

RECP Best Practices Catalogue

*Reduction of raw material discharges
below silos*

Developed within the framework of MED TEST II



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is
funded by the European Union

Best Practice - Reduction of raw material discharges below silos

SECTOR:	Food & Beverage
SUBSECTOR:	Bakery and farinaceous products
PRODUCTS	Pasta and couscous made from durum wheat
CATEGORIES	Process control or modification
APPLICABILITY	Process

COMPANY SIZE	70 Employees
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Best Practice - Reduction of raw material discharges below silos

Description of the Problem (Base Scenario):

During manufacture and feeding of the lines from the silos, a purge of the silos is necessary to have a continuous feed for proper operation of the fabric (membrane) installed on the silo base (the duration of functionality of the fabric is provided by the vendor). This generates non-reusable rejects. During the 7 days of monitoring, we recorded releases of 5,110 kg, which is equivalent to 730 kg per day.

Description of the Solution

We recommend the implementation of a systematic preventive maintenance and preparation of the fabric change in advance to reduce the changeover by about 50%.



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Economic Gain

The estimated reduction potential is 50% of the material discharges in the silos area and, as well, a reduction in the response time for the changing of the fabric.

The cost of the raw material is on the order of € 540 per ton We evaluate a savings of:

$$730 \text{ kg/day} \times 288 \text{ days/year} \times 50\% = 105 \text{ tons/year} \times € 540/\text{ton} = € 56,700$$

Environmental Gain

105 tons/year of raw material

Health and Safety Impact

Positive Impact



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Investment & Financial Indicators	No investment is required, except fabric replacement (membrane) at the bottom of the silo, which takes place annually. The cost of this work is estimated at € 13,500/year (to be charged to the maintenance budget)
Suppliers	Original manufacturer of the storage silo equipment
Other Aspects	None
Implementation	The action has been carried out by the company. For the moment the company has not yet communicated the recent values on earnings to compare with the estimates made by the expert



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