



PHOTOS: SANJAY BORADE

Samir: built a knowledge-driven company

Having made rapid strides in green chemicals and ethanol, Godavari Biorefineries' growth momentum is just starting

A green wave is unfolding across the world. Large and small companies are in the midst of upending their business models in a bid to reduce their impact on the environment. Climate change has ushered in a new urgency. That's the prime reason corporations are increasingly turning their attention to biodiversity and the prudent use of scarce resources. While 'green' is the new mantra, one important sector where the green wave is inevitable is chemicals.

Godavari Biorefineries Ltd (GBL) has been in the forefront of this. With its roster of 'green' products, it is one of the rare companies in India which has a range of bio-based products that are utilised in various industries including agro-chemicals, cosmetics and others.

This Indian company also makes global strides. It has been permitted by the United States Department of

Agriculture to use the 'US FDA-certified bio-based product' label for some of its products such as 1,3 butylene glycol and the bio-based ethyl acetate.

"We have built a really nice knowledge-driven company. The world is looking at a green charge. When we started on this journey many decades ago, there were many sceptics, including my father. But I told him we have to think about sustainability; even if the world does not reward us, we have to think on these lines. I am happy today that the world understands the need for sustainability, even if it has taken a while longer. GBL is doing its bit for the climate in the green chemical and ethanol arenas," says Samir Somaiya, CMD, GBL.

It's been its USP ever since the firm forged relations with chemicals, sugar and ethanol. Godavari Bio is now one of the largest integrated bio-refineries in India, one of the largest producers of

ethanol and a pioneer in manufacturing ethanol-based chemicals in India. According to a Frost & Sullivan report, it is also the largest manufacturer of MPO worldwide, one of only two manufacturers of natural 1,3 butylene glycol globally, the fourth largest manufacturer of ethyl acetate in India and the only company in India to produce bio ethyl acetate.

Godavari's products are bio-based chemicals, sugar, rectified ethanol and grades of alcohol, which are utilised in a range of industries. The Frost and Sullivan report points out that Godavari is the only company in India to have such a vast line of bio-based products.

The roots

This drive for uniqueness has its roots in the decades-old heritage of the Somaiya Group, which has a rich history of over eight decades in sugar and over 60 in chemicals. But matters regarding bio-chemicals took a turn for the better when Samir returned to India with a chemical engineering degree from the

US.

Nevertheless, even with theoretical studies in chemical laboratories, practical applications of chemical engineering in the real world are always a challenge. Samir knew he would need help. With the go-ahead from his father, who was then in charge of the business, he recruited Sangeeta Srivastava, a teacher in those days, and a chemist. Even so, the duo had to find ways in which they could use local resources, including sugarcane syrup and other by-products from their sugar-crushing units.

Both Samir and Sangeeta began to conduct research and development in bio-based chemicals. Their immediate task was to find ways to nurture all resources at hand and churn out 'green' chemicals and other bio-based products. Back then, another challenge came up when duty structures slipped. Nevertheless, Samir and his team took up the challenge and started testing new products and conducted extensive research.

"In those days, research and development was not exactly research but a quality-control department. Research and development was to innovate and think differently, and we set about systematically trying to see how we could innovate. We started the whole idea of renewable chemistry and creating research-oriented innovation," says Samir.

This ideology set Godavari Biorefineries apart from other ethanol and chemical manufacturers even as it steadily expanded capacities and added products to its portfolio. Today, it has a turnover of over ₹1,500 crore, with 65 per cent of revenues coming from biochemicals and ethanol. Its diversified product range not only comprises biochemicals and ethanol but includes



Khetan: achieving better margins

sugar, rectified spirits and other grades of alcohol, including a power unit for internal use.

Expanding operations

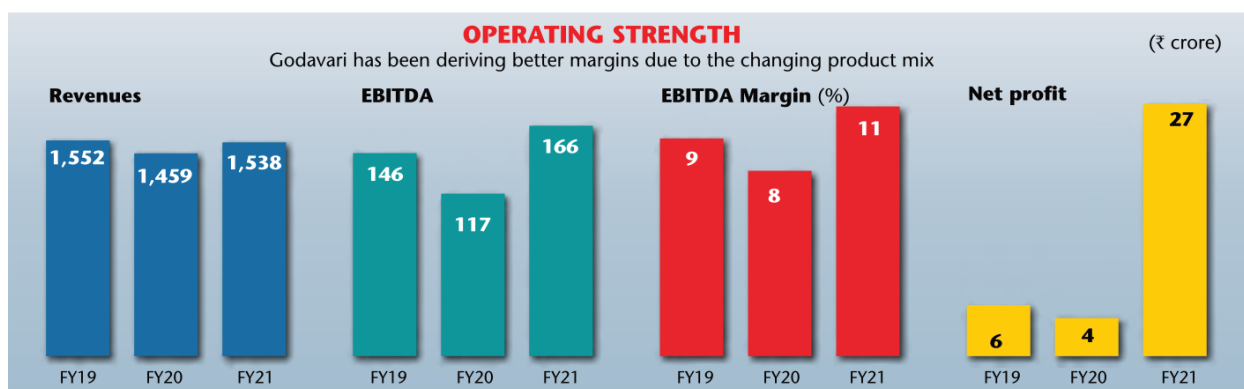
Godavari's facility in Sakarwadi, Maharashtra, is dedicated to producing biochemicals. The facility, with an installed capacity of 101,197.40 tonnes per annum (TPA), produces ethyl acetate, bio-ethyl acetate, MPO, 1,3 butylene glycol, crotonaldehyde, acetaldehyde, acetic acid, bio-acetic acid and paraldehyde.

Bio-based manufactured chemicals are used in various industries, including agrochemicals, cosmetics, flavours and fragrances, food, fuel, paints and coatings, and pharmaceuticals. Over the years, the firm has expanded its scale of operations and global footprint, raking

in marquee brands as customers.

Some of them include Biocon Ltd, Cipla Ltd, Deccan Fine Chemicals (India) Pvt Ltd, Dr Reddy's Laboratories, Hershey India, and Hindustan Coca-Cola Beverages, among others. The firm has customers in over 20 countries including Australia, China, France, Germany, Italy, Japan, and the US. With offices in Hoofddorp (Netherlands) and Princeton, New Jersey (US), Godavari has access to international markets, wherein it can cater to overseas demand, and this with an eye on product development.

"We have built a base for now, and we have a wonderful set of companies that we cater too, and our days are very exciting because we are always innovating and working on the next set of products," says Samir.



Godavari is also expanding its chemical production roster of products. It has received environmental clearance to expand its existing capacities to manufacture a wider range of specialty chemicals, including cellulose, MCC, xylitol, EVE, furfural, lignosulphonate and biocomposites. The market for green chemicals is growing, and the firm also has the ability to price its products at a premium, thanks to the green charge.

Sangeeta Srivastava, now executive director, points out that innovation and optimisation of resources have been the key pillars of the company's progress. "From the start we have focused on innovation and research. Our access to raw materials is central to our success and we will continue to commercialise new products, and achieve optimum utilisation of our resources."



Srivastava: focus on innovation

Ethanol growth

Godavari Biorefineries has been successful in utilising sugarcane as feedstock for a vast range of its products, including sugar and ethanol. It is one of the few companies in India to use sugarcane juice and syrup to produce ethanol, says the Frost and Sullivan report. Its long history of purchasing sugarcane and the support provided to farmers have built strong relations and goodwill among sugarcane growers.

Its unit in Sameerwadi is an integrated plant dedicated to manufacturing rectified spirits and ethanol, and sugar. The firm can crush about 15,000 tonnes per day (TCD) of sugarcane. Besides, it has installed capacity of 400 KLPD for rectified spirits. Also, the 380 KLPD for ethanol and power with an aggregated installed capacity of 49.56 MW as on 30 June, 2021 makes this facility one of the top 10 sugar complexes in India, and one of the largest producers of ethanol.

Over the years, the company has striven to improve the valorisation of sugarcane through developing downstream products and increasingly diverting sugarcane toward value-added products. It sells sugar and certain other food products under the 'Jivana' brand. Its rectified manufactured spirits are used internally and converted into various grades of ethanol, including fuel ethanol, pharma-grade ethanol and extra-neutral alcohol.

No doubt, for sourcing sugar, Godavari

has a long-standing relationship that goes a long way to ensure that supplies are high. "We believe that through our long history of purchasing sugarcane and continued support provided to farmers, we have established strong relationships and goodwill among farmers," says Balachandra Bakshi, executive director, who looks after farmer relations and holds several years of experience in the agricultural industry.

Among its several expansions within sugar, Godavari Biorefineries is also planning to manufacture cellulose and its derivatives by utilising bagasse. It also intends to leverage its expertise and capabilities to manufacture other products across the value chain.

Further, with the government's emphasis on increasing ethanol blending for fuel, the company is on an expansion spree. It aims to improve the valorisation of sugarcane and increase its capacity to manufacture ethanol from 380 KLPD (as at 30 June, 2021) to

570 KLPD in the coming quarters. It has received the requisite environmental clearances.

Not content with this, it is evaluating prospects of manufacturing second-generation ethanol and energy to further increase feedstock for its distillery. All these expansions will provide it with more resources and strengthen its competitive edge in chemicals and sugar-based ethanol.

It started ethanol manufacturing in the early 60s. "We had a strong advantage in India, and we expanded ethanol capacity considering that sugarcane surplus is an asset in the country. It did not happen for a while, but it's a good thing that ethanol blending became a reality and we rapidly expanded our ethanol facilities," says Samir.

Godavari extensively uses sugarcane feedstock at its Sameerwadi plant to manufacture sugar, rectified spirits and ethanol. Besides, the pressmud is utilised to produce fertilisers under the 'Bhumilabh' brand.

Industry drivers

Godavari's business growth seems assured. With the Indian government set to cut pollution and reduce its oil import bill, and plans to gradually increase ethanol blending in petroleum products, such a change is being billed as the largest in the global sugar market since Europe's sugar reforms.

India's ethanol programme will help end the government's sugar export subsidies and erase exportable sugar volumes from the country. At present, the sugar sector produces almost six tonnes of surplus sugar every year, which can be diverted to produce 700 crore litres of ethanol (of the total 1,000 crore litres required); the balance can be produced from excess grains.

The government's allowing ethanol through grain-based distilleries as well offers an additional stream of revenue to some sugar companies which are willing to expand. At present, the excess sugar produced is exported. This surplus can be reduced by two million tonnes.

By 2023, India is planning to have zero surplus sugar through the diversion to ethanol (with two MT every year till 2023). With a considerable increase in ethanol sales and the demand-supply balance evening out, integrated

GOOD REVENUE MIX

Godavari's revenue mix is well-diversified even as the company gains from ethanol, distillery and bio-chemicals			
	2019	2020	2021
Sugar	29.15	26	10.66
Ethanol	11.94	16.83	21.28
Bio-based chemicals	39.25	31.22	34.96
Distillery	16.8	22.38	29.66
Power	2.16	2.84	2.63
Unallocated	0.7	0.73	0.81

Figures in % of consolidated revenue from operations



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sugar mills are expected to increase cash flows.

With ethanol blending by oil-marketing companies (OMCs) picking up pace and with the Government's stance on increasing the blending target to 20 per cent, supported by remunerative ethanol pricing and incentive schemes to build capacities, the prospects of the sugar sector are looking brighter. All this is projected to expand the Indian ethanol market from \$3.6 billion in 2020 to \$8.9 billion by 2025, a 19.8 per cent CAGR, says the Frost and Sullivan report.

In its other vertical, growth in domestic biochemicals is expected to further pick up momentum. India has bio-mass potential, which could easily be relied upon to fulfil much of its energy needs. An estimated 50 million metric tonnes (MMT) of liquid fuels are consumed annually in India, but with the actual bio-mass potential and its full utilisation, India is capable of generating much of that every year.

Besides the growing awareness of the ill-effects of certain chemicals on humans and the environment, a growing trend is being seen in the shift to green chemicals and sustainable chemistries. These are bio-degradable products which significantly reduce the environmental impact when applied.

Biochemicals is an emerging focus among manufacturing industries. They minimise pollution at the molecular level. Growing policy measures

to encourage green chemistry are also leading to market growth. If the demand for biochemicals is not met, global companies will also look at the China Plus One strategy to meet the sourcing needs for chemicals. That places Indian chemical companies like Godavari on a strong footing.

Verdant days ahead

Godavari Bio-refineries' expansion plans in ethanol blending should help it capitalise on these growth opportunities in the industry. The company is planning to tap the capital markets to raise funds to help it expand its sugarcane crushing capacities, as well as retire debt. It has earmarked about ₹45 crore towards the expansion of its crushing facility at Sameerwadi. Besides, it will repay debt of ₹214 crore. All in all, Godavari Biorefineries plans to raise about ₹370 crore for expansion and debt reduction through a fresh issue.

As a part of its growth plan, it will continue to diversify its product range, and increase production of higher-margin products in the value chain. In the past two years, revenues have been stagnant due to the impact of Covid-19. However, due to greater operating efficiencies and higher-margin products, its net profit jumped more than threefold from ₹5.5 crore in FY19 to ₹27.1 crore in FY21. The operating margin improved from 9.33 to 10.72 per cent.

"The flexibility in our plants for blending helps us adapt to changing

market dynamics and optimise our product mix to optimise realisations and achieve better margins," says Naresh Khetan, chief financial officer, GBL.

When it comes to research, Godavari Biorefineries has three research and development facilities at its manufacturing plants, and one in Navi Mumbai. It expended ₹15 crore toward research in FY21. As of 30 June, 2021, it had 38 research scientists at its R&D centres to identify and develop potential marketable products after carrying out thorough studies, including product specifications, potential costs and timelines.

Not only that: it is collaborating with Dr Sendurai Mani in developing small molecule inhibitors for cancer, and obtained approval in March 2021 to undertake, over two years, clinical trials in relation to a proposed drug.

"It is thought that India can never create a new molecule in medical research. Over the last 10-12 years, we actually found a molecule, and have received permission for clinical trials very soon for triple-negative breast cancer," concludes Samir, whose passion and commitment for innovation and research have been one of the hallmarks of growth for GBL. If the research, expansion and strategies for growth pay off, it seems that for GBL, the sky is the limit.

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