## COSTS STRUKTURE IN MILL BRANCH IN THE REPUBLIC OF CROATIA

D. Hrsto<sup>1</sup>, B. Petrač<sup>2</sup>, J. Kanisek<sup>3</sup> i M. Tratnik<sup>1</sup>

Faculty of Agriculture, University in Zagreb Agronomski fakultet Sveučilišta u Zagrebu

<sup>2</sup> Faculty of Economics, University J. J. Strossmayer in Osijek Economski fakultet Sveučilišta J. J. Strossmayera u Osijeku

<sup>3</sup> Faculty of Agriculture, University J. J. Strossmayer in Osijek Poljoprivredni fakultet Sveučilišta J. J. Strossmayera u Osijeku

### SUMMARY

Interdependence of wheat and mill products price is the main factors of mill industry business success of the Republic of Croatia. Significance is shown in representation of wheat price (as main mill raw material) in mill product price. Price share of the main raw material was 66,1 % (fco mill) for the analysed period whereas mill expenditures were 33,9 % for the same period.

The relation varied firstly to mill products' disadvantages and than to their advantages. So, price parity was 1:1,58 in 1976 then it was only 1:1,16 in 1980. Since that year it was constantly increased (for grinding benefit). Thus it was 1:2,06 in 2000. Firstly, it was the result of free price formation of some meal types. Processed wheat amount ranged between 450 and 510 thousand tons with negative change rate of -0,46 % annually.

Correlation of analysed factors (wheat and mill products prices) was confirmed by determination coefficient of 0,6 and Pearson's coefficient of 0,739. It means that meal price of 73,9 % was explained by wheat price as the main raw materials of mill industry.

Key words: prices, parity, grinding, synthetic, indicator, earning, power.

## OBJECT, AIM AND DATA SOURCE OF THE PAPER

Need for permanent coast monitoring in these two economy branches of Croatia is manifested in wheat significance in agriculture and in population food as costs which are present with production of both products. The needs are of two kinds: namely, firms which produces those products should accomplish better financial indicators of successful business and enable production of cheaper baker's products coming to the consumers' table.

Certain regularities can be seen by the analysis of mill products production costs in the period of 1976 – 2000. Data sources are as follows: State Bureau of Statistics, Business Association of "Žitozajednica", Bureau of money transfers, internal data of Agricultural Faculty in Zagreb, Institute of agriculture economy.

### ANALYSIS OF POSITION AND TRENDS IN MILL BRANCH

Mill industry is a tehnological and economic continuation of primary agricultural branch as well as a bond toward baker is trade. It showed a negative trend a growth rate of 3,135 (Table 1 and 2) for the period 1976-2000.

Table 1. Wheat utilisation in the Republic of Croatia (1976 - 2000)

tons Meal Utilisation Wheat Year 72,6 % 348.669 480.043 1976 349.285 75,4 % 1980 464.424 76.3 % 376.378 493.287 1985 74.3 % 471.577 350.382 1990 291.739 72.6 % 401.942 1995 73,2 % 278.307 2000 380.165

Production trend of mill products in firms whose ownership type is based on stocks capital was negative in the period 1991 – 2000 i.e. reduction from 1995 contrasted with 1991 was 18,9 %, and 1991. – 2000. was 22,7 % (Table 2) in the period 1991 – 2000. Grinding reduction is manifested in larger numbers of family whose capacity is approximately 120.000 tons.

Table 2. Production of mill industry in Croatia

Table 2. Froduction of th		STERNET HUSIN		tons	
waste or a state	1991.	1995.	1998.	1999.	2000.
Ground wheat	494860	401942	355680	389070	380165
Index (1991.=100)	100	81,22	71,87	78,62	76,82
All meal types	359914	291739	262364	282351	278307
Index (1991.=100)	100	81,06	72,89	78,45	77,32
Pollards	18060	21578	12239	12239	10945
Cattle meal	112870	85296	63502	62633	66232
Waste	3976	3329	1941	2164	1578
Meal utilisation Total %	72,7	72,6	73,8	72,6	73,2

Statistical source: Association internal data

# COSTS STRUCTURE OF MILL PRODUCTS MANIFACTURE

Searching for costs and their structure as well as mill products price it was found out that (Table 3) purchase wheat price as well as costs of buying and storing for the whole analysed twenty four yearperiod amount to 66,1 % (fco mill) whereas processing costs are only 33,9 %.

Table 3. Structure of grinding costs

produce and a second	DED INS							%
without witelnings	1976.	1980.	1985.	1990.	1995.	1998.	1999.	2000.
I. Purchase wheat price	63,3	64,7	64,6	50,7	63,4	59,2	53,6	48,5
- costs of purchase								
and storing	2,4	2,3	2,9	3,2	2,6	2,7	2,6	2,1
II. Fco mill price	65,7	67,0	67,5	54,0	66,0	61,9	56,2	50,6
III. Processing costs	34,3	33,0	32,5	46,0	34,0	38,1	43,8	49,4
- depreciation	0,5	0,5	0,5	0,4	5,9	4,3	5,3	1,6
- liabilities	2,5	6,4	2,9	8,2	4,6	4,2	7,8	3,1
- interests	0,7	2,9	1,7	2,9	2,9	2,6	7,9	6,0
- salaries	10,1	6,4	4,9	9,3	7,4	7,3	11,7	10,6
- accumulation	1,1	2,3	1,3	2,2	1,8	1,6	2,2	2,0
Product price	100	100	100	100	100	100	100	100

However, price parity of wheat and mill products has had a slight increase trend on the benefit of processing costs since domestic convertible currency – kuna was introduced.

Table 4. Grinding costs structure

							USD/ton
	1976.	1980.	1985.	1990.	1995.	1998.	2000.
Wheat purchase price	140,0	338,9	167,0	215,3	169,8	146,9	111,1
- costs of purchase							
and storing	5,3	6,2	10,1	13,8	7,0	6,7	4,8
II. Fco mill price	145,3	345,1	177,1	229,1	176,8	153,6	115,9
III. Processing costs	75,9	45,3	112,4	195,5	91,4	94,6	113,0
liabilities	5,5	20,7	12,2	34,8	4,3	10,4	7,1
salaries	22,3	16,8	20,0	39,4	6,8	18,1	24,3
interests	1,6	10,5	3,5	12,3	2,65	6,4	13,7
IV. Average grinding price	221,2	390,4	289,6	424,5	268,2	248,2	228,9
IV. Average grinding price	221,2	390,4	209,0	424,0	200,2	240,2	

On the basis of the given data in the last three years (1998., 1999. and 2000.) wheat price was 153,6; 123,3 and 115,9 USD/ton. Mill firms tried to depreciate "incidence" to baker's trade and to a consumers by reducing processing costs. Cost items such as raw materials, storing, and turnover means in grinding price are still 50,6 % of the structure i.e. 228,9 USD/ton in 2000. These are items on which firm managers can't have influence. Apart from the fact thet our millers are in a very delight branch of Croatian economy (i.e. much turnover means are required for the whole tehnological year) they also share misfortune of other branches considering solvent capital. It includes long terms of sold products collection period, market amount etc., especially family mills and relation with private bakers who are not completely comprised by the system of the Republic of Croatia.

### CONCLUSION

The following conditions should be fulfilled if Croatian white industry was to achieve better business results and offer cheaper and more qualitative product to a consumer:

- 1. Credit financing of agricultural production must be burdened by interest rate of 50 % of total amount,
- Turnover means which are borrowed by mills for raw materials buying should also be burdened by the same interest since refund coefficient in these branches is 1,18;
- 3. Detailed financial studying of private entrepreneurs from mills to baker's trade in order to determine "true" tax rate for them.
- 4. Sticking to collection period, i.e. terms of law by merchants and mill firms between themselves.
- 5. Establishing "discipline" in permitted discount amount.
- Developing study which would connect wheat production, wheat processing and production of baker's products from tehnological and economic level.

### STRUKTURA TROŠKOVA U MLINSKOJ INDUSTRIJI REPUBLIKE HRVATSKE

### SAŽETAK

Međuovisnost cijena pšenice i mlinskih proizvoda jedan je od osnovnih činitelja uspješnosti poslovanja mlinske industrije Republike Hrvatske. Znakovitost se očituje u zastupljenosti cijene pšenice (kao osnovne mlinske sirovine) u pri prosječnoj cijeni mlinskog proizvoda.

Udio cijene sirovine za analizirano razdoblja odnos se mijenjao najprije na štetu, a zatim u korist mlinskih proizvoda. Tako da je odnos 1976. bio 1:1.58 da bi 1980. iznosio svega 1:1.16. Od te godine on stalno raste (u korist meljave), te je 2000. iznosio 1:2.06. U prvom redu to je bio rezultat slobodnog formiranja cijena pojedinih tipova brašna. Količine prerađene pšenice kretale su se u analiziranom razdoblju između 450 i 510 tisuća tona, s negativnom stopom promijene od -0.46% godišnje.

Povezanost analiziranih činjenica (cijene pšenice i cijene mlinskih proizvoda) potvrđena je koeficijentom determinacije od 0.6 i Pearsonovim koeficijentom od 0.739. To znači da je cijena brašna sa 73.9 % protumačena cijenom pšenice kao osnovne koa osnovne sirovine mlinske industrije.

### REFERENCE

- 1. Arhiva Žitozajednice, 1976. 2000.
- 2. D. Hrsto, Međuovisnost cijena pšenice i mlinskih proizvoda, disertacija 1992.
- 3. D. Hrsto, Mlinska industrija Republike Hrvatske (1945. 1990.), Sociologija sela br. 31/93.
- 4. J. C. van Horne, Financial managment and policy 1992.
- J. Kanisek, i drugi, Bilanca energije različitih sustava obrade pri proizvodnji pšenice, Aktualni zadaci mehanizacije polioprivrede, Opatija.
- Petrač, Kvalifikacija stupnja finalizacije osnovnih ratarskih kulturau financiji ostvarivanja integriteta argoindustrijske proizvodnje Slavonije i Baranje "JUMA", Zbornik radova ("Finalizacija i plasman hrane"), Osijek, 1989.
- 7. Statistička izvješća DZSRH; 1980., 1985., 1990., 1995., 2000.

Adrese autora - Authors' addresses:
Doc. dr. sc. Davorin Hrsto
Doc. dr. sc. Miroslav Tratnik
Faculty of Agriculture
University in Zagreb
Svetošimunska cesta 25
10000 Zagreb, Croatia

Prof. dr. sc. Boris Petrač Faculty of Economics University J. J. Strossmayer in Osijek Gajev trg 7 31000 Osijek, Croatia

Doc. dr. sc. Jozo Kanisek Faculty of Agriculture University J. J. Strossmayer in Trg sv. Trojstva 3 31000 Osijek, Croatia Primljeno - Received: 19. 12. 2001.