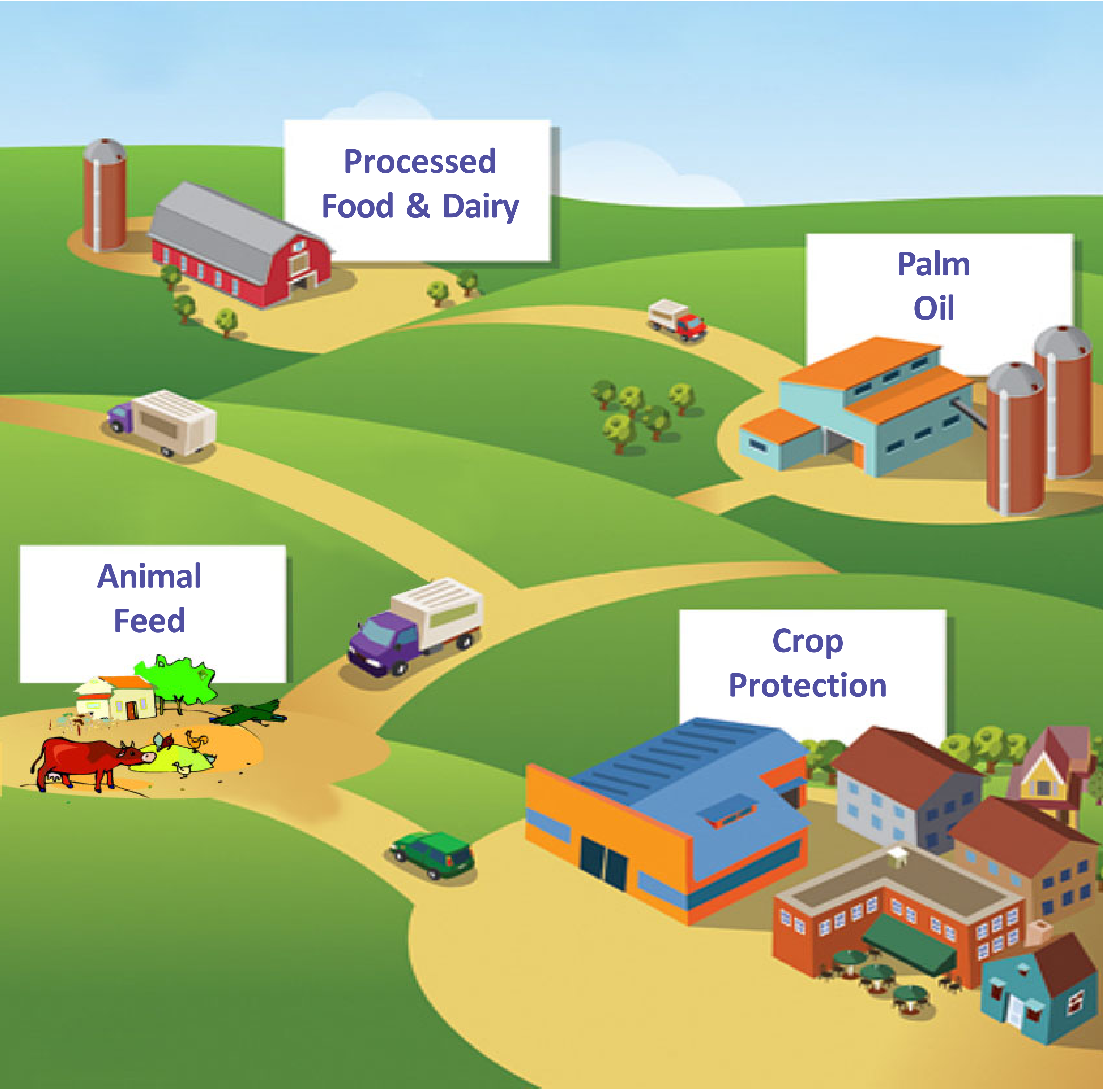
Initiating Coverage | 1 April 2019
Sector: Agriculture

Godrej Agrovet



Agri behemoth in the making

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Godrej Agrovet

BSE Sensex	S&P CNX
38,673	11,624

CMP: INR509 **TP: INR610 (+20%)** **Buy**

Stock Info

Bloomberg	GOAGRO IN
Equity Shares (m)	192
M.Cap.(INRb)/(USDb)	97.8 / 1.4
52-Week Range (INR)	737 / 462
1, 6, 12 Rel. Per (%)	-1/-7/-37
12M Avg Val (INR M)	88
Free float (%)	31.2

Financial Snapshot (INR b)

Y/E Mar	FY19E	FY20E	FY21E
Sales	58.6	64.9	73.0
EBITDA	4.7	5.9	7.0
NP	2.4	3.0	3.7
EPS (INR)	12.6	15.7	19.0
EBITDA Gr. (%)	5.2	26.0	18.6
EPS Gr. (%)	11.8	24.0	21.5
RoE (%)	16.4	18.3	19.6
RoCE (%)	14.8	16.8	18.3
EV/ EBITDA (x)	22.3	17.7	14.9
P/E (x)	40.3	32.5	26.7

Shareholding pattern (%)

As On	Dec-18	Sep-18	Dec-17
Promoter	68.8	68.8	68.8
DII	2.9	3.4	17.2
FII	3.0	2.6	3.4
Others	25.3	25.3	10.7

FII Includes depository receipts

Godrej Agrovet

Agri behemoth in the making

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Please click here for Video Link

Godrej Agrovet (GOAGRO) is a diversified agri company with pan-India presence and operations spread across five business verticals. It comprises (i) the crop protection business, where it is a dominant player in plant growth regulators and triazole chemistry (via its subsidiary Astec Life Science), (ii) palm oil, where it enjoys leadership in India, (iii) animal feed- amongst the top player in cattle feed , (iv) dairy and (v) processed foods.

Agri behemoth in the making

Riding on the back of crop protection and the palm oil business

- **The diverse nature of GOAGRO's various businesses de-risks its operations, enabling it to focus on growth, optimize capital efficiency and to maintain its competitive advantage. It undertakes dedicated R&D in existing products, focusing on improving yields and process efficiencies. Strength of the '*Godrej*' brand and its association with trust, quality and reliability help the company across segments, particularly in those involving direct sales to retail consumers.**
- **In crop protection, GOAGRO is focusing on multiple product launches with category expansion; it has guided for ~10 launches over the next 3-5 years with a potential of INR10b. Growth in Astec will be driven by capacity expansion; GOAGRO plans to invest INR350-400m every year over the next 3-4 years in triazole chemistry. At a fixed asset turnover of 2-2.5x, it should aid in revenue CAGR of 15% over FY18-21.**
- **Demand for palm oil in India is not a constraint as >90% of the domestic demand is imported. To augment the supply of fruits for palm oil manufacturing, the government has introduced a program to promote its cultivation. GOAGRO — India's largest palm oil processor is well placed to capitalize on this opportunity; we expect revenue/ EBITDA CAGR of 11%/ 12% over FY18-21.**
- **Low compound feed penetration, decline in fodder availability and increasing crossbred cattle should drive industry-wide growth for cattle feed. GOAGRO, a leading player in cattle feed is at the forefront to tap this opportunity with the Indian poultry feed industry expected to grow at 14.9% CAGR over FY17-20. But, pure feed players like GOAGRO face stiff competition from integrators. We expect the animal feed segment to deliver revenue/EBITDA CAGR of 14%/12% over FY18-21.**
- **We expect consolidated revenue/ EBITDA CAGR (FY18-21) of 12%/ 16% to INR73b/ INR7.0b. We initiate coverage on GOAGRO with Buy rating and SOTP-based target price of INR610.**

Crop Protection business aided by multiple pillars of strength

GOAGRO is the market leader in the domestic plant growth regulators (PGR) segment and one of the leading players in the cotton herbicide segment. Also, through its subsidiary — Astec, the company has a strong foothold in the triazole group of fungicides, selling in India and 24 other countries. Both GOAGRO's crop protection business and Astec are well placed to scale up from hereon. In the standalone business, the company guided for ~10 launches over the next 3-5 years together with a potential of INR10b, with 2-3 of these expected by Mar'20. Further, given the abundant demand for triazole chemistry and Astec's utilization touching 95%, the company plans to invest INR350-400m every year over the next

3-4 years for capacity expansion in triazole chemistry. This would ensure its consolidated crop protection revenue will grow at CAGR of 15% over FY18-21E.

Palm oil – a steady cash generating business

India has a huge opportunity in the palm oil business as it imports more than 90% of its demand due to supply constraint of fresh fruit brunches (FFBs). Oil palm plantation in India is regulated and GOAGRO has participated in the government's Oil Palm Development Program (OPDP) for accessing FFB produce from farmers in designated areas, thus being an asset-light model. As at FY17, only 0.3m hectares are under palm oil cultivation with scope for an additional 2m hectares. GOAGRO being the largest palm oil manufacturer in India (35% market share) is well placed to capitalize on this opportunity as the government increases the area under cultivation. We expect the segment to deliver revenue CAGR of 11% over FY18-21 to INR8,046m by FY21 on account of increasing availability of FFBs (on higher mix of mature plants), increase in oil plantation area (currently has access to ~66k hectares of land and plans to add 2-2.5k hectares per year), and improvement in the Oil Extraction Ratio (OER). EBITDA margin is likely to expand by 60bp to 22.3% on operating leverage and improvement in OER.

Animal Feed — strong growth prospect

The overall animal feed industry is expected to grow at ~14% CAGR over FY17-20 to INR1,065b by FY20 (as per CRISIL). **Cattle feed** — low compound feed penetration, declining availability of fodder and increased crossbreeding of cows and buffaloes offers huge opportunity for GOAGRO (being one of the leading players). Also, scaling up its dairy segment should provide an additional revenue stream for selling its feed to farmers (over the long term). **Poultry feed —** expect overall poultry feed to grow at 14.9% CAGR over FY17-20 (65% is organized due to high penetration of compound feed), but pure feed players like GOAGRO are facing stiff competition from integrators who supply feed directly to farmers. Thus, scaling up its poultry processing segment is critical to compete with integrators. Addressing this, the company has already entered into the live bird market, which constitutes 98% of the poultry market. In 9MFY19, segment revenue grew 17% YoY to INR22,147m backed by volume growth of 15.7%, but segment EBIT declined 23.1% YoY to INR824m due to an increase in raw material prices. However, from FY20, we expect margins to start inching up on the price hike taken by the company in 4QFY19 and several R&D initiatives, which should help in cost reduction over the next 2-3 years. Hence, we expect this segment to clock in revenue CAGR of 14% over FY18-21 to INR37.8b (EBITDA margin to remain flat over FY18-21).

Initiating coverage with a Buy rating

We expect consolidated revenue/ EBITDA CAGR (FY18-21) of 12%/16% to INR73b/ INR7b. We expect GOAGRO to generate strong CFO of INR12b over FY19-21 and RoCE should increase to 18.3% by FY21 from 14.7% in FY18. We ascribe (i) 18x EV/EBITDA multiple to crop protection (avg. RoCE of 35.6% over FY13-18) and 16x to the oil palm business segment, given GOAGRO's strong positioning and growth prospects (avg. RoCE of 30.1% over FY13-18), (ii) 14x EV/EBITDA to animal feed segment considering its strong RoCE profile (avg. RoCE of 51.3% over FY15-18), and (iii) 15x EV/EBITDA to dairy and the processed food business, considering its strong growth prospects. Our SOTP-based target price stands at INR610 implying 20% upside. We initiate coverage on GOAGRO with a **Buy** rating.

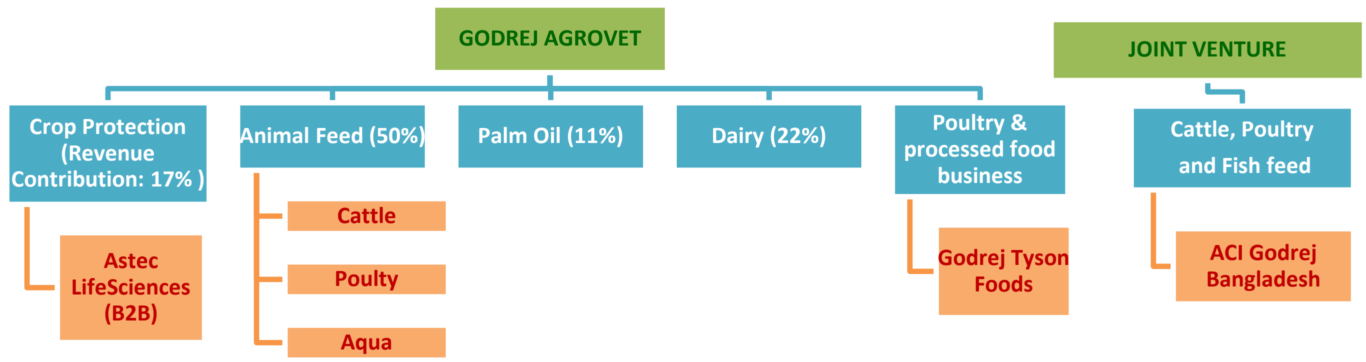
Company overview

GOAGRO is a diversified agri-business company with operations across five verticals: (a) animal feed, (b) crop protection, (c) oil palm, (d) dairy, and (e) poultry and processed foods. The company is focused on improving productivity of farmers by innovative products and services that increase crop and livestock yields.

GOAGRO operates in the following five verticals:

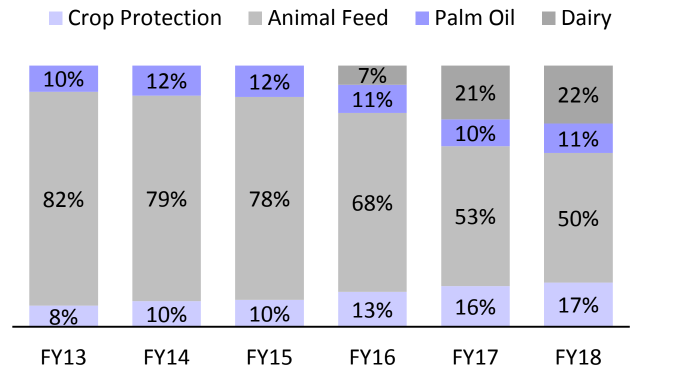
1. **Crop Protection:** Manufactures wide range of products catering to the entire crop lifecycle, including plant growth regulators, organic manures, generic agrochemicals and specialized herbicides.
2. **Animal Feed:** GOAGRO is one of the largest organized players in the compound animal feed market in India. Its product portfolio comprises cattle feed, poultry feed (broiler and layer), aqua feed (fish and shrimp) and specialty feed.
3. **Palm Oil:** It produces a range of palm plantation products such as crude palm oil, crude palm kernel oil and palm kernel cake.
4. **Dairy:** GOAGRO operates the dairy business through its subsidiary — Creamline Dairy Products Limited, selling milk and milk-based products under the 'Jersey' brand, mainly in Southern India.
5. **Poultry and Processed foods:** In 2008, GOAGRO entered into a JV with US-based Tyson Foods to manufacture and market processed poultry and vegetarian products through 'Real Good Chicken' and 'Yummiez' brands. Now, the company has acquired majority stake in the JV.

Exhibit 1: Diversified across business segments



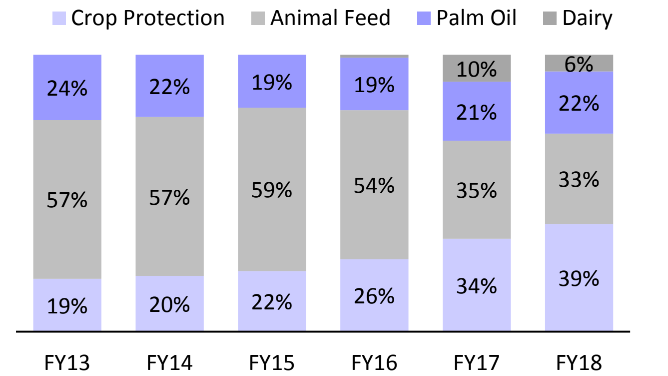
Source: Company, MOSL

Exhibit 2: Revenue mix trend



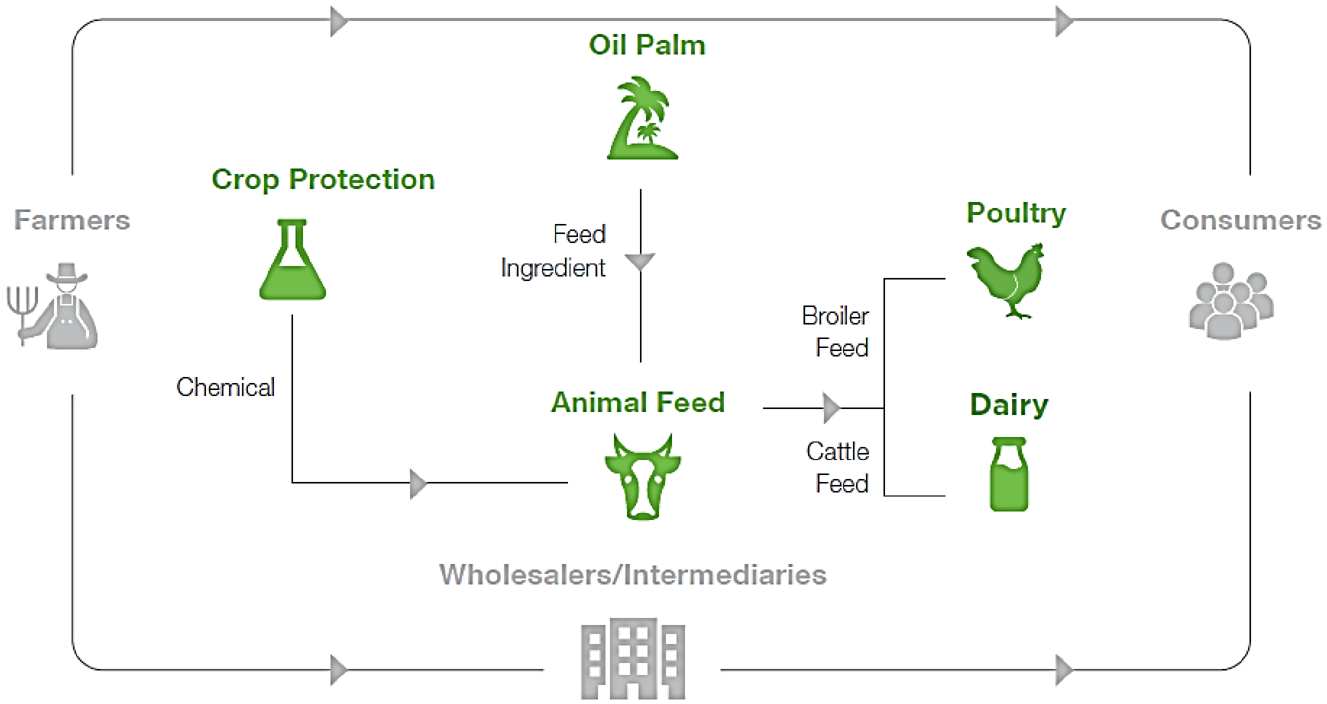
Source: Company, MOSL

Exhibit 3: EBITDA mix trend



Source: Company, MOSL

Exhibit 4: Inter-linkages between business verticals



Source: Company, MOSL

Exhibit 5: Snapshot of GOAGRO's businesses

Particulars	Crop Protection	Animal Feeds	Palm Oil	Dairy
Revenue (INRm) - FY18	8,818	25,760	5,854	11,577
Revenue Contribution (%)	17%	50%	11%	22%
EBITDA (INRm) - FY18 *	2,215	1,856	1,270	342
EBITDA Contribution (%)	39%	33%	22%	6%
EBITDA Margin (%)	25.1%	7.2%	21.7%	3.0%
FY13-18				
Revenue Growth	31.8%	2.8%	16.3%	106.0%**
EBITDA Growth	34.5%	4.3%	15.6%	197.4%**
Avg. RoCE	35.6%	51.3% ***	30.1%	2.5% **
FY18-21				
Revenue Growth	15.2%	13.7%	11.2%	5.8%
EBITDA Growth	15.6%	12.4%	12.2%	26.1%
Industry				
Market Size (INRb)	296 (FY17)	720 (FY17)	483 (FY17)	6,911 (FY16)
Unorganized Players (%)	NA	Poultry – 15-20% Cattle- 88% Aqua – 28%	NA	74%
Market Share of GOAGRO (%)	2.6%	Poultry – 2.4% Cattle- 7.4%	35%	0.04%
Key raw materials	Not available	Maize, Soybean, Rice Oil Extraction, DORB	GOAGRO purchases Fresh Fruit Bunches from farmers	Milk

* Unallocated expenses has not been taken into account in EBITDA calculation | ** Over FY15-18

*** Excluded FY13 & FY14 as company outsourced its manufacturing activity

Source: Company, Industry, MOSL

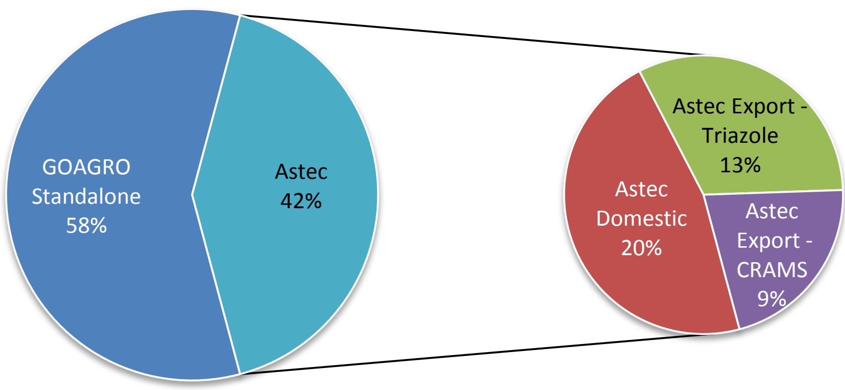
Crop protection biz aided by multiple pillars of strength

Capacity expansion in Astec and new launches to drive growth

- **The company has guided for ~10 product launches over the next 3-5 years in its standalone crop protection business with a potential of INR10b. 2-3 out of the 10 new products should hit the market by Mar'20.**
- **GOAGRO's subsidiary, Astec LifeSciences, plans to invest INR350-400m every year to expand capacity in triazole chemistry over the next 3-4 years. This should aid revenue CAGR of 15% over FY18-21 for Astec.**
- **Backward integration of intermediates is expected to result in ~200bp margin expansion over FY18-21 in Astec.**

GOAGRO has a strong presence in the crop protection market with plant growth regulators, organic manures, generic agrochemicals and specialized herbicides. It also has a subsidiary — Astec LifeSciences, which manufactures and sells AI (Active Ingredient), bulk and formulations, and intermediate products with a focus on the triazole group of fungicides across India and 24 other countries. As of FY18, GOAGRO's standalone business contributed 58% to the overall crop protection revenue while Astec contributed the remaining 42%.

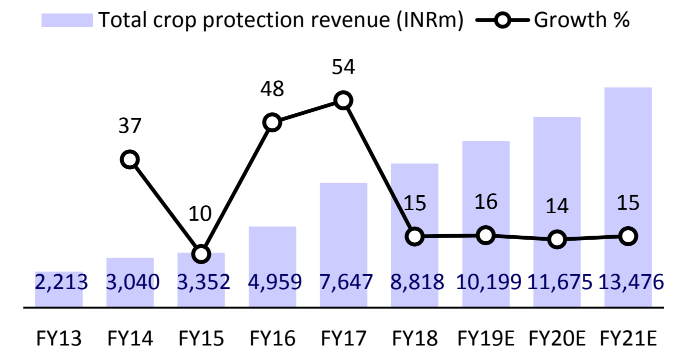
Exhibit 6: Mix of consolidated crop protection revenue (FY18)



Source: Company, MOSL

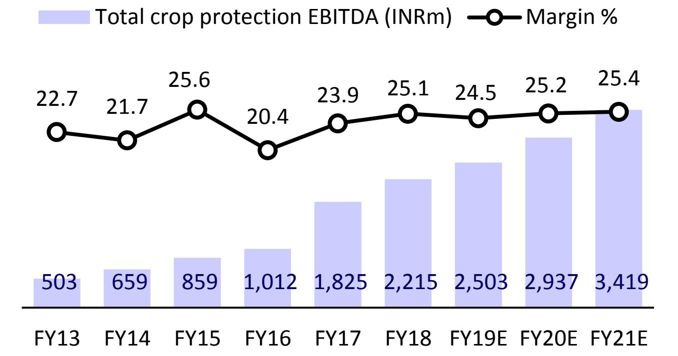
Due to the complimentary nature of GOAGRO and Astec's operations, a scale-up in operations can be achieved. In India, GOAGRO sells its entire range of products to retail consumers via 6,000 distributors and 20,000 retailers; Astec, on the other hand, caters to institutional customers with focus on triazole chemistry. Hence, GOAGRO can leverage Astec's AIs and develop formulations for the retail market. We expect GOAGRO's consolidated crop protection revenue to grow at a CAGR of 15% over FY18-21E.

Exhibit 7: Consolidated crop protection revenue to post 15% CAGR over FY18-21E



Source: Company, MOSL

Exhibit 8: Consolidated crop protection margins to expand 30bp over FY18-21E



Source: Company, MOSL

New launches, category expansion in standalone crop protection business

The company is the market leader in plant growth regulators' (PGR) segment, with *Vipul, Double, Combine, Bountee* and *Zymegold* as the key products. The overall market size of the PGR segment in India is INR12-13b, growing at 3-4% CAGR. The company hopes to maintain its fast pace of growth over the next three years, beating industry growth rate due to new combination formulations. But, it is challenging to consistently expand within a segment that is growing at a slow rate. Hence, GOAGRO expects to diversify with new launches in existing segments and through category expansion. The company has guided product launches with a potential of INR10b over the next 3-5 years.

GOAGRO is one of the leading players in cotton herbicide with its product *Hitweed*, a 9(3) product patented until 2022 and catering to plants with broad leaves. Plans are afoot to launch a superior version of *Hitweed* to continue enjoying the strong market share even after its patent expiry. Besides, the company plans to launch products catering to tea, chilli and cotton, and also to expand into an all-together new category. Overall, its launch pipeline over the next 3-5 years has ~10 products; of this 2-3 are expected to hit the market by Mar'20.

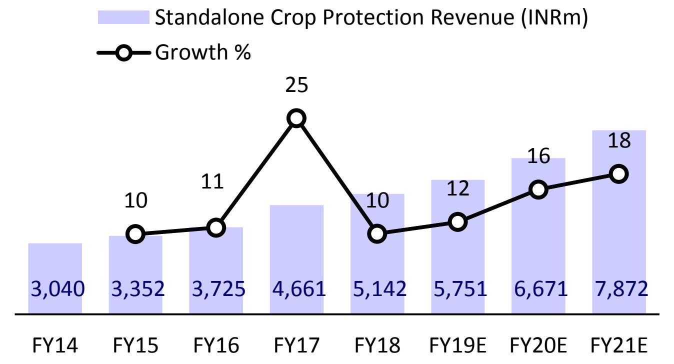
Exhibit 9: The following new products were launched in 1HFY19:

Type	Product
Herbicides	❖ Reflex, Pixel
Insecticides	❖ Annova, Beleaf, Czaar Green, Fimecta, Dartus
Fungicides	❖ Oute

Source: Company, MOSL

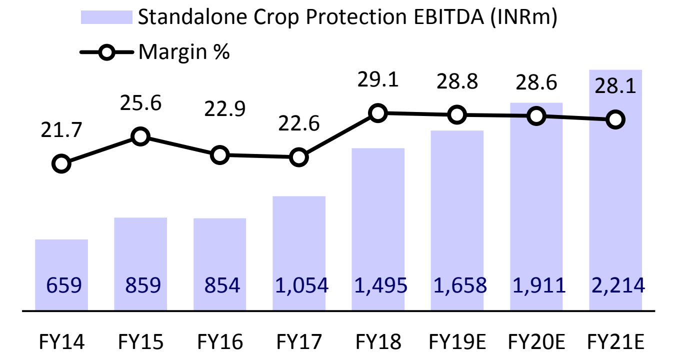
We believe multiple product launches from GOAGRO's crop protection business should translate into standalone revenue CAGR of 15% over FY18-21.

Exhibit 10: Standalone crop protection business to post revenue CAGR of 15% over FY18-21E



Source: Company, MOSL

Exhibit 11: Margins in standalone crop protection business to contract by 100bp over FY18-21E



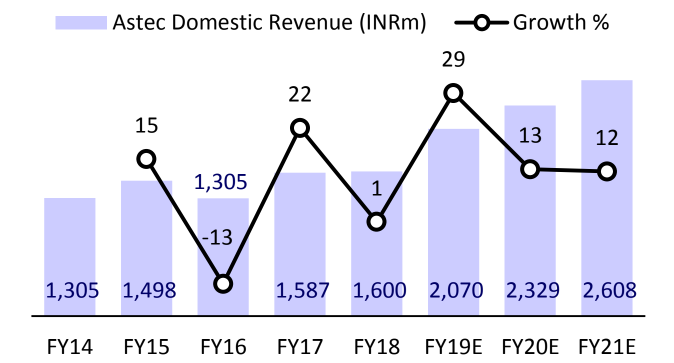
Source: Company, MOSL

Astec — Steady triazole chemistry to lead the way

Astec is one of the established names in the manufacture and sale of triazole chemistry. As of FY18, 50% of Astec's business (B2B sale of technical and bulk triazole chemistry) is in the domestic market, while the remaining 50% is the exports business (60% triazole chemistry and 40% contract manufacturing (CRAMS)). Collectively, 80% of Astec's overall business (as of FY18) is primarily into triazoles.

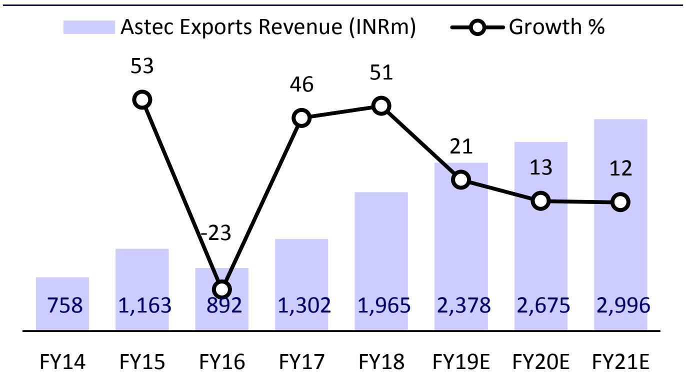
At present, Astec is involved with four triazoles — tropiconazole, hexaconazole, depaconazole and disiliconazole, which are used in solo triazole products or combination products. But, even if the industry introduces new triazole combinations, the company is capable of venturing into them given its expertise and strong technical knowledge in triazoles.

Exhibit 12: Astec's domestic revenue to grow at 18% CAGR over FY18-21E



Source: Company, MOSL

Exhibit 13: Astec's export revenues to grow at 15% CAGR over FY18-21E



Source: Company, MOSL

Exhibit 14: Astec's product portfolio

Technicals	Formulations	Combination Fungicides	Intermediates
Tebuconazole technical	Tebuconazole	Difenoconazole 13.9% + Propiconazole 13.9% EC	2,4 – dichloro acetophenone
Propiconazole technical	Propiconazole	Difenoconazole 15% + Propiconazole 15% EC	4 – phenyl 1- butane
Hexaconazole technical	Hexaconazole	Difenoconazole 25% + Propiconazole 25%	2 – chloro 4 – fluoro acetophenone
Difenoconazole technical	Difenoconazole	Cyproconazole 8% + Propiconazole 25%	4 – methyl pthalic anhydride
Metalaxyl technical	Metalaxyl	Metalaxyl 8% + Mancozeb 64%	Thiophene 2 – ethanol
Tricyclazole technical	Tricyclazole		
Imazethapyr technical	Imazethapyr		
Lambda cyhalothrin	Lambda cyhalothrin		

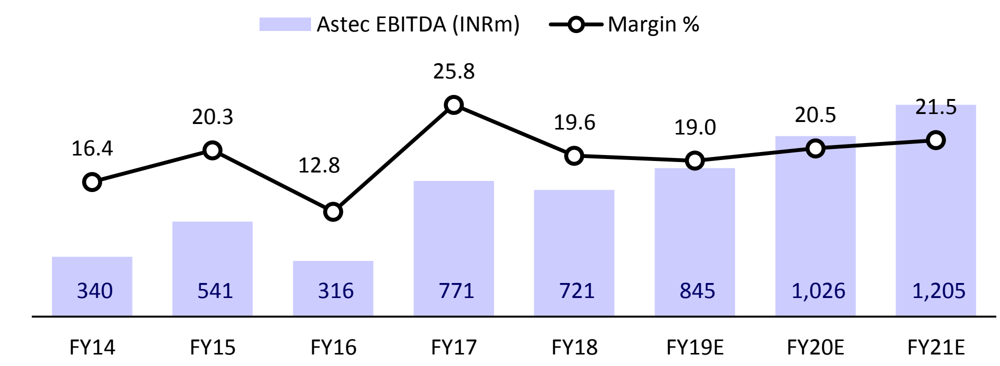
Source: Company, MOSL

Astec's strengths

Backward integration makes production cost efficient: By far, Astec is a superior player in terms of operational efficiency at low cost of production due to its fully backward integrated capabilities. Therefore, it's a preferred supplier for many global giants like Sumitomo, Adama and Nufarm; and for players in domestic market like Adama, Syngenta, Dhanuka, Bharat Rasayan and Insecticides India.

Due to backward integration, it has reduced its dependency on intermediates supply from China significantly (from 35-40% of raw material cost to 20-25% now). Most recently, it has backward integrated another set of intermediates at a capex of INR400m, which should aid in margin expansion of ~200bp over a period of 2-3 years.

Exhibit 15: Astec's margins to expand by 190bp over FY18-21E

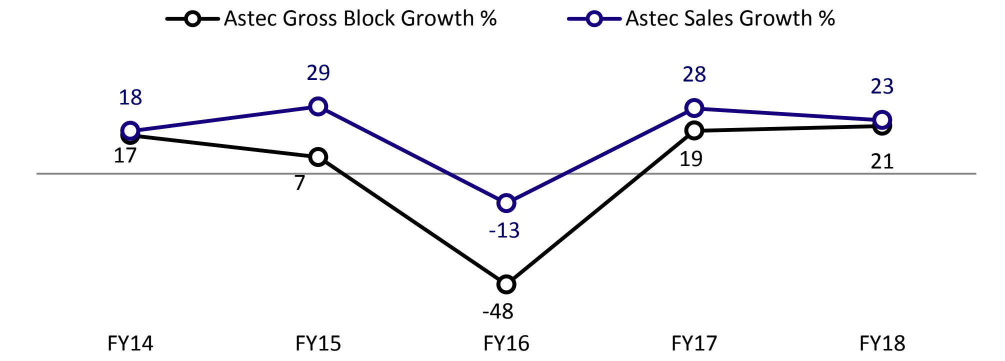


Source: Company, MOSL

Investments in capacities to propel growth in triazole

Currently, Astec's capacities have hit 95% utilization mark and more capex is required to push volumes higher. With land and basic infrastructure in place, the company plans to invest INR350-400m every year over the next 3-4 years for capacity expansion focused towards triazole chemistry. Given that a typical capex entails a total asset turnover of 1.3x and a fixed asset turnover of 2-2.5x, the revenue CAGR of 15%+ for the next 3-4 years is achievable. We expect revenue CAGR of 15% over FY18-21.

Exhibit 16: Sales growth movement vis-à-vis gross block movement



Source: Company, MOSL

Vast opportunity in CRAMS; growth to be lumpy but strong

Currently, the CRAMS business forms ~20% of Astec's total revenue. As it is highly dependent on contracts/tie-ups with clients, the business is expected to witness gradual expansion.

As it is witnessing traction in terms of enquiries from global giants like Bayer, Syngenta and many Japanese companies; it has kept basic infrastructure for capacity expansion ready to jump on the bandwagon as and when the order book demands. The revenue share of CRAMS business is expected to increase significantly in the next 4-5 years from 20% currently. However, growth is not likely to be consistent on a YoY basis as it is highly dependent on contract initiation and execution. But, the CRAMS business is expected to grow faster than the triazole business over the next five years, increasing its share in overall revenue.

Palm oil - a steady cash generating segment

Largest palm oil producer in India

- **Global palm oil consumption for 2017 stood at 65MMT with India accounting for ~14% share. India has huge opportunity in the palm oil business as it imports more than 90% of its demand due to supply constraint of FFBs.**
- **For FY18-21, we expect the palm oil segment's revenue CAGR at 11% to INR8,046m, which is due to increased availability of FFBs (as higher maturity plants start yielding fruits), increase in coverage area and improvement in OER.**
- **We expect palm oil's EBITDA margins to expand by 60bp over FY18-21 to 22.3% on account of operating leverage, improvement in the OER directly flowing to EBITDA, and any improvement in palm oil prices.**

Demand not a constraint as >90% of domestic demand is imported

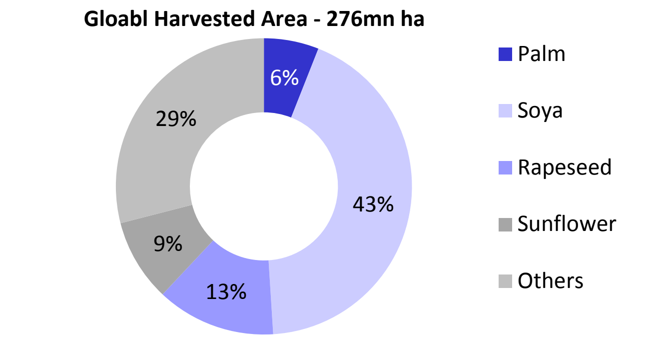
In the global supply of vegetable oils, palm oil accounts for the highest share at 30%, despite having a meager 6% share in the global harvest area. It is a critical ingredient in most consumer products from soaps and shampoos to margarine and chocolates, cosmetics and even biofuels. Palm oil has good consumer acceptance as a cooking medium too as it is cheaper than most other vegetable oils.

Exhibit 17: Uses of palm oil

Food Products	Non Food Products
Cooking Oil, Dough fat, Vanaspati	❖ Bio fuel and Bio lubricants
Vegetable Ghee	❖ Cosmetic products/Aromatherapy
Margarine	❖ Pharmaceuticals products
Salad Oil	❖ Toiletries, Detergents including soaps & soap Blends
Chocolate/Ice-cream/ Frying fats, Specialty fats for coatings	❖ Esters
Cocoa Butter substitutes	❖ Oleo chemicals, Fatty acids & Fatty Alcohols

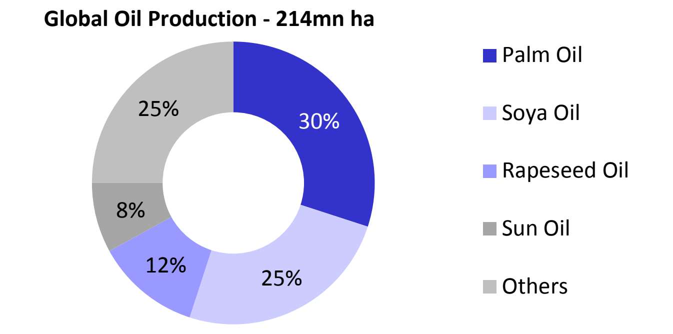
Source: Industry, MOSL

Exhibit 18: Palm plantation occupies 6% of harvested area…



Source: Advance Enzyme Presentation , MOSL

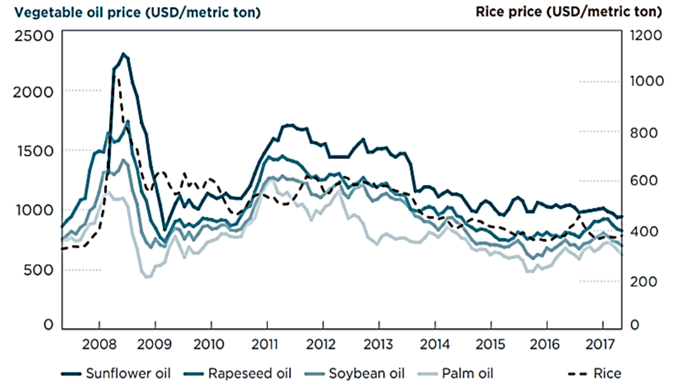
Exhibit 19: …but forms 30% of total vegetable oil production



Source: Advance Enzyme Presentation, MOSL

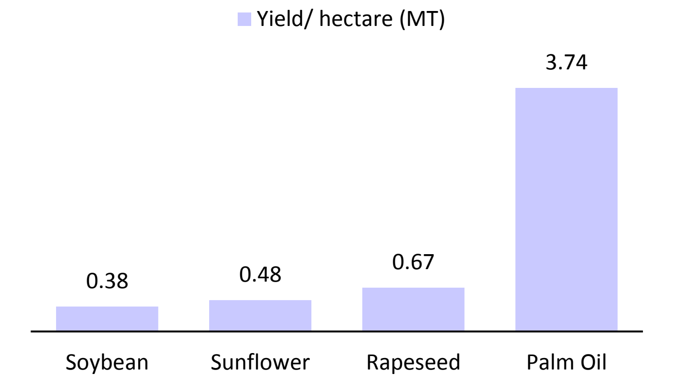
Palm gives the highest oil yield of 4-6 tons per hectare/year with a global average of 3.74 tons per hectare/year, which no other oilseed crop produces. In India, farmers have obtained 6-8 tons per hectare/year, highest being 10 tons per hectare/year.

Exhibit 20: Palm oil prices are lower amongst other vegetable oils…



Source: Greenpalm.org , MOSL

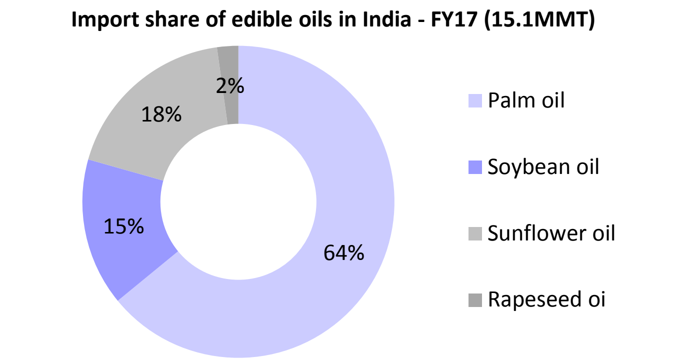
Exhibit 21: …and has higher yields/hectare



Source: Advance Enzyme Presentation, MOSL

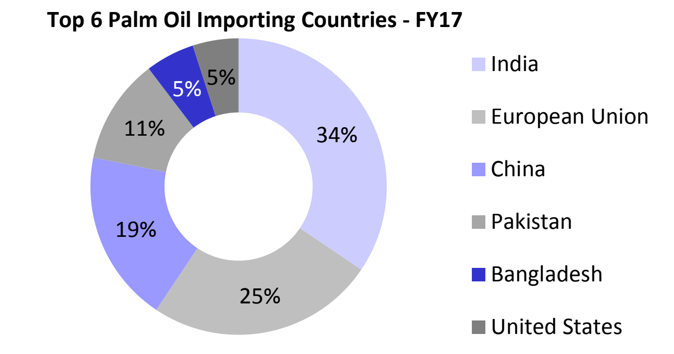
In the last 15 years, global demand for oils and fats (vegetable oil) has doubled from 92MMT in FY2000 to 180MMT in FY15. The four major vegetable oils — palm (30%), soya bean (25%), rape seed and mustard (12%), and sunflower (8%) contributed 75% to the total world oil production. Of the total palm oil production of 62.4MMT (FY17), ~85% of the palm oil is produced by Indonesia and Malaysia. In 2017, global palm oil consumption stood at 65MMT. India's share in total palm oil consumption stood at 14% at ~9.3MMT, with over 90% being met by imports.

Exhibit 22: Palm oil has a 64% share in edible oil imports in India



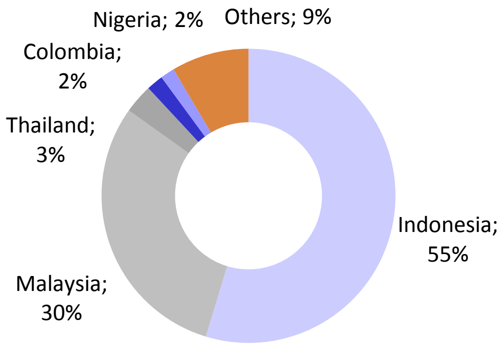
Source: CARE, MOSL

Exhibit 23: India is the largest palm oil importer



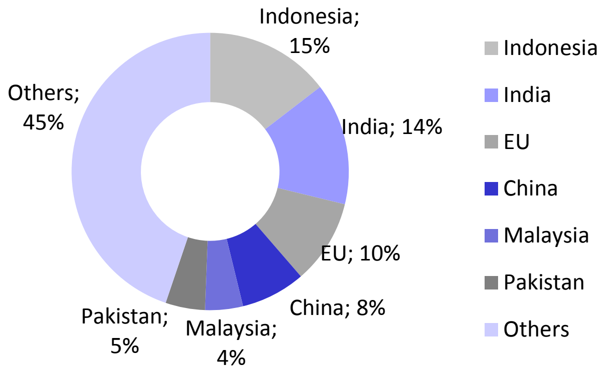
Source: USDA Estimates (Aug 2017), MCX, MOSL

Exhibit 24: Top-2 countries contribute 85% to the global palm oil production (62.2MMT – FY17)



Source: USDA Estimates (Aug 2017), MCX, MOSL

Exhibit 25: India has a 14% market share in global palm oil consumption (65MMT – 2017)



Source: USDA Estimates (Aug 2017), MCX, MOSL

Government's push to encourage oil palm plantation

More than 90% of India's palm oil requirement is imported from Indonesia and Malaysia. Thus, in order to encourage oil palm plantation in India, the government launched the Oil Palm Development Program (OPDP) during 1991-92 to promote the culture of palm oil plantation.

In India, ~1.9m hectares can be brought under oil palm cultivation, of which ~24% is located in Andhra Pradesh (AP). In 2QFY19, GOAGRO commenced operations of its new palm oil processing plant located in AP with 0.24MMT processing capacity (capex of INR1,800m), thereby taking its total processing capacity to 1.04MMT. Thus, the new plant will be able to process arrival of additional FFBs over the next 3-4 years.

Exhibit 26: Additional area of 2.0m Hectare can be brought under palm oil cultivation

Current Area (m Hectare)	Potential area for cultivation (m Hectare)	Total
0.3 *	2.0	2.3

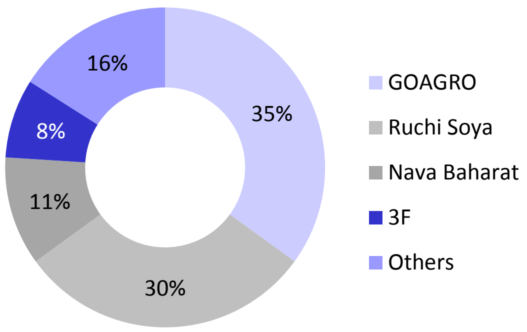
* as on FY17 Source: Company, MOSL

Exhibit 27: AP has the highest potential area to be brought under cultivation

States	Potential Area Identified (m hectares)	% share
Andhra Pradesh (AP)	**0.47**	**24**
Gujarat	0.26	13
Karnataka	0.26	13
Tamil Nadu	0.21	11
Bihar	0.20	10
Maharashtra	0.18	9
Meghalaya	0.05	3
Mizoram	0.06	3
Others	0.25	13
Total	**1.93**	**100**

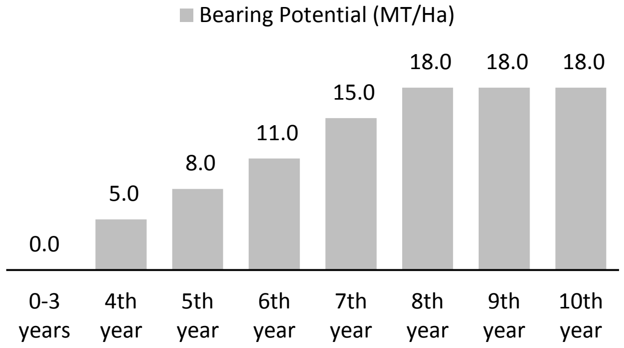
* as on FY17 Source: Company, MOSL

Exhibit 28: GOAGRO has the highest market share of 35% in palm oil production



Source: Company, MOSL

Exhibit 29: Yield if the oil palm plant increases progressively

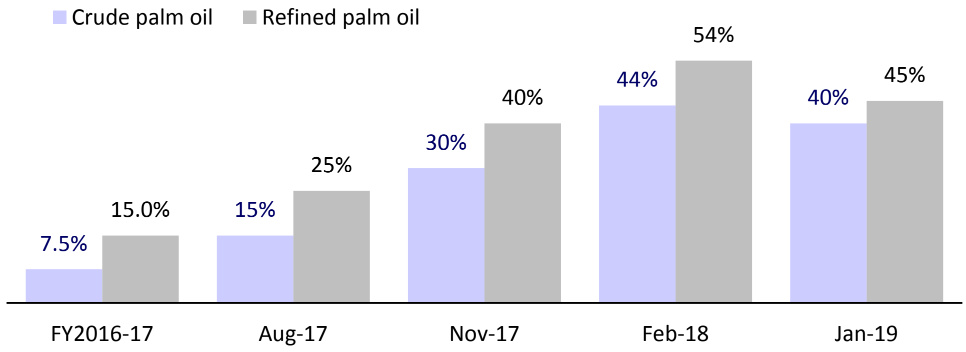


Source: NMOOP, MOSL

Import duty of 40% on crude palm oil

An increase in palm oil plantation led to subdued palm oil prices globally. To support the domestic palm oil industry, the Indian government increased import duty on crude palm oil to 44% in Feb'18, but later reduced it to 40% in Jan'19.

Exhibit 30: Import duty providing support amidst declining global palm oil prices



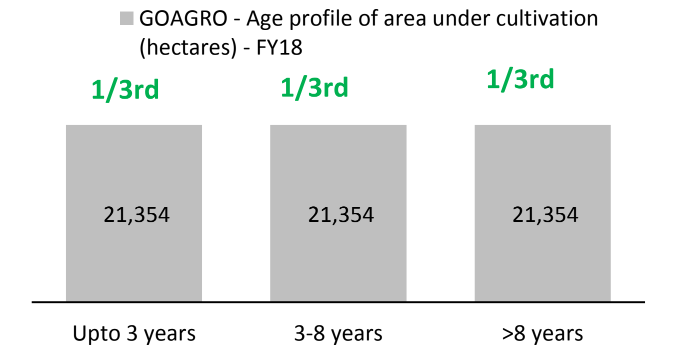
Source: CRISIL, MOSL

Higher fruit availability to drive revenues

We expect revenues to grow at 11% CAGR over FY18-21 to INR8,046m mainly on account of an increase in availability of FFBs (as higher maturity plants start yielding fruits), increase in coverage area and improvement in the OER.

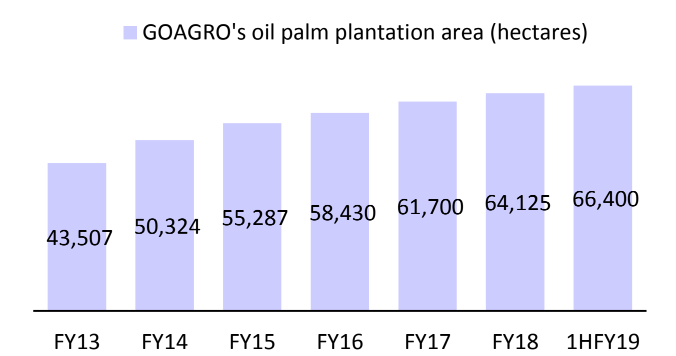
- Well distributed maturity profile of plants to ensure higher fruit availability with an increase in the plant's age, yield also increases (refer exhibit 29). Well distributed maturity profile of the oil palm plantation (66,400 hectares as of 6MFY19) would ensure higher availability of FFBs in the coming years as the age of plants increases.

Exhibit 31: Well distributed maturity profile of plantation to ensure higher availability of FFBs



Source: Company, MOSL

Exhibit 32: Area under cultivation grew at 8% CAGR over FY13-18



Source: Company, MOSL

- GOAGRO targets to add 2,000-2,500 hectares land every year GOAGRO has 66,400 hectares (as on Sept'18) under coverage for oil palm plantation (area under coverage has increased at 8% CAGR over FY13-18). Management targets to add 2,000-2,500 hectares to its land under cultivation every year to ensure FFBs availability.
- Biomass - providing an additional revenue stream
  - In the palm oil production chain, large quantities of biomass by-products (up to almost ~4-5x of the oil production) are produced. For instance, 100MT of FFBs processed produces 20% of palm oil (including palm kernel) while the rest is biomass (80%). Of the biomass generated, small portion is sold in the form of briquettes and protein with the rest sold as fiber.
  - Thus, some of the biomass produced is used as an animal feed ingredient, which provides additional source of revenue to the palm oil business, as well as strengthens the cost competitiveness of the animal feed business.
  - The revenue generated from biomass is sufficient to assist in covering the fixed cost (3-4% of the sales) of the business.

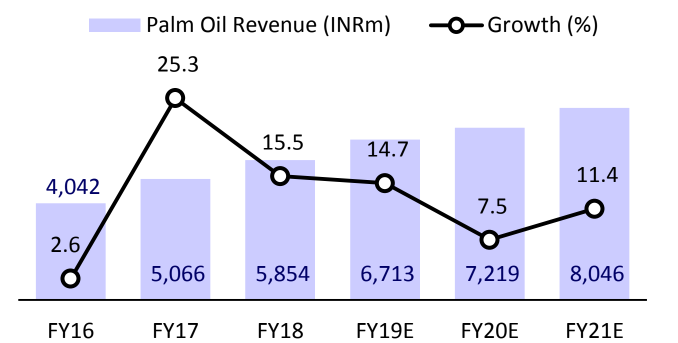
Improvement in OER and global palm oil prices to aid in expanding margin

We expect EBITDA margins to expand by 60bp over FY18-21 to 22.3% on account of improvement in OER, operating leverage (improvement in the utilization of the new plant) and any improvement in global palm oil prices.

Improvement in OER to directly flow to EBITDA

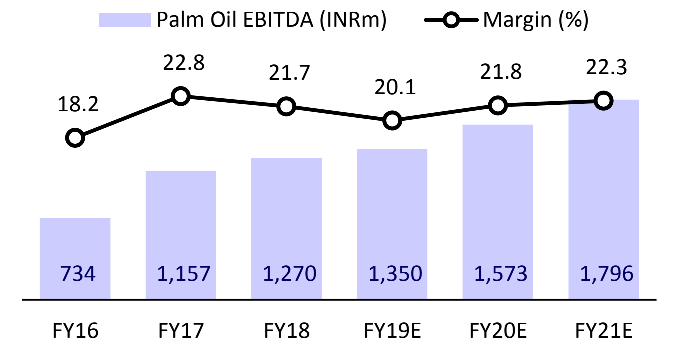
Currently, OER for FFBs stands at 16-18%. The new plant in Andhra Pradesh is expected to improve OER. Any improvement in OER would directly flow to EBITDA and thus aid in expanding margins.

Exhibit 33: Revenue to grow at 11% CAGR over FY18-21E



Source: Company, MOSL

Exhibit 34: Margin to expand by 60bp over FY18-21E

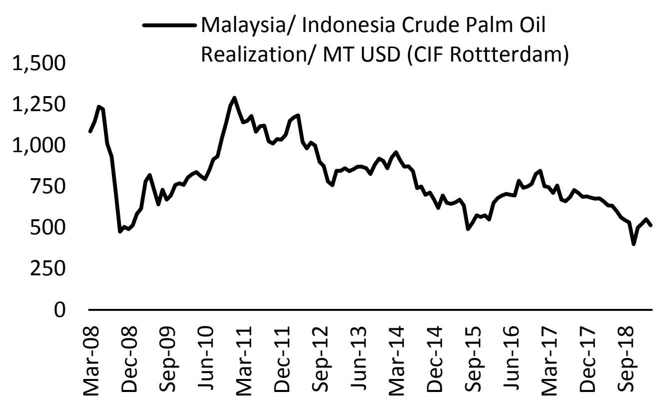


Source: Company, MOSL

Any improvement in global palm oil prices should aid in margin expansion

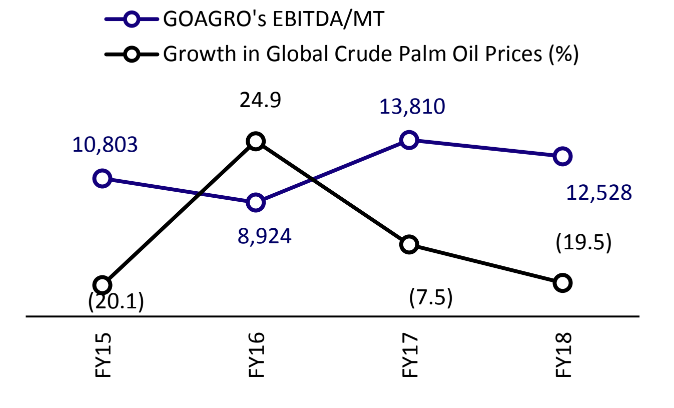
GOAGRO directly purchases FFBs from farmers based on the prices determined by the government (linked to global palm oil prices). Indian palm oil prices are protected by the government, thanks to the import duty, but international prices still have a bearing on the prices in India. Thus, any improvement in global palm oil prices will directly flow to the EBITDA of the company.

Exhibit 35: Global palm oil price trend



Source: Bloomberg, MOSL

Exhibit 36: Global palm oil prices and GOAGRO's EBITDA/MT trend



Source: Bloomberg, Company, MOSL

Cattle feed – a long runway for organized players

Pure broiler feed players facing competition from integrators

- **The Indian animal feed industry is expected to grow at 13.9% CAGR over FY17-20 to INR1,065b (as per CRISIL). The growth can be mainly attributed to the poultry segment (14.9% CAGR over FY17-20 to reach INR735b by FY20).**
- **Decline in fodder availability (due to declining pasture land), increased cross-breeding in cows and buffaloes, and the shift from unorganized to organized players should aid in driving cattle feed sales of GOAGRO.**
- **Though, the poultry feed industry in India is expected to grow at 14.9% CAGR over FY17-20, pure feed players like GOAGRO are facing stiff competition from integrators. Therefore, scaling up Godrej Tyson is critical for the company to compete with forward integrated players.**
- **Hence, we expect the animal feed business revenue/ EBITDA to grow at 14%/ 12% CAGR over FY18-21 to INR37,875m/ INR2,638m.**

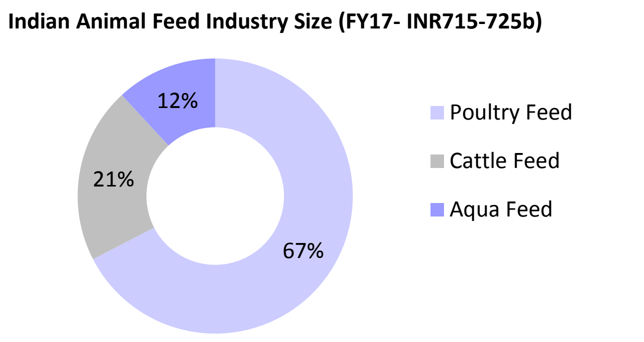
GOAGRO is one of the largest organized players in the compound animal feed market in India. Its product portfolio comprises cattle feed, poultry feed (broiler and layer) and aqua feed (fish and shrimp), manufactured at its 31 plants spread across India. Also, GOAGRO has an established strong network of over 4,000 distributors.

Exhibit 37: Animal feed industry to grow at 13.9% CAGR over FY17-20

Feed Segment	Volume MMT		Volume Growth %	Value INR b		Value Growth %
	FY17	FY20	FY17-20	FY17	FY20	FY17-20
Poultry Feed	16-17	20-21	7.5%	480-490	730-740	14.9%
Cattle Feed	7.5-8.5	9-10	5.9%	148-150	197-199	9.9%
Aqua Feed	1.6-1.8	2.1-2.3	9.0%	85-86	131-132	15.4%
Total	**25.1-27.3**	**31.1-33.3**	**7.1%**	**715-725**	**1,060-1,070**	**13.9%**

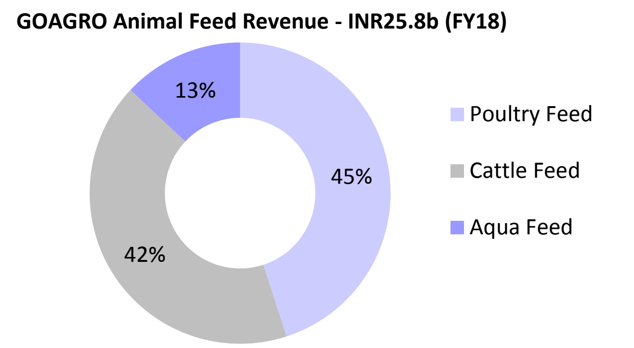
Source: Company, MOSL

Exhibit 38: Poultry feed dominates the animal feed market



Source: Company, MOSL

Exhibit 39: Poultry & cattle feed constitute 87% share in GOAGRO's revenue



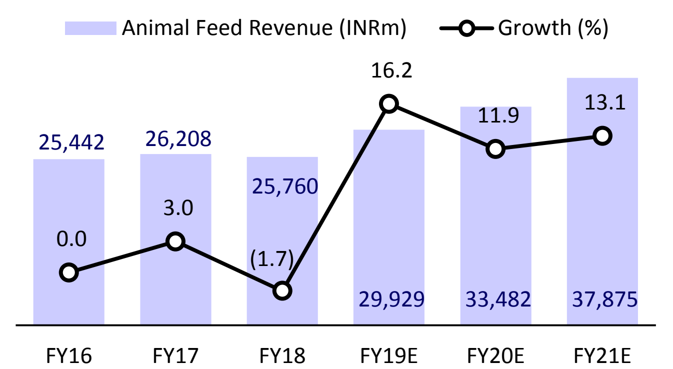
Source: Company, MOSL

- In the overall animal feed industry, poultry feed occupies the largest share of volume/value mix at 63%/67% on increased penetration of compound feed, especially in the broiler segment. In contrast, the share of cattle feed is lower at 21% (volume: 31%) as farmers rely on pasture land as a means of feed.
- The total animal feed segment contributed ~50% to the revenue of the company with an EBITDA contribution of 33%. Segment EBITDA margin has declined to

7.2% in FY18 from 9.1% in FY15 (with flat revenues over the same period), mainly due to increasing competition from unorganized players on low entry barriers, increasing raw material price pressure and rising competition from integrators in poultry feed.

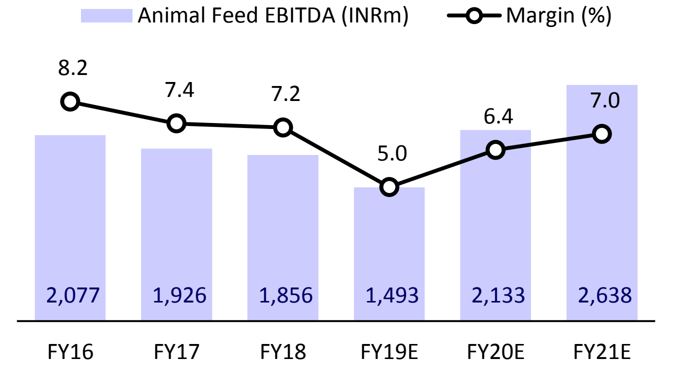
- We expect the animal feed segment to post revenue CAGR of 14% over FY18-21 to INR37.8b. Segment EBITDA margins should decline by 20bp over FY18-21.
- **Cattle-feed**: The animal feed segment revenue grew at a meager 0.4% CAGR over FY15-18 to INR25.8b; while revenue from cattle feed grew at 16.4% CAGR over the same period to INR10.8b. This led to the cattle feed segment increasingly contributing to animal feed revenues in FY18 at 42%, which stood at 27% in FY15.
- **Poultry-feed:** This segment's performance has remained subdued (de-grew at 7.7% CAGR) over FY15-18 due to food processing players integrating backwards into the broiler feed segment. Processing companies/ integrators directly supply feed to farmers, thus, pressurizing pure feed players like GOAGRO.
- In 9MFY19, the animal feed segment registered revenue growth of 17% YoY to INR22,147m, backed by volume growth of 15.7%. The growth is attributable to the broiler segment wherein (a) the company launched products catering to small integrators, and (b) the layer segment witnessed strong growth. However, segment EBIT declined by 23.1% YoY to INR824m, mainly due to an increase in raw material prices. However, from FY20, we expect margins to start increasing as the company took a price hike in 4QFY19 and also due to some R&D initiatives, which would aid in reducing costs over the next 2-3 years.
- GOAGRO has a strong presence in the cattle feed segment and it intends to scale up volumes in the broiler/ layer segment (tailor-made product for small integrators).

Exhibit 40: Revenue to grow at 14% CAGR over FY18-21



Source: Company, MOSL

Exhibit 41: EBITDA margin to decline by 20bp over FY18-21



Source: Company, MOSL

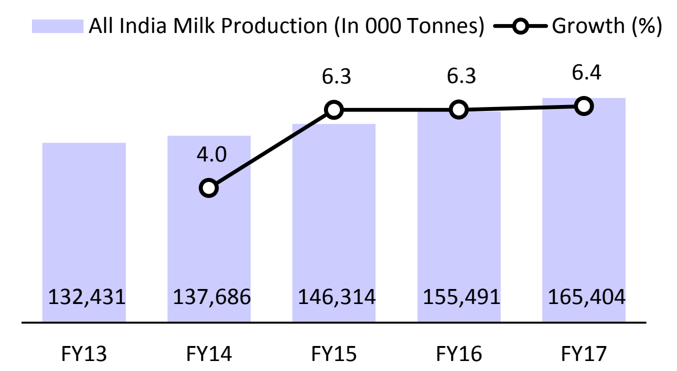
- Recently Amul (India's largest milk processor) has started supplying cattle feed directly to farmers. Therefore, over the long term, scaling up of GOAGRO's processed food manufacturing (Godrej Tyson) and dairy (Creamline) businesses is critical for its feed business. The company may also resort to inorganic acquisitions to scale-up at a faster pace.

Cattle feed: a leading player in the segment

Milk production in India expected to grow at 4% CAGR over FY17-23 to 209MT

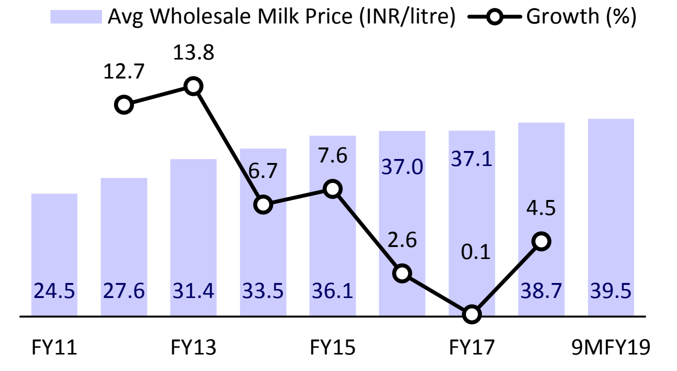
India is the world's largest milk producer producing 165MMT (FY17) of milk. Majority of the milk produced is consumed domestically and surplus production is converted into Skimmed Milk Powder (SMP) for export. Milk prices were subdued in the last four years due to a supply glut. Additionally, global SMP prices tumbled from USD4,744/ton in FY14 to USD1,925/ton in FY18, making SMP exports unviable (cost of manufacturing SMP is above USD2,857/ton).

Exhibit 42: Milk production grew at 6.0% CAGR over FY13-17



Source: DAHD, MOSL

Exhibit 43: Milk prices increased by 2.4% CAGR over FY15-18



Source: CEIC, MOSL

Shortage of Fodder supply

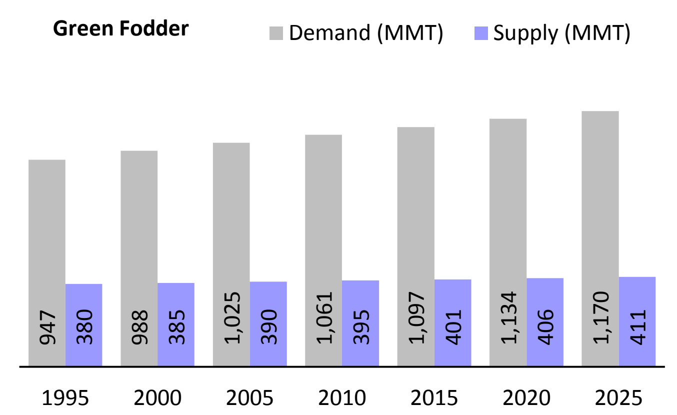
- Preference given to food crops and cash crops over fodder cultivation
- Diversified use of agricultural residues has led to grazing lands gradually diminishing
- Increased mechanization in farming activity has led to a decline in agricultural waste, a source of fodder

Compound cattle feed - the only resort to shortage of fodder supply

Genetics, feed and fodder, cattle management and environment have a significant bearing on the milk producing capability of cattle (quantity and nutritive value). Livestock reared by villagers depend on crop byproducts, grass from roadside and other marginal lands for feed. Wheat, maize and rice bran are commonly used as feed, but the use of concentrates is rather limited. Thus, a major share of this industry is still unorganized as small-scale farmers do not use compound cattle feed, while large-scale dairy farms using compound feed are few.

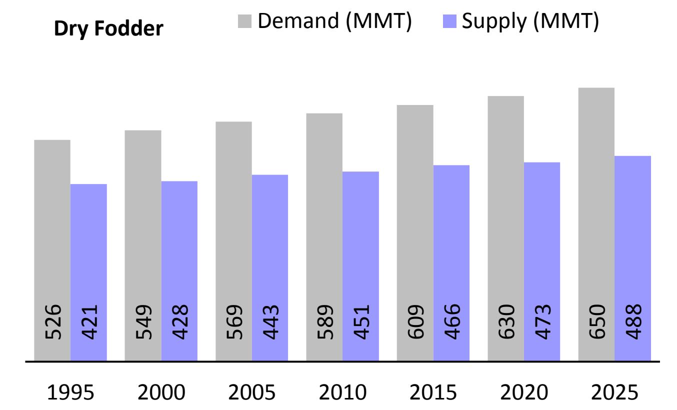
But, with increasing scarcity of fodder, farmers will have to use compound feed to ensure balanced nutrition for cattle.

Exhibit 44: Green fodder supply deficit trend



Source: DAHD, MOSL

Exhibit 45: Dry fodder supply deficit trend



Source: DAHD, MOSL

Genetics do matter, but compound feed ensures higher yields

- Genetics of the breed is a key factor for gauging milk production — 76% of the milk production is contributed by crossbred cows (27%) and buffaloes (49%), despite forming just 47% of the total animal population; this is on account of its higher yields.
- The total number of milk producing animals (crossbred cows, indigenous cows, buffaloes and goats) grew at 2% CAGR over FY13-17 to 124.3m. However, during the same period, number of crossbred cows and buffaloes grew at 5.9% and 2.1%, respectively.
- Farmers usually feed their animals with locally available concentrate ingredients, unmindful of an animal's requirement. This leads to lower milk production v/s the genetic potential of the animal or higher production cost due to imbalance feeding. Thus, in order to ensure cattle/ buffaloes produce milk according to their producing capacity, compound feed should be used.

Exhibit 46: Feed requirement per cow (in kg)

S. No.	Type of animal	Feeding during	Green Fodder	Dry Fodder	Concentrate/ Compound
1	6 to 7 liters milk per day	Lactation days	20 to 25	5 to 6	**3.0 to 3.5**
		Dry days	15 to 20	6 to 7	**0.5 to 1.0**
2	8 to 10 liters milk per day	Lactation days	25 to 30	4 to 5	**4.0 to 4.5**
		Dry days	20 to 25	6 to 7	**0.5 to 1.0**

Source: DAHD, MOSL

Poultry feed market to grow at 14.9% CAGR over FY17-20

The poultry industry can be broadly divided into two segments — broiler and layer. The broiler segment represents chicken for meat consumption while the layer segment represents egg-laying chickens. Poultry egg and meat are important sources of high quality proteins, minerals and vitamins for a balanced diet.

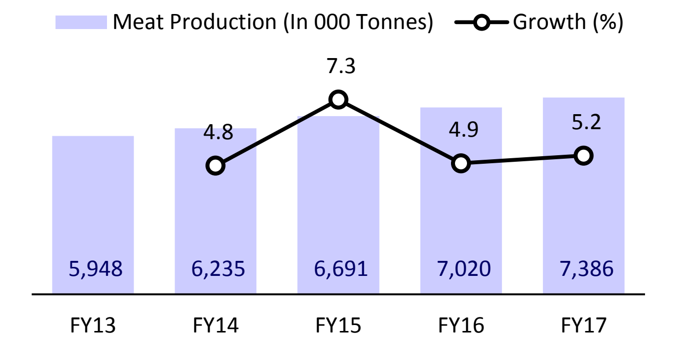
As per OECD-FAO Agricultural, India's protein consumption (gm/day/person) grew at 1.0% CAGR over 2000-13 to 61.5gms/day in 2013. However, going forward, it is expected to grow at 1.3% CAGR over the next 10 years to 70.3gms/day by 2023; the higher growth is on account of increasing per capita income, change in consumption pattern and increased urbanization.

Broiler segment — forward integration the only resort for pure feed players

While Meat production in India grew at 8.9% CAGR over FY01-17 to 7.4MMT; poultry at ~47% is the highest contributor, followed by buffaloes at ~20%.

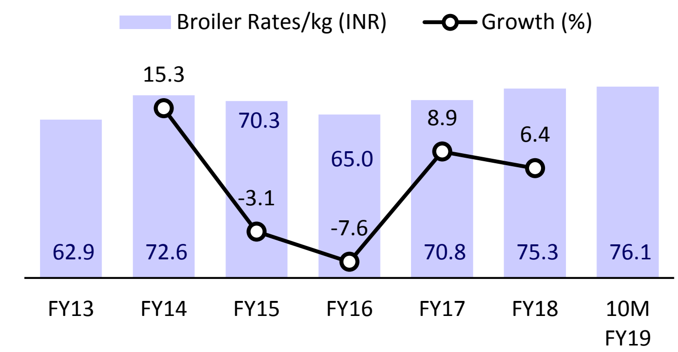
In the broiler segment, 90-95% of the feed production is in the form of compound feed. Majority of the organized feed is manufactured by integrators who produce 70-75% of the total manufactured feed, which is typically used for captive purposes. The balance feed is sold to individual farmers. In contrast, specialist feed manufacturers primarily sell the feed.

Exhibit 47: Meat production grew at 5.6% CAGR over FY13-17



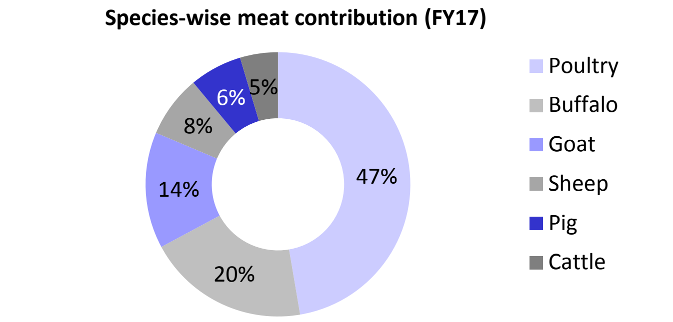
Source: DAHD, MOSL

Exhibit 48: Broiler prices grew at 3.6% CAGR over FY13-18



Source: Poultry Bazar, MOSL

Exhibit 49: …contribution of poultry is 47%



Source: DAHD, MOSL

Exhibit 50: Proforma P&L of farmer

Particulars	INR (based to 100)
Sales	**100.0**
Less: Direct Cost	**78.4**
Cost of chicks	16.4
Cost of feed	**54.9**
Cost of medicine and labor cost	7.1
Gross Profit	**21.6**
Margin %	**21.6%**

Source: Industry, MOSL

Evolution of chicken vertical integration in the US; India on the same path

In the early days of the broiler business, the different stages of producing broiler meat were all separate businesses. There were independent feed mills, hatcheries, farms and processors. However, in the 1940s, 'integrators' combined the different stages of production by coordinating the production capacity of each stage; thereby reducing costs. Thus, integrators started supplying feed to farmers giving stiff competition to pure feed players.

Backward integration by integrators – a threat to pure feed player

Integrated poultry players use the contract farming model, rather than indulging in captive farming. Under contract farming, integrators provide day-old chicks with feed, medications, vaccinations and advisory services to farmers. The health, feed intake, growth, and mortality level of these day-old chicks is the responsibility of the farmers and is monitored by the integrator. In the case of broiler farming, at the end of six weeks, the full grown bird is returned to the integrator, who then sells this bird as live or processes it. In the Indian market, pure feed manufacturers like GOAGRO are facing stiff competition from integrators/ processing companies like Venky/ Suguna.

Tyson Foods, USA, to compete with other industry players

In 2008, GOAGRO entered into a JV with Tyson Foods, USA, to manufacture and market processed poultry and vegetarian products through its two brands 'Real Good Chicken' and 'Yummiez'. Through this JV, GOAGRO is combining its supply chain expertise and Tysons' capabilities in vertically-integrated poultry processing and product development (currently company has acquired 51% stake in Godrej Tyson).

GOAGRO — a leading player in the layer feed segment

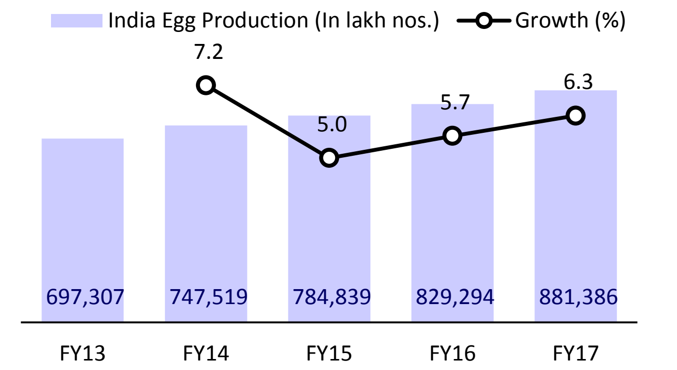
India has emerged as the third largest egg producer (88b eggs) in the world growing at 5.6% CAGR over FY01-17.

The total poultry feed requirement in India has been estimated at 21-22MMT, based on the overall poultry population and typical feed conversion ratios. Of this, ~16-17MMT was contributed by compound feed in FY17.

In FY17, the poultry feed industry (comprising broiler and layer feeds) was worth INR480-490b. The same is growing at CAGR of 14-15% and is expected to be worth INR730-740b by FY20.

Broiler feed comprised 85% of the industry (13.5-14.5MMT) in FY17, while layer feed stood at 2-3MMT. In the layer segment, 25-35% of the feed production is in the form of compound feed as against 90-95% in the broiler segment. Usage of layer feed is expected to increase with a rise in usage of compound feed and growth in the overall egg production. Production cost of eggs is directly proportional to the feed cost. Egg-laying chicken are fed maize, corn, broken rice, groundnut cakes, jowar, bajra, and soya (mixed with amino acids) to augment yields. As a result, when grain prices increase, egg production costs rise in tandem. That apart, distance between the egg and the feed production centers also determines the price of eggs.

Exhibit 51: Egg production grew at 6% CAGR over FY13-17



Source: DAHD, MOSL

Exhibit 52: Proforma P&L of farmer

Particulars	INR (based to 100)
Sales	**100.0**
Less: Direct Cost	**86.9**
Cost of chicks	3.4
Cost of feed	75.8
Cost of medicine and labour cost	7.7
Gross Profit	**13.1**
Margin %	**13.1%**

Source: DAHD, MOSL

Bangladesh Animal Feed Business: GOAGRO has 50:50 JV with Bangladesh-based Advanced Chemical Industries Limited (ACI). Incorporated in 2004 and named ACI Godrej Agrovet Private Limited (ACI Godrej), it produces cattle, poultry and fish feed. Over the last decade, it has become a leading player and ranks among the top-4 players across all categories of animal feed in Bangladesh.

Aqua Feed contributes ~6% to the GOAGRO's overall revenue

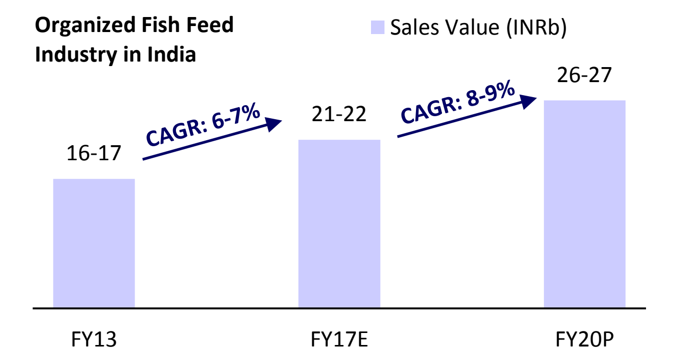
In FY18, revenue from aqua feed stood at INR3,349m (contributed ~13% to the total animal feed segment revenue and 6% to overall GOAGRO's revenue), of which a major part was contributed by the fish feed segment.

Fisheries industry in India: The industry is concentrated in the southern and the eastern parts of India. The export market is relatively smaller than the domestic market, but is largely organized. In sales volume, the organized fish feed market is expected to grow at 3-4% CAGR over FY17-20 to 0.8-0.9MMT in FY20 from 0.7-0.8MMT in FY17.

Shrimp industry in India: As ~80% of the shrimp cultivated in India is exported, the industry uses compound shrimp feed and complies with the international quality standards. In volume terms, the shrimp feed industry in India grew at 13-14% CAGR over FY13-14 to 0.9-1.0 MMT in FY17. However, in FY19, decline in global shrimp prices and increase in raw material costs, adversely impacted shrimp feed manufacturing companies in India.

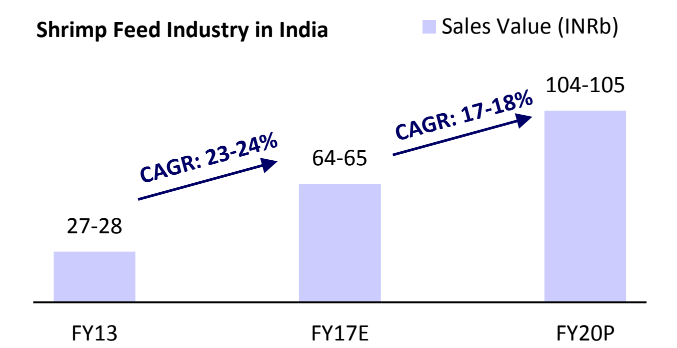
A large part of the shrimp exports market is catered to by aquaculture leading to higher usage of shrimp feed by organized players. But, wild catch commands a higher share in case of fisheries, leading to a lower usage of fish feed.

Exhibit 53: Fish feed to grow at 8-9% CAGR over FY17-20



Source: Company, MOSL

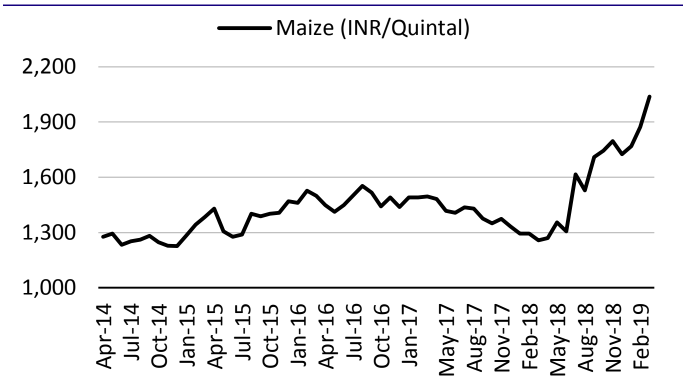
Exhibit 54: Shrimp feed to grow at 17-18% CAGR over FY17-20



Source: Company, MOSL

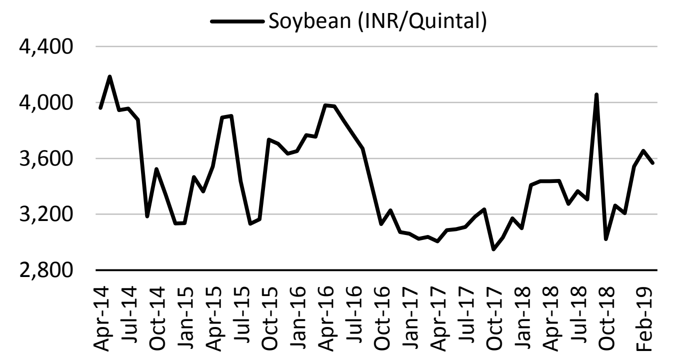
Key raw material for the animal feed segment

Exhibit 55: Maize price trend



Source: AgMarknet, MOSL

Exhibit 56: Soybean price trend



Source: AgMarknet, MOSL

Decline in realization for farmers can adversely affect choice in feeds

Feed cost accounts for ~60-70% of the total direct cost to farmers. Thus, any decline in realization leads to the farmer cutting the feed quantity or using a cheaper, unbranded compound feed with lower nutrients. Additionally, any increase in raw material prices may be difficult for a company to pass on to farmers as it already accounts for **a higher share in the cost.**

Dairy - increase in share of VAP to aid margin expansion

Godrej Tyson shifting focus to the live bird market

- **The organized players in the Indian dairy industry are expected to grow at 20% CAGR over FY16-22 to INR5,321b (grew at 17.5% CAGR over FY10-16).**
- **Increasing share of value added products (VAP) (currently less than 25%) and procuring milk directly from farmers should aid margin improvement. Thus, we expect the dairy segment revenue/ EBITDA to grow at 6%/ 26% CAGR over FY18-21 to INR13,722m/ 686m by FY21.**
- **In the processed food segment, the company intends to scale up its presence in the live bird market (as it accounts for 98% of the poultry market in India). We expect Godrej Tyson's revenue/ EBITDA to grow at 12%/ 33% CAGR over FY18-21 to INR6,142m/ 491m.**
- **We believe over the long term, GOAGRO is well placed to scale up its dairy and poultry processing businesses by leveraging the Godrej brand, which should also aid GOAGRO's animal feed sales.**

Organized dairy industry in India to grow at 20.0% CAGR over FY16-22

GOAGRO operates the dairy business through its subsidiary Creamline Dairy selling milk and milk-based products under the 'Jersey' brand. It owns and operates nine milk processing units catering to the states of Telangana, Andhra Pradesh, Tamil Nadu, Karnataka and Maharashtra. Milk procurement by GOAGRO is done through its network of 120 chilling centers spread across six states.

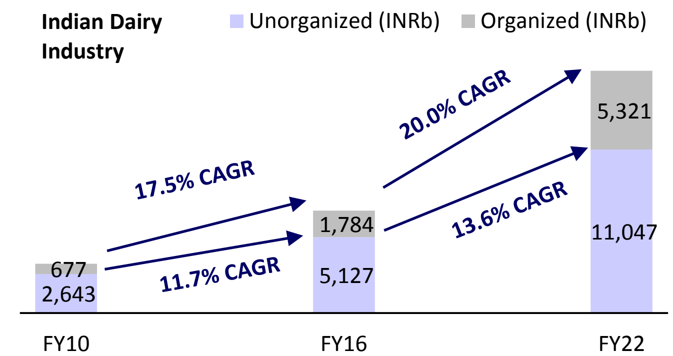
Although India is the largest producer and consumer of milk, the per capita consumption of milk stood at 97 liters/year, which is well below other major milk markets (except for China). Milk production in India is expected to increase from 165MMT in FY17 to 209MMT in FY23 (4.0% growth CAGR), and total consumption of milk and dairy products is expected to increase from 154MMT in FY17 to 205MMT in FY23 (4.9% growth CAGR).

Increase in share of value added products (VAP) to aid in expanding dairy segment margins

- Creamline Dairy grew its revenues at 11.2% CAGR over FY13-18 to INR11.6b in FY18 through a wide distribution network of ~4,000 milk distributors, ~3,000 milk product distributors and 50 retail parlors, while it also sold directly to institutional customers. The revenue/ EBITDA contribution from the dairy segment stood at 22%/6% in FY18.
- Currently, value added products like curd*, lassi,* butter milk, *paneer, ghee, doodh-peda*, milk powder, ice-cream, flavored milk contribute less than 25% to the revenue of the dairy segment. Management intends to increase this further by leveraging its distribution network, which would also aid in improving the margin profile of the company.
- Currently, GOAGRO procures ~85% of its milk requirement from agents or from smaller companies, but going forward, it intends to directly procure from farmers, which would benefit in multiple ways: (a) decrease the procurement cost, (b) improve the quality of milk, and (c) cross-selling—sale of GOAGRO's cattle feed to farmers (over the long term).

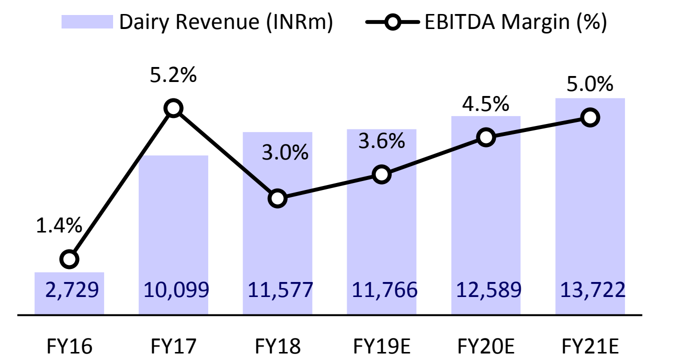
- Thus, scaling up of the dairy business is also critical to the cattle feed business as going forward, cooperative societies/ private companies may start with backward integration (similar to broiler processing companies).
- GOAGRO's growth strategy for the dairy business is to: (i) leverage its brand to increase its market share in India's southern states, (ii) increase margins by increasing share of value-added products in the portfolio and (iv) increase the milk procurement base directly through farmers, which would also aid in increasing sales of its cattle feed division.
- The company has changed its strategy of milk procurement; it procures more milk from cows now rather than buffaloes due to a decline in SMP and butter prices. Currently, 70% of its milk requirement is met by cows, which was 52% a year ago.
- Hence, we expect the segment to deliver revenue CAGR of 6% over FY18-21 to INR13,722m in FY21. We expect, EBITDA margin to expand by 200bp to 5.0% by FY21.

Exhibit 57: Organized dairy industry growth to outperform the unorganized sector over FY16-22



Source: Company, MOSL

Exhibit 58: EBITDA margin to expand by 200bp



Source: Company, MOSL

Godrej Tyson - focus shifts to scaling up in the live bird market

- In FY16, India's per capita poultry meat consumption was ~3.7kg/year, compared to the world average of ~17kg/year. Although, India's per capita consumption is lower, overall poultry consumption has been growing at 15-20% CAGR over the last decade. This growth is attributable to an increase in the average household income, increase in popularity and number of fast food restaurants, as well as a shift in preference for white meat over red meat.
- In FY17, poultry meat production in India was ~3.5MMT. The poultry market, currently valued at INR5.65b, contributes ~48% to the total meat output. Of the total poultry meat market, the live poultry market constitutes 98% of total sales since most consumers prefer freshly culled chicken meat, while processed chicken meat production comprises 2%.
- GOAGRO operates its processed foods business through Godrej Tyson (earlier JV with Tyson Foods, USA; but, GOAGRO increased its stake to 51% in Godrej Tyson on 27th March, 2019). Since India is a live bird market, GOAGRO is increasing its focus in this space and in processed foods (would also aid in scaling up broiler feed sales).
- Against this backdrop, we expect Godrej Tyson's revenue/ EBITDA to grow at 12%/ 33% CAGR over FY18-21 to INR6,142m/ 491m by FY21.

SWOT Analysis

- Strong brand pedigree aids in attracting and retaining customers
- Operates across diversified business segments
- Market leader in PGR

- Seasonal nature of business leads to volatility in earnings
- Feed cost accounts for 60-70% of the total cost for the farmer, therefore, it may be difficult for GOAGRO to pass on the price increase in raw materials

- Lower penetration of compound feed in cattle and layer segment provides huge runway for growth
- Scaling up of dairy and processed food segments to provide complementary sales of feed to farmers
- Scaling up the consumer businesses by leveraging the Godrej brand

- Increased raw material prices in animal feed and crop protection can affect profitability
- Intense competition from fully-integrated players in broiler feed
- Decline in rainfall can impact crop protection and palm oil business

Bull & Bear case

Bull case

- ☑ In the crop protection business, we have factored in higher sales/ EBITDA CAGR of 17%/21% over FY18-21 v/s base case assumption of 15%/ 16% CAGR due to line-up of product launches in the domestic business and capacity expansion in Astec. We have also factored in higher EV/ EBITDA multiple of 19x v/s base case multiple of 18x.
- ☑ In palm oil, we have factored in higher processing volume growth of 14% CAGR over FY18-21 v/s our base case assumption of 10%.
- ☑ In animal feed, new launches should aid revenue growth. Easing of raw material prices should help in improving margins. Thus, we have factored in higher revenue/ EBITDA CAGR of 15%/ 19% over FY18-21 v/s base case assumption of 14%/ 12%.
- ☑ Carrying the above assumptions, we get a bull case target price of INR729 (upside of 43%) based on FY21E EBITDA (v/s base case target price of INR610).

Bear Case

- ☑ In the crop protection business, we have factored in lower sales/ EBITDA CAGR of 10%/ 10% over FY18-21 v/s base case assumption of 15%/ 16% CAGR as the line-up of product launches may fail to pick up as expected (have also factored in the decline in margins).
- ☑ In palm oil, we have factored in lower processing volume growth of 8% CAGR over FY18-21 v/s our base case of 10%. We have factored in lower EV/ EBITDA multiple of 13x v/s base case multiple of 18x in palm oil & crop protection.
- ☑ In animal feed, competition from integrators, especially in the broiler segment should intensify further and therefore, we have factored in a decline in margins. We have factored in revenue/ EBITDA CAGR of 11%/ 9% over FY18-21 v/s base case assumption of 14%/ 12%. We have also factored in lower EV/ EBITDA multiple of 11x v/s base case multiple of 14x.
- ☑ Carrying the above assumptions, we get a bear case target price of INR395 (downside of 22%) based on FY21E EBITDA (v/s base case target price of INR610).

Exhibit 59: Scenario analysis – bull case

Bull Case	FY19E	FY20E	FY21E
Sales (INR m)	58,276	66,136	75,772
Sales growth (%)	11.9	13.5	14.6
EBITDA (INR m)	4,694	6,207	7,718
EBITDA Margin (%)	8.1	9.4	10.2
EBITDA growth (%)	6.0	32.2	24.4
PAT (INR m)	2,494	3,288	4,230
PAT growth (%)	14.8	31.8	28.6
Target price (INR)			729
Upside/downside (%)			43

Source: Company, MOSL

Exhibit 60: Scenario analysis – bear case

Bear Case	FY19E	FY20E	FY21E
Sales (INR m)	57,118	62,492	67,980
Sales growth (%)	9.7	9.4	8.8
EBITDA (INR m)	4,596	5,363	6,017
EBITDA Margin (%)	8.0	8.6	8.9
EBITDA growth (%)	3.7	16.7	12.2
PAT (INR m)	2,422	2,708	3,058
PAT growth (%)	11.5	11.8	12.9
Target price (INR)			395
Upside/downside (%)			(22)

Source: Company, MOSL

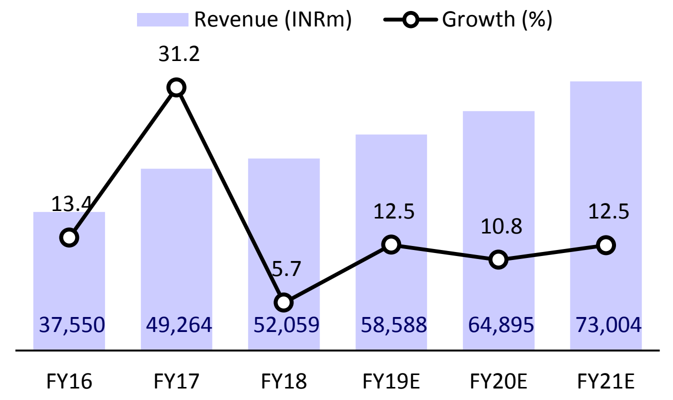
Expect EBITDA CAGR of 16% to INR7b over FY18-21

To generate CFO of INR12b over FY19-21

Animal feed and crop protection to drive revenue

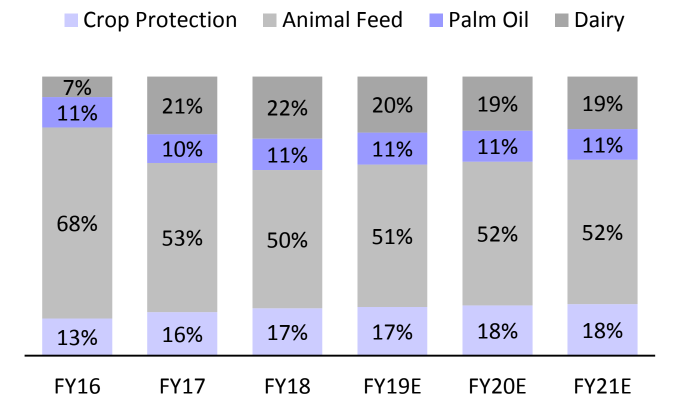
- We expect GOAGRO's revenue to grow at 12% CAGR over FY18-21 to INR73b on growth in the animal feed and crop protection business. Animal feed (AF) which accounted for ~50% (FY18) of the overall revenue is expected to grow at 14% CAGR over FY18-21 to INR37.9b driven by cattle and the layer feed segment.
- In the crop protection segment, we expect revenue CAGR of 15% over FY18-21 to INR13,476m on increasing product launches, abundant demand of triazole chemistry, and the company's strategy to strengthen its presence in PGR (via combination of products).
- Palm oil segment is expected to clock in revenue CAGR of 11% over FY18-21 to INR8,046m mainly due to an increase in the availability of fruits.

Exhibit 61: Revenue to grow at 12% CAGR over FY18-21



Source: Company, MOSL

Exhibit 62: Crop protection and AF dominates revenue mix

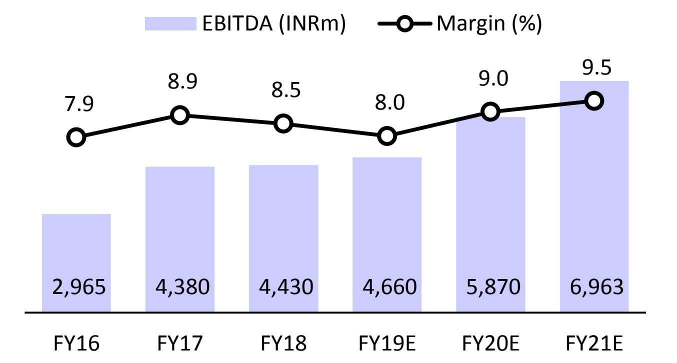


Source: Company, MOSL

EBITDA margins to expand across businesses except animal feed

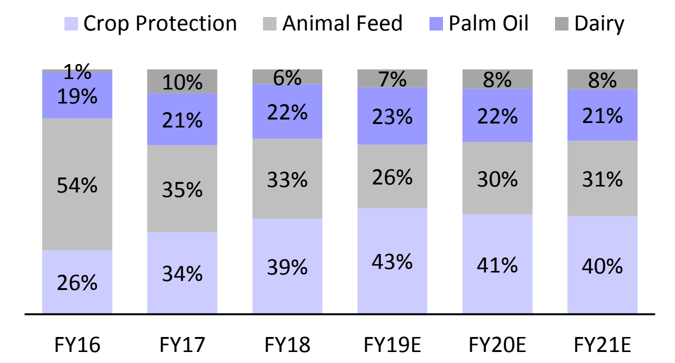
- Overall EBITDA margins are expected to expand by 100bp over FY18-21 to 9.5% mainly due to improvement in the crop protection and palm oil business. Margin expansion in the crop protection segment is expected on account of an increase in backward integration in Astec and line-up of new launches over the next 2-3 years.
- In the palm oil segment, operating leverage due to improving utilization of the new plant and improving OER directly flows to EBITDA to aid margin expansion (60bp over FY18-21 to 22.3%).
- In the dairy segment, increase in share of value added products and direct sourcing of milk from farmers is expected to expand margins by 200bp over FY18-21 to 5.0%.

Exhibit 63: EBITDA margin to expand by 100bp over FY18-21



Source: Company, MOSL

Exhibit 64: EBITDA mix

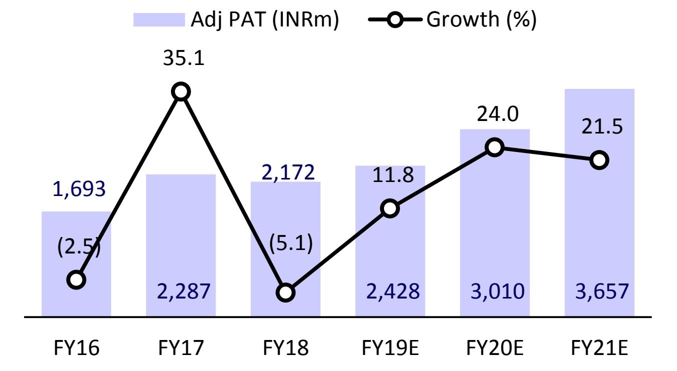


Source: Company, MOSL

To generate CFO of INR12b over FY19-21

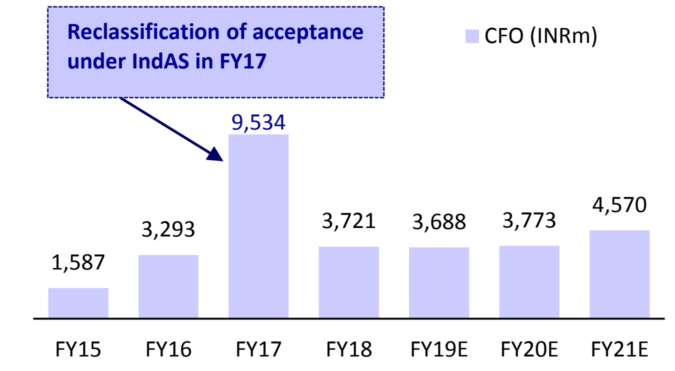
We expect GOAGRO to generate strong CFO of INR12,032m over FY18-21, which is mainly deployed towards capex and reducing debt. RoE/ RoCE are expected to increase from 17.9%/ 14.7% in FY18 to 19.6%/ 18.3% by FY21.

Exhibit 65: Adj. PAT to grow at 19% CAGR over FY18-21



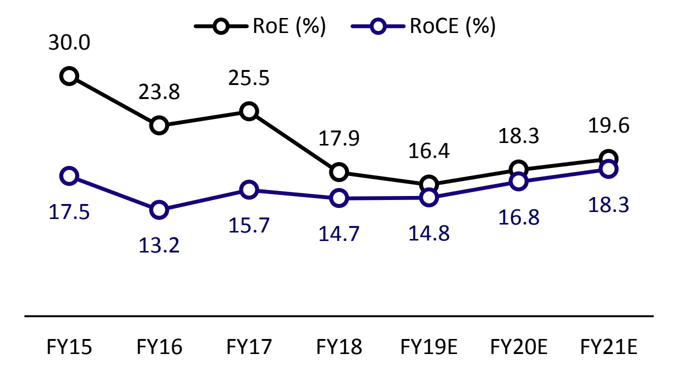
Source: Company, MOSL

Exhibit 66: To generate CFO of INR12b over FY19-21



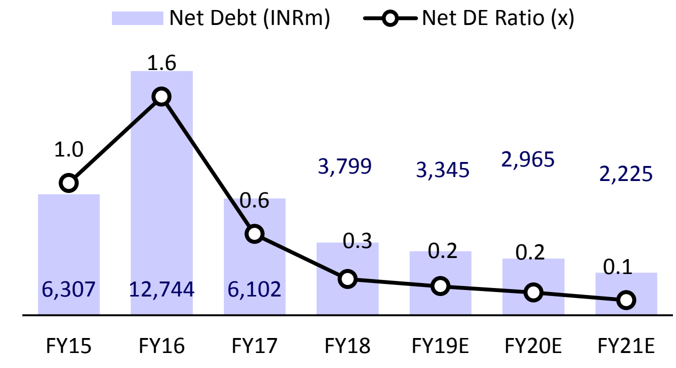
Source: Company, MOSL

Exhibit 67: ROE and RoCE to improve going ahead



Source: Company, MOSL

Exhibit 68: Net DE ratio to improve further



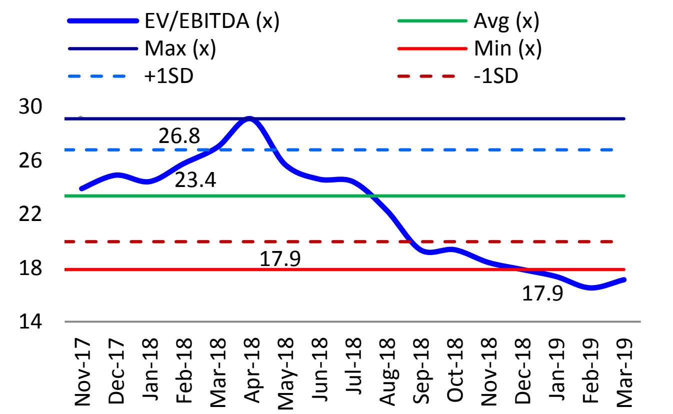
Source: Company, MOSL

Valuation and view

Initiating with Buy

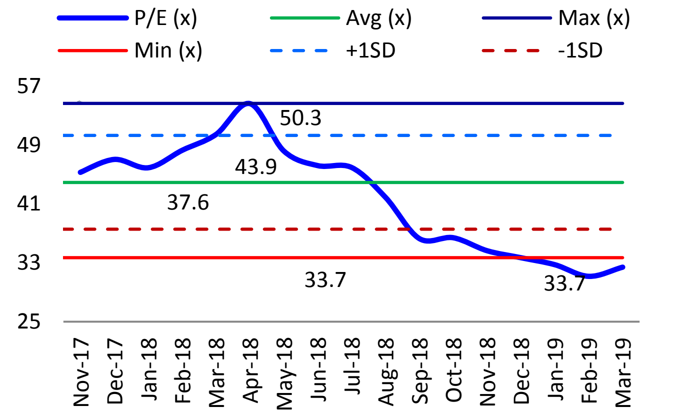
- GOAGRO is a diversified, research and development focused agri-business with operations spread across five business verticals.
- **Crop protection:** Given GOAGRO's strong growth prospects backed by capacity expansion in Astec, 2-3 planned product launches by FY20, and better return ratios (avg. RoCE of 35.6% over FY13-18), thus, we ascribe **EV/EBITDA FY21 of 18.0x** to the standalone crop protection business and Astec.
- **Palm Oil:** There are no listed companies in India into palm oil processing. But, globally, palm oil processing companies also engage in plantation, thus, making it an asset-heavy business. However, Indian palm oil processing companies operate through an asset-light business model (get access to fruits without owning the land), which leads to higher return ratios. Thus, we assign **EV/EBITDA FY21 of 16.0x** considering the asset-light business model and its return profile (avg. RoCE of 30.1% over FY13-18).
- **Animal Feed:** Increasing competition from integrators in the broiler segment and increasing raw material cost pressure are the key near-term concerns; however, given the strong RoCE profile (avg. RoCE is 51.3% over FY15-18) as GOAGRO operates through negative working capital, we assign **EV/ EBITDA FY21 of 14x.**
- **Dairy:** Increase in share of VAP and direct sourcing of milk from farmers would improve the margin profile of the business (EBITDA CAGR of 26% over FY18-21); thus, we assign **EV/EBITDA FY21 of 15.0x**.
- **Processed Foods:** Apart from processed food, GOAGRO intends to scale up its presence in the live bird market (as it forms 98% of the poultry market in India). We assign **EV/ EBITDA FY21 of 15x** considering the strong brand of the Godrej group, which can be leveraged to scale up the business.
- We expect consolidated revenue/ EBITDA CAGR (FY18-21) of 12%/ 16% to INR73b/ INR7b. Our SOTP-based target price stands at INR610, which implies 20% upside. We initiate coverage on GOAGRO with a **Buy** rating.

Exhibit 69: 1year forward EV/EBITDA



Source: Bloomberg, MOSL

Exhibit 70: 1year forward P/E



Source: Bloomberg, MOSL

Exhibit 71: Initiate with an upside of 20%

Particulars	EBITDA FY21E (INR m)	EV/ EBITDA (x)	EV (INR m)	Net Debt (INR m)	Equity Value (INR m)	GOAGRO's share (%)	Value (INR m)	Value/ share (INR)	% Share
Standalone									
Crop Protection	2,214	18.0	39,854		39,854	100	39,854	208	34
Palm Oil	1,796	16.0	28,731		28,731	100	28,731	150	25
Animal Feed	2,638	14.0	36,929		36,929	100	36,929	192	32
Unallocated expenses	(1,314)	10.0	-13,141		-13,141	100	-13,141	(68)	-11
Total	5,334	17.3	92,374	1,110	91,263	100	91,263	475	78
Subsidiaries									
Astec	1,205	18.0	21,688	911	20,777	57	11,937	62	10
Creamline Dairy	686	15.0	10,292	204	10,088	52	5,237	27	4
Godrej Tyson Foods Limited	491	15.0	7,371		7,371	51	3,759	20	3
JV/ Associate									
ACI Godrej Agrovet Private Limited	668	15.0	10,013		10,013	50	5,006	26	4
Total	**8,383**	**16.9**	**141,737**		**139,512**			**610**	**100**
CMP (INR)								509	
Upside (%)								20	

Exhibit 72: Peer comparison

Company Name	M Cap (INR b)	Revenue CAGR % FY18-21E	EBITDA CAGR % FY18-21E	RoCE % FY18	EV/ EBITDA (x) FY20E	EV/ EBITDA (x) FY21E	PE (x) FY20E	PE (x) FY21E
Crop Protection:								
PI Industries Ltd	142	19.2	15.1	20.8	19.3	16.4	27.6	23.4
Bayer CropScience Ltd	149	14.3	23.7	15.8	23.7	19.4	41.0	31.3
Dhanuka Agritech Ltd	19	9.1	6.5	21.8	10.3	9.1	14.9	13.2
Rallis India Ltd	31	12.8	13.2	14.6	9.3	8.0	14.9	12.7
Average		**13.9**	**14.6**	**18.3**	**15.6**	**13.2**	**24.6**	**20.1**
GOAGRO's Crop Protection Segment		**15.2%**	**15.6**	**22.6**				
Animal Feed:								
Avanti Feeds Ltd	58	14.7	0.0	53.6	10.1	7.7	15.4	NA
Waterbase Ltd	7	NA	NA	21.8	NA	NA	NA	NA
KSE Ltd	4	NA	NA	60.4	NA	NA	NA	NA
Average		**14.7**	**0.0**	**53.6**	**10.1**	**7.7**	**15.4**	**NA**
GOAGRO's Animal Feed Segment		**13.7%**	**12.4**	**38.5**				
Dairy:								
Hatsun Agro Product Ltd	108	13.0	20.4	25.4	21.9	17.0	64.5	45.7
Parag Milk Foods Ltd	22	15.8	19.2	13.0	8.4	7.2	15.7	13.0
Prabhat Dairy Ltd	8	14.2	15.1	6.7	4.7	4.2	10.3	9.1
Heritage Foods Ltd	25	10.6	22.9	9.2	12.1	10.1	24.3	19.3
Average		**13.6**	**19.1**	**9.6**	**11.8**	**7.2**	**16.8**	**13.8**
GOAGRO's Dairy Segment		**5.8**	**26.1**	**1.8**				
Processed Food (PF):								
Venky India	33	NA	NA	31.9	7.7	NA	13.6	NA
GOAGRO's PF Segment		12	33					
Godrej Agrovet	**98**	**11.9**	**16.3**	**14.7**	**17.7**	**14.9**	**32.5**	**26.7**

Source: Bloomberg, MOSL

Key risks

Decrease in realization for milk/ broiler/ eggs

Feed cost usually accounts for 60-70% of the total direct cost for farmers. Thus, any decrease in the realization of milk/ broiler/ egg for farmers will directly impact the feed consumption as farmers would either resort to unbranded feed or compromise on the quality of feed.

Increase/ shortfall in the availability of raw material

GOAGRO does not enter into long-term contract with its supplier for raw material. Rather, it acquires from the open market. Thus, it is difficult for GOAGRO to pass on an increase in raw material prices to farmers, as feed cost accounts for 60-70% of the total direct cost.

Decrease in palm oil import duty by the government

The Government of India plays a vital role in development of the palm oil industry providing various subsidies to farmers, processing companies and imposing import duty on crude palm oil. More than 90% of the domestic palm oil demand is imported, and therefore, global palm oil prices have a significant bearing on domestic realizations. Average price of crude palm oil has declined over the last 2-3 years; thus, making it difficult for the domestic palm oil industry to compete. Against this backdrop, the government increased import duty on crude palm oil to 40% due to declining prices. In case of a further decline in palm oil prices, the government may not be able to raise duty, which in-turn could affect the realization of GOAGRO and affect the farmer’s interest in cultivating the oil palm plant.

Unfavorable weather patterns may have an adverse effect on the business

Adverse weather conditions may cause volatility in commodity prices and hence in the acreage of crops, thereby impacting the consumption of agrochemicals.

Resistance development reduces life of product

The effective life of agrochemicals gets reduced over time, as the targeted pests develop resistance to them. Constant innovation and regular introduction of newer agrochemicals is essential for effectively eliminating pest attacks.

Management overview

Mr. Nadir B. Godrej, Chairman

Mr. Nadir B. Godrej with a rich experience in leading businesses has played an important role in developing the animal feed, crop protection and chemical businesses owned by the Godrej group. His active interest in research has resulted in several patents for the company in the field of agricultural chemicals and surfactants. He is a member of the CII National Council, the President of Alliance Française de Bombay, and was the Chairman of the CII National Committee on Chemicals. He has a Bachelor's degree in Science from the Department of Chemical Engineering, Massachusetts Institute of Technology, and has a Master's degree in Business Administration from Harvard University.

Mr. Balram Singh Yadav, Managing Director

Mr. Yadav has been associated with GOAGRO since 1992. He has experience in sales, marketing and operations in animal feed, crop protection, poultry and the palm oil businesses. He became Business Head for the integrated poultry business in 1999, and was involved in establishing the 'Real Good Chicken' and 'Yummiez' brands in India. He was appointed Executive Director and President of the company in 2007 and as the Managing Director in 2009. He has a Bachelor's degree in Agriculture from the Haryana Agricultural University and has a Post Graduate Diploma in Management from the Indian Institute of Management, Ahmedabad.

Mr. S. Varadaraj, Chief Financial Officer

Mr. Varadaraj took over as the Head of Finance and Systems in 2005. He is a Chartered Accountant, a qualified Cost Accountant and also holds a Master's degree in Financial Management. He joined GOAGRO as a Management Trainee in May 1994.

Financials and valuations

Consolidated - Income Statement								(INR m)
Y/E March	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19E**	**FY20E**	**FY21E**
Total Income from Operations	**31,025**	**33,118**	**37,550**	**49,264**	**52,059**	**58,588**	**64,895**	**73,004**
Change (%)	12.4	6.7	13.4	31.2	5.7	12.5	10.8	12.5
Raw Material Cost	25,041	26,157	29,451	37,905	39,536	45,177	49,191	55,191
Employees Cost	1,298	1,334	1,557	2,328	2,763	2,990	3,245	3,577
Other Expenses	2,272	2,568	3,577	4,651	5,329	5,762	6,590	7,272
Total Expenditure	**28,610**	**30,059**	**34,585**	**44,884**	**47,629**	**53,929**	**59,026**	**66,040**
% of Sales	92.2	90.8	92.1	91.1	91.5	92.0	91.0	90.5
EBITDA	**2,414**	**3,059**	**2,965**	**4,380**	**4,430**	**4,660**	**5,870**	**6,963**
Margin (%)	7.8	9.2	7.9	8.9	8.5	8.0	9.0	9.5
Depreciation	276	370	524	747	859	990	1,121	1,260
EBIT	**2,139**	**2,690**	**2,441**	**3,633**	**3,571**	**3,670**	**4,749**	**5,703**
Int. and Finance Charges	403	655	977	863	453	349	328	306
Other Income	149	137	627	590	318	521	389	445
PBT bef. EO Exp.	**1,885**	**2,172**	**2,091**	**3,360**	**3,436**	**3,842**	**4,811**	**5,843**
EO Items	0	364	946	200	121	0	0	0
PBT after EO Exp.	**1,885**	**2,536**	**3,037**	**3,560**	**3,557**	**3,842**	**4,811**	**5,843**
Total Tax	506	605	754	1,018	1,207	1,298	1,636	1,987
Tax Rate (%)	26.9	23.9	24.8	28.6	33.9	33.8	34.0	34.0
Minority Interest	-186	-170	-356	55	57	116	165	200
Reported PAT	**1,565**	**2,101**	**2,639**	**2,487**	**2,292**	**2,428**	**3,010**	**3,657**
Adjusted PAT	**1,565**	**1,736**	**1,693**	**2,287**	**2,172**	**2,428**	**3,010**	**3,657**
Change (%)	62.8	10.9	-2.5	35.1	-5.1	11.8	24.0	21.5
Margin (%)	5.0	5.2	4.5	4.6	4.2	4.1	4.6	5.0

Consolidated - Balance Sheet								(INR m)
Y/E March	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19E**	**FY20E**	**FY21E**
Equity Share Capital	132	926	926	1,851	1,920	1,920	1,920	1,920
Total Reserves	5,055	5,478	6,906	8,237	12,193	13,582	15,552	17,938
Net Worth	**5,187**	**6,404**	**7,832**	**10,088**	**14,114**	**15,502**	**17,472**	**19,858**
Minority Interest	0	0	2,323	2,541	2,693	2,899	3,163	3,471
Total Loans	6,205	6,848	13,757	6,641	4,098	3,848	3,598	3,348
Deferred Tax Liabilities	435	565	1,458	1,663	1,730	1,730	1,730	1,730
Capital Employed	**11,827**	**13,818**	**25,369**	**20,933**	**22,635**	**23,979**	**25,963**	**28,408**
Gross Block	5,234	6,417	12,139	14,109	15,185	17,833	20,163	22,554
Less: Accum. Deprn.	578	975	564	1,329	2,214	3,204	4,325	5,585
Net Fixed Assets	**4,655**	**5,443**	**11,575**	**12,779**	**12,971**	**14,629**	**15,838**	**16,969**
Goodwill on Consolidation	0	0	1,949	1,949	1,949	1,949	1,949	1,949
Capital WIP	1,492	1,380	638	504	1,904	1,506	1,426	1,535
Total Investments	**1,288**	**1,858**	**2,140**	**1,755**	**1,952**	**1,952**	**1,952**	**1,952**
Curr. Assets, Loans&Adv.	**8,326**	**8,847**	**14,930**	**15,157**	**16,749**	**18,783**	**20,928**	**23,894**
Inventory	3,193	3,888	6,665	7,381	7,629	8,717	9,703	10,856
Account Receivables	2,259	2,693	4,545	5,219	6,315	6,742	7,467	8,400
Cash and Bank Balance	1,145	175	420	538	299	503	633	1,123
Loans and Advances	1,729	2,092	3,299	2,019	2,507	2,821	3,125	3,515
Curr. Liability & Prov.	**3,934**	**3,711**	**5,862**	**11,212**	**12,890**	**14,840**	**16,130**	**17,892**
Account Payables	2,296	2,141	3,349	8,408	9,550	11,081	11,967	13,208
Other Current Liabilities	1,519	1,434	2,312	2,496	2,955	3,326	3,684	4,144
Provisions	120	136	202	308	385	433	479	539
Net Current Assets	**4,391**	**5,136**	**9,067**	**3,946**	**3,859**	**3,943**	**4,798**	**6,003**
Appl. of Funds	**11,827**	**13,818**	**25,369**	**20,933**	**22,635**	**23,979**	**25,963**	**28,408**

Financials and valuations

Ratios								
Y/E March	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19E**	**FY20E**	**FY21E**
Basic (INR)								
EPS	**8.2**	**9.0**	**8.8**	**11.9**	**11.3**	**12.6**	**15.7**	**19.0**
Cash EPS	9.6	11.0	11.5	15.8	15.8	17.8	21.5	25.6
BV/Share	27.0	33.4	40.8	52.5	73.5	80.7	91.0	103.4
DPS	1.3	3.7	2.1	4.5	4.5	4.5	4.5	5.5
Payout (%)	18.8	39.3	18.8	41.9	45.6	42.8	34.5	34.8
Valuation (x)								
P/E				42.7	45.0	40.3	32.5	26.7
Cash P/E				32.2	32.3	28.6	23.7	19.9
P/BV				9.7	6.9	6.3	5.6	4.9
EV/Sales				2.2	2.0	1.8	1.6	1.4
EV/EBITDA				24.3	23.5	22.3	17.7	14.9
Dividend Yield (%)	0.3	0.7	0.4	0.9	0.9	0.9	0.9	1.1
FCF per share	1.5	0.0	2.4	36.6	5.7	7.5	7.9	10.8
Return Ratios (%)								
RoE	33.6	30.0	23.8	25.5	17.9	16.4	18.3	19.6
RoCE	16.5	17.5	13.2	15.7	14.7	14.8	16.8	18.3
RoIC	21.6	22.4	11.3	12.9	12.9	12.6	14.9	16.5
Working Capital Ratios								
Fixed Asset Turnover (x)	5.9	5.2	3.1	3.5	3.4	3.3	3.2	3.2
Asset Turnover (x)	2.6	2.4	1.5	2.4	2.3	2.4	2.5	2.6
Inventory (Days)	38	43	65	55	53	54	55	54
Debtor (Days)	27	30	44	39	44	42	42	42
Creditor (Days)	27	24	33	62	67	69	67	66
Leverage Ratio (x)								
Current Ratio	2.1	2.4	2.5	1.4	1.3	1.3	1.3	1.3
Interest Cover Ratio	5.3	4.1	2.5	4.2	7.9	10.5	14.5	18.7
Net Debt/Equity	1.0	1.0	1.6	0.6	0.3	0.2	0.2	0.1

Consolidated - Cash Flow Statement								(INR m)
Y/E March	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**	**FY19E**	**FY20E**	**FY21E**
OP/(Loss) before Tax	2,071	2,706	3,364	3,727	3,717	3,842	4,811	5,843
Depreciation	276	370	524	747	859	990	1,121	1,260
Interest & Finance Charges	375	620	885	715	453	-172	-62	-140
Direct Taxes Paid	-421	-557	-456	-800	-837	-1,298	-1,636	-1,987
(Inc)/Dec in WC	-29	-1,552	-1,024	5,145	-471	326	-461	-406
CF from Operations	**2,271**	**1,587**	**3,293**	**9,534**	**3,721**	**3,688**	**3,773**	**4,570**
Others	-172	-499	-1,610	-561	-183	0	0	0
CF from Operating incl EO	**2,099**	**1,088**	**1,683**	**8,973**	**3,538**	**3,688**	**3,773**	**4,570**
(Inc)/Dec in FA	-1,818	-1,094	-1,223	-1,949	-2,448	-2,250	-2,250	-2,500
Free Cash Flow	**281**	**-5**	**460**	**7,024**	**1,091**	**1,438**	**1,523**	**2,070**
(Pur)/Sale of Investments	-68	-131	581	610	-131	0	0	0
Others	-16	-44	-3,581	366	51	611	488	554
CF from Investments	**-1,901**	**-1,269**	**-4,223**	**-974**	**-2,528**	**-1,639**	**-1,762**	**-1,946**
Issue of Shares	0	0	39	8	2	0	0	0
Inc/(Dec) in Debt	1,402	566	4,168	-7,027	-2,571	-250	-250	-250
Interest Paid	-421	-650	-972	-861	-455	-349	-328	-306
Dividend Paid	-251	-706	-452	0	-1,045	-1,040	-1,040	-1,271
Others	0	0	0	0	2,818	-206	-264	-309
CF from Fin. Activity	**729**	**-790**	**2,784**	**-7,881**	**-1,250**	**-1,845**	**-1,881**	**-2,135**
Inc/Dec of Cash	**927**	**-970**	**244**	**119**	**-240**	**204**	**130**	**489**
Opening Balance	219	1,146	175	419	538	299	503	633
Closing Balance	**1,146**	**175**	**419**	**538**	**299**	**503**	**633**	**1,123**

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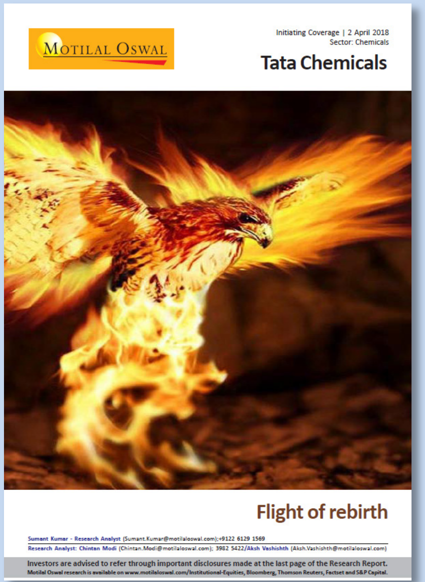

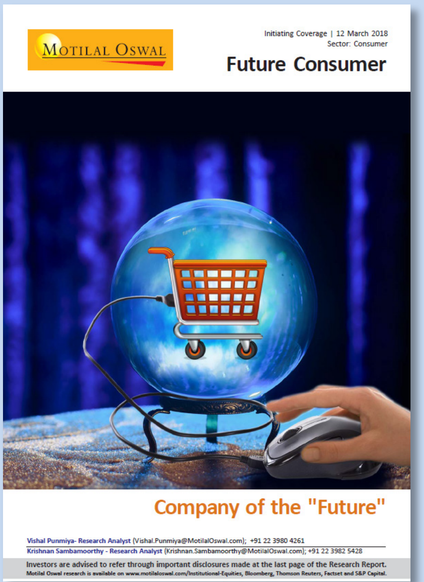

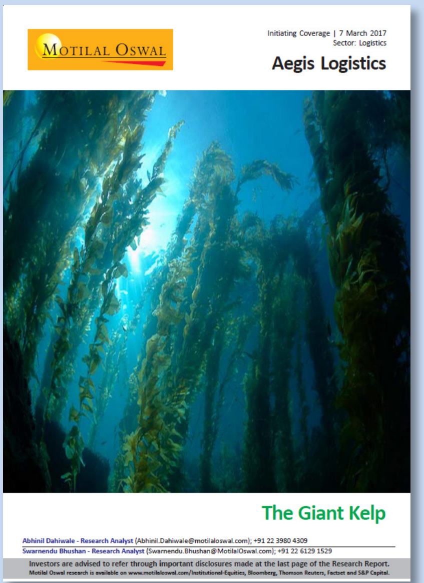

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BUY	>=15%
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