



NATH SEEDS®

# Nath Bio-Genes (I) Ltd.

*Research Led Growth*



## Background Information

- **Pioneering promoters**
  - *Associated with the industry right from inception*
- **One of the most experienced Seed Company in India**
- **First Seed company in the Asia Pacific region to get ISO 9001 certificate**



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## Background Information

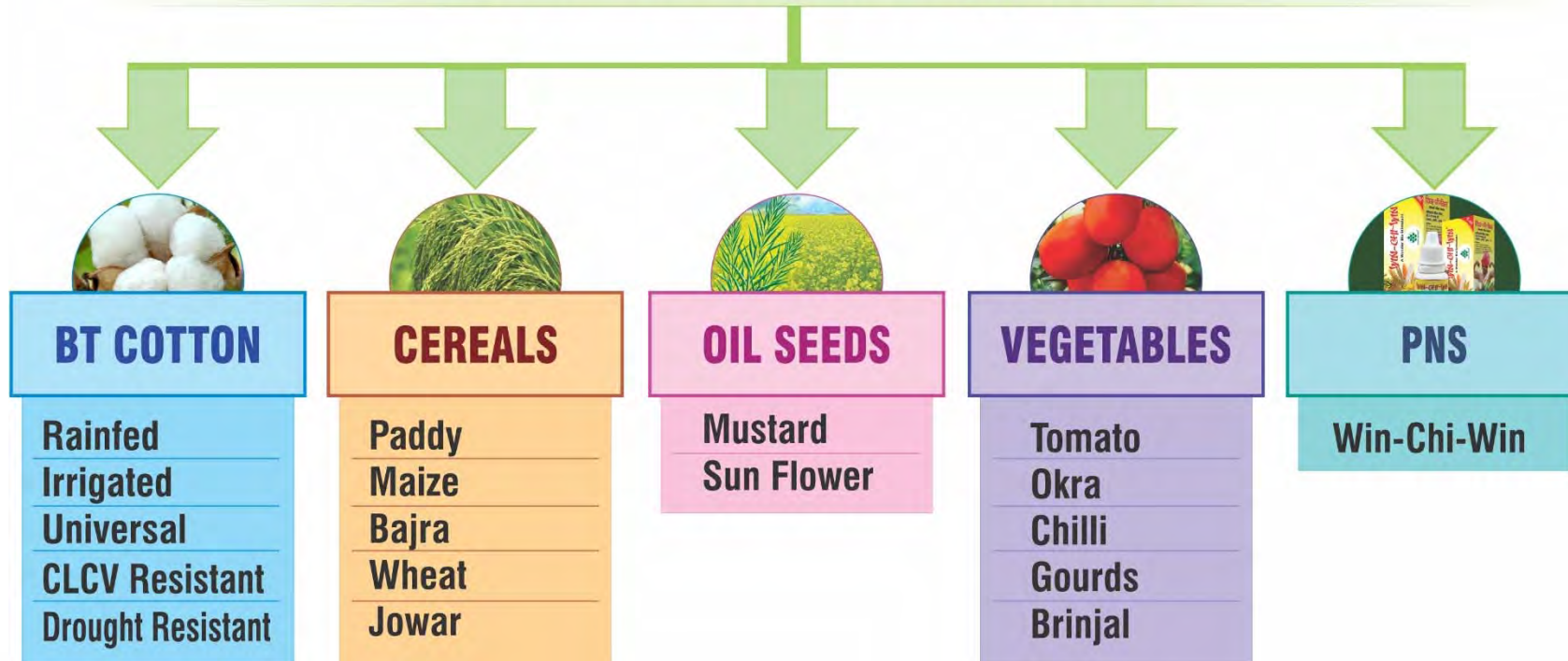
- Released over 30 hybrids in the last 5 years
- Collection of over 18,925 Germ plasms
- Strong marketing network & Brands
- Strong Research and screening facilities
  - Valuable Pipeline
  - Irrigated land and Research laboratories
- Technically sound and experienced breeders
- Close co-operation with National & International Research Institutes
- Strong linkages with farming community
- Network of over 15,000 farmers growing seeds for the company



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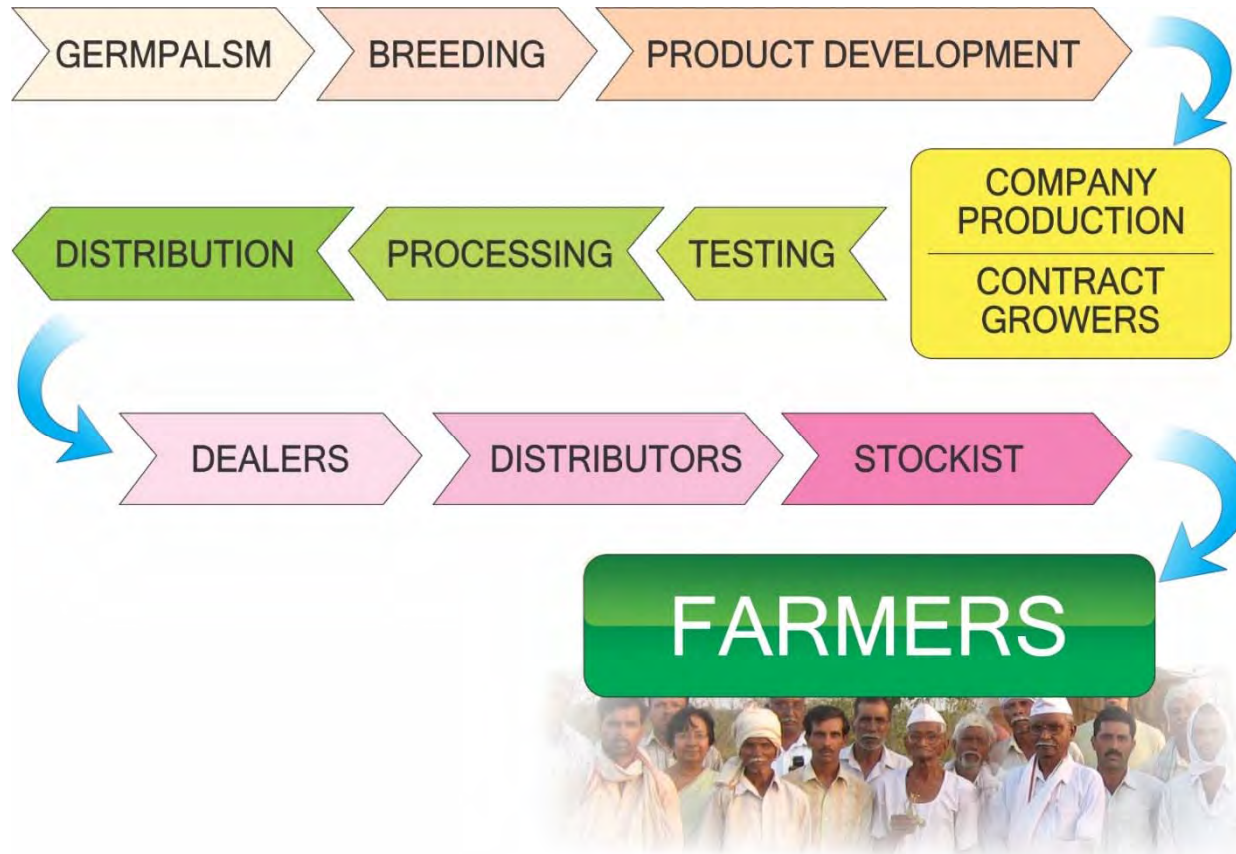
# Balanced & Diversified Portfolio of Value Added Products

## NATH BIO-GENES (I) LTD.



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# Presence Across the Value Chain



***One of the few seeds company to cover the entire spectrum***



# Key Success Factors

## ➤ Continuous Demonstration of Quality

- *Seeing is believing. Branding is important*

## ➤ Investment in Technology

- *Collection of germplasm*
- *Alliances with National & International Research Institution*

## ➤ Robust Pipeline of Value Added Research Products

- *To suit changing disease profile, climate patterns and farmer choices*

## ➤ Relationship with Farmers

- *Established network of committed seed growers.*

## ➤ Distribution Network

- *PAN Indian presence with a network of 14 branches.*



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## Our Core Fundamentals

- **Vision:** Developing proprietary genes for various crops.
- **Research focus:** Pursuing genetic engineering technology and molecule aided selection systems to augment crop breeding and product development programs.
- **Alliances:** Alliances with prestigious international research institutions in India, China and Philippines to further research in cotton, paddy and vegetable hybrids.
- **Strategic Location:** Located in Maharashtra and Telangana, the seed production hub of India. Research centres across geographies to customize seeds for local requirement.
- **Products & Pipeline:** Focus on large category like Cotton, Paddy, Okra and Tomato and create industry leading product. For. E.g. – In Cotton, created a product called 102 and 1022 that requires no spray, no irrigation and gives assured yield – resulting in a higher farmer profit per acre across climate cycles.



# Nature alone cannot feed us

## ➤ Increasing Global Population

- *Growing at the rate of 1.33% pa. - 78 million people pa. expected to touch 8.9 billion in 2050 from 7 billion today*
- *80% of the population in the less developed nations, with Asia accounting for 61% of the total population.*
- *60% of increase taking place in developing regions (21% by India, 15% by China)*
- *Demand for food expected to double by the year 2025-35*

## ➤ Decreasing per capita availability of land

- *India: The challenges*
  - 16% of global population*
  - 2% of arable land*
  - 1% of rainfall*
  - 0.50 acres of arable land per acre and still declining*





## Hence the Seeds

- **Seeds is the present & the future**
- **Solution lies in Seeds**
  - *It is the most optimal and cost effective solution*
  - *Highest ROI in the entire Agri-value chain*
  - *Value of seed per acre is around 8-10 % of overall cost*
  - *Yet, no production without seeds.*



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## Seed Stats – Cotton

- **Highest RoI amongst all inputs. For e.g. Cotton per acre:**
  - Seed cost per acre Rs. 1200 (1.5 packets),
  - Fertilizer cost per acre Rs. 1500 – 2000,
  - Insecticides / pesticides cost per acre Rs. 3500-6000 per acre,
  - Plucking cost at one tonne / acre Rs. 6000,
  - Other cost is Rs. 3500 (Water, manpower, etc).
- **Seed cost is between 6.5-7.5% of the total cost, its quality determines the output and the quality of produce.**
- **Farmer is well aware of the importance of seed and very particular of the seed he buys. Generally farmer does not compromise on quality of seed he buys.**



# RESEARCH IS THE KEY

WE HAVE INVESTED IN THE BEST



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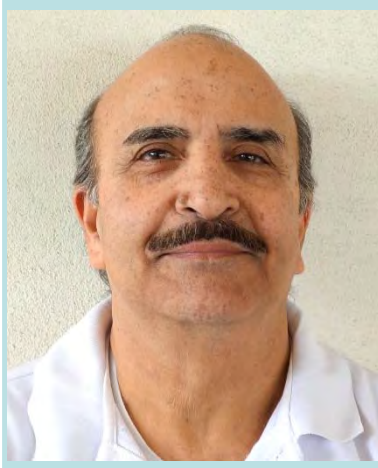


## Library of Germ Plasms

- **Germplasm are living genetic resources such as seeds or tissues that are maintained for the plant breeding, preservation and research.**
- **Germplasms are extensively used by research companies for genetic mapping, genetic editing to get right traits in the final product,**
- **Nath Bio-Genes has always believed in original research and over 4 decades of existence, company has created a valuable library of 18,925 germplasms,**
- **In addition to this, the company has affiliations and research alliances with several research Institutes world over for various crops,**
- **This is the foundation on which Nath Bio-Genes is building future generation of seeds that meet the peculiar needs of Indian farms.**



## Research Team - Veterans



**Dr. Satish Raina, Field Crops & Cotton**

- PhD, well known agro scientist with over 4 decades of experience,
- Helmed ICAR & IRRI transgenic and R&D programs,
- With Nath Bio-Genes for over 13 years and has developed class leading Bt-cotton seeds.



**Dr. Ish Kumar, Paddy**

- PhD, with almost 5 decades of experience,
- Served / Headed research at Syngenta, Raasi, Bayer, IRRI, Birmingham City University,
- His products contribute 60% of the hybrid rice seed production in India.



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## Research Team - Veterans



**Dr. Chandra Pathak, Vegetables**

- PhD, with over 4 decades of experience in seed research,
- Worked with Seminis, Monsanto, ICAR and World Vegetable Centre Taiwan,
- With Nath for past 8 years.



**Mr. Samadullah Baig, International Business**

- A seeds man with an extensive experience of all technical aspects of seed industry.
- He has been associated with Nath for the past 38 years and has undertaken several critical responsibilities & has contributed substantially towards the growth.



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## Research alliances

- **National Research Center on Biotechnology (IARI) Pusa Campus, Delhi**
- **International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad**
- **International Rice Research Institute (IRRI)**
- **International Maize and Wheat Improvement Center (CIMMYT), Mexico**
- **Biocentury Transgenes Corporation (China) Ltd.**
- **National Engineering and Technology Research Center for Semi-Arid Agriculture, Shijiazhuang, China**
- **Yuanlongping International Hybrid Rice Development Co. Ltd., Changsha, Hunan, China**
- **National Key Laboratory of Crop Genetic Improvement, National Center of Plant Gene Research, Huazhong Agricultural University, Wuhan, China**





# AT INFLECTION POINT



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# Inflection Point

- **Nath Bio-Genes (I) Limited is an early Pioneer and been in business for more than 35 years.**
- **The company is now at an Inflection Point.**
- **To grow faster than ever.**
- **Enhancing value for all its stakeholders.**



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## Convergence leading to Inflection

At Nath Bio-genes (I) Limited, we believe that the inflection is derived from a rare convergence, of many favorable factors, creating one of its biggest opportunities in years.

### **This convergence is derived from three realities:**

- **One.** *The Indian agriculture sector is being driven by the government's ambition to double farm incomes by 2022.*
- **Two.** *The Indian seeds segment intends to correct decades of under-penetration through rapid growth over the next few years.*
- **Three.** *Some of Nath Bio-genes' differentiated products are showing outstanding performance leading to enhanced revenues and profits.*

**The big message:** When sector, segment and company are at a take-off point, the emerging opportunity can be unprecedented.



# Inflection Opportunity

At Nath Bio-genes, this inflection opportunity is the result of three realities:

- **Considerably superior products that can transform farmer prosperity**
- **Graduating from being a domestic company to an international company**
- **Growing competence in the cutting-edge area of gene editing**



# Our Champion Products

## Cotton

- NBC-102
- NBC-1022
- NBC-King 101

## Field Crops

- NMH 1008 (Maize)
- NMH 1591 (Maize)
- NBH 1717 (Bajra)
- NBH 1188 (Bajra)

## Paddy

- Gajab
- Super Duper
- Ford 140
- Tehelka

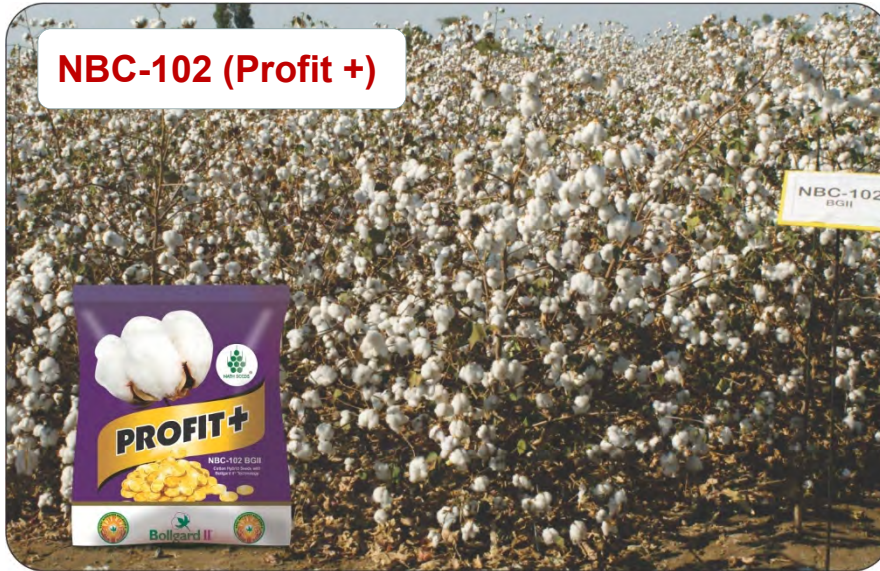
## Vegetables

- NTH 1894 (Tomato)
- NTH 1831 (Tomato)
- NOH 05 (Okra)
- NCH 886 (Chilli)

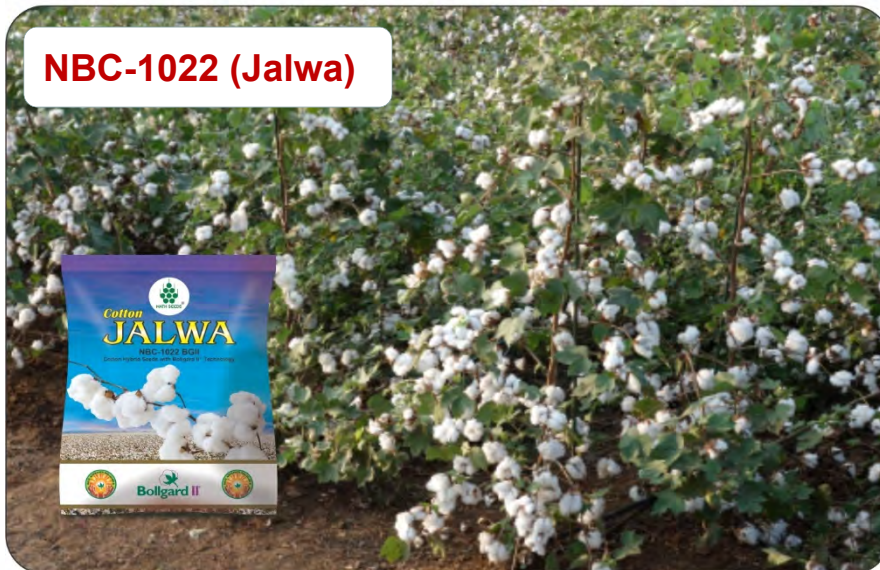


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**NBC-102 (Profit +)**



**NBC-1022 (Jalwa)**



**NBC-101 (King)**



**GAJAB**



**SUPER DUPER**



**FORD-140**



**TEHELKA**



**NATH SEEDS®**

**NMH-1008**



**NMH-1591**



**NBH-1717**



**NBH-1188 (BIG-B)**







**NOH-05**



**NTH-1894**



**NCH-886  
(PRIYA)**



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# Win-Chi-Win

- **WCW is a unique product increases enzymatic activity in the Plant, resulting in good metabolic process.**
- **Benefits of WCW:**
  - Enhance resistance against Stress & Cold.
  - Polysaccharides produces antibiotics, thus giving protection to the crop from fungus, Bacteria, Viruses & Insects.
  - It is crop Balancer.
  - Improve yield and quality.
  - Degrades pesticides residue.
- **WCW, foliar supplement, is seen to enhance the yield by over 50%, and also protects.**
- **China, sells 6 mm litres of WCW whereas in India we are not even 50 KL.**
- **We are creating a separate team dedicated to selling WCW in near future.**



## Planning for the Future Growth

- Investing in R&D for farmer centric crop solutions
- Intensify Transgenic Research in Cotton, Rice & Brinjal
- Augment Production & Processing Infrastructure
- Increase presence in number of crops
- Increase presence in number of territories
- Growth through Acquisitions
- Exports & Custom Seeds Production



## Research & Development

- Focused need based Farmer oriented Breeding
- Launched 85 hybrids of different crops for marketing
- Research stations located at Aurangabad, Hyderabad, Faizabad & Abohar
- Transgenic research in Cotton, Rice & Brinjal.
- 20 stations for multi-location trials in different climatic zones
- Crop Specific Research alliances with leading institutions worldwide



## Research & Development

- **Augment Gene Pool**
- **Enhance R & D Team**
- **Establish dedicated research centers for wheat & mustard.**
- **Establish Pathological Lab for disease screening**
- **Increase number of Regional Research Testing Stations**
  - *North India and the North East*
- **Strengthen crop specific research alliances**
  - *Rice, Maize, Sunflower*
- **Intensify national/international registrations**



## Quality Assurance:

- Well established seed tasting laboratory at Aurangabad
- 250 acres of land in Aurangabad & Andhra Pradesh for:
  - *R & D*
  - *Grow out test*
  - *Production of breeder and foundation seed*

## Seed Processing Network

- Aurangabad (M.S.)
- Munipally (T.S.)
- Medchal (T.S.)
- Arrangements in
  - A) Karnataka B) Madhya Pradesh
  - C) Rajasthan D) Gujarat



# Product Development

- **Continuous Market Research**
  - *to determine region specific requirements & farmer needs*
- **Dedicated product development teams**
- **Develop hybrids resistant to biotec & abiotic stresses**
- **Develop hybrids for export markets**



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# Production Activities

## ➤ Major Production Areas

- *Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Madhya Pradesh, Rajasthan, Tamil Nadu*

## ➤ Crops Being Produced

- *Cotton, Pearl Millet (Bajra), Sorghum, Maize, Wheat, Paddy, Mustard, Castor, Sunflower, Vegetable Seeds etc.*

## ➤ Number of Contact Growers associated with the Company

- *Approximately 15,000*

## ➤ Approximate Area Under Seed Production

- *30,000 Acres*



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# Seed Production, Processing & Storage

- **Dedicated clusters for seed production**
  - *Adopt villages for seed production*
- **Modern, state of the art processing & storage facilities in Andhra Pradesh, Maharashtra & North India**
- **Establish training centers for seed productions**
  - *Impart training to seed growers*
  - *Provide access to state of the art production technologies*
  - *Implement stringent quality standards*



# Revamped Marketing

- **Change starts from the top, got the industry Veteran, Mr. Madhav Dhande to head marketing:**
  - Madhav comes with over 4 decades of experience in seed marketing,
  - Last job as Director Krishdhan,
  - Madhav is considered as a veteran and one of the most respectable names in seed marketing in India.
- **Changes institutionalized by in the past 12-18 months:**
  - Focus on performing distributors or distributors who can deliver,
  - Targeted marketing, instead of selling all seeds at all times,
  - Created separate teams for field crops and vegetable marketing,
  - Improved co-ordination between marketing, research and production.
- **Results are visible, will manifest in Nath Bio-Gen performance in times to come.**



# Marketing

- Increase the number of Branches & Depots.
- Extensive demonstration and field days
- Increase network of Nath Farm Advisors
- Focus on Patent / Trademark registration
- IT integration



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# Marketing

## NATH SEEDS

*A Trusted Brand with Farmers*

**20 RRTS in different agro-climatic zones for Research Demonstration and evaluation**

**14 Branches**

**Over 200 Sales Territories**

**Over 450 Nath Farm Advisors to provide after sales service**



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# Thrust on Overseas Markets

## ➤ Existing products to be market in SAARC countries

- *Similar agro-climatic and soil conditions*
- *Similar crop preferences*

## ➤ East African Countries

- *Set up offices and trial stations*
- *Conduct and support trials for 2-4 years*
- *Develop tailor made crops*
- *Form alliance / acquire local firms*
- *Expand market share*
- *Collect germplasm - enrich databank*

## ➤ Phillipins NBIL - the only company to obtain approvals to Fusion Bt cotton seeds.



## Venture into Philippines

- Invested considerable time, effort and resources in comprehending the Philippines agro-climatic condition.
- Selected its proprietary cotton hybrid seeds, imbedded with its own Fusion BT technology to rejuvenate Philippines's cotton crop cultivation.
- Our cotton seed reported a yield that was much higher than the available alternative.
- Result : Fusion BT on the verge of commercialisation which would enhance revenues.
- This successful initiative could have two positive implications for the company:
  - *Possibility of extending from cotton to other crops.*
  - *Possibility of extending its successful Philippines entry into other countries.*



# NATH BIO-GENES (I) LTD to Evolve as a Future MNC



- **Indian experience can be replicated**
  - *In other developing countries of Africa & Asia*
- **Rich Germplasm and local experience of handling varied crops and seasons**
- **Capture Export Markets**
  - *Marketing Alliance in Bangladesh, Pakistan, Egypt, Myanmar & Saudi Arabia*
- **Research efforts providing a reservoir of Hybrids in pipeline**
  - *Ideal delivery vehicles for Biotech products*
  - *Research alliances with national and international institutions*
- **Alliances on transgenic technology already in place**
  - *Nath amongst the First Indian Seed Companies to launch BT cotton*
  - *Other being an MNCs Monsanto*



## Vision - 2023

- **Be the most admired and respected Seeds Company in the Focus Product Group.**
- **Have 12-15 % market share in Cotton seeds, with industry expected size of 50 million packets**
- **Become one of the Top 5 players in Paddy, Okra and Tomato.**
- **Make Win-Chi-Win a preferred Nutritional Supplement in the country.**
- **Make International forays with our distinctive products and technology.**





## Leadership team



**Mr. Nandkishor Kagliwal, Chairman (Promoter)**

*Mr. Nandkishor Kagliwal is the founder chairman of the Nath Group. He was the President of Maharashtra Economic Development Council (MEDC) and also served as a member of Maharashtra's planning board and western regional council of Industrial Development Bank of India (IDBI).*



**Mr. Satish Kagliwal, Managing Director (Promoter)**

*Mr. Satish Kagliwal is the Managing Director of the Nath Bio-Genes (India) Limited. He is also the trustee of Nath Agro Research Foundation, an institute doing fundamental research in several crops. He is a Management Post Graduate and has studied at BITS, Pilani. He has been actively involved in the agri sector for over two decades.*



**Mr. Devinder Khurana, Chief Financial Officer**

*A CFA (US), CAIIB, finance professional with more than 34 years of experience, He started his career in Indian Army. Thereafter, he joined State Bank of Hyderabad and accumulated an in-depth understanding of the banking and finance sectors. He has been instrumental in getting the entire operations of the Company online through the implementation of a cutting-edge ERP system.*



**Mr. Madhav Dhande, Business Lead**

*Mr. Dhande, a M.Sc. in Entomology from PVK Akola University, he is one of the foremost names in the marketing of agro inputs and has a rich experience of 43 years working for numerous renowned MNCs & Indian Seed companies. He has been associated with rapidly expanding Cotton business in highly competitive market.*



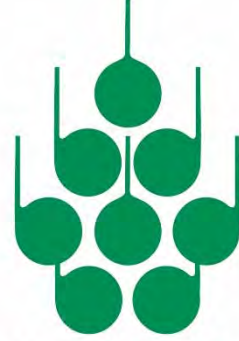
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## Chairman's Message

- **Our Annadata, the farmer is in deep distress. Extensive use of Insecticides, pesticides and chemical fertilizers have further added to his woes.**
- **We also realize that in times to come, the water availability would progressively decline.**
- **In such a scenario, seeds have to play the most important role in helping the farmer.**
- **We would do all that is in our means to help farmers realize full potential from the seeds they sow.**
- **All our research is dedicated for the betterment of our customers and Annadata of our nation.**

**Nandkishor Kagliwal  
Chairman – Nath Bio-Genes**





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**Nath Bio-Genes (I) Ltd.**

हर बीज खरा, शक्ति भरा



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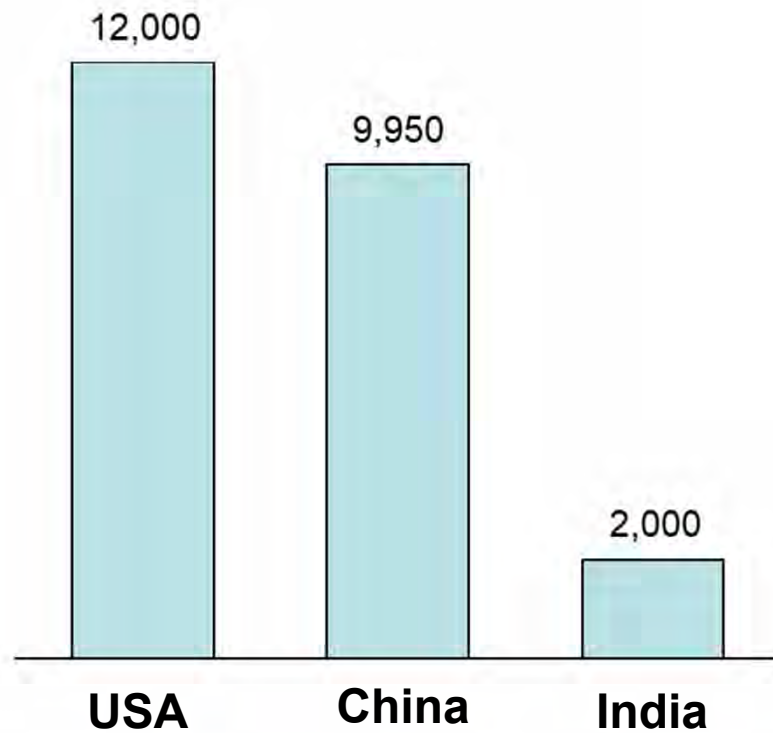
# SEED INDUSTRY INFORMATION



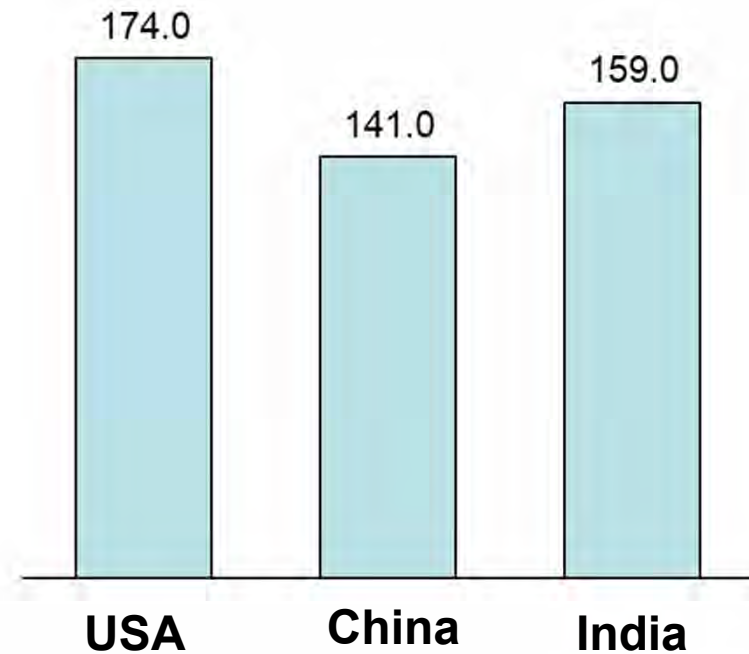
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# Arable land and Seed market

Domestic seed market (USD million)



Arable area (million ha)



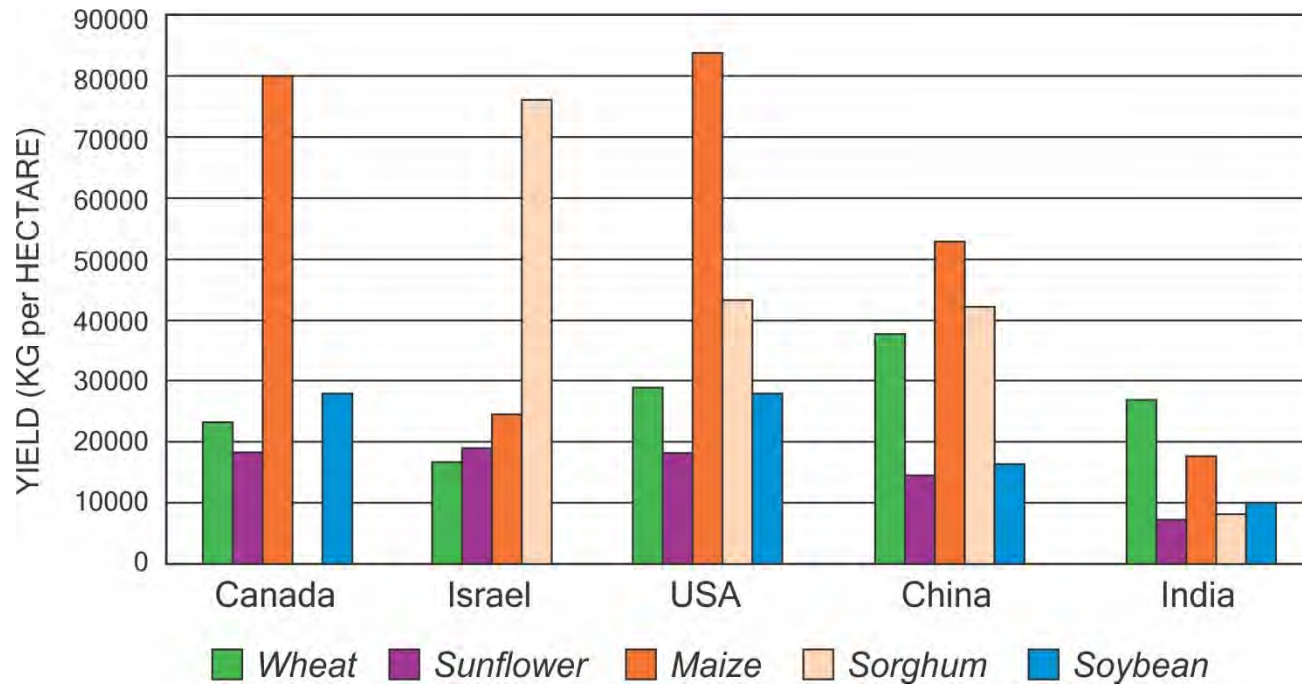
Source: FAIDA 2030



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# Substantially Lower Yields

COMPARATIVE YIELDS OF CROPS- BY COUNTRY



*Comparatively lower yields in India provide bigger business opportunities*

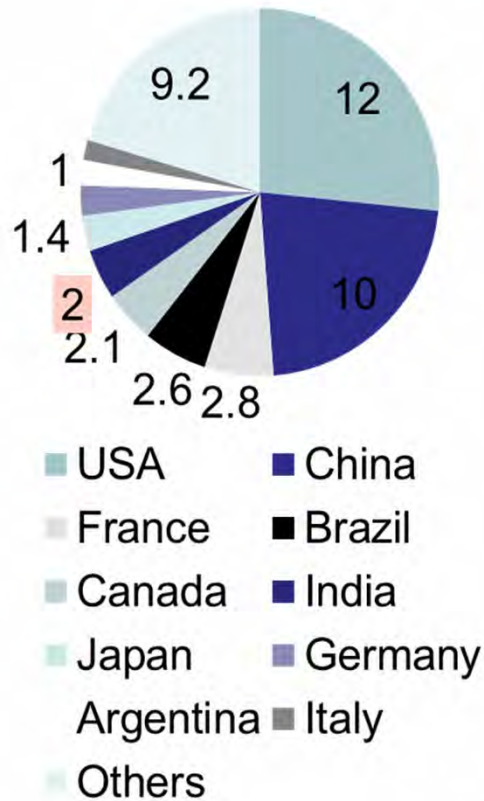


# Productivity Comparison

Crop	India (kg/ha)	China (kg/ha)
Rice	3659.80	6724.90
Wheat	3153.80	5050.50
Maize	2451.60	6174.90
Sorghum	854.40	4954.20
Cotton	552.00	1449.00
Chickpea	920.10	3333.30
Brinjal	18620.50	36110.10
Tomato	20712.50	51456.50



## Indian Seed Industry – 2%



- **Indian Seed Industry began with Green revolution**
- **Introduction of HYV & Hybrids helped the industry grow along with Agricultural production.**
- **It's still only 2% of the Global Seed market.**
- **Industry is fragmented with many small players largely from private sector**

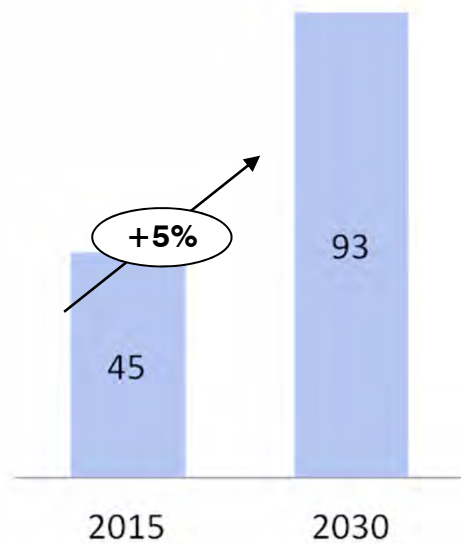


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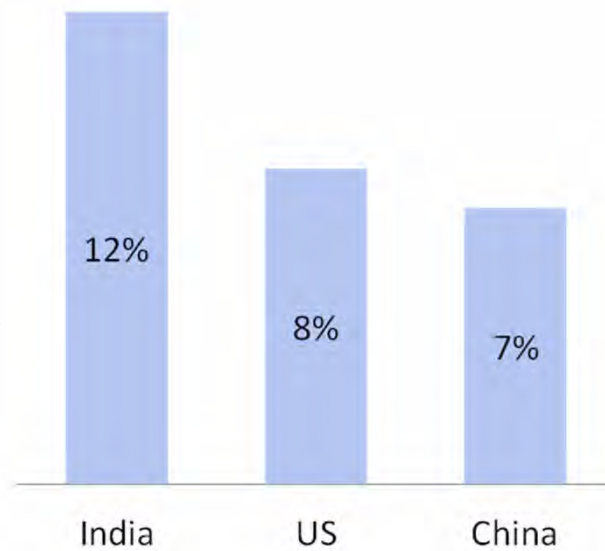
# Indian Seed Industry – Potential (\$14.7 Bn)

**Global Seed Industry  
Growing at a CAGR OF  
5%**

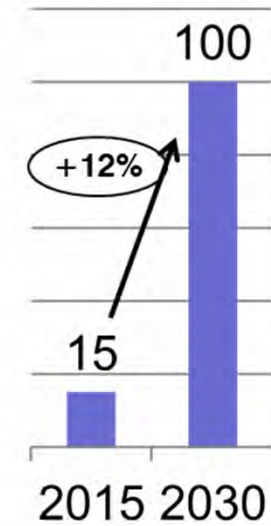


Figs in billion USD

**Fastest Growing  
countries in the Seed  
Market (basis CAGR)**



**Indian Seed Industry  
has the potential to  
reach Rs.100,000 Cr \***



Figs in 000 Cr



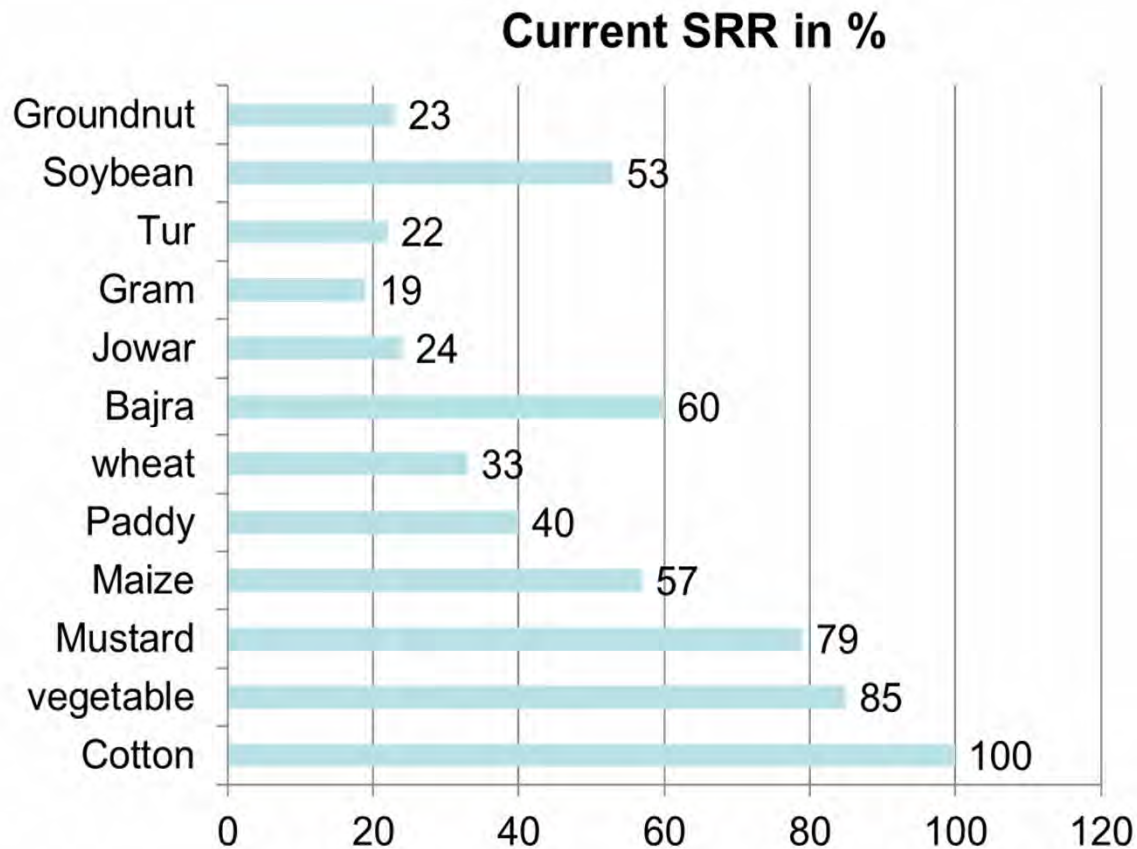
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## Hybridization/HYVs – Key drivers

Crop	Seed Industry Size ( Rs. Cr in 2014 )	Crop Area ( mn Ha.)	Hybridisation (%)
Cotton	4600	11.4	95
Wheat	1980	30.6	0
Paddy	1600	42	6
Maize	1100	9.7	60
Groundnut	900	4	0
Soybean	770	12.2	0
Vegetables	800	8	82
Others	3250	50.7	30
Total	15000	159	



## Seed replacement rate – Should increase



Generally,  
Higher SRR  
indicates  
Higher crop  
productivity

SRR in %



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