

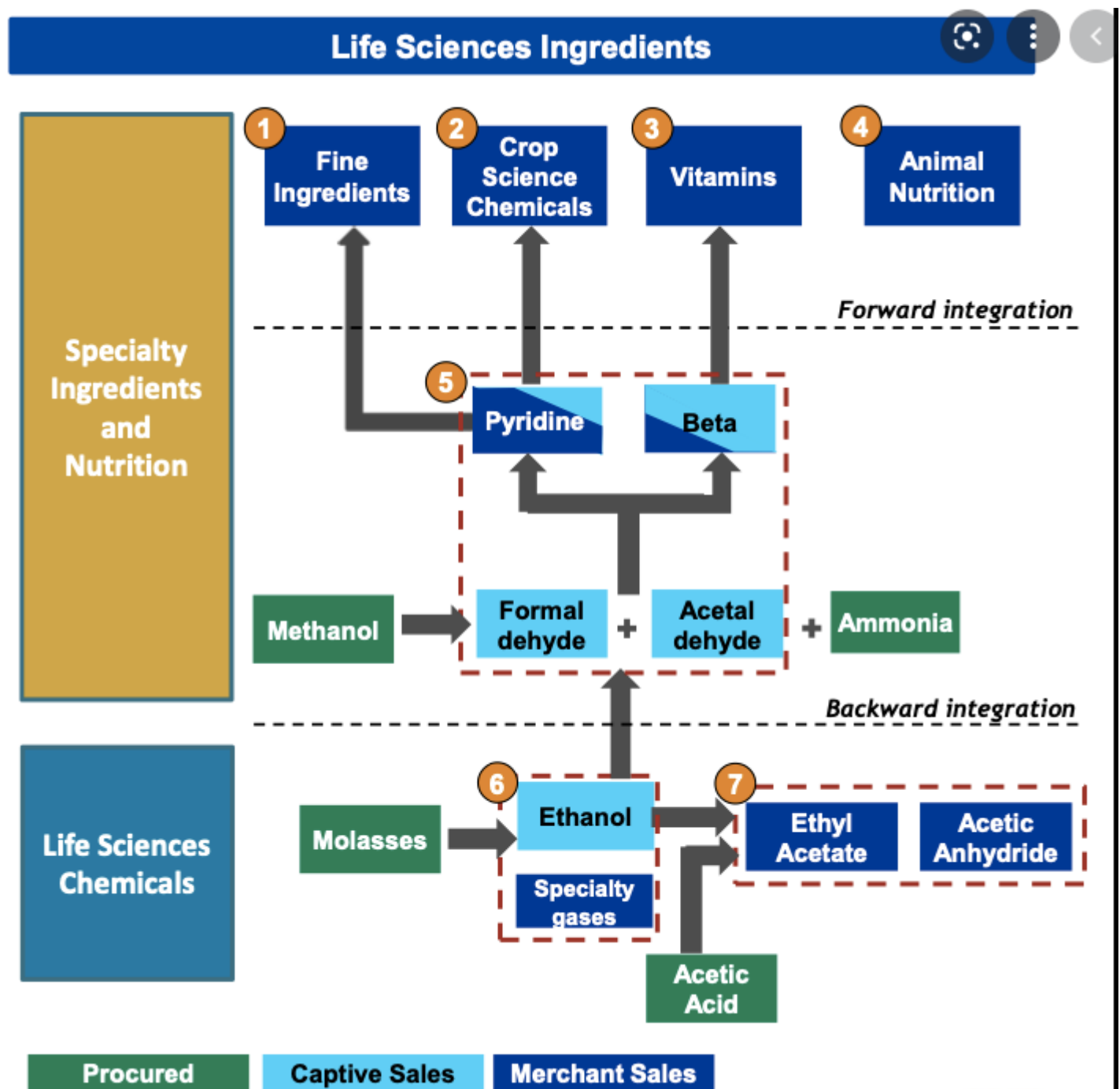
Twitter Thread by EV MISHRA



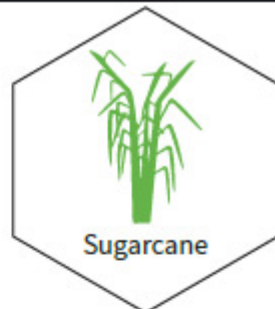
EV MISHRA
@drprashantmish6



Jubilant ingrevia - Products integration (Source Hemant Bubna)



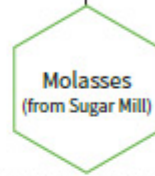
Products integration -For Vitamin B3



Sugarcane



Methanol



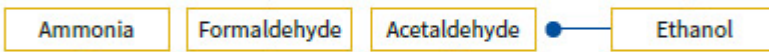
Molasses
(from Sugar Mill)



In house
Plant



In house
distillary



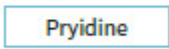
Ammonia

Formaldehyde

Acetaldehyde

Ethanol

Catalyst



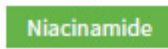
Pyridine



Beta-Picoline



3-Cyano Pyridine



Niacinamide



Niacin

	Highlights	Entry Barriers
Speciality Chemicals	<ul style="list-style-type: none"> Portfolio of ~70 products Amongst top 2 in Pyridine - Beta globally #1 in 11 Pyridine Derivatives globally 'Partner of Choice' in CDMO services with a strong pipeline Catering ~420 customers globally 	<ul style="list-style-type: none"> Globally lowest cost producer of Pyridine – Beta & all value added products Long approval process of customers, takes about 3-5 years for product approvals and facility audit Demonstrated expertise in handling multi-step chemistries (~13 steps) upto commercial scale
Nutrition & Health Solution	<ul style="list-style-type: none"> Portfolio of 34 products Amongst top 2 in Vitamin B3 (Niacinamide) globally Serving diverse customers in Animal & Human Nutrition, Personal Care, etc #1 in Vitamin B4 (Choline Chloride) domestic market Offer more than 18 branded solutions to farmers & channel partners Catering ~400 customers globally 	<ul style="list-style-type: none"> Complete backward integration to key RM i.e. Be Picoline & Differentiated niche technology (air oxidation) for mfg of Niacinamide – leading to lowest cost Attained deep reach to farmer community for Anim Nutrition & Health products Brand Recognition –“ANICHOL” for Vit-B4 is leader brand & other 18 Brands
Life Science Chemicals	<ul style="list-style-type: none"> Portfolio of 6 products Amongst top 2 in Acetic Anhydride globally Leading producer of Ethyl Acetate Globally largest manufacturer of bio-based Acetaldehyde Most reliable player of Acetyl products from multi-plants at multi-locations Catering ~600 customers globally 	<ul style="list-style-type: none"> Capability of handling large “Ketene” volumes Strong internal systems to manage controlled substances

1) Markets & Markets Industrv Report 2020

2) Merchant Market- IHS Report

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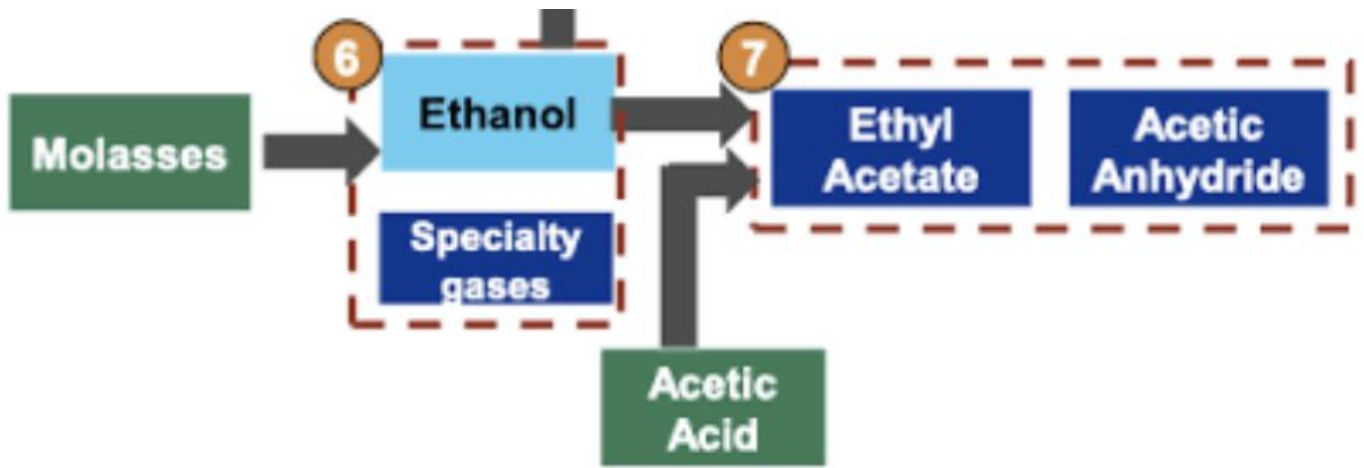
Life science chemicals -Market Share

Jubilant Market Share - Select Offerings¹

Product	Domestic Market Share	Global Market Share
Acetic Anhydride	71%	15%
Ethyl Acetate	33%	4%
Bio Acetaldehyde	35%	-
Speciality Ethanol	8%	-
Propionic Anhydride	Recent Launch	Recent Launch

Ethyl acetate-One of the key products of Jubilant’s Life science business Manufacturing from -bio-ethanol and acetic acid.

Jubilant is also the 7th largest Ethyl Acetate manufacturer in the world and has the largest market share in the domestic market.(See Below)



ethyl acetate produced through bio- ethanol gives a much lower carbon footprint of 2.29 (cO2 per ton of chemical) as against 5.66 (cO2 per ton of chemical) through petro route. it is an important downstream product of bio-ethanol and acetic acid.

Acetic Anhydride

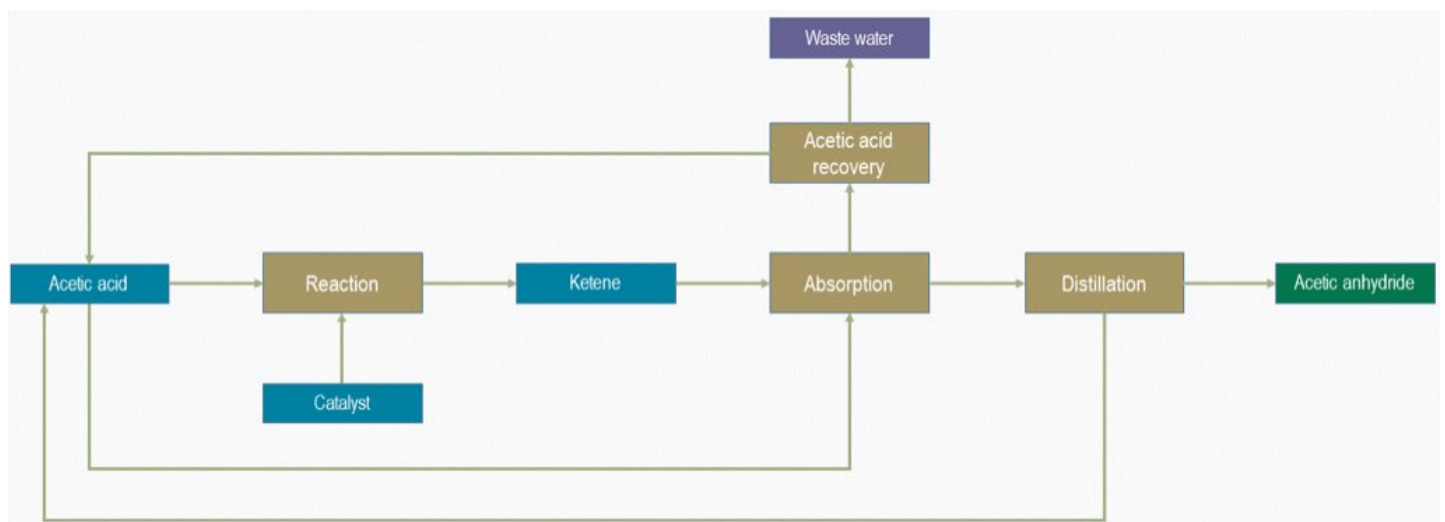
acetic anhydride is made from acetic acid. Jubilant holds more than half of the domestic market share in the production of acetic anhydride. it is also the 7th largest global manufacturer of acetic anhydride and the 4th largest in terms of merchant sales globally

company has two state of the art production unit for ethanol manufacturing in Gajraula (Uttar Pradesh) and nira (maharashtra). ethanol produced is supplied to oil marketing companies for ethanol Blending Programme (eBP) in india making them the 4th largest supplier on Pan india

Monochloroacetic Acid (MCAA)/ sodium Monochloro Acetate (sMCA)

Jubilant is the only integrated producer,manufacturing monochloroacetic acid/Sodium monochloro acetate by utilising acetic acid and acetic anhydride.The company is a prominent exporter of mcaa and Smca.

Manufacturing of Acetic anhydride from Acetic acid .



Acetaldehyde

Acetaldehyde market in India is anticipated to grow at CAGR of 4% owing to its extensive utilization in the production of agrochemicals, pharmaceuticals, paints and coatings industries. Acetaldehyde, also known as ethanal, is an organic compound and is used as a

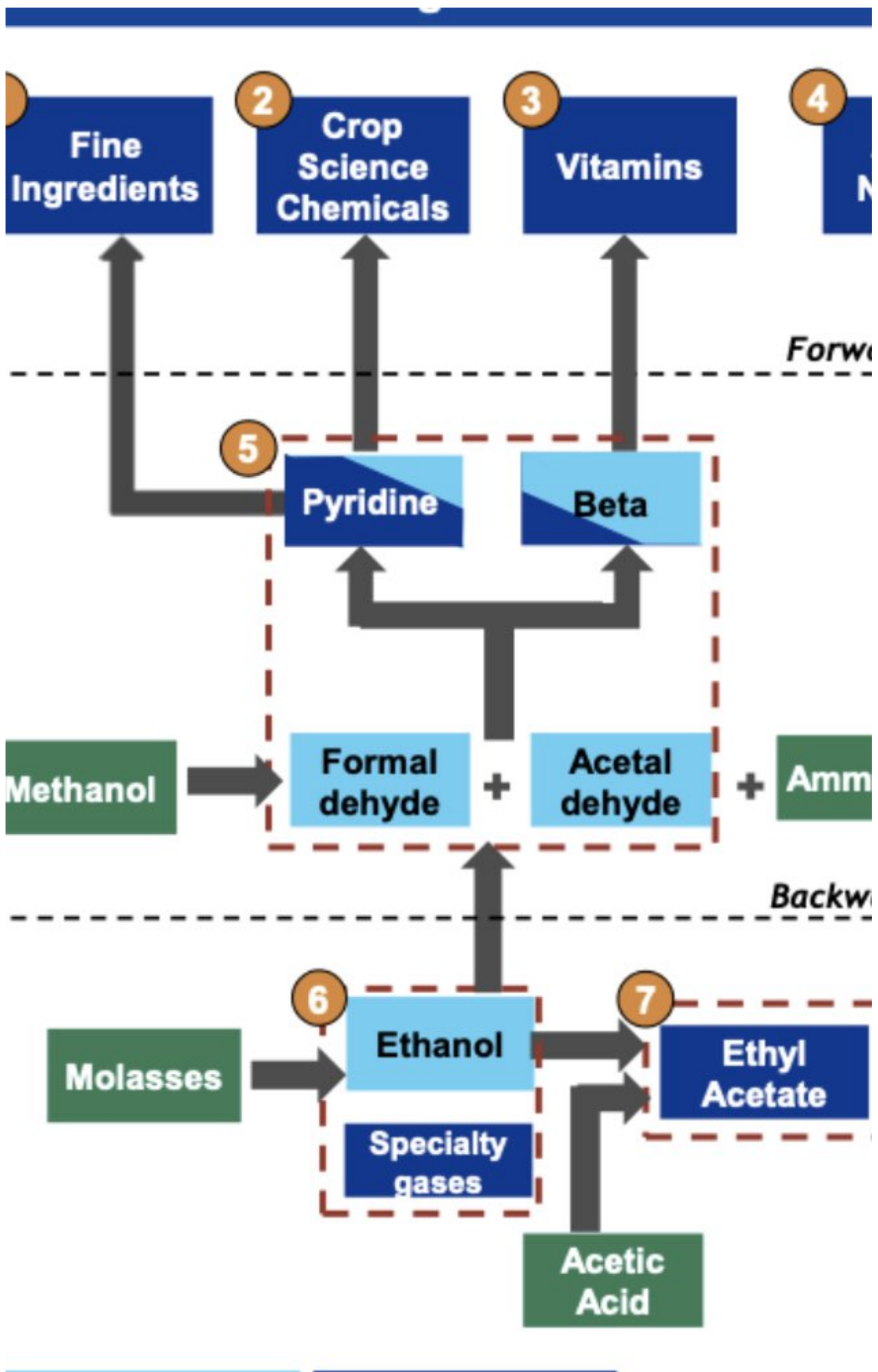
as a chemical intermediate for the manufacturing of various petrochemical products. Indian Acetaldehyde market is highly fragmented owing to the easy availability of raw material and production process, which encouraged the domestic manufacturers to enter this market.

Acetaldehyde finds its major application in the production of Pyridine & Pyridine bases, Pentaerythritol, Acetic Acid and Acetate Esters. Demand for Acetaldehyde in India is driven by the growing demand for Pyridine and Pyridine base in production of agrochemicals and

More than 50% of Pyridine produced is used in the manufacturing of pesticides and herbicides. Moreover, rising demand for Pentaerythritol in plasticizers, paints and coatings is boosting the demand for Acetaldehyde in India. Increasing construction activities coupled with rising

concern towards protection of surface coatings is likely to increase the consumption of Pentaerythritol in paints and coatings, which is further accelerating the growth of India Acetaldehyde market. Furthermore, Acetaldehyde is also used as precursor to produce other chemicals.

Again See the value chain of manufacturing of Ethanol - Acetaldehyde - pyridine - fine in gradients and crop science chemicals



@threder_app compile

Diketene market in india-

Until 2020, the Indian diketene market was valued at US\$ 31.5 Mn, and is further expected to increase to US\$ 48.4 Mn by 2030, expanding at a value CAGR of over 4%.

Pharmaceuticals & nutraceuticals is the key growth engine, likely to yield over two-fifths of the total revenue.

The India Brand Equity Foundation establishes that the country is the largest provider of generic drugs globally.

The Indian pharmaceutical sector generated over 50% of the global demand for various vaccines, 40% of generic demand in the U.S and a quarter of all medicines in the U.K. By 2025, the pharmaceutical industry will reach US\$ 25 billion.

Recently, the Union Cabinet has amended existing FDI policies in the pharmaceutical segment to permit 100% investment with regard to medical devices manufacturing subject to certain conditions. pharmaceutical sector cumulatively attracted an FDI inflow worth over US\$ 16 billion

between April and June 2020.

Based on these aforementioned broad trends, investments in diketene derivatives and associated products is likely to burgeon, creating massive revenue pools in the future.

Global Diketene Derivatives market

Diketene Derivatives Market

Market Value in 2018
US\$ 348.0 Mn



CAGR for (2018-2028)
8.2%



Top-Selling Derivative
Diketene Esters



Opportunistic Market
South Asia



Lucrative Market
East Asia



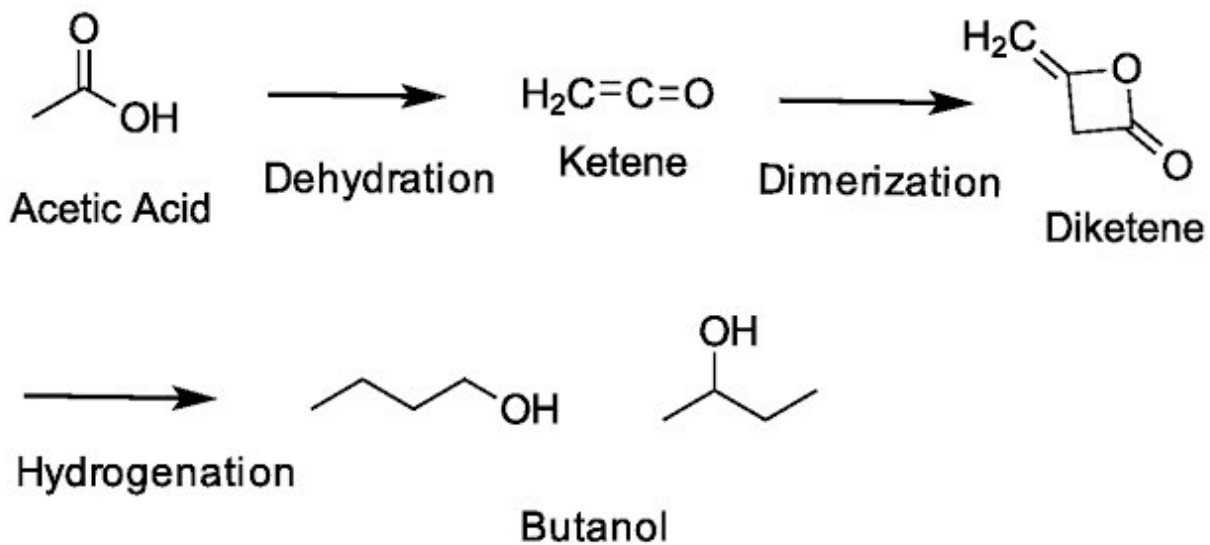
Prominent Application
**Pharmaceuticals
and Nutraceuticals**



Source: Future Market Insights, 2018



Acetic acid - ketene- Diketene- Butanol



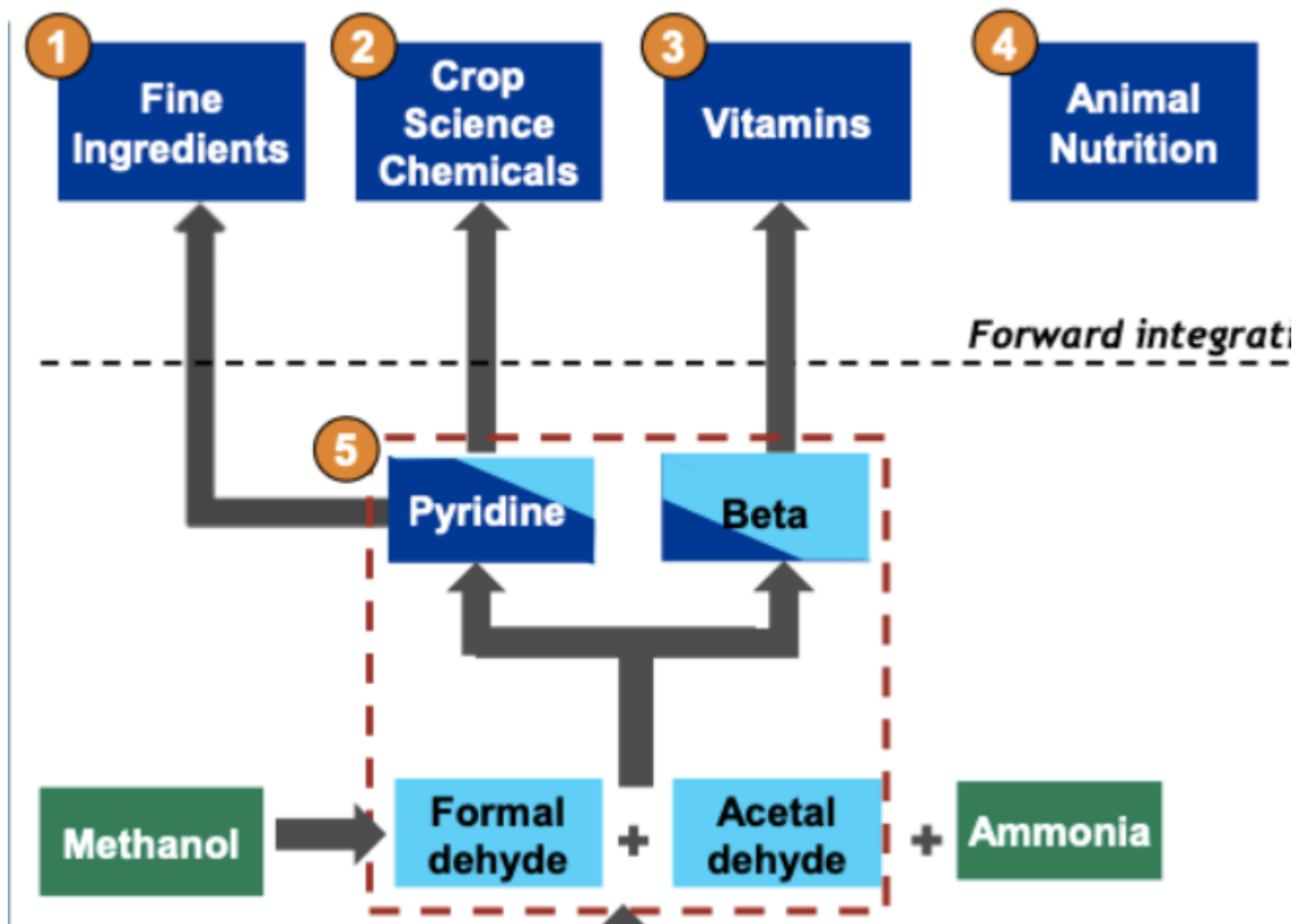
Synthesis of butanol from acetic acid via diketene.

Rice fortification will increase growth of vitamin B3 market <https://t.co/4VK0tc1m6O>

<https://t.co/il6oEHcXwy>

Paraquat is a herbicide and it requires pyridine as a raw material for manufacturing and due to Paraquat ban in Brazil and Thailand, pyridine prices were lower in last q but beta picoline is a co-product during pyridine manufacturing so because of low pyridine demand even

beta picoline production was low because of this has resulted into improvement in Beta Picoline prices. (Just for knowledge sharing) See Diagram Below



Jubilant Ingredia AR-
CDMO-

-We currently have seven molecules in our pharma CDMO pipeline out of which four are in Phase III for anti-viral and cosmetic applications and three are in Phase II for anti-neoplastic, anti-retroviral and anti-thrombotic applications.

-Our agrochemical CDMO pipeline includes four molecules, one in Stage III for insecticides and three in Stage II for insecticide and fungicide application.

We are also planning to file DMFs for our intermediates regulated markets from our GMP facility at Bharuch

-Our Vitamin B3 is manufactured through an eco-friendly route, starting from a renewable source, instead of conventional fuels, thereby reducing our carbon footprint.

-We offer Vitamin B4 (Choline Chloride) which helps maintain liver health in animals.

We hold the domestic market leadership position in Choline Chloride.

We have also diversified into herbal replacer of

Choline, Methionine, Non-antibiotic growth promoter (under brand 'Phytoshield') which is a plant-based natural offering for animal health

In FY 2021, our in-house RDT team developed 'Propionic Anhydride' in record time to capture the growing demand in Agrochemicals (mainly herbicides), Pharmaceuticals (APIs) and Dyes segments.

Our team has successfully commissioned the global scale plant at Gajraula for supply across India and the global market. The demand for Propionic Anhydride is expected to grow on account of strong growth from Agrochemical Segment (Growth in Clethodim).

Clethodim- is a post-emergence herbicide used to control annual and perennial grasses in a wide variety of broad leaf crops including soybeans, cotton, flax, peanuts, sunflowers, sugarbeets, potatoes, alfalfa and most vegetables (In FY 20 UPL also started its production)

Jubilant ingrevia -Acetaldehyde is used to manufacture Pentaerythritol and read about Market of Pentaerythritol - Growth, Trends and Forecast (2020-2025) <https://t.co/ofTMWM7ARK>

Jubilant ingrevia - 50 plants in 5 sites (Total Plant Area almost 1000 Acres)

Multi Location Manufacturing & Operation Excellence



Manufacturing Facilities



463 acres

Gajraula, Uttar Pradesh, India
Integrated facility for Speciality Chemicals & Life Science Chemicals



310 acres

Bharuch, Gujarat, India
Speciality Chemicals, Nutrition & Health Ingredients & Life Science Chemicals facility located in SEZ



144 acres

Nira, Maharashtra, India
Life Science Chemicals



109 acres

Samlaya, Gujarat, India
Animal Nutrition & Health Solutions



3.5 acres

Ambernath, Maharashtra, India
Speciality Chemicals

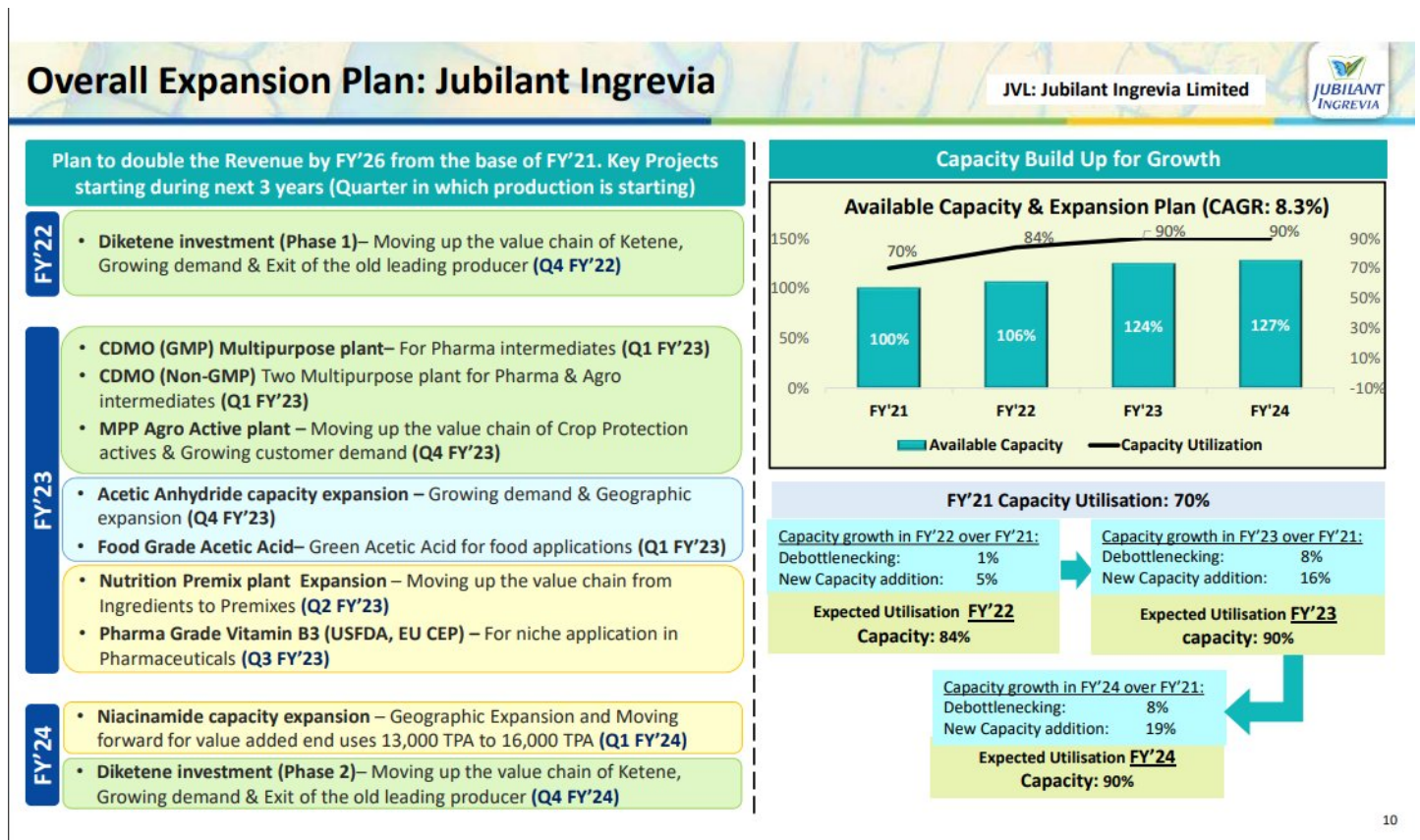
International offices in US, Europe, Japan & China

▪ We operate 50 Plants across 5 sites in 3 states



RC 14001:2015
Gajraula, Bharuch & HO Noida

Jubilant Ingrevia - expansion plan



Debt Status

Debt Profile – As on 30th September, 2021

Particulars ¹	31-Mar-21	30-Jun-21	30-Sep-21
Long Term Borrowings	548	227	218
Short Term Borrowings	-	230	45
Total Gross Debt	548	457	263
Cash & Equivalent	117	70	70
Total Net Debt	431	386	193
QoQ change		-10%	-50%

Jubilant ingrevia in Antimicrobial segment- CPC - natural Bacticial and fungicidal with anti viral efficacy .-key word here is natural

Introducing

A Range of Anti-Microbials for Higher Efficacy



Jubiquat CPC™ - Cetyl Pyridinium Chloride

A Naturally Derived Safe & Eco-Friendly Bactericidal and Fungicidal QUAT
With Potential Virucidal Efficacy Against Respiratory Viruses Including
***SARS-COV-2/COVID-19.**

**Recent Lab Studies by Leading FMCG Companies Show Mouthwash with CPC
Neutralizes 99.9% Covid-19 Virus.*

All Oral Care Applications / Surface/Laundry Cleaner / Hair Spray / Body Wash / Antibacterial Bar/Liquid Soap



Personal Care Applications

- Jubithione ZPT-50 - ZPTO based Anti-dandruff formulation
- Jubithione ZPZ - Next gen, eco-friendly & highly efficacious anti-dandruff composition.
- Jubiquat CLC - Advance, efficacious and eco-friendly composition for clear anti-dandruff formulations.
- Jubiquat CPL - Complete Oral care solution with anti-bacterial and tooth whitening advantage.



Industrial Applications

- Jubithione ZPT 40 - Dry Film & in-can preservative
- Jubithione CuPT - Marine anti-fouling coatings
- Jubithione NaPT - Water soluble anti-fungal composition for metal working fluids.
- Jubithione ZPB and NPB - Next generation dry film & in-can preservatives.

Jubilant Anti-Microbials - Jubilant, a global leader in Pyridine and its derivatives, now enters Antimicrobial range of products using Pyridine as the key starting material with complete backward integration, Quality control, ISO certified manufacturing plants and technical strength. Jubilant Life sciences is a trusted partner of choice, servicing globally renowned customers across personal care, paints & coatings market.

Visit us at www.jubilantingrevia.com or
e-mail at ingrevia.support@jubl.com

