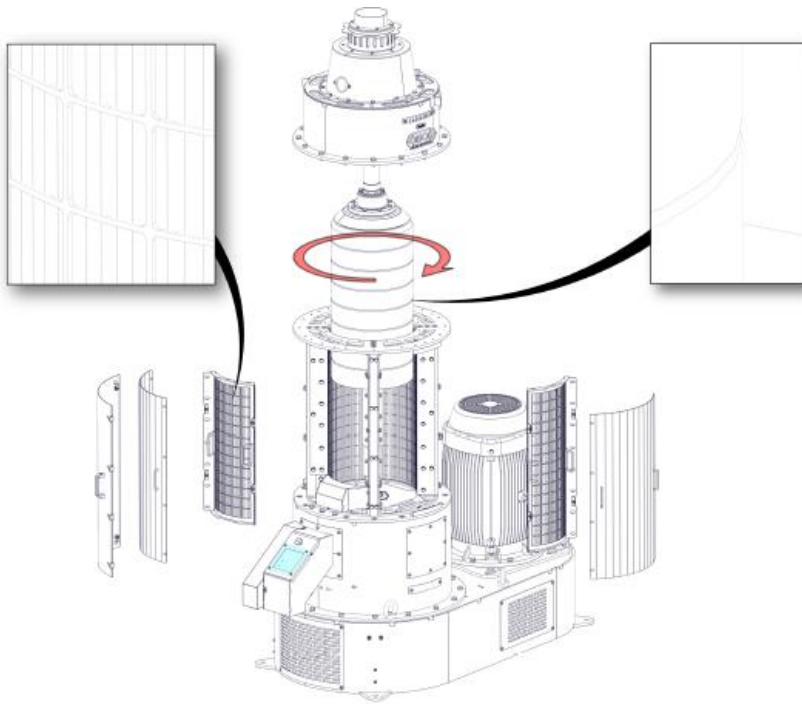
GRAY – Scrubbing Chamber

BROWN – Air/Fines/Dust Outlet

GREEN – Wheat Outlet



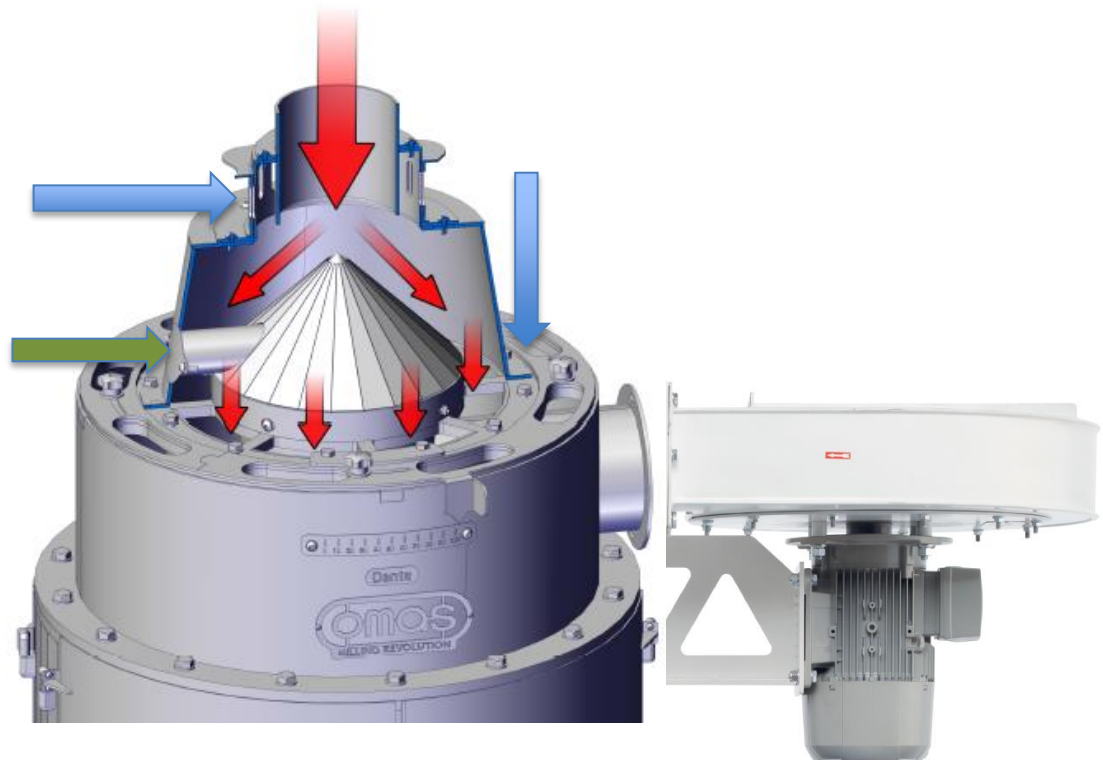
PROCESS



- Product moves vertically from top to bottom.
- Abrasive discs work gently on product.
- Target of 0.5% of Pericarp is removed.
- External fan aids in dust and fine removal as well as helping cool the product.
- Product exits the machine via automatic gate controlled by PLC.

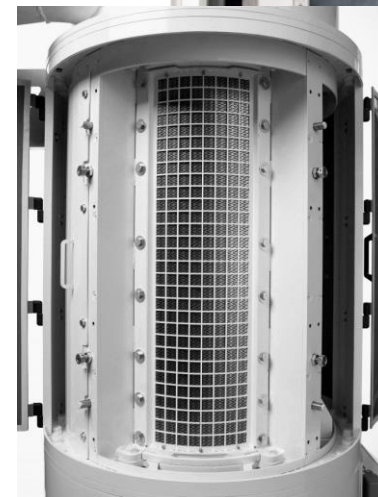
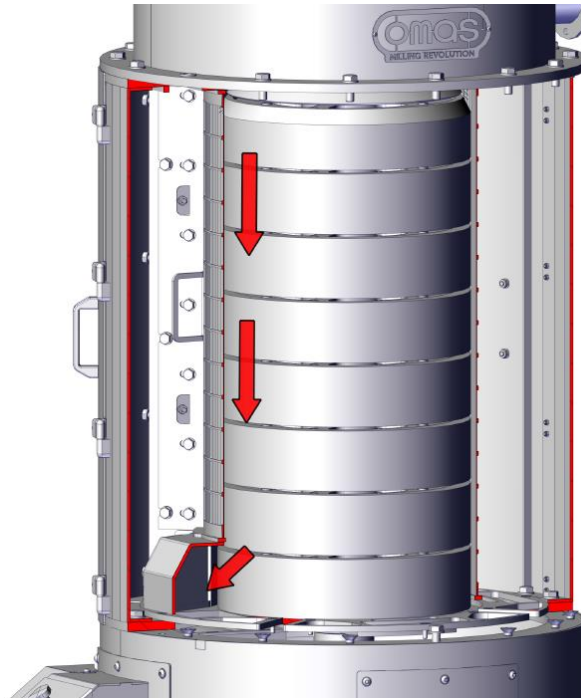
MECHANICAL FEATURES

- 6.6" Product Inlet
- Distribution Cone
- Two Adjustable Air Inlets
- 10 H.P. (7.5KW) fan
- External Grease Point



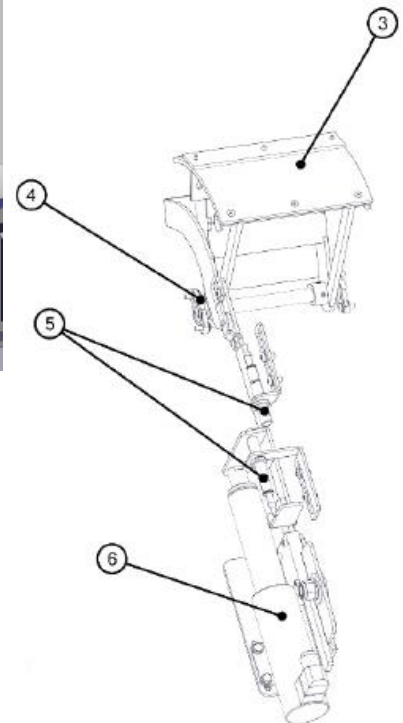
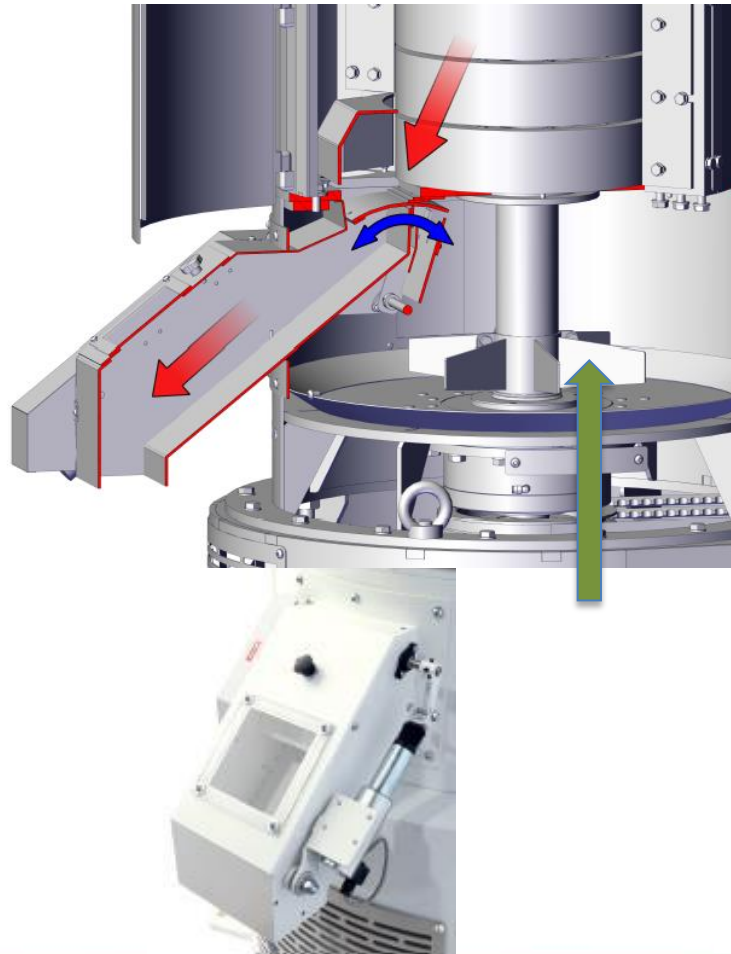
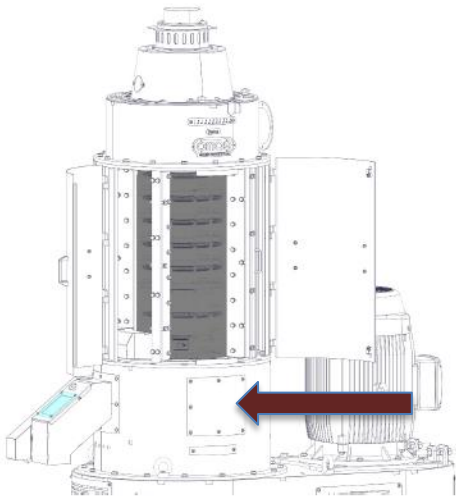
MECHANICAL FEATURES

- 8 Abrasive Discs
- SS Slotted Screen
- Inner Doors
- Outer Doors

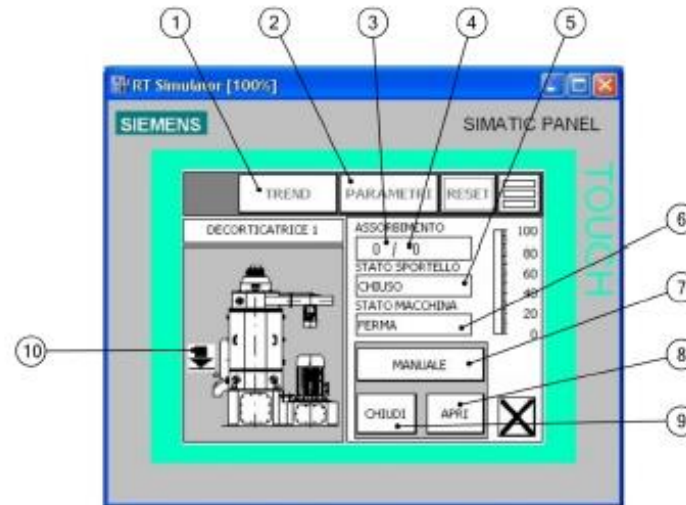


MECHANICAL FEATURES

- Product Outlet w/ Actuator
- Fines Outlet
- Bladed Impeller
- Drive Motor: 50 or 75 H.P.



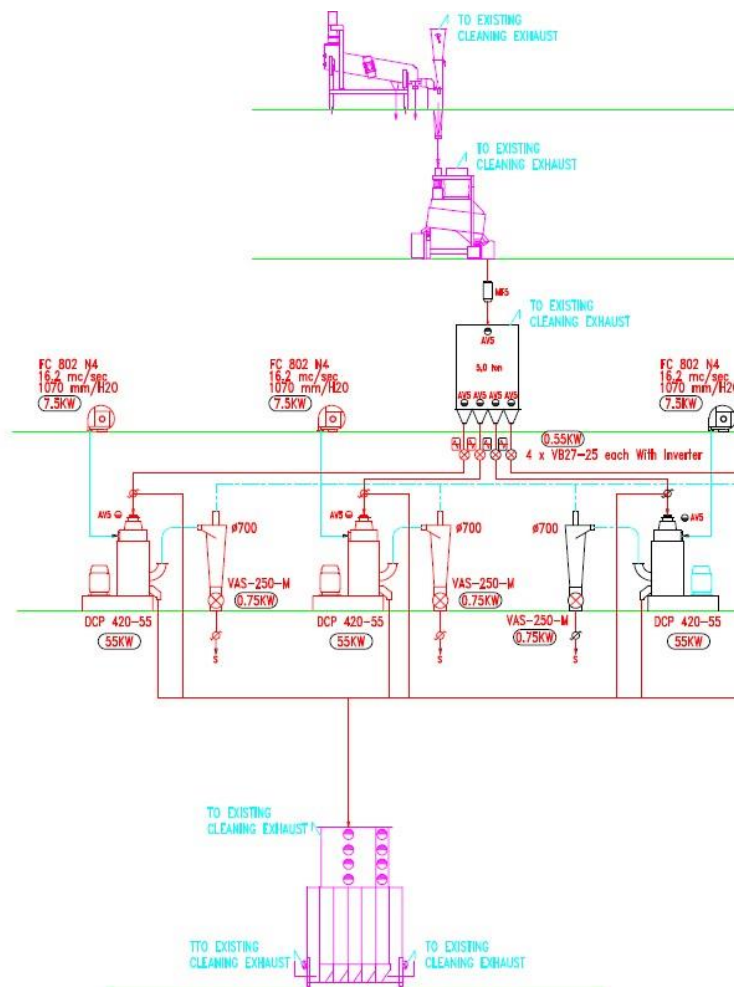
MACHINE CONTROLS



1. Machine Amp Consumption Trend
2. Settings
3. Amp Consumption
4. Amp Setting
5. Outlet Gate Position
6. Machine Status
7. Automatic or Manual Mode
8. Manually Open Outlet Gate
9. Manually Close Outlet Gate
10. Regulation Damper Status



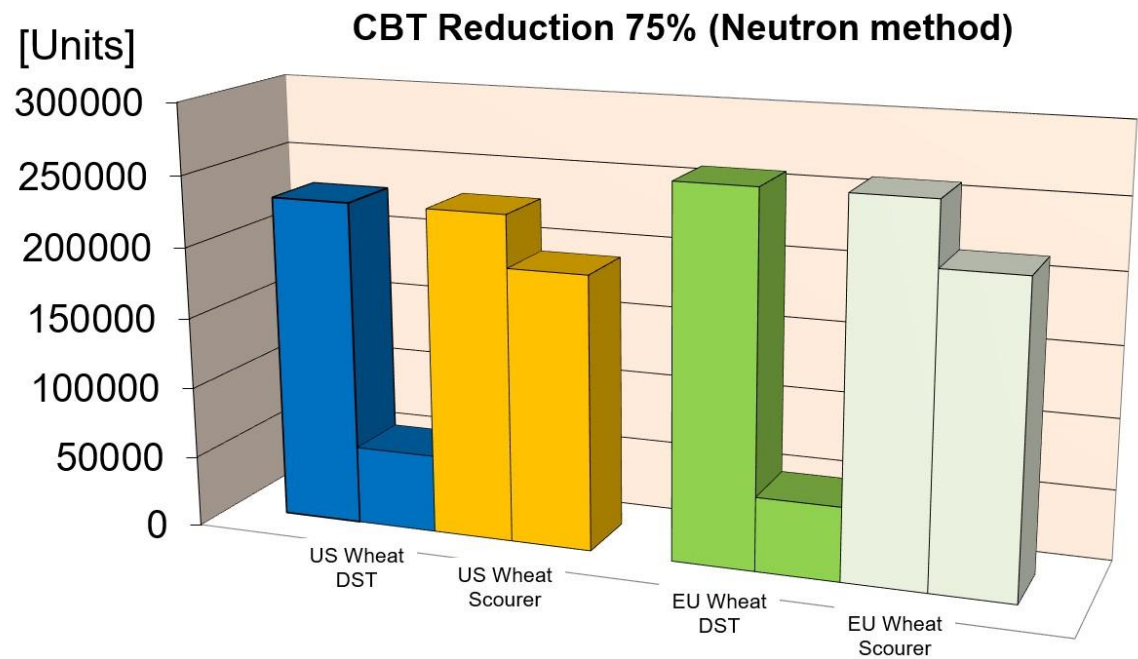
INSTALLATION



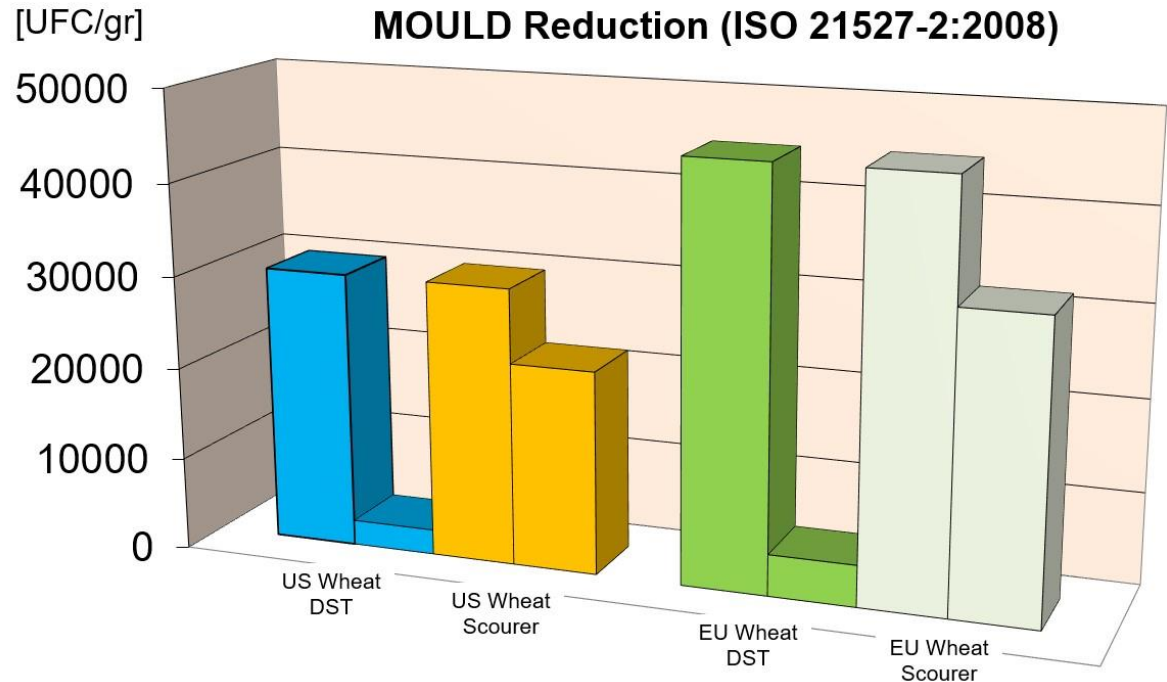
PROCESS



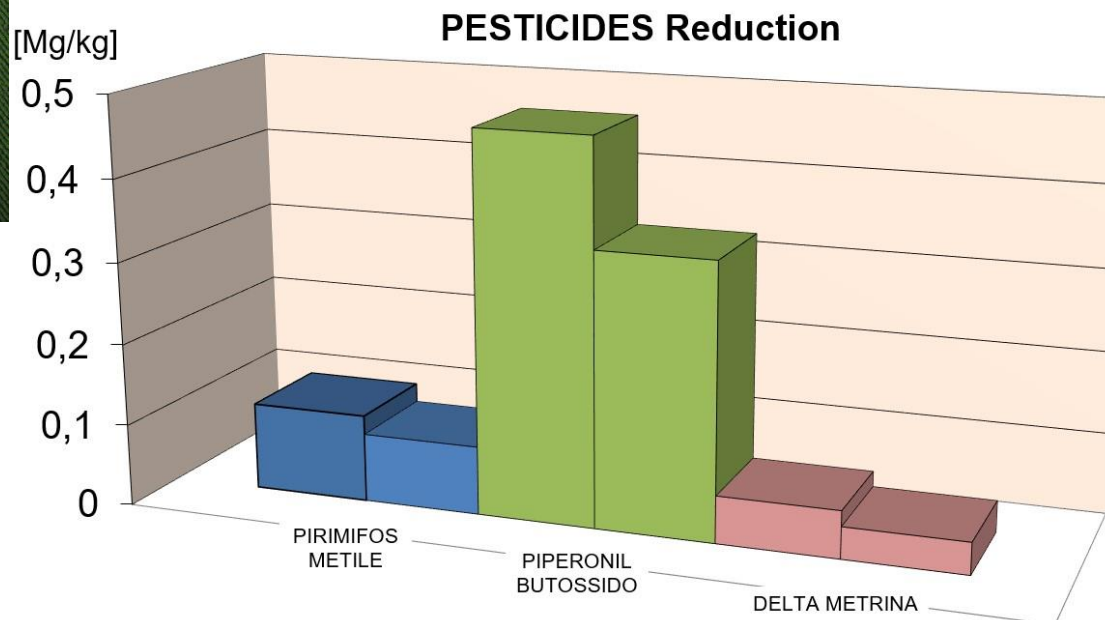
BACTERIAL LOAD -75%



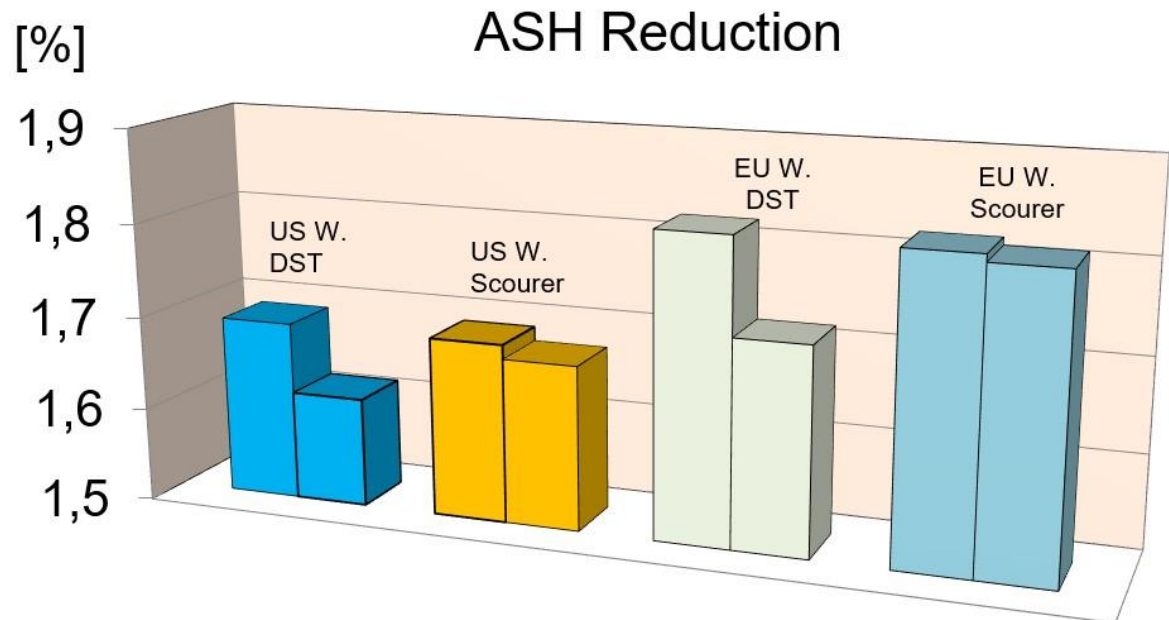
MOLD REDUCTION



REDUCE HERBICIDE/PESTICIDE RESIDUE



ASH REDUCTION



MYCOTOXIN REDUCTION

SCRAPS

ASH 3.35 ± 0.20 g/100 g 0.050

Met.: MP 2271 rev 0 2018 -11/10/2019

DON $13\,200 \pm 2\,600$ µg/kg 20 10 97.5

Met.: MP 2249 rev 1 2018 -17/10/2019



ITALIAN EXCELLENCE



WHEAT BEFORE DST

ASH 1.42 ± 0.09 g/100 g 0.050

Met.: MP 2271 rev 0 2018 -11/10/2019

DON 560 ± 110 µg/kg 20 10 97.5

Met.: MP 2249 rev 1 2018 -15/10/2019

WHEAT AFTER DST

ASH 1.38 ± 0.09 g/100 g 0.050

Met.: MP 2271 rev 0 2018 -11/10/2019

DON 290 ± 57 µg/kg 20 10 97.5

Met.: MP 2249 rev 1 2018 -15/10/2019

PRODUCTION MACHINES

- Tested at large mill in Italy.
- Customer saw temper time reduced by 25%.
- Homogenous absorption and consistent hydration.
- Improved Flour Color
- No negative effects on baking characteristics.
- Converted entire cleaning line to Dante system.





THANK YOU