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Strategic positioning study of the “Flour Milling and Semolina Processing” branch

FOREWORD

Milling concerns two principal activities: flour milling and semolina processing.

- Semolina manufacturing units transform hard wheat (triticum durum) for the production of semolina destined for the manufacture of pastas and couscous.
- Flour mills grind soft wheat (triticum vulgare) for the production of flour for bread making.

The world production of wheat is around 580 Million tons (Mt) per year, of which 350 million tons are transformed into flour and semolina.

NATIONAL SITUATION

The milling branch in Tunisia is important in terms of annual production which is valued at 420 Million dinars, representing 8% of total production of the food processing sector.

Annual trituration is estimated at 2 Million tons divided almost equally between hard wheat (HW) and soft wheat (SW).
Local wheat production is estimated at 1 Mt/year (80% hard wheat and 20% soft wheat) and imports are around 1.4 Mt/year.

28 industrial units are active in the production of flours and semolina.

Breakdown of production capacity

tons/24h

	N°	SW	HW	Total
Mixed : milling and semolina	19	4104	4885	8989
Flour mills	7	1700	-	1700
Semolina units	2	-	295	295
TOTAL	**28**	**5 804**	**5 180**	**10 984**

Source : CNSMST/Office of cereals

During the past 5 years, investment in the milling branch was 108 MTND, of which 64 MTND was invested in the creation of new units and 44 MTND for the modernization of existing units.

The number of employees in the branch is estimated at around 2000 persons, a level which has remained relatively constant since 1995.

Generalized modernization of equipment has led to an increase in production without increases in man power.

11 programs for the modernization and upgrading of milling enterprises were approved from 1996 to October 2002, for an amount of over 40 million dinars.

The sales price of flour, semolina and derivatives are fixed by the government.

INTERNATIONAL SITUATION

Professionals have evaluated the total world wide stock of flour mills and semolina processing factories at around 10000 units. The crushing and milling volume is around 350 Mt/year.

Wheat Production of the principal countries

Mt

Country	1999	2000	2001	2002
EU	97	104	91	103
Fed of Russia	66	65	92	96
China	114	100	94	89
India	71	76	69	72
USA	63	61	53	44
Total	**411**	**406**	**399**	**404**

Source : CIC

International trade concerns less than a fifth of world production.

The principal producers-exporters of **soft wheat** are the USA (26 Mt), Canada (9 Mt), Australia (9 Mt), Argentina (10 Mt), Europe (15 Mt) and the Ukraine (5 Mt).

The principal producers of **hard wheat** are the European Union (9 Mt), Canada (3.6 Mt), Turkey (3 Mt), Kazakhstan (2.4 Mt) and the USA (2.2 Mt). Foreign trade is principally influenced by the North American producers (Canada and the USA).

Foreign trade in wheat flour has dropped close to 25% over the past few years, to a level of around 7.5 Mt in 2002.

INTERNATIONAL COMPARISON

The analysis of a Benchmarking table established on a reference group of four leading European countries in the exporting of flour and/or semolina: Belgium, Spain, France and Italy, reveals that:

- milling activity in Tunisia is consolidated within a few units (average 40 000 t/year/unit) as in Belgium (average 50 000 t/year/unit) ; whereas in France (average 10 000 t/year/unit), Italy (17 000 t/year/unit) and Spain (15 000 t/year/unit) heterogeneous tools aligned;
- semolina processing activity in Tunisia is as well concentrated within a few units (48 000 t/year/unit), but is equally as important as in Europe (France: average 101 000 t/year/unit);
- the rate of capacity utilization is comparable to that of the Mediterranean area in general. Tunisian flour mills branch has a slightly higher utilization rate for milling activities;
- the average «extraction rates» (yields) for flour and semolina are relatively comparable to the equivalent ratios in Europe;
- average productivity for Tunisian flour milling is slightly higher than 1000t/person/year, and in general is comparable to the performance of European mills (slightly less that 1000t/person/year in France and Italy). In contrast the European semolina processing units have a much higher productivity level (from 2500 to 3300 t/person/year);
- the purchase price of wheat in Tunisia is an important factor weighing heavily on the net cost, due to the fact that 60% of raw material inputs are imported.
- Production costs in Tunisia are close to half, as labor costs are much lower, and energy and maintenance costs are more advantageous than in Europe;
- Value added is low for all countries of the reference group, and is between 15% to 17% in France, Italy and Spain; and is even lower in Belgium 13%) and around 11% in Tunisia.

ACTIONS TO UNDERTAKE

✱ **Material Investment:**

- ➢ increase the stocking capacity at the level of the enterprises;
- ➢ improve the cleaning tools for hard wheat (grading machines and stone removing equipment) and for soft wheat (stone removing equipment and the control systems for adding water);
- ➢ optimize installations through automation in preparation for computer assisted production control and management (GPAO et CAO) ;
- ➢ creation of laboratories;
- ➢ increase and modernize the stocking capacity for flour and semolina.

✱**Measures aimed at the quality and competitiveness of the branch:**

- ➢ The partial or total liberalization of wheat imports with greater attention paid to the quality;
- ➢ creation of a support structure, a training and research pole specific to the wheat branch, regrouping the CNSMST of UTICA and the related institutions (institutes, CTAA, offices,..), with a mandate that includes the creation of:

- (i) a school specializing in training for the cereals industries professions,

- (ii) a research laboratory dedicated to cereals and cereal by-products.

ENTERPRISE CREATION AND PARTNERSHIP

The study has also resulted in the identification of 2 project files to promote.