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## INTELLOTRACKER

Innovative Fertilizers May 2023



#### ARANCA'S QUARTERLY SECTORIAL UPDATE ACROSS FOUR DIMENSIONS....

Developments         • Technology updates       • Company expansions         • Disruptive innovations       • Competitor tracking         • New product launches       • Under-research technologies         • Product USPs       •	01 02 4D's	<ul> <li>Dynamics</li> <li>New entrants/ start-ups</li> <li>Supply chain activities</li> <li>New business</li> </ul>	models Company financials Other initiatives
Drivers         • Government policies & regulations       • Product ratings         • Litigations       • Influencers         • Customer Insights       •	04 03	<ul> <li>Diversification</li> <li>Mergers &amp; acquisitions</li> <li>VC investments</li> <li>Company collaborations</li> </ul>	<ul> <li>Licensing activities</li> <li>Exploring alternate applications</li> <li></li> </ul>



	DEVELOPMENTS	
Technology/ Innovations		Nano DAP will go a long way in driving sustainability of Indian farms through improving nutrient uptake, lowering wate consumption and minimising environmental losses. Source: Economic times
Technology/ Innovations	i  Windfall Bio	The company is developing the first-ever solution for capturing and transforming climate-harming methane emissions into living organic fertilizer. Source: Waste 360 news
Technology/ nnovations	MASHINDIGN STATE	Sustainable methods to produce synthetic ammonia for fertilizer with the fossil-fuel based method for commercial option that can reduce carbon emissions and help increase market stability for food production. <i>Source: Phys.org news</i>
Fechnology/ nnovations	azotic	Envita, a systemic nitrogen-fixation biofertilizer for corn works within plant cells to improve nitrogen availability for the corn crop, boost yield results and contribute to farmers' sustainability efforts. Source: Web news
New Manufacturing unit	GENESIS FERTILIZERS	The company selects Saskatchewan for proposed urea fertilizer plant and currently raising equity and debt capital facilitate construction of the 700,000 MT urea plant along with six distribution facilities. <i>Source: Newswire</i>
Technology/ Innovations	Green Science Alliance	Synthesized graphene quantum dots with a composition comprising nitrogen, phosphorus, and potassium when applie to the seeds of the Japanese Mustard Greens plants, grow as much as they would with the use of a liquid fertilizer. <i>Source: Horti daily news</i>
New Product _aunch		New agricultural biostimulants, NeoVita <sup>™</sup> 43 biostimulant, plus with liquid starter fertilizer, increased corn yields up seven bushels/acre versus starter fertilizer alone. Source: Company Website
Fechnology/ nnovations	AGRICULTURE	The study aims to improve wheat and rice grains grain Zn concentration grown in saline soils through zinc oxid nanoparticles (ZnO-NPs) due to their perspective high availability. <i>Source: Nature article</i>
	DIVERSIFICATION	
Company Collaboration	LifeCO An unset and the unit of the unit	A MOU was signed between ICAR-National Rice Research Institute and IFFCO for evaluation of Nano- DAP with respector P and N nutrition and yield of rice through contract research project. Source: <u>TOL news</u>
Mergers & Acquisitions		LEMKEN and Equalizer have reached an acquisition agreement wherein the German agricultural machinery specialist will be significantly expanding its product portfolio in seeding technology. <i>Source: Global news</i>
Company Collaboration		The companies entered into a strategic collaboration agreement to help farmers reduce weed control costs and drive profitability by combining Greeneye's retrofit precision spraying systems and FBN's Precision Spraying Packs. <i>Source: <u>News</u></i>
Company Collaboration		The fertilizer enhancement is a blend of proprietary microbial cultures coated onto dry fertilizer or mixed with liquid fertilizers to create an enhanced efficiency fertilizer. Source: <u>lcis news</u>
Company Collaboration		The companies announced plans to bring Indigo's innovative microbial technology to Mexican corn growers for the first time. Source: <u>Prnewswire</u>
Company Collaboration	syngenta	The companies are collaborating to bring a new wheat seed treatment technology to markets across Europe with the aim of helping farmers improve sustainability through better yields and reduced fertilizer use. <i>Source: <u>News</u></i>
	Drivers	

	Drivers	
Government Policies		The Quantum in Practice Act would introduce quantum molecular simulations and modeling to allow experts to study fertilizer chemical elements and reactions with accuracy. Source: <u>News</u>
Government Policies	٢	In a bid to help farmers maintain their fields and crops, agricultural committees and self-help groups in Uttar Pradesh will be provided drones on 40 percent subsidy Source: <u>News</u>

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Government Policies	*	The Ontario government is providing 10 new projects with funding from the \$2-million Fertilizer Challenge program in an effort to combat ongoing supply chain issues causing fertilizer shortages. <i>Source: <u>Global News</u></i>
	DYNAMICS	
Key Initiatives	Tålčher Fertilizers	The urea plants at Talcher which uses Coal Gasification Technology to produce urea will be ready by the end of this year. The plant when in operation, will help to reduce dependency on urea import. Source: <u>Current affairs</u>
New Entrants /Start-up	BIOTA	Biota Nutri wants to produce organic fertilizers made from residual flows. Source: <u>News</u>
Other Relevant Information	VARA	The report align with SDGs while addressing areas like GHG emission reduction, energy conservation, water stewardship, circularity, and biodiversity Source: <u>Agriculture post news</u>

#### SOLUTION PORTFOLIO – TECHNOLOGY RESEARCH & ADVISORY

<b>*</b> **		
IP Strategy	Technology Intelligence	Growth & Strategy
How best can we proactively manage and monetise our technical knowhow / intellectual property?	How best can we keep abreast of technology trends, competitor activity and headwinds / tailwinds in our domain?	Which technologies do we invest in? How do we ensure quick wins? Speed to market?
<ul> <li>IP Portfolio Analysis</li> </ul>	Competitor Benchmarking	<ul> <li>R&amp;D Strategy Roadmaps</li> </ul>
<ul> <li>IP Monetisation</li> </ul>	<ul> <li>Tech / IP Landscapes</li> </ul>	<ul> <li>Technology Scouting</li> </ul>
<ul> <li>IP Valuation</li> </ul>	<ul> <li>Technology Watch</li> </ul>	<ul> <li>Open Innovation</li> </ul>
<ul> <li>Prior Art Searches</li> </ul>	<ul> <li>Market Analysis / Trends</li> </ul>	<ul> <li>Product Development</li> </ul>
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