

# MANAGEMENT DISCUSSION AND ANALYSIS

## INDIAN ECONOMY

With Covid-19 playing havoc with the economy before the new financial year even started, the year would be remembered as an extremely difficult one. At a time when India's growth rate was at a six-year low and decelerating.

As India went into a nationwide lockdown, the government announced its initial set of measures to limit the damage. "The Great Lockdown" that saw crude oil prices turn negative for the first time in history. In early September, India's first official estimates showed that the domestic economy had contracted by almost 24% in the April-May-June quarter — making India one of the worst-hit major economies in the world. India had entered a technical recession, moreover since this contraction came at the back of secular deceleration in GDP growth rate since 2016-17 onwards, the economic stress was showing up in rising joblessness, increasing poverty and falling health and wellbeing of citizens at large.

## AGRICULTURAL SECTOR IN INDIA

India has the largest arable land resource in the world. Agriculture is the livelihood of 58% of India's population. India is the largest producer of spices, pulses, milk, tea, cashew and jute, and the second largest producer of wheat, rice, fruits and vegetables, sugarcane, cotton and oilseeds. Further, India is second in the global production of fruits and vegetables and is the largest producer of mango and banana.

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year due to its immense potential for value addition, particularly within the food processing industry. Indian food and grocery market is the world's sixth largest, with retail contributing 70% of the sales. The Indian food processing industry accounts for 32% of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. Essential agricultural commodities export for the April-September period of 2020 increased by 43% to Rs. 53,626 crore (US\$ 7.3 billion) over Rs. 37,397 crore (US\$ 5.1 billion) in the same period last year.

India is among the 15 leading exporters of agricultural products in the world. Agricultural export from India reached US\$ 38.54 billion in FY19 and US\$ 35.09 billion in FY20. The total agricultural export was US\$ 10.40 billion between April and October 2020. The organic food segment in India is expected to grow at a CAGR of 10% during 2015-25 and is estimated to reach Rs. 75,000 crore (US\$ 10.73 billion) by 2025 from Rs. 2,700 crore (US\$ 386.32 million) in 2015.

India is expected to achieve the ambitious goal of doubling farm income by 2022. The agriculture sector in India is expected to generate better momentum in the next few years due to increased investment in agricultural infrastructure such as irrigation facilities, warehousing and cold storage. Furthermore, the growing use of genetically modified crops will likely improve the yield for Indian farmers. India is expected to be self-sufficient in pulses in the coming few years due to concerted effort of scientists to get early maturing varieties of pulses and the increase in minimum support price.

## SEED SECTOR IN INDIA

Indian seed industry size is around US\$4bn has been growing at 20% cagr in last 8-10 years. It is expected to double to US\$8-10bn market by FY25-26. Global seed market is US\$60-70bn and growing at 6-7% and likely to touch US\$90-100bn by FY25-26. India despite the 2nd largest population is just 4% of the global seed market. At the same time, India's share of global export market is a mere 1%. Given the varied weather conditions existing in the country, India can export seeds to whole of South Asia and Africa. Seeds are just 5-6% of the farming cost and one of the most important way to improve productivity. Sharp improvement happened in productivity of cotton farming due to use of Genetically modified seeds. Similar scope is there for other crops too. It seems like a secular growth story and seed companies can grow their revenues in excess of 10-15% consistently in the foreseeable future.

The adoption of hybrid seeds has significantly increased in the country during and after the Green Revolution, due to the increasing pressure for high crop production for food security. The hybrid seed sector witnessed a growth of 15-20% per year, over the past decade. The major boost has come from the increased adoption of Bt cotton hybrids, single-cross corn hybrids, and hybrid vegetables. This increased demand for hybrid seeds has boosted the market for commercial seeds. The aggressive promotion measures are undertaken for the use of hybrid seeds resulted in the increased demand for, and production of, hybrid seeds in the country. Farmers are adopting and using more hybrid seeds, considering the disease- and pest-resistant properties of these seeds, and reducing the losses and cost of production.

## VALUE RESEARCH PREMIUM

Under the row crop segment of the market studied, cotton holds the maximum revenue share. This is primarily due to the large-scale adoption of Bt cotton seeds in India. The cottonseed segment in India has witnessed the highest CAGR during the forecast period. Cotton is an important part of the Indian economy, as this crop forms the backbone of the Indian textile industry. Cotton has been a stellar example of the role of seeds in improving the productivity of the crop. Indian yields are a far cry from global averages and those seen in the developed world. Apart from fraction land holdings and limited irrigation facility, quality of seeds play an important role. Looking at the Seed Replacement Ratio (SRR), the ratio of cultivation done by new seeds, there is huge scope in increasing seed sales of Paddy, Maize and Vegetables. Many factors are driving the demand for high quality seeds

1. Increasing Disposal Income
2. Increasing Seed Replacement Ratio
3. Government Policy Support
4. Increasing adoption of hybrid seeds
5. Patent Protection systems & intellectual rights over plant varieties
6. Increased investment from public as well as private sector

### NBIL

Nath Bio-Genes (India) Limited is one of the oldest seed companies in the country with over 30 years of experience in manufacturing & distributing seeds to Indian farmers. Relying upon its strong R&D background, Nath Bio-Genes has produced several highly ranked cotton seeds in the country which have done well in the ICAR trials and stood the test of time with respect to various virus tolerance as well as improved yield in spite of weather fluctuations. It is the first seed company in Asia Pacific region to get ISO 9001 certificate. It's new launches Sanket and Daksh cotton seeds have been ranked among top 3 in most geographies and under various planting conditions. These blockbuster seeds have helped Nath to increase its cotton seeds sales by more than 3x in last 4 years. A new seed has a life cycle of 7-8 years. The consistent high rank achieved by Nath's new seeds gives reasonable confidence about it growing its cotton seeds portfolio faster than the industry. Management has been guiding for 20% CAGR growth. The company has worked on de-risking its business by having multiple growth drivers like paddy, vegetable seeds and plant nutrient (win-chi-win) in its portfolio. The non cotton non paddy portfolio has grown by 14% and contributed to 38% of the overall revenue.



# VALUE RESEARCH PREMIUM

Nath strives to maintain good relations with farming community and build close contacts to work hand in hand with progressive farmers. The company has established a network of over 15,000 farmers growing seeds for the company. The Company has been awarded with the prestigious "Vasantrao Naik Prathisthan Award" for its contribution for enhancing Agricultural Productivity amongst other rewards & recognition.

## PRODUCT PORTFOLIO

Segment	Key Products	Product Pipeline	Key Geographies
<b>Cotton</b>	NBC 102, NBC 1022, NBC 1111, NBC 1103, NBC 10	NBC 1821, NBC 1851, NBC 1811	Maharashtra, Gujarat, Karnataka, Andhra Pradesh, Telangana, Madhya Pradesh
<b>Paddy</b>	Loknath, Gorakhnath, Super Duper, Tehelka, Kabir, Gazab, Ford	Hybrid NBRH 29, Hybrid NBRH 33	Bihar, Jharkhand, Uttar Pradesh
<b>Vegetables</b>	Okra- NOH 05, NOH-03, Tomato-NTH1831, NTH1894, Cucumber- NCH 02, NCH-1061, Bitter Gourd- NBIH274, Hot Pepper-NCH 811, NCH 1120s		Maharashtra, Gujarat
<b>Win Chi Win</b>			Maharashtra, Gujarat, Bihar, Telangana, Andhra Pradesh
<b>Others</b>	Maize, Mustard, Jowar, Bajra, Wheat		Maharashtra, Gujarat, Andhra Pradesh

## COTTON

Cotton –Big boll and sucking pest tolerant are the two aspects which are attracting farmers attention. In the Cotton Industry, both areas are a reciprocal combination. If it is big boll then naturally it is susceptible to sucking pest conflict. Nath Bio is the only company barring one or two products in the market, to focus on this unique segment which is medium boll but having high level of sucking pest tolerance.

Products in the pipeline -NBC 1821, NBC 1851 and NBC 1811 have completed 1 year of ICAR Government of India enhanced cotton seed prices by Rs 37 per packet this year which is helping in adding better value. Extra ordinary efforts have been put in order to promote unique cotton products like NBC-10, Sanket and Dana. However, the treat of illegal HTBT Cotton continues to affect the industry.

In R&D, the company is developing products with:

- Medium and Large Boll
- High tolerance to sucking pests
- Wider adaptability
- Yield Superiority

Our strategy is to provide farmers with a wide range of varieties of cotton seeds suitable for diverse climatic conditions while maintaining yield superiority. The company has launched two new hybrids- Sanket and Dakash to bolster the growth in this segment.

Cotton expected to grow at 22%.

**PADDY**- Sales is a combination of Open Pollination and Hybrid Seeds. Hybrid Paddy sells at relatively higher margins and it is one of the major bottom line generators for the company given that paddy has the highest pie in our product portfolio. The company has invested heavily in hybrid research program and has launched new products: Dhoom, Dhadak and Dhadak Gold.

Currently Paddy as a segment is growing at a CAGR of 7-8%.

In terms of R&D, the company is developing products with:

- Early maturity, fine grain and resistance to diseases and pests
- Tolerance to moisture stress
- Medium-Bold and Long Bold grain products, Medium maturity (125-135 days), embedded with BLB and BPH resistance

**Vegetables** - Vegetables is a huge segment with varieties of product offerings. In few parts of India it is a round the year crop whereas in few it is majorly a Rabi focussed crop. It is a high margin segment for the company contributing 60% plus gross margins.

In terms of R&D, the company is developing:

- Multiple product varieties in the existing portfolio
- New products
- Foray into fruits as well with vegetables

Nath has its presence cross 10 products – Pan India. The company has a set a separate team for marketing and distribution. NBIL is in the process of launching multiple new products in Tomato and Okra with high disease resistance, in Chilly and Bitter Gourd with high yield and excellent virus resistance and in cucumber with no bitterness.



**Plant Nutrient Supplement** - Nath Bio-Genes has an exclusive tie-up with a Chinese company to source & market Win-Chi-Win in India. It is a Plant Nutrient Supplement, which has a proven track record of increasing the yield of the crops it is used on. Win-Chi-Win is sold round-the-year, across India & Nath Bio-Genes has witnessed high demand for this product for vegetables, field, plantation & horticulture crops. Two new products have been launched in the PNS vertical – both are soil conditioners and help raise a good crop by improving the soil quality. It is a high margin segment.

**Others** - Maize, Bajra, Mustard, Jowar and Wheat are majorly covered in this segment which higher concentration from Maize, Mustard and Bajra. This segment contributes about 20% to the topline of the company.

### Financial Review

Despite a massively challenging year, in which the company was hit by COVID-19 in the key seasons, Nath bio genes has delivered a strong revenue growth of 10% and maintained the long-term debt free status. The growth is commendable pursuant to the pandemic situation, which hampered farmer and marketing personnel movement simultaneously. However, we maintained our gross contribution margin of 56% this year with a net profit margin of around 18%. The company also declared a maiden dividend of 20%. Strong growth was reported in the verticals of field crops, vegetable and supplements, thus strengthening the success towards moving to a de-risked business model. Vegetable portfolio volumetrically grew by 13%. High Gross margins of 50%+ have been consistently maintained. Field crops besides cotton and paddy have performed very well and contributed to 17% of the portfolio. Maize grew by 32%, bajra by 10%, Wheat by 34%. The overall volumetric growth was 10%. Plant nutrient segment, was massively impacted because of Covid, and it delivered a moderate growth of 80%. The product continues to give a margin of around 70% plus and in revenue contribution it maintained the 10% of the overall sales. Cotton portfolio grew by 5% - it took a significant hit due to COVID. A tight working capital cycle is maintained but has been impacted due to Cotton Sales return. The distributors were unable to place the product and there was a significant inventory build-up. However, Inventory is expected to normalize over the next two years. Receivable days have reduced from 140 to 130 days. Promoters have considerably reduced the pledge of their holding in the company to 20%. Pandemic situation is getting under control, but will still impact the upcoming kharif season marginally. Nath bio genes guidance maintained at a top line growth of 15-20% in FY22.



### Outlook And Future Strategies

Potential to increase revenue multifold through new products and geographies  
Huge opportunity in South East Asia and Africa  
Insulates from a single country regulatory risk

### Infrastructure

#### Research And Development

Using the best R&D expertise in the country, Nath Bio-Genes has successfully redefined product development & evaluation technologies, to create exceptionally high yielding hybrids with high levels of biotic & abiotic stress tolerance. One of its largest advantages over its peers comes from the company's proprietary collection of superior & world-class Trait Specific Elite Germplasm.

### The company has:

- 18 Breeding and Evaluation R&D Stations in different Agro-Climatic conditions
- More than 300 acres of land dedicated to Research and Development, across the nation
- Collaboration with reputed International and National Centres of Excellence (NRCPB, CIMMYT, IRRI, ICRISAT Etc.)
- Team of handpicked plant breeders and biotechnologists, located at key R&D stations, across the country, guided by R&D veterans.

### Pan India Operations

NBIL undertakes seed production in over 30,000 acres of land with about 25,000 loyal growers and 72 technically qualified organizers. Seed is produced in the states of Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Rajasthan, Odisha, Uttar Pradesh, Madhya Pradesh and Tamil Nadu which covers different agro- climatic zones of the country. The company assures that seeds of the highest quality reach its processing centers by setting rigorous field standards and quality control checks throughout the seed production process. A team of qualified production staff and quality personnel visit to monitor farms in order to ensure stringent controls. The foundation seed with highest genetic purity is sown in all crops. The company constantly strives to build and improve relationships on a personal level with the production growers & organizers to ensure loyalty and commitment. Understanding their constraints, providing them the necessary training, guidance and financial support have led to fruitful results.

### Elaborate Seed Processing Facilities

The company has elaborate seed processing facilities with 10 Processing Plants located in Maharashtra and Andhra Pradesh. The company also has processing arrangements in Gujarat, Karnataka, Tamil Nadu, Madhya Pradesh and Rajasthan on custom basis. The seeds received from growers are processed to achieve quality standards which surpass those prescribed by the regulatory authorities. All the plants are equipped with pre-cleaner, fine cleaner, grader, gravity separator, de-stoner, indented cylinder, treater, needle separator and packing machines which are fully automated. The company has independent facilities for ginning, de-linting, drying, processing, treating, packing and storage of seeds. The seed processing quality is taken to the next level by ensuring improvements in seed viability and prolonging the shelf life of seeds. All the packing material has best environmental barriers characteristics to guarantee optimal storage conditions for the seed.

## Meticulous Quality Assurance

The quality policy of Nath Bio-Genes ensures meeting world class quality standards so that the farmers get optimal yields that maximize their profitability, keeping total quality management in view.

NBIL has one of the most stringent and systematic Seed Testing Laboratories at Maharashtra and Andhra Pradesh. The team conducts regular field inspection in entire production area. Also Genetic Purity tests are conducted to check germination of lots regularly. It is a consistent endeavour to ensure that the seeds are produced under best conditions and that all seed lots are of highest genetic purity. Every seed lot that comes into the Processing Plants is sampled and tested for Physical Appearance, Moisture, Other Distinguishable Varieties presence, Physical Purity, Treatment, Genetic Purity, Germination, vigour and Soil emergence and reported. The Genetically Modified Crops undergo the ELISA test to ensure Gene Purity. Quality Assurance is also involved in Foundation Seed Production inspection and Processing Plant inspection during processing and packing. Every year more than 2 lakh quality checks are conducted throughout the supply chain process in accordance with the International Seed Testing Association (ISTA) before packing & dispatch of seeds to marketing centres.

## Strong Distribution Network

Nath Bio-Genes, led by Seed Marketing Veterans, has diversified to new geographies, both within & outside India, over the last 3-4 years. In India, the company has 16 business centres covering 131 territories & connecting with over 2,000 distributors, all across the country. NBGL aims to improve its Direct Retailer reach to over 20,000 by the upcoming year as compared to over 7,000 currently.

With a heartened presence in India, the company has been venturing to newer geographies outside the country, possessing similar agronomical conditions as India. all set to spread its wings in other parts of Asia, Africa & the Middle East.

## Risk Mitigation

Uncertainties regarding government policies on GM or Hybrid seeds: Growing regulatory norms due to rising competition in the seed space, both from domestic as well as international companies could impact operations adversely.

Mitigation: Nath Bio-Genes has a strong compliance & R&D team, which keeps abreast of the various policy changes as well as international standards on GM and/or Hybrid seeds. The company will be able to adequately mitigate any challenges arising out of policy changes, supported by its middle-management & technology teams.

**Technological Efficacy:** Increased usage of the same kind of technology sometimes makes the soil or viruses and pests immune to the benefits of that technology.

**Mitigation:** Nath Bio-Genes has invested heavily in developing its R&D infrastructure, in order to introduce several new technologies & innovations to the Indian market and reduce its dependence on any one type of technology. The company will endeavor to continue creating seeds that remain high yielding & sufficiently resistant to several pests & viruses.

**Weather Fluctuations:** A large section of the world's agricultural community relies upon supportive weather conditions in order to produce & maintain their crops and fields. Any adverse climatic changes could impact production of foodgrains, vegetables, etc to a large degree.

**Mitigation:** Despite the advances in irrigation, any adverse climatic conditions continue to impact food production to a large degree. While Nath Bio-Genes' sales will also be impacted by such adverse weather conditions, the company is trying to reduce the impact of weather conditions by introducing seeds that can be grown in specific conditions like drought, head wave, etc. The company aims to keep the impact of such natural factors in check by proactive & prompt responses.

**Cotton Business Impacted by Multiple Challenges:** Uncertainty around policy approval or new technology and increasing proliferation of illegal seeds in cotton growing states. It is difficult to produce products based on consumer preferences and farmers are using illegal products which are herbicide tolerant.

**Mitigation:** The company has focused on creating a diversified portfolio. Company will increase focus on "All Season Products" for optimal utilisation of field force and channel partners. Company wants to target vegetable and plant nutrient segment growth at a higher rate.

## Human Resources

As Nath Bio-Genes enters its growth phase, the company is investing heavily in human resources. The company has a dedicated team of researchers & scientists that form the backbone of the company & create the large variety of products that Nath Bio-Genes deals in. The company continues to nurture this team via various international alliances and workshops with reputed research institutes worldwide. Nath Bio-Genes is also focusing on increasing its sales & marketing team in order to widen the outreach of its products. the team undergoes constant training & motivation sessions to cultivate self-development. Nath Bio-Genes also endeavors to provide a supportive work environment where employees can realize their full potential. As on March 31st, 2021 the total number of employees on the company's rolls stood at 482.

## Internal Control Systems

The Company has adequate systems of internal control and procedures covering all financial and operating functions commensurate with the size and nature of operations. The Company believes that a strong internal control framework is one of the important pillars of Corporate Governance. Continuous efforts are being made to see that the controls are designed to provide a reasonable assurance with regard to maintaining of accounting controls and assets from unauthorized use or losses. The audit committee considers all aspects of internal and advises corrective action as and when required.