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Economics of processing of corn flour in district Etah (U.P)

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Abstract
Maize is an important cereal crop in India. It is cultivated in India in plaines as well as in the hilly regions, especially in the areas with hot summer. In India, maize is grown as one of the leading commercial crops. In India the local-urban population uses the maize in the form of food ingredient. For chapatti making, it is used as a major cereal in the traditional area. The use of processed maize foods for breakfast and snacks is very little. In addition, green ears are consumed in roasted form. In bakery products, maize has played an important role in the human diet in the urban areas, use of bread, buns, rusks, biscuits etc. The cost of production of corn flour came to Rs. 1959.00/qtl while input-output ratio was calculated as 1:1.22 during the processing of Corn flour unit.

Keywords: Building and machinery, salary and wages, utilities and working capital

Introduction
Corn is the cereal with the highest production worldwide and is used for human consumption, livestock feed, and fuel. Various food technologies are currently used for processing maize flours and corn meals in different parts of the world to obtain precooked refined maize flour, dehydrated nixtamalized flour, fermented maize flours, and other maize products. These products have different intrinsic vitamin and mineral contents, and their processing follows different pathways from raw grain to the consumer final product, which entail changes in nutrient composition. Dry maize mechanical processing creates whole or fractionated products, separated by anatomical features such as bran, germ, and endosperm. Wet maize processing separated by chemical compound classification such as starch and protein.

Material and Methods
The study was carried out in district Etah of Uttar Pradesh during 2015-2016. Etah is one of the big maize producer district of Uttar Pradesh. The whole study was base on intensive investigation on 120 maize farmers of the Etah district. The data regarding corn flour processing was among the collected from the three corn flour processing unit selected among the studied in the district surroundings. The whole data was validated analyzed and tabuted as per norms & presented for the processing cost & returns of corn flour, Cost of production /q and cost & returns per rupee investment from corn flour.

Result and Discussion
The present investigations deals with the economics of processing of corn flour unit in the study area. The processing of corn flour has been discussed below.

Investment on Building and machinery in corn flour processing unit

Table 1: Total investment on Building and machinery in corn flour processing unit

S. No.	Particular	Amount (in Rs)
1	Land	Rented@ 1500/month
2	18'' mill, 10 H.P. motor, starter-1	30000.00
3	Balance (Beam scale) 100 kg cap -1	4500.00
4	Set of weights -1	3500.00
5	Installation expenses-1	3000.00
	Total	41000.00

The table -1 reveals that the corn flour processing unit consist 18 Mill 10 HP Motor starter which costs Rs 30000.00 for the better efficacy of corn grinding and processing and a Balance has also been arranged for material on accurate weighing purposes at cost of Rs 4500.00, Corn flour setup also included other investments like; Set of Weights for Rs 3500.00, Installation expenses of Rs 3000.00 for the measurement purposes of raw material. Total investment cost of Rs 41000.00 have arranged for the Equipment and Machinery in the establishment of corn flour processing unit.

Investment on salary & wages in corn flour processing unit/month

Table 2: Total investments on salary & wages in corn flour processing unit/month

S. No.	Particular	Amount (in Rs)
1	Entrepreneur/Supervisor-1	4000.00
2	Unskilled worker-1	2500.00
	Total	6500.00

It is evident from table -2 that the a total amount of Rs 6500.00 per month is required for meeting the salary & wages expenses in corn flour processing unit/month which includes; Entrepreneur salary Rs 4000.00 unskilled worker salary Rs 2500.00 to manage the operational processing smoothly.

Investment on Utilities and other expenses in corn flour processing unit/month

Table 3: Other expenses in corn flour processing unit/month

S. No.	Particular	Amount (in Rs)
1	Power	3000.00
2	Miscellaneous	500.00
3	Other expenses like transportation, consumable stores.	1500.00
	Total	5000.00

Table-3 reveals that the corn flour processing unit requires Power consumption of Rs 3000.00, miscellaneous expenses Rs 500.00 and some other expenses like transportation, consumable stores of Rs 1500.00. Total amount of Rs 5000.00 was spent for the Corn flour processing unit.

Investment on working capital in corn flour processing unit/month

Table 4: Total investments on working capital in corn flour processing unit/month

S. No.	Particular	Amount (in Rs)
1	Raw materials 40 quintal/ month @ 1550/q	62000.00
2	Packing material etc.	1000.00
3	Strings, thread and other consumables	1000.00
4	Rent	1500.00
5	Salaries & wages	6500.00
6	Utilities and other expenses	5000.00
	Total	77000.00
	Overhead costs/month	
1	Depreciation on fixed capital@10% per annum for a month	342.00
2	Interest on fixed capital@ 12%	410.00
3	Interest on working capital@10%	642.00
	Total	1394.00
	Grand total	78394.00

Table-4 reflects that the various particulars such as; raw materials 40 quintal costing Rs 62000, Packing material Rs 1000, Strings, thread and other consumables Rs 1000 for the establishment of Corn flour processing unit which reserved of total Rs 64,000 absolutely in the current study. An amount of 1500 has reserved for the rent purpose followed by Rs 6500 as an investment cost for the working capital during the establishment of Corn flour processing unit per month. For the purpose of Salaries and wages, an amount of Rs 6500 invested while Rs 62000 have kept for the purchasing of raw material and Rs 5000 arranged for the utilities & other expenses in the set up of Corn flour processing unit as observed during the survey in this study.

Total investment cost of Rs 78394.00 came for the production in corn flour processing unit/month which includes other expenses in terms of total working capital of Rs 77000.00, depreciation cost of Rs 342.00, interest on fixed capital of Rs 410.00 and interest on working capital of Rs 642.00 during the production of flour in the Corn processing unit.

Total returns received from corn flour processing unit/month

Table 5: Total returns received from corn flour processing unit/month

S. No.	Particular	Amount (in Rs)
1	By sale of Corn flour 40 quintal@2400/q (Gross income)	96000.00
2	Total cost incurred	78394.00
3	Net income	17606.00
4	Cost of production/quintal	1959.00
5	Input-output ratio	1:1.22

The table-5 reveals that from Corn flour processing an amount of Rs 96,000 recorded as the gross income while total cost incurred remained as a cost of Rs 78394.00 during the operation. The net income remained as Rs 17606.00. The cost of production of corn flour came to Rs. 1959.00/qtl while input-output ratio was calculated as 1:1.22 during the processing of Corn flour unit. The benefit cost analysis reveals that corn flour fetched at 1.22 times return on investment of Re 1 proved to be beneficial venture to the farmers of maize as well as millers.

Conclusion

In the study the total cost of production of corn flour came to Rs. 1959.00/qtl while input-output ratio was calculated as 1:1.22 during the processing of Corn flour unit.

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