



Contact Key Persons

Mr. Kirit Patel
(Chairman & Managing Director)

Mr. Ketul Patel
(CEO)
☎ +91-9825224912
✉ E-mail : ketul@miki.co.in

Mr. Denil Patel
(Managing Director)
☎ Mob. No.: +91-96015 85777
✉ E-mail : denil@miki.co.in

Miki Maize Milling Pvt. Ltd.

Reg. Office : 52,53,54,59, G.I.D.C.,
KANSARI - 388630. KHAMBHAT.

Dist : ANAND. (GUJ.) INDIA
(02698) 220170, 221404

☎ info@miki.co.in

🌐 Web Site : www.miki.co.in

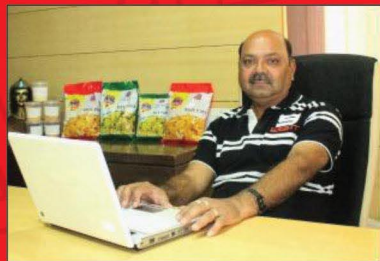
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Miki Maize Milling Pvt. Ltd.

OUR Italian Partner - OCRIM S.p.A





Shri Kirit P. Patel
(Chairman & Managing Director)



We take an opportunity to introduce our self as **Miki Maize Milling Pvt. Ltd.** a newly establishes Unit and Group Company of **MIKI FOOD PRODUCTS**, CAMBAY, GUJARAT. We have an ambitious plan to set up a most modern, maize milling unit in the state of GUJARAT. To take advantage of the future growth of maize industry, the company has decided to venture into a most modernize - imported plant at Dist: - ANAND in the state of GUJARAT in the vicinity of availability of main raw material i.e. Maize.

Indian market is creating value for the Indian Agro Industries, as major exporter and Best Qualitative Competitors; know each and every single global market are fascinated by Best Quality Indian products and its global demand. The growth of manufacturing industries is rising in double digits number, this year it has reach to the level of 13.8%. This is comparatively high; than any other Developing Countries.

We have also contributed in the global growth. This maize milling will be one of the largest capacity maize milling unit in India. Creating value for this project company is planning to setup an International standard for Food processing Unit. This marking will be one of the USP point for company's marketing Objective.



Vision Statement

Every single opportunity is step towards success; establishment of this unit is also and step for achieving highly qualitative global market. Every single product now a day is having numbers of usage. Especially MAIZE for its nutritious quality is used in mostly all kind of snack & cereal food product, oil products, bakery product, Feed Meal Industries. This creates value to our industry.

Mission Statement

"To consistently achieve high growth through Total Qualitative Approach, with the highest levels of productivity to meet the fusion between demand and supply and to achieve excellence by integrating people, products and practices" Establish highest bench mark for the Quality of Indian food Industries. Company wants to establish as one of the major maize processor company at International level; this project will put and fuel in the speedy car of the company. Company has plans to establish many more units within short span of time. These units will be establishing for capturing global market of maize snacks & cereal products around the world.

The Company





Company Background

Miki Maize Milling Pvt. Ltd. is newly established company, incorporated by MIKI FOOD PRODUCTS, CAMBAY. MIKI FOOD PRODUCTS was established in the year 1986. Mr. KIRIT PATEL a young commerce graduate started this business as a family partnership firm at GIDC Estate of a small town CAMBAY in Gujarat INDIA. The intention was to catch the growing market of food processing industries. Initially the company started the production of maize flakes and then gradually started making other Maize Products.

After a span of 29 years, today firm has more than 890 customer's distribution channel in all over India. The firm is enjoying market leadership in Maize Flakes in the state of Gujarat and proved to be best seller in Maize Poha with best Auto Processing system.

Every single company is creating value in our channel, this list includes name of a big corporate company's too Small retail outlays in small town. By the lapse of time company diversified itself into the production of MAIZE GRITS and other MAIZE PRODUCTS also. These products are highly demanded in national and international markets. However to achieve the best quality products, high standards of production are required, and hence the company is planning to advance the present standard of technology. The increasing demand survey shows that, the customer list must increase twice the existing in our customer list.

Business Objective

1. Mass production of all Products.
2. Maximum Utilizations of Resources.
3. Best Quality Products.
4. Best Reasonable Price.
5. Marketing National and International Market.



Description of Milling unit

- ❖ Company Introduction
- ❖ Plant layouts
- ❖ Detail Explanation of Plant
- ❖ Product obtain
- ❖ Laboratory Apparatus
- ❖ Compression Statement of Plant

Plant Introduction



OCRIM S.p.A Milling Engineering Company, is an **ITALYAN** Company, Incorporated: Since 1945. **Certificated by BVQI** (Bureau Veritas Quality International). Company is into manufacturing of various types of Milling Machinery, Storing and Conveying Plants for CEREALS, they are like.

- GRAIN Silos
- FLOUR Mills
- FEED Mills
- MAIZE Mills

Head office in Cremona – ITALY, Minneapolis – USA, Madrid – Espana, Reinach BL – Switzerland, Mosca District – CSI, Sao Paulo – Brasil, Blida – Algeria, Bucuresti – Romania, Tripoli – G.S.P.L.A.J., Beijing – P.R. China, Jakarta – Indonesia, Alger – Algerie., Riyadh – UAE

Company is having there Head Office in Cermona Italy, and having Plant and Service Units in other 12 different Part of the world.



With this company has installed various Capacity Plant of Flour Mills, Maize Mills, and Feed Mills. CAPACITY UP TO t/24h

100	O	1000	☀ ☀
200	OO	2000	☀ ☀ ☀ ☀
300	OOO		
400	OOOO		
500	☀		
600	O ☀		
700	OO ☀		
800	OOO ☀		
900	OOO ☀		

(‘O’ is for 100 t/1plant, ‘☀’ is for 500 t/1 plant)

Company has done its best for putting High Quality Projects world wide, they have also done few work in India, like supplied 2 FLOUR Mills, 1 FEED Mill, and Upgraded one MAIZE Mill project in Indore. They have not installed any MAIZE milling plant in India up till now. So we will be the first company to install project of Maize in India with this company.



Plant Layouts & Technical know how

We have gone through the introduction level of company, let's go for knowing about the different process and there flow chart and other technical strategy are historically based on two main guiding principles: applied research and development of new technologies, and improvement of current products. This policy has allowed Ocrim to maintain the competitive advantage on which is based its development.

Today, research and experimentation are mainly devoted to environmental and ecological areas, energy saving, management control and automation of the milling plants with great attention to the food industry's ever stricter hygiene standards.

New developments are thoroughly studied and experimented in the test department, and then they are tested on the pilot mill located in the company facilities, followed by further trial in an industrial operating plant

We are Offer the best milling system of producing high granulation ratio for the production of Cornflakes Grits with maximum achievement of lowest fat content below 0.5-0.7% and fiber of 0.3-0.4% which is comparatively half of any other milling process in other Company processing systems.





Type of Maize Mills

Basically, Ocrim can offer the maize processing plant with four different technologies for maize degermination system: they are as below;

1. Completely Dry, with impact rotor degerminators and gravity separators.
2. Wet, with conical rotor dehuskers and gravity separators.
3. Semi-wet degermination, with conical shape rotor for degerminators (dgc)
4. Mixed Degermination, using impact rotor degerminators, classifier aspirator, roller mills and sifters.

We are going for selecting the **SEMI – WET Degermination system** of Corn/Maize Milling. During our visit to Italy, they has taken us to visit different processing Milling in there place. We were taken to one Semi – wet processing Mill of 240 tons/per day. Running very smoothly from last 5 years, we were allowed to take trill of our Quality size of Grits, and see totally unit by spending whole day over there and seen the process. We come to an conclusion that if we will go for buying any machinery it will be this for our Units.

The most important aspect of this system is, it is one of the most flexible processing machinery we have seen up till know. This is new type of Degerminator DGC, which was there latest innovation for getting more production of Grits for Cereal Corn/Maize. Below we show the general Granulation Ratio if with out going for the production of any particular size of Grits.

General Granulation Ratio of DGC Semi - wet processing System form 100% CEREAL



THIS RATIO IS 2% + OR -



Products obtain from Plant

We are talking about the semi wet milling system, any product obtain in the plant is not always the best. We have only seen the Maize Grits obtain from Dry Milling system of any other company and even OCRIM to. But by this system the Granulation Ratio of Hominy & Coarse Grits increase





Granulation Result in semi- wet Process

BIG HOMINY



VERY COARSE



Q&C Logo

MEDIUM SIZE



FINE SIZE



Maize Flour



THIS PLANT WILL BE TAKE UNDER CERTIFICATION OF WORLD FOOD STANDARDS AND BEST INDIAN STANDARDS OF **ISO 22000**, **haccp** and **BRC CERTIFICATION**.
As this is the best up till now.

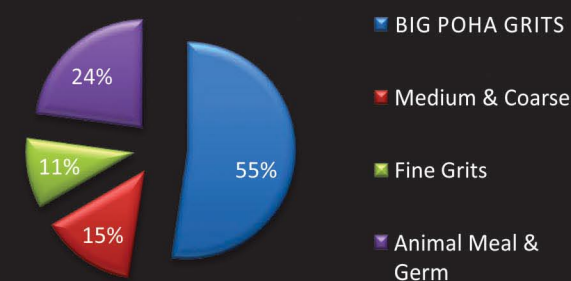
Our Products



Big Hominy grits



Ratio Showing % of Big Poha Grits from DGC



THIS RATIO IS 2% + OR –

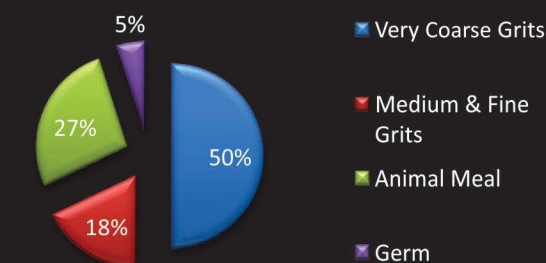
This Grits are special made for making POHA, it is an non-Fried/Roasted Flakes which are use as Snacks in India and also by all Major Namkeen companies as there major Raw material.

Packaging available in 25 kg , 50 kg & 1 Ton Jumbo bags
Granulation ranging between 8.00 micron - 5.5 microns

Very Coarse grits



Ratio Showing % of Very Coarse Grits from DGC



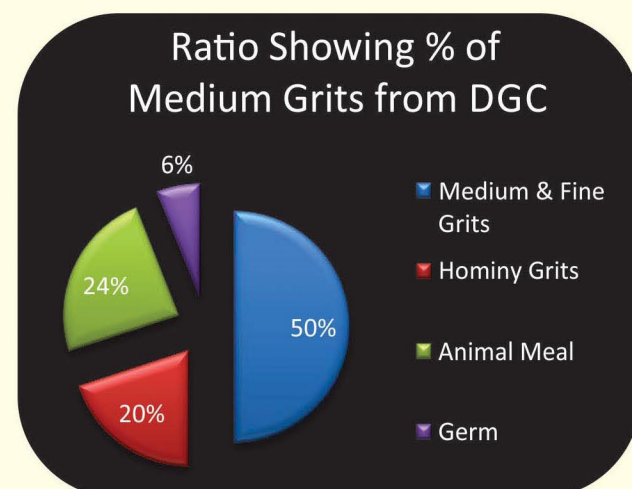
THIS RATIO IS 2% + OR –

This is one of the best Grits obtain from this Plant use for Manufacturing of best Quality Corn Flakes, from size to 6.3mm, to 3.35mm of high quality grits with very low Fat & Fiber.

Packaging available in 25 kg , 50 kg & 1 Ton Jumbo bags
Granulation ranging between 5.5 micron - 3.5 microns



Medium grits

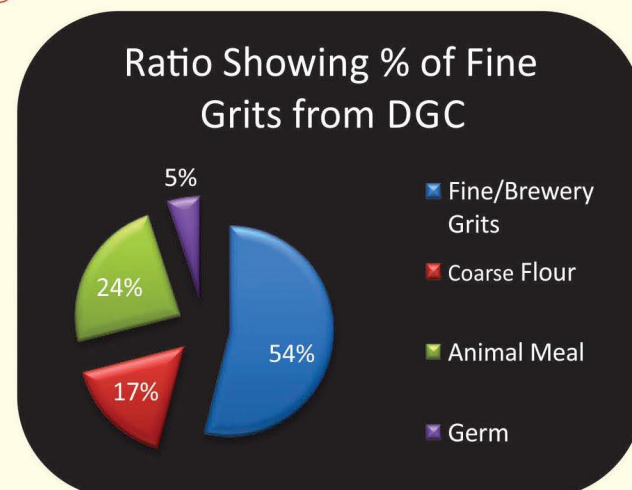


THIS RATIO IS 2% + OR –

This Size Grits are either use Directly or send back for processing of Semolina/Corn Grits, and flakes made from this are use for heavy Coated or Flavor flakes. Size obtain in this grade are 4mm to 2.5mm.

Packaging available in 25 kg , 50 kg & 1 Ton Jumbo bags
Granulation ranging between 3.5 micron - 2.0 microns

Fine grits



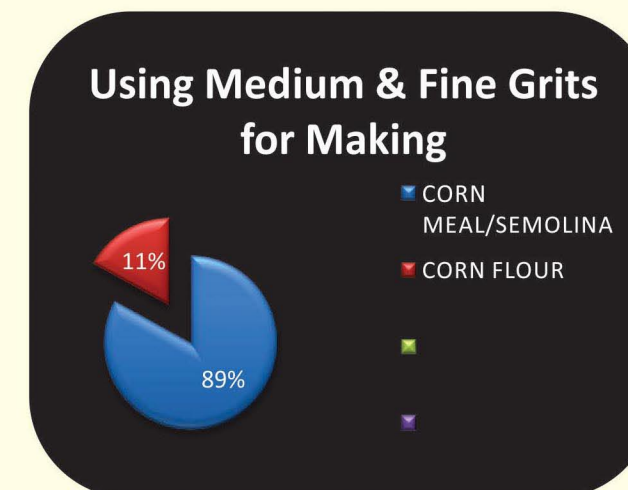
THIS RATIO IS 2% + OR –

This size of Grits are in very less in production and major are send for processing of Corn Meal/Semolina or Corn Flour, size in this Grits is 2.4mm to 1.8mm or less max to 1.5mm.

Packaging available in 25 kg , 50 kg & 1 Ton Jumbo bags
Granulation ranging between 2.5 micron - 1.0 microns



Corn meal/semolina

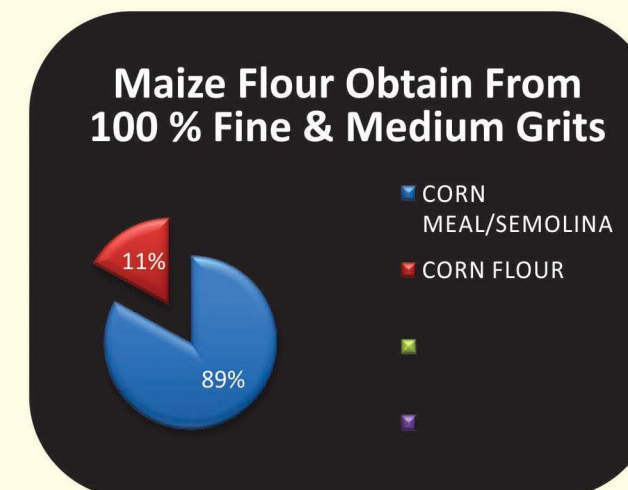


THIS RATIO IS 2% + OR –

Corn Semolina/Corn Meal is one of the highest use raw materials as worlds largest use grade for making any extruded Snacks of corn, by this process we can get best quality of pre-cooked Grits, also we can make all size according to client requirement or Grade available in world Stander.

Available Sizes: M-14, M-10, M-50, M-101, M-108, M(CS 101), M(U.S 20), and as per the customer requirement
Packaging available in 25kg & 50 kg bags.

Maize Flour



THIS RATIO IS 2% + OR –

Maize flour is obtain from Medium & Fine Grits.It is used to make tortila, Nachos etc.

Packaging available in 50 kg bags.



Maize Flakes/Maize Poha:

These flakes are non-roasted & Non fried products. It can be use as frying snack or as Namkeen by household people or namkeen manufacturers. As it is our mother products and highly selling brand in world. Also the most modern production line for maize poha in India.

Our key customers of Maize Poha in India:



Packaging available in 500 grm & 200 grm Pouches
Bulk Packaging: 5 kg (200 grm X 25 Pouches), 10 kg (500 grm X 20 Pouches), 15 kg (500 grm X 30 Pouches)



Rice Flakes/Rice Poha:

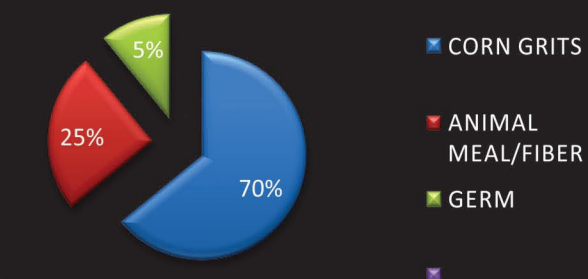
Rice Poha is a dehusked rice which is flattened into flat light dry flakes. These flakes of rice swell when added to liquid, whether hot or cold, as they absorb water, milk or any other liquids. This snack is highly nutritious.

Packaging available in 500 grm & 1 kg Pouches
Bulk Packaging:
20 kg Borry (500 grm X 40 Pouches)
20 kg Borry (1 kg X 20 Pouches)

Animal meal/fiber



ANIMAL MEAL OBTAIN FORM 100% CORN CEREAL



THIS RATIO IS 2% + OR -

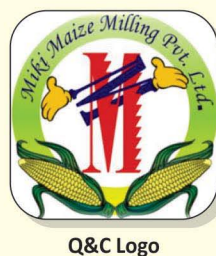
This is one of the grade which is obtain up to 25% from total process, so it is one of the important product for us to process, it is one of the best feed for Animal feeding as it content high Fiber, Fat, and good for increasing out of Milk.

Packaging available in 50 kg & 60 kg.

We have establish the new laboratory with highly advance lab equipments. We are conducting the all the necessary tests. Its lists are as stated below.

Laboratory Equipments:

- ❖ Water Bath Rectangular
- ❖ Hot Air Oven
- ❖ Hot Plates
- ❖ Muffle Furnace
- ❖ U.V. Inspection Cabinet
- ❖ Autoclave Vertical
- ❖ B.O.D Incubator
- ❖ Colony Counter Digital
- ❖ Incubator Bacteriological
- ❖ Ordinary Filter Paper
- ❖ Soxhlet Extraction
- ❖ Digital Balance
- ❖ PH Meter
- ❖ Digital Conductivity Meter
- ❖ Turbidity Meter
- ❖ Thermometer
- ❖ Crucible Tonge
- ❖ Weight Box
- ❖ Thimble



Test Procedures

SR. NO.	Parameter	Method used
1	PHYSICAL	
	Moisture, %by weight (Max)	AOAC-2000 922.06, 954.02
	Hectoliter Weight	AOAC
	Maximum cracks	Visual Check
	Retention over 5mm SS screen	ROTUP Shaker
	Particle Size:	ROTUP Shaker
	On # 3.5 (5.6 mm)	ROTUP Shaker
	On # 4 (4.75 mm)	ROTUP Shaker
	On # 5 (4.00 mm)	ROTUP Shaker
	On # 6 (3.35 mm)	ROTUP Shaker
	Thru # 6	ROTUP Shaker
	Damaged grits (bored)	Visual Check
	Dirty discolored Grits (one surface blackened)	Visual Check
	Unfinished grits-germ attached	Visual Check
	Unfinished grits-husk, skin attached	Visual Check
	Whole Kernels	Visual Check
	Virtuosity	AOAC
2	REFRECTION	
	Foreign Matter (Extraneous Matter)	Visual Check
	Other edible grains	Visual Check
	Damaged Grains	Visual Check
	Weevil led grains	Visual Check
3	CHEMICAL	
	Fat	AOAC-2000-923.03
	Total ash, dry basis	AOAC-2000-923.03
	Ash insoluble in Dil HCl , dry basis:	AOAC-2000-923.03
	Alcoholic Acidity(with 90% alcohol)	AOAC-2000-923.03
	Free Fatty Acid (as Oleic Acid)	AOAC-2000-923.03
	Uric acid	AOAC-1995 16 th edition
4	MICROBIAL	
	Yeast & Mold	AOAC-1995 16 th edition
	Total Plate Count	AOAC-1995 16 th edition
	Coliform	AOAC-1995 16 th edition
	Escherichia Coli	AOAC-1995 16 th edition
	Environmental monitoring (TPC and Y&M)	AOAC-1995 16 th edition

	Process Air monitoring(TPC and Y&M)	AOAC-1995 16 th edition
	Silo Swab (TPC and Y&M)	AOAC-1995 16 th edition
	Hand Swab (TPC and Y&M)	AOAC-1995 16 th edition
	Equipment Swab (TPC and Y&M)	AOAC-1995 16 th edition
5	Nutritional value Per 100 Gram	
	Energy Value (K Cal)	
	Protein	
	Carbohydrate	
	Vitamin B1	
	Vitamin B2	
	Vitamin B6	
	Niacin	
	Mineral	
6	Natural Toxin	
	Aflatoxin	AOAC
	Fumonisin	AOAC
7	Metal Contaminants	AOAC
	Arsenic	
	Copper	
	mercury	
	Lead	
	Zinc	
	Tin	
	Cadmium	
8	Pesticides Residues As per FSSAI Guideline	
9	Sensory	
	Odour	
	Appearance	



Manufacturing Process



Cleaning and Conditioning

Firstly, any ferrous items are removed, using powerful magnets. The maize then falls to a grain separator which removes coarse and fine impurities, with the lighter particles being removed utilising an aspiration channel.



Sand, silica and stones are then removed by the de-stoners. The maize is next fed into an automated moisture control unit. Here, the moisture content of the grain is automatically and continuously determined.

This, coupled together with the close observation of the throughput, allows for the accurate addition of water, to ensure that a constant level of moisture is attained.

Tempering

The conditioned maize is then allowed to stand in the tempering bins for between 6-12 hours primarily dependent on the hardness of the kernel. During this period, the water will penetrate the kernels homogeneously.

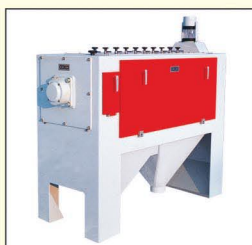
The tempered maize is next elevated to the second conditioning and de-germination process.



Secondary Conditioning/ De-germination

Water is added to soften the surface of the kernel to facilitate the removal of the husks.

This separation of the husk takes place in the de-germinators where the maize kernel is broken open and the germ loosened.



Turbo Sifting & Aspiration

Fines generated by the degerminators are removed by turbo sifters and the loosened husks are separated in aspiration channels.



Plansifters

The mixture of de-germed maize and loosened maize germs are pneumatically lifted and graded by size on plansifters.



Concentrators

A coarse separation between the maize germ and the de-germinated maize, takes place in three concentrators. This separation is achieved by exploiting the differing densities of the maize germ and the de-germinated maize.

This separation is essential to ensure low oil contents in products supplied to the food and brewing industries.



Sifting and Grinding

The maize fractions are carefully ground and sifted over a number of passages to ensure the granulation of the maize products adheres to customer specifications.

Purification

Oil contents are further reduced by purification of the maize products. The moisture of the finished products is controlled pneumatically, lifting the products in hot air by the use of thermo pneumatic lifts. On line routine samples are taken and analysed by the millers. Here the miller is looking to ensure that any deviation from optimum specifications is corrected by the appropriate mill adjustments.

Control Sifting

The finished products are passed over control sifters to ensure the removal of oversize or fine materials, prior to the transfer to the finished product bins.

Finished Products

All major products are then discharged into bulk vehicles, or if required by the customer, packed into 25kg, 50kg & 1ton jumbo bags multi-walled paper sacks.

Packaging Line

Finished products to be supplied in sacks are fed onto a fully automated packaging line. Sacks are accurately weighed and filled at a rate of 600 sacks per hour. Each sack is coded with date of manufacture, use by date, sequential tally number and product code if required, prior to metal detection of the filled sacks.

The sacks are then automatically palletised and wrapped in plastic, prior to storage in the warehouse.



Comparison statement of plant

This stage of project is very important for selecting right type of Milling system for obtaining best Quality of Grits; with most Flexible machinery system. This will help us to achieve any kind of demand in any size of MAIZE/CORN Grits in Current Growing world and also in Upcoming Future requirement of it. Below is the comparison with different size of grits with different types of process.

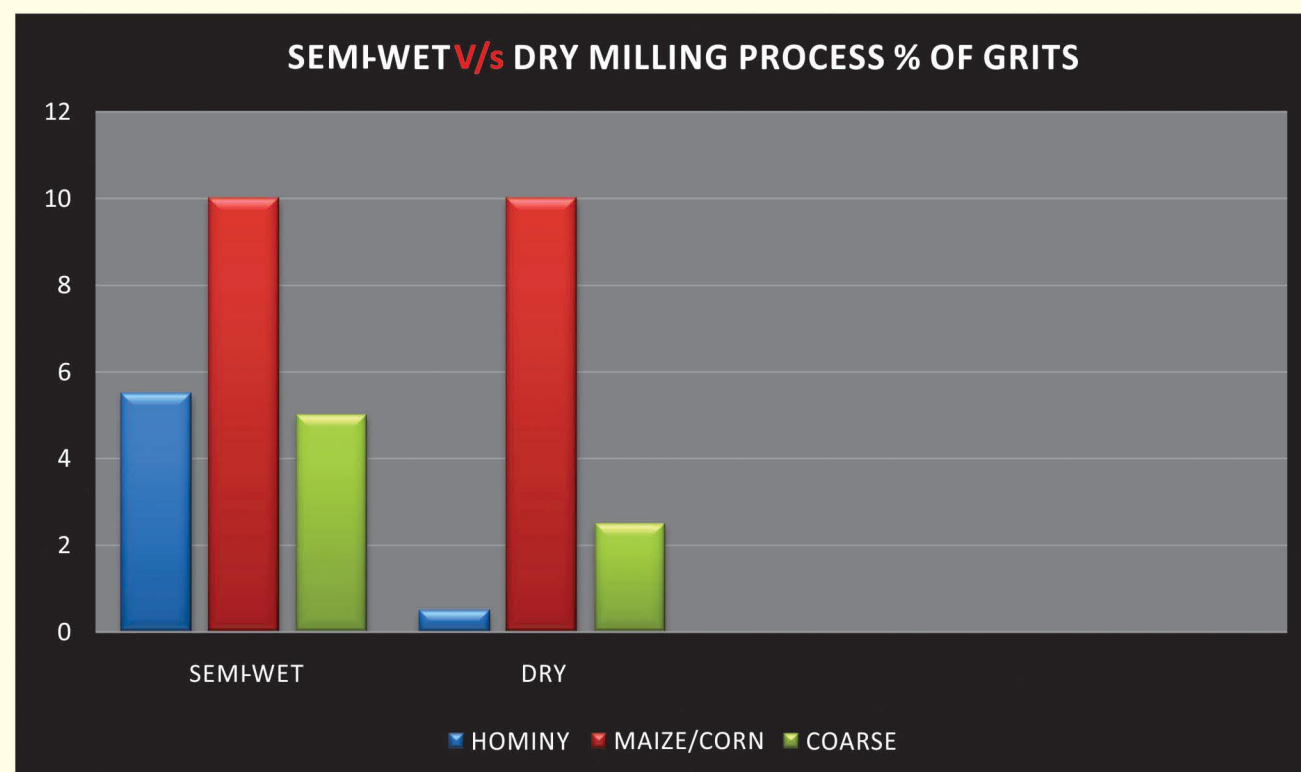
AS THE MAIN POINT OF THIS COMPARISON IS TO OBTAIN BEST TYPE OF HOMINY & CORASE GRITS, SO WE WILL POINT IT

✓ Semi-wet degermination, with conical shape rotor for degerminators (dgc)

V/s

❖ Completely Dry, with impact rotor degerminators and gravity separators.

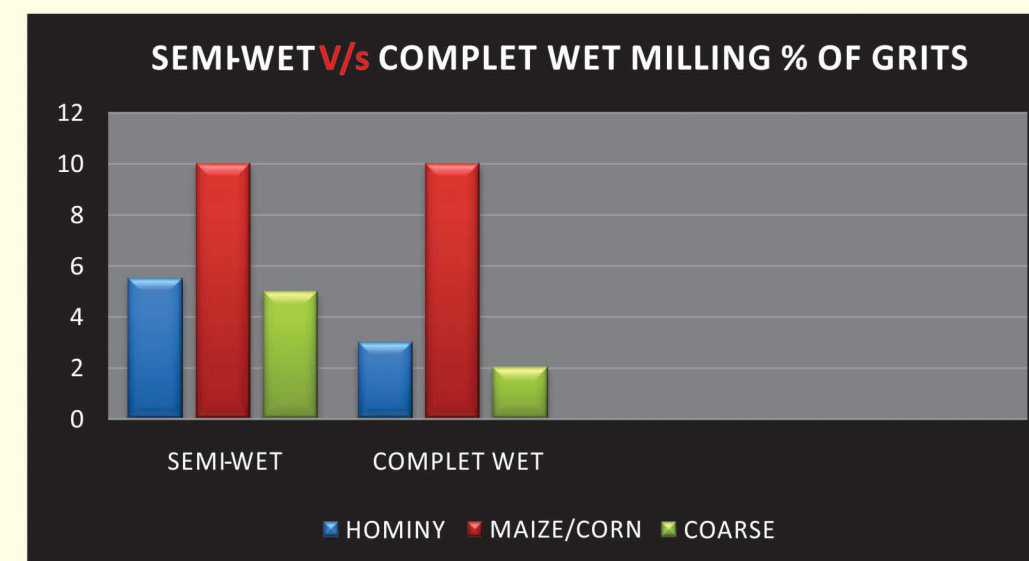
Points on left are % of 100; each step is of 20%.



✓ Semi-wet degermination, with conical shape rotor for degerminators (dgc)

V/s

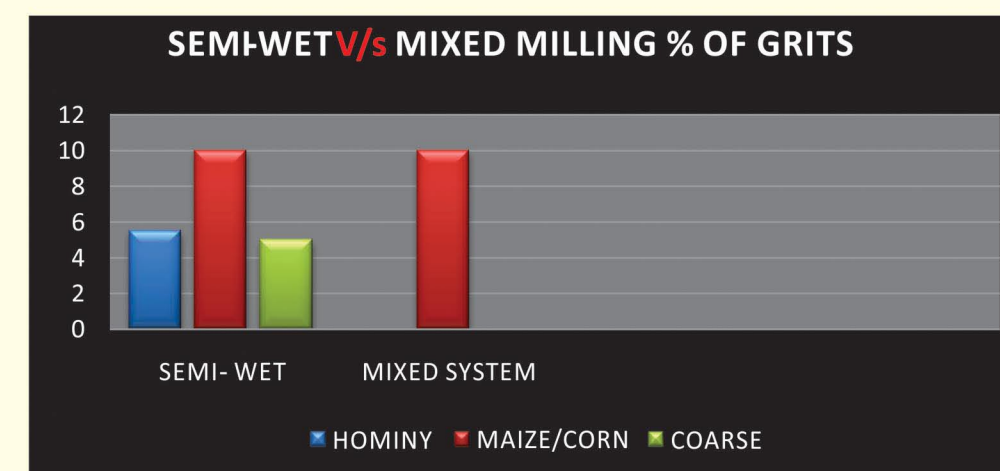
❖ Wet, with conical rotor dehuskers and gravity separators.



✓ Semi-wet degermination, with conical shape rotor for degerminators (dgc)

V/s

❖ Mixed Degermination, using impact rotor degerminators, classifier aspirator, roller mills and sifters.





Few other points which we will like compare from the point of production and Quality. The current suppliers for the Corn/Maize products are having there plant with limited processing systems, they can not able to change the system if they have demand for particular Quality of products or change that product to any other form.

Points for Comparison:

1. Quality of Grits

As we have explain the process, by this system the quality of grits will improve not only by achieving better quantity but also by cleaning ratio of Fibers & Fats content from Corn. Current suppliers are not having system for Double cleaning of grits after degerminator, which help us to provide better product without any Powder or waste particles along with Grits, which allow grits to cook better

2. High production level of Grits

As we have said that this Degerminator is specially design for production of more and more Grits, and our main point is to achieve maximum of Big Homny & Very Coarse Grits. Lets take an example we are looking for the production of big size of grits in this process we will achieve this by 50% of total input quantity of Corn.

3. High supplying Quantity

By this point we will like to stay that this process is better for achieving your demanded quantity of grits. As if we both are having 100 kg of milling every day. Your current supplier is having production capacity of grits is 20%, and our production capacity is 50%. For your demanded quantity lets take 100 kg of Very Coarse grits. Your current supplier will take 5 days for the production of your demand and we can produce that same quantity in 2 days. By this way we also increase your supply quantity.

4. Saving in cost of production

As we have explain you in above point that how we can achieve your demanded quantity with very big difference, we also save into various resources like Light, Labour, Raw material, Production Cost, control over Other points also.

5. Capacity for future expansion.

Designing of plant is done in such a way that in future in we want to increase our Capacity to 240 M. Tons per day we can achieve by only installing one single degerminator and gravity table, with out any interruption in production, an also can plan for supplying to other points of your Company.

6. Pre-Cooked Grits:

Any Product process with certain moisture & high thrust of Determination create effects of pre-cooking itself, as it is important for quality out put after final product & also control control micro biological contamination of the process. According to us its one of the most important point to highlight in our process as USP.



Analysis of food industry

Future Outlook and Trend

For any industries its growth and product survival in market is very important. The maize and its products are on the growth level of the product life cycle and there is still more to rise in the sky. The total production of maize in India is only 12 Lakh Million Tons which is negligible as compare to US market which is 242 Lakh Million Tons, and this is not the end there is still more to grow. With the success of these industries we have also grown with our market share in India.

Analyses of Competitors

There are major three companies in India manufacturing maize products apart from our company. The maximum capacity of any individual company is 90 M.T. per day. We propose to set up a plant having a capacity of 150 M.T. per day which will be the highest production capacity of any individual company in India.

Industrial Forecast

According to the experts any industries require beneficial market for the success of any industries. As we all know that every human and animal requires food for surviving. So scope of these industries is not going to end; yes but by the time it will change its value of usage in different consumption system. As we have mention in the previous passages that Maize for its nutritious value, is use in maximum Snack food products. According to the market consumption data, India needs to grow 85% Appro. More to match the American Market

