The owners of roller flour mills in India like to describe their country’s wheat industry in sweeping terms:

- an annual harvest that has reached a record level of 88 million tonnes;
- about one-third of the crop each used by farmers, bought by traders or by the government;
- more than 1,200 roller milling companies grinding from 15 to 18 million tonnes of wheat per year into refined flour called “maida” and other products;
- several million tonnes of branded packaged stone ground whole wheat flour or “atta”; and
- most importantly, 40 to 45 million tonnes of atta still ground on a job-work basis in villages, towns and even in large cities by small electric or diesel driven stone mills, known as chakkis.

Such broad brush strokes, however, conceal the enormous complexity of India’s grain value chain. Wheat production and consumption vary tremendously from region to region. Differing tax regimes on wheat purchasing and wheat product sales give artificial advantages to millers in some states and put those in others at a huge disadvantage. Government procurement of wheat for the “central pool” in surplus states and movement to deficit states for heavily subsidized distribution to the poor under an array of state level welfare schemes results in massive distortion of markets and creates incentives for illegal behavior at all levels of the supply chain, as does a highly regulated agricultural marketing system for wheat.
that protects unneeded intermediaries, reduces the efficiency of supply, raises costs through extra fees and taxes and prevents millers from procuring directly from nearby farmers.

The central government periodically reduces excess stocks through release for export or forcing poor quality wheat on to the domestic market while preventing importation of high quality wheat by millers. When the monsoons fail, the government may import wheat itself.

EXPANSION

Despite the heavy-handed role of the government and challenging business environment, the roller milling industry, which is entirely privately owned, has been steadily expanding during the last two decades of economic liberalization and rapid GDP growth in India. Millers estimate that refined flour consumption has been increasing at the rate of 7% to 8% per year against an average population increase of 2%. Leading equipment suppliers estimate there are 20 to 30 new roller mill plants being built every year.

The total number of roller mill stands installed may be as many as 15,000 to 20,000, estimates Manesh Lokin, a milling industry consultant, meaning average mill capacity of 100 to 150 tonnes per day. Many of the new milling plants being built or on order are as large as 300 tonnes per day, placing them among the biggest in the country.

This expansion notwithstanding, the roller milling industry remains fragmented with national milling groups having failed to emerge. Only a handful of companies have multiple milling plants and usually they are clustered in one region of a state.

On the other hand, by some estimates up to three quarters of India’s roller milling companies’ owners may have close or distant family ties. They are mostly members of the same Mawaris community of wealthy merchants, one branch of whom made their profession the construction and operation of industrial flour mills throughout the country. Brothers, cousins, nephews and uncles often cooperate to found mills in the same state or even district, or move onto new states where they perceive market opportunities. But their companies remain separate entities.

Indian roller millers traditionally produce a different product range than their counterparts in other countries. Only 55% of refined flour may be extracted for bread and biscuits. Millers also separate out fractions of fine semolina called “sooji” and used for pasta, and coarse semolina called “rawa” for traditional sweet foods like halwa, in addition to 10% atta, and finally 20% bran.
For the last 10 years, roller mill owners have been increasingly targeting the market for packaged branded atta. Traditionally, Indian families store wheat at home and take 10 to 15 kilograms (kg) at a time to chakkis for custom milling. In large cities, this practice has been slowly dying out as busy lifestyles and dual income families cause many to opt for packaged atta from shops and supermarkets. In the largest cities, only 10% to 30% of families still take wheat to chakkis. Often they are the more well-off ones, with domestic help available to perform this task.

Depending on the state, a quarter to three quarters of roller milling companies have also installed lines of mostly Indian-style horizontal stone mills in order to produce their own brands of atta in all package sizes. The mills make use of the cleaning sections and bagging lines of their roller mills.

Indian consumers prefer chakki atta over roller mill atta for its taste and texture. It is commonly thought that stone grinding breaks the starch sufficiently to release extra sweetness while burning it slightly to give added flavor to chapatis (flat bread cooked on a griddle) and nan (flat oven bread).

Some of the most successful roller milling companies are contracted co-packers of chakki atta for the handful of national brands. By far, the leader in this segment is the domestic consumer goods giant ITC, whose Aashirvaad brand sells 100,000 tonnes per month. Multinationals General Mills and Hindustan Unilever have also targeted this segment for a decade with their Pillsbury and Annapurna brands, respectively. Besieged by local low-price competitors unburdened by either the high overhead costs or heavy advertising budgets, both companies have retrenched. None of these market leaders own their own chakki mills, relying instead on the larger flour milling companies who invest in lines of large diameter horizontal stone mills to supply them. According to C.S. Saboo, managing director of Sunstone Engineering Industries, a major manufacturer of stone mills, there are over 50 roller milling companies that also dispose of production lines of 15 to 25 stone mills.

Overall growth in the commercial whole wheat atta segment has been driven by the entry of hundreds of new players. As most urban and many rural consumers switch to ready-made atta, new local commercial stone milling enterprises have sprung up, particularly in the areas of heavy wheat production and consumption, resulting in fierce price competition.

Barriers to entry are minimal. Just a handful of stone mills are sufficient to start up a commercial atta mill, preferably with a cleaning section and bagging and packaging lines. Wheat can be purchased by the truckload from traders at mandis or at a discount if it is illegally diverted from government distribution channels. A brand with colorful 5-kg, 10-kg or 25-kg packaging can be created easily. These small local companies produce a fresh product tailored to local preferences. Their packaged atta can be marketed directly to wholesalers and brokers who supply retail shops.

Just in the 200-km corridor between Mumbai and Pune, Saboo estimates there have been 50 new commercial chakki millers started up in recent years to supply the two largest cities in Maharashtra state.

A phenomenon that has also stimulated commercial atta production has been policy changes in several states to distribute subsidized vitamin- and mineral-fortified atta to ration card holders under their Public Distribution Systems, instead of bagged wheat which beneficiaries would normally take to local chakkis for custom milling but which is often illegally “leaked out” of distribution channels.

Both roller milling companies with or without chakki production and the new chakki atta companies have been able to qualify for production quotas under these fortified atta schemes, whereby they receive wheat for fee-based milling into fortified atta.

For example, in Rajasthan, where daily per capita wheat consumption of close to 300 grams is the highest of any state, the largest program for fortified atta now operates. Some 120 mills, including 70 roller milling companies, are officially grinding about 95,000 tonnes of atta monthly for distribution in 10-kg packages to most of 14.4 million ration card-holding families in all categories through a network...
of 25,000 Fair Price Shops. Production for government welfare schemes is the only business being done by up to one-third of the enterprises involved.

WHEAT PURCHASING

Further complicating the life of roller mill owners is the heavy involvement of both the central and state governments in wheat purchasing. Thanks to a highly developed irrigation infrastructure fed reliably by the Himalaya snowpack, the wealthy and highly mechanized farmers of Punjab and Haryana states in the north produce a combined annual wheat surplus of about 18 million tonnes, nearly all of which Food Corporation of India purchases at the central government Minimum Support Price (MSP) through a comprehensive network of agricultural trading centers (mandis). A farmer rarely has more than 10-km distance to go to sell his crop.

However, millers in the two states, who must pay MSP for wheat, face low price competition from neighboring Uttar Pradesh, where traders and small farmers sell wheat at well below the MSP, since the government wheat purchasing system is underdeveloped, with mandis often 50-km apart and farmers lacking means of transporting their grain.

The result is that millers in the Punjab and Haryana may run at a fraction of their capacity even as wheat flour...
arrives from Uttar Pradesh and huge amounts of wheat are poorly stored for up to four years by FCI all around them.

Haryana millers have also lost the New Delhi market due to state taxes on their wheat purchases and wheat flour production not faced by Uttar Pradesh millers.

Uttar Pradesh, which occupies most of the Ganges Plain, has the largest number of roller mills of any Indian state at around 200 enterprises, according the Roller Flour Mills Federation of India. New mills are being built every year. Wheat production is increasing as the state has experienced a delayed Green Revolution.

Despite the state’s population of 200 million, millers are able to export more and more surplus flour to other states, thanks in part to lower wheat prices due to the inability of the government to enforce the MSP.

Neighboring Bihar, India’s poorest state, is also experiencing a boom in its wheat industry, with yields rising and new mill construction doubling the number over the last five years, stimulated by a state government subsidy of 30% of the investment cost. Conversely, to the south, the state of Jharkand has seen a halving in the number of mills since it separated from Bihar in 2000. This is mainly due to a tax on wheat and wheat products, which is not collected in Bihar.

Millers in the states of southern India, where wheat is not grown, have traditionally relied on FCI for much of their wheat supply, since that agency’s mandate is to move wheat from surplus to deficit states. In Tamil Nadu, however, supply from FCI in recent years has become less reliable.

Consequently, many of the mills have shut down because they lacked the financial resources to buy whole train-loads of wheat from the north or import wheat from Australia and elsewhere when it is allowed.

The number of operating millers has fallen from 54 to 33 in just four years, according to the Tamil Nadu Roller Flour Mills Association.

As India’s wheat production increases and wheat processing enterprises grow in number and size, one wonders how much more rapidly the industry might evolve in efficiency and scale if the invisible hand of the market had freer play in both the supply chain and distribution channels.