

RECP Best Practice Catalogue

Optimization of the gluten drier operating parameters

Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is
funded by the European Union

Best Practice - Optimization of the gluten drier operating parameters

SECTOR:	Food & Beverage
SUBSECTOR:	grain mill products, starches and starch products
PRODUCTS	Maize products
CATEGORY	Process control or modification
APPLICABILITY	Process
COMPANY NAME	---
COMPANY SIZE	Large

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Description of the problem (Base scenario):	One of the final products in the company is the gluten meal. The last step in the production process is the drying process. The drying took place at 90 °C to a humidity of 6 to 7 %. This setting exceeded the best practice for the similar industries.
Description of the solution	Adjusting the set points for the drier to 80 °C shall yield a humidity of 10 to 12 %. This gives a better quality product (less overcooking) at lower energy costs.
Economic Benefits	Estimated savings of 5% of natural gas consumed in boilers resulting from the 10 °C decrease in the dryer set point. This corresponds to 196,400 m ³ /year of natural gas ~ 33,900 Euro/year
Environmental Benefits	Reduction of natural gas by around 196,400 m ³ /year (4% of the baseline) leading to 446 ton of CO ₂ emissions being avoided.

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Capital investments & financial indicators	This is a no cost intervention Payback is immediate.
Suppliers	Company internal team
Other aspects	None
Implementation	This measure is already implemented by the company.
Replicability sectors	Maize and corn processing plants
Aspects to investigate for replicability	Drier set point
Useful resources	BREF for FDM page 286